NSW Treasury

2025 GST Methodology Review

NSW Treasury Response to Draft Report

7 August 2024

Acknowledgement of Country

We acknowledge that Aboriginal and Torres Strait Islander peoples are the First Peoples and Traditional Custodians of Australia, and the oldest continuing culture in human history.

We pay respect to Elders past and present and commit to respecting the lands we walk on, and the communities we walk with.

We celebrate the deep and enduring connection of Aboriginal and Torres Strait Islander peoples to Country and acknowledge their continuing custodianship of the land, seas and sky.

We acknowledge the ongoing stewardship of Aboriginal and Torres Strait Islander peoples, and the important contribution they make to our communities and economies.

We reflect on the continuing impact of government policies and practices, and recognise our responsibility to work together with and for Aboriginal and Torres Strait Islander peoples, families and communities, towards improved economic, social and cultural outcomes.

Artwork:
Regeneration by Josie Rose

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List of Acronyms

AADT:	Annual Average Daily Traffic
ABS:	Australian Bureau of Statistics
AIHW:	Australian Institute for Health and Welfare
AP:	Admitted patients
APC:	Actual per capita
APRA:	Australian Prudential Regulation Authority
BITRE:	Bureau of Infrastructure and Transport Research Economics
BLADE:	Business Longitudinal Analysis Data Environment
CALD:	Culturally and linguistically diverse
CBD:	Central Business District
CBR:	Californian Bearing Ratio
CGC:	Commonwealth Grants Commission
COFOG:	Classification of the Functions of Government
COPE:	Commonwealth Own-Purpose Expenditure
ED:	Emergency department
EPC:	Equal per capita
ERP:	Estimated Resident Population
GFS:	Government Finance Statistics
GP:	General Practitioner
GST:	Goods and Services Tax
HFE:	Horizontal Fiscal Equalisation
IRSEO:	Indigenous Relative Socioeconomic Outcomes
NAP:	Non-admitted patients
NDIS:	National Disability Insurance Scheme
NSLS:	National Service Level Standards
NTC:	National Transport Commission
NWAU:	National Weighted Activity Unit
PLIDA:	Person Level Integrated Data Asset
PWD	Population Weighted Density
RMCC:	Road Maintenance Council Contracts
RMD:	Regional Maintenance Delivery
ROGS:	Report on Government Services
SA1:	ABS Statistical Area 1
SA2:	ABS Statistical Area 2
SDC:	Socio-Demographic Composition
SDS:	Service delivery scale
SEIFA:	Socio-Economic Indexes for Areas
SES:	Socio-economic status
SHS:	Specialist homelessness services
SMVU:	Survey of Motor Vehicle Use
SRO:	State Revenue Office
TfNSW:	Transport for NSW
UCL:	ABS Urban Centres and Localities

VDA: Value distribution adjustment

1 Introduction

This submission responds to the Commonwealth Grant Commission's (the Commission) *Draft Report on GST Sharing Relativities* released to states on 26 June 2024 and published on 5 July 2024.

This response should be read in conjunction with the Commission's Draft Report and the Tranche 1, 2 and supplementary submissions made by NSW Treasury as part of the 2025 GST Review. NSW Treasury have not reiterated all positions raised in prior submissions, with responses focused on the Commission's preliminary positions in the Draft Report.

A summary table of responses to the Commission's Draft Report are included below.

1.1 Summary table of NSW Treasury positions

Assessment	NSW Treasury position
Revenue	
Land tax	Not supported. The Commission's proposed position does not align with its conceptual support of elasticity, is not supported by evidence, and is inconsistent with its own process for introducing new adjustments. An elasticity adjustment should be applied to the assessment of land tax, where elasticity adjustments are found to be statistically significant, and the effect of the adjustment is material. This is conceptually valid and supported by local and international literature.
Stamp duty on conveyances	Not supported. The Commission's proposed position does not align with its conceptual support of elasticity, is not supported by evidence, and is inconsistent with its own process for introducing new adjustments. An elasticity adjustment should be applied to the assessment of stamp duty on conveyances, where elasticity adjustments are found to be statistically significant, and the effect of the adjustment is material. This is conceptually valid and supported by local and international literature.
Insurance tax	Not supported. The Commission's proposed position does not align with its conceptual support of elasticity, is not supported by evidence, and is inconsistent with its own process for introducing new adjustments. An elasticity adjustment should be applied to the assessment of insurance tax, where elasticity adjustments are found to be statistically significant, and the effect of the adjustment is material. This is conceptually valid and supported by local and international literature.
Motor taxes	Noted.
Mining revenue	Partially supported. The Commission will introduce a price band approach to capture differences in the value and distribution of coal across states. However, while a price band approach is effective, the Commission's proposed approach of two fixed-price bands is not appropriate as it would incorrectly determine that multiple assessment quarters are immaterial. An average-price band approach would fix for this issue and ensure the Commission's objective of recognising the differences in coal across states would be achieved.

Assessment	NSW Treasury position
Payroll tax	Noted.
Gambling revenue	Noted.
Other revenue	Noted.
Expenses	
Schools	Noted.
Post-secondary education	Noted.
Health	Mostly supported. While the COVID-19 adjustments cannot fix for all historical issues, the Commission has made the appropriate adjustment when within scope to do so, in line with proper equalisation. NSW Treasury also supports the technical adjustments put forward by the Commission. Deferring comprehensive review of the non-state sector model to the proposed forward program is reasonable. A discount would be appropriate given uncertainty over evidence of the conceptual position.
Services to communities	Noted.
Justice	Noted. NSW Treasury will continue to work with the Commission as it defers potential method changes until the 2026 Update.
Transport	Noted. The Commission has demonstrated that its model is robust and that arguments for removal of the model are unsound. However, NSW Treasury considers that the model now understates the density impact of Sydney and that the inclusion of small cities with low-density populations improperly skews the results. The temporary increase to the blending ratio is poorly founded and should be removed. As the Commission has proved the integrity of its model, it should be moving the blending ratio towards 0 per cent for urban populations. At minimum, the Commission should be open to removing the blending ratio as part of the 2028 Update when 2026 Census data are available.
Native Title and Land Rights	Noted.
Commonwealth payments	Noted.
Socio-economic status	Noted.
Housing	Not supported. The Commission's proposed individuals-based model produces an incorrect assessment and should be removed. It is not fit for purpose and implies implausible service costs for states. Further evidence, analysis, and consultation are required before adjusting this assessment in future. The case for housing stress remains compelling and not satisfied by the Commission's response in the Draft Report.

Assessment	NSW Treasury position
Welfare	Noted.
Roads	Partially supported. The Commission has made reasonable improvements to the assessment where possible. The proposed discount recognises significant and ongoing differences between states' assessed and actual expenditure, reflecting important missing cost drivers. We provide further evidence for the inclusion of soil and rainfall in the assessment.
Services to Industry	Partially supported. The inclusion of COVID-19 costs is an important correction to this assessment. Technical assessment changes proposed may benefit from further analysis.
Natural disaster relief	Noted.
Other expenses	Noted.
Investment	Noted.
Net borrowing	Noted.
Administrative scale	Not supported. Draft Report responses on the congestion cost work of Chan and Petchey (2024) do not address key points made in this academic analysis. This has a material impact on the methodology and must be further engaged with by the Commission.
National capital	Noted.
Geography	Mostly supported. The combined regional cost gradients are conceptually supported and likely an improvement on the existing approach to remoteness. There are minor adjustments that should be considered to improve the relevance of the new regional cost gradient.

2 Revenue assessments

Overview

- The seven Revenue assessments comprise payroll tax, land tax, stamp duty on conveyances, insurance tax, motor taxes, mining revenue and other revenue. The purpose of the revenue assessments is to calculate the revenue raising capacity of each state or territory (state) if it applied national average rates of tax.
- The Commission's most material proposed changes are in the mining revenue assessment. While the existing mineral-by-mineral approach has been retained in the Draft Report, the potential split of coal into price bands would represent a material change to the assessment.
- Apart from minor technical changes in the land tax assessment, the Commission is proposing to not make further method changes to Revenue assessments. This includes continuing to assess gambling revenue as equal per capita (EPC) and not introducing elasticity adjustments for relevant assessments.

NSW Treasury key positions

- NSW Treasury supports the Commission's preliminary decision to split the coal assessment into price bands, once all necessary investigation is undertaken. This is readily achievable for the 2025 Review. However, we contend that the Commission's two fixed-price band approach is not fit for purpose and could unintentionally result in the assessment falling in and out of materiality thresholds on a year-on-year basis.
- Our proposed two band average-price approach is more appropriate for producing a split coal assessment, as it would be responsive to price changes while not introducing volatility. It would also recognise the key reason for the assessment change, that in most circumstances states cannot achieve the same royalty revenue from thermal and metallurgical coal.
- We oppose the Commission's position to not implement an elasticity adjustment across relevant revenue assessments. This position is not supported by evidence and inconsistent with the Commission's own conceptual support for elasticity adjustments. As such, elasticity appears to be subject to a uniquely high standard to meet for implementation, at odds with drivers and adjustments for other assessments and the Commission's own rules about introducing new drivers. It is unclear to us why this is the case, nor what standard must be met for the introduction of an elasticity adjustment. We consider this issue specifically in Section 2.9 - The case for elasticity adjustments.
- Other comments about the Commission's Draft Report positions are incorporated in this section. Apart from concerns about elasticity and the quality of land tax data, we are broadly supportive of the remaining positions from the Commission.

2.1 Payroll tax

- NSW Treasury agrees that retaining the 2020 Review method is an appropriate position for this assessment and that material changes are not required. We support the position to assess payroll tax surcharges on the same basis as payroll tax.
- We consider that the Commission's position to defer any potential implementation of Business Longitudinal Analysis Data Environment (BLADE) and/or Person Level Integrated Data Asset (PLIDA) data in this assessment to the 2030 Review is reasonable. It is appropriate for the Commission to continue investigating the usefulness of this data in the inter-review period.
- We note the Commission's position on changes in Commonwealth Government employment practices.

2.2 Land tax

- NSW Treasury does not support the Commission's preliminary decision to not implement elasticity adjustments on relevant Revenue assessments, including land tax. We consider this matter further in Section 2.9 - The case for elasticity adjustments.
- We continue to have concerns about the 2020 Review decision to reduce the land tax discount from 25 per cent to 12.5 per cent based on improved data quality. We remain concerned that there are material issues with state data that did not justify the decision to reduce the discount in 2020 nor justify the decision to retain the same discount in the 2025 Review.

2.2.1 Retaining the 12.5 per cent discount on the assessment

Draft Commission position:

- To retain the 12.5 per cent discount to recognise a low level of comparability concerns with the state provided data used in the assessment.

- NSW Treasury continues to have significant reservations about the quality of data used by the Commission for its land tax assessment. While we accept that comparing data provided by State Revenue Offices (SROs) with other measures of land values is not without its problems, we believe the scale of the anomalies identified in our Tranche 1 submission and this submission remain significant.
- In the Draft Report the Commission considered, having undertaken its own analysis, that the quality of the data used in the land tax assessment has not deteriorated since the 2020 Review. Consequently, the Commission does not consider an increase to the discount to be warranted.
- We acknowledge and appreciate the Commission's detailed analysis. As outlined in our Tranche 1 submission, however, we do not contend that the data used in the Land Tax assessment has deteriorated since the 2020 Review. We contend that the 2020 Review reduction in the discount from 25 per cent to 12.5 per cent was not justified based on the quality of data used in the assessment and should be reversed.

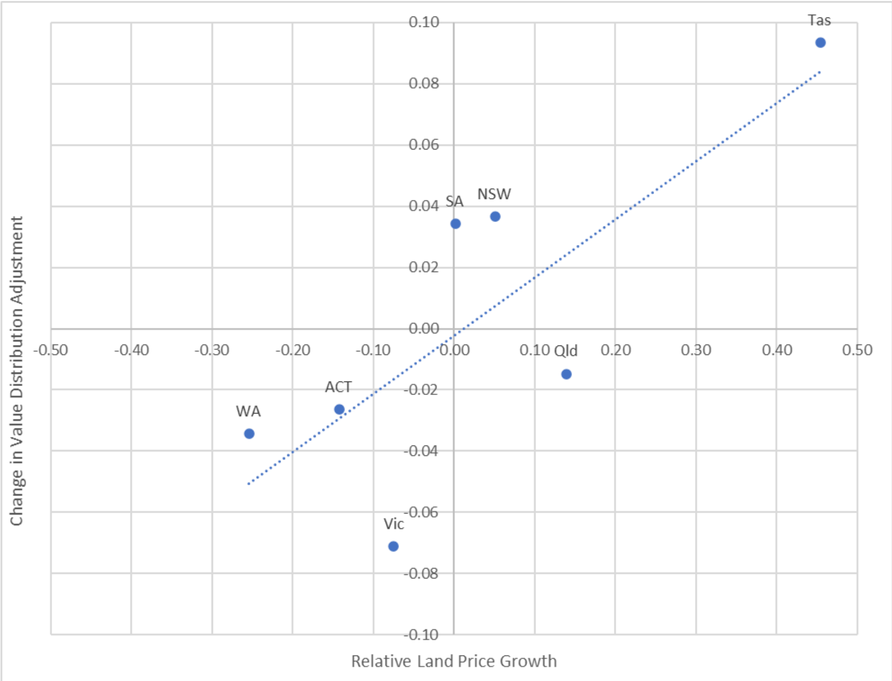
2.2.2 Stability of value distribution adjustment

- In the Draft Report, the Commission has assumed that the stability of the value distribution adjustment (VDA) over time is a sign of the integrity of its data and calculations.
- However, given the progressive structure of national average land tax rates, changes over time should be expected in the VDA, reflecting differences in the relative price growth of land values in each jurisdiction. For example, a jurisdiction with higher-than-average price growth would be expected to see land values move upwards faster through the Commission's fixed value band distribution. Since higher average tax rates apply in higher value ranges, this will result in an increase in the size of its VDA, with an offsetting reduction in other states.
- Based on data provided by the Commission, we have looked at the concordance between Australian Bureau of Statistics (ABS) data on changes in land values[1] compared with our expectations of the movement in the Commission's VDA over the period since 2018-19. We excluded the Northern Territory based on the absence of land tax in that jurisdiction and its impact on the quality of land valuation data. We found the following:

[1] We have used adjusted ABS land values derived by the Commission underpinning Figure 2 of the Land Tax Chapter of the Draft Report.

- All jurisdictions appear in the correct quadrant, except Queensland which shows higher than average land price growth but a negative change in its VDA. This implies that land price growth shown in SRO data may be understated.
- The reduction in Victoria's VDA appears overstated unless relative land price growth implied in SRO data is understated.
- The increases in value range adjustment for NSW and South Australia appear overstated implying that relative land price growth shown in SRO data is overstated.

Figure 2-1: Relative Changes in Land Prices v Value Distribution Adjustment since 2018-19



- NSW Treasury acknowledges that the growth in revenues does not always follow the expected relationship with changes in land prices. As evidence of this, the Commission has pointed to the growth of NSW taxable land values in 2021-22 (based on land values as at 1 July 2021) and the decline in revenues in 2021-22. This is explained by additional revenue being incorrectly accrued in 2020-21 with this being reversed in 2021-22.
- In the absence of changes in tax rates and/or administrative issues associated with revenue collection, progressive land tax rates should see revenues rise faster than the increase in land prices. Given the significant GST redistributive impact of the land tax assessment, we believe it is incumbent on the Commission to verify the integrity of its data in any circumstances where the movement in tax revenues does not align with the movement in land values.
- The Commission has pointed to the consistency of adjusted ABS data on land values[2] and SRO data over the period from 2018-19 to 2022-23.[3] In our view, the associated percentage variation for many jurisdictions is significant and would have a very large impact on the distribution of GST. Table 2-1 shows the percentage variation in the share of each jurisdiction for adjusted ABS land values and SRO data.

Table 2-1 State Shares of Land Values - Average for 2018-19 to 2022-23

State	ABS	SRO	% Variation

[2] ABS data has been adjusted by the Commission to only include residential rental property and commercial land.

[3] 2025 Methodology Review - Draft Report June 2024, Land Tax, Figure 2.

NSW	41.9%	42.5%	1%
Vic	27.6%	30.8%	12%
Qld	15.6%	12.9%	-17%
WA	7.5%	6.5%	-13%
SA	4.3%	5.2%	22%
Tas	1.3%	1.1%	-17%
ACT	1.2%	1.0%	-17%
NT	0.7%	0.0%	NA
Aust	100.0%	100.0%	0%

- NSW Treasury has also analysed the data underpinning **Table 2-1** on a year-by-year basis. This analysis revealed detail which is obscured by an averaging approach.
    - SRO data shows a significantly growing share of land values in NSW not matched in ABS data.
    - ABS data shows a significantly smaller share of land values in Victoria and South Australia which is consistent across years.
    - SRO data for Queensland shows a falling share of national land value while ABS data shows an increasing share. ABS trends in land values are more consistent with the higher economic growth rates experienced by that state.
    - Both SRO and ABS data show a declining share of land values in Western Australia, but SRO data suggests this decline has been much sharper.
    - SRO data for Tasmania may understate land values.

Table 2-2: Year by Year Comparison of Estimated Land Value Shares

	NSW			Vic			Qld			WA		
Year	**SRO**	**ABS**	**% Difference**	**SRO**	**ABS**	**% Difference**	**SRO**	**ABS**	**% Difference**	**SRO**	**ABS**	**% Difference**
2018-19	40.0%	41.0%	-2.4%	31.9%	28.1%	13.5%	13.4%	15.1%	-11.2%	7.7%	8.2%	-6.7%
2019-20	40.3%	41.9%	-3.9%	31.1%	27.5%	13.3%	13.9%	15.1%	-7.4%	7.1%	8.0%	-11.0%
2020-21	40.8%	42.1%	-3.1%	31.5%	28.0%	12.4%	13.6%	15.0%	-9.0%	6.7%	7.5%	-11.2%
2021-22	43.3%	41.9%	3.4%	31.4%	27.8%	12.9%	12.0%	15.7%	-23.4%	6.1%	7.2%	-15.2%
2022-23	46.3%	42.5%	9.1%	28.8%	26.6%	8.2%	12.2%	16.5%	-26.4%	5.4%	6.8%	-20.9%
	SA			**Tas**			**ACT**			**NT**		
Year	**SRO**	**ABS**	**% Difference**	**SRO**	**ABS**	**% Difference**	**SRO**	**ABS**	**% Difference**	**SRO**	**ABS**	**% Difference**
2018-19	5.1%	4.3%	18.1%	0.9%	1.1%	-13.9%	1.0%	1.4%	-29.9%	0.0%	0.8%	-100.0%
2019-20	5.4%	4.3%	24.0%	1.1%	1.2%	-14.0%	1.1%	1.1%	-5.8%	0.0%	0.8%	-100.0%
2020-21	5.3%	4.2%	24.9%	1.1%	1.3%	-13.1%	1.0%	1.2%	-10.7%	0.0%	0.7%	-100.0%
2021-22	5.1%	4.2%	22.5%	1.0%	1.3%	-23.1%	1.0%	1.3%	-17.2%	0.0%	0.6%	-100.0%
2022-23	5.1%	4.3%	19.4%	1.1%	1.4%	-18.9%	1.0%	1.3%	-17.8%	0.0%	0.6%	-100.0%

- Both ABS and SRO data is sourced from the Valuers-General of each state. Given this, we expect consistency of direction in value movements. Instead, our analysis suggests anomalies in the data that warrant further investigation.
- In the 2020 Review the Commission argued that it believed that improvements in the quality of data used in the Land Tax assessments contributed to its decision to reduce the assessment discount from 25 per cent to 12.5 per cent.

- Given the above analysis, combined with the matters raised in our Tranche 1 submission, we believe the Commission should revisit this decision for the 2025 Review while it undertakes a more detailed review of the integrity of the underlying data as part of the 2030 Review.

2.2.3 Other Land tax assessment positions

- NSW Treasury does not support the Commission's position to not introduce an elasticity adjustment in this assessment for the 2025 Review. This matter is considered in more detail in Section 2.9.
- We note the Commission's preliminary decision to retain the existing value ranges used in the Land Tax assessment.
- We note the Commission's preliminary decision to remove the adjustment to the ACT's taxable land values on materiality grounds.
- We note the Commission's preliminary assumption that Northern Territory's distribution of land values is more likely to reflect the average distribution of the smaller states.
- We note the Commission's preliminary decision to not change the assessment method for recent changes in states' Foreign Owner Land Tax Surcharges and the introduction of a COVID-19 Debt Recovery Surcharge in Victoria.

2.3 Stamp duty on conveyances

- NSW Treasury does not support the Commission's position to not introduce an elasticity adjustment in this assessment for the 2025 Review. This matter is considered in more detail in Section 2.9 of our submission. Supporting academic literature for elasticity on stamp duty is included in Appendix 1 at the end of the submission.
- We note the Commission's position to assess revenue from NSW property tax with land tax, noting that the NSW First Home Buyer Choice scheme has now closed.
- We note the Commission's position to not introduce elasticity adjustments for recent state policy reforms on materiality grounds. This includes for the NSW First Home Buyer Choice scheme, Victorian property tax reform, and the ACT's phased replacement of stamp duty.
- We note the Commission's position to continue assessing duties on non-real property transfers as equal per capita in the other revenue category.
- We note the Commission's position to retain the existing value ranges for this assessment.

2.4 Insurance tax

- NSW Treasury remains comfortable with the overall assessment but disagrees with the Commission's draft position to not implement an elasticity adjustment for specific revenue assessments, including insurance tax. We provide extended comments on the Commission's elasticity positions in Section 2.9.
- We note the Commission's position on leaving duty on workers' compensation premiums and compulsory third-party insurance in this assessment.

2.5 Motor taxes

- NSW Treasury notes the outcome of the High Court decision in *Vanderstock & Anor v State of Victoria* and its impact on states' ability to implement electric vehicle road user charges. It is agreed that a separate assessment of these charges is no longer relevant.
- We support the decision to use the number of light vehicles to assess revenue from emissions-based registration fees.
- We note the Commission's position on assessing electric vehicle incentives in line with their Government Finance Statistics (GFS) classification and that it will continue to monitor state concessions.
- We acknowledge the Commission testing the materiality of stamp duty on motor vehicle transfers and determining that it did not meet the $40 per capita driver materiality threshold.

2.6 Mining revenue

- NSW Treasury supports the Commission's preliminary decision to split the coal assessment into price bands, however, we consider that the fixed two-price band approach is not an optimal solution and would result in the assessment falling in and out of materiality.
- Our proposed two band average-price approach is more appropriate for producing a split coal assessment, as it would be responsive to price changes while not introducing volatility. We contend that this is the best path forward for the Commission in splitting coal.
- We note that the Commission will retain its mineral-by-mineral approach, which allows for an improved approximation of relative fiscal capacity. We consider that if the Commission sought to address its concerns over policy neutrality in this assessment again, we would again contend that the aggregation method is preferable to the 'dominant state' proposal.

2.6.1 Retaining a mineral-by-mineral approach

Draft Commission positions:

- To retain a mineral-by-mineral approach to assessing mining revenue capacity.
- To not introduce an adjustment for the 'dominant state' factor in this review.

- NSW Treasury acknowledges the Commission's preliminary decision to retain the mineral-by-mineral approach to the assessment of mining royalties and not make any adjustment for the potential policy disincentives associated with one state being dominant in a particular mining category.
- By not making any adjustment for dominant state impacts, the Commission essentially assumes the revenue opportunities associated with the mining wealth of each jurisdiction is a national resource which should be shared between all states. NSW Treasury endorses the view and believes that in principle the Commission should not reconsider the issue of a dominant state impact in the future.
- We see little justification for states with a greater natural endowment being able to offer a higher standard of services or lower taxes simply because of an accident of geological history or where state borders happen to have been drawn in the past. Suggesting otherwise is equivalent to a view that higher property prices in Sydney, which result from the historical pattern of the settlement of Australia and the topography of the Sydney Basin, should not impact on the assessed stamp duty and land tax revenue of NSW.
- Furthermore, in our Tranche 1 submission, we pointed to numerous practical issues with any adjustment where one state was dominant in a tax base including:
    - The arbitrariness of any definition of a dominant state and the share of revenue that should be retained following changes in tax rates.
    - The ability for states to game the definition to their greater financial benefit.
    - How the benchmark would be updated over time.
    - The introduction of a bias in the Commission's assessments encouraging the dominant state to increase its tax rates.
    - The inability of the model to accommodate changing economic circumstances.
- In our Tranche 1 submission, we argued for an aggregated mineral approach. This was only in response to the Commission's desire to address perceived policy neutrality issues in the mining assessment. We acknowledge, however, that a mineral-by-mineral approach allows for a greater approximation of relative state fiscal capacities. Since the Commission is no longer proposing its dominant state approach, we are no longer proposing aggregation.

- We continue to believe that any proposal to improve policy neutrality will necessarily worsen equalisation (as the Commission's dominant state proposal would have done and as aggregation would do). The extent to which the Commission balances these priorities will determine whether it continues to explore options for improving neutrality. If it does retest this matter, then we will continue to advocate for aggregation as the simplest and least arbitrary option.

2.6.2 Separating coal by a price band approach

Draft Commission positions:

- To separate coal, provided it can be done reliability and is material.
- To use a fixed two-price band approach to separate coal.

- NSW Treasury notes the Commission's preliminary decision to split the coal assessment provided it can be done reliably and it is material to the distribution of GST grants. NSW Treasury supports the Commission's conclusion that:

  'By combining all coal, the aggregate assessment is likely to understate Queensland's revenue capacity and overstate the capacities of other coal producing states…'[4].

- We note arguments made by other states that the Commission should take account of a broader range of factors than currently considered in determining revenue and expenditure assessments[5]. However, we believe such considerations go well beyond the Commission's remit.
- We also reject any suggestion that the proposed new coal assessment would be retrospective. A fundamental feature of the five-yearly methodology review process is its application to the data years of the Review. If claims of retrospectivity associated with the Commission's coal assessment were accepted, this would permeate all the Commission's assessments with any new methodology developed as part of the 2025 Review only being applied to data from 2025-26 onwards. Such an outcome would clearly conflict with the principle of the contemporaneity of fiscal equalisation.
- A fixed price band approach will be an effective method of determining state differences in coal value and distribution. However, the Commission should not use its proposed fixed two-band approach as it will inappropriately result in multiple quarters over the past ten years being deemed immaterial despite material price differences. The average two-band approach proposed by NSW Treasury will account for this volatility, is simple to implement, relevant data are readily available, and will enable differences in coal to be recognised consistently.

2.6.3 Distinguishing Metallurgical and Thermal Coal

- While NSW Treasury believes that it is possible to distinguish metallurgical and thermal coal, we accept that there is a wide variation in the quality of coal mined and its final use depends on whether it is blended with coal of a higher or lower quality. Such decisions are made by producers to maximise their margins. While we believe these issues can be overcome, NSW Treasury now favours a price band approach to effectively distinguish different grades of coal.

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[4] 2025 Methodology Review - Draft Report June 2024, Mining Revenue, paragraph 73.

[5] With respect to the mining assessment, it has been suggested that the Commission consider factors such as 'the national interest', 'reducing Vertical Fiscal Imbalance' and 'reducing carbon emissions'.

- Such an approach would not rely on data regarding the relative quality of coal being sold and its use. We believe that the price of coal sold is an easy and convenient means to distinguish coal of different qualities and, more importantly, to assess differences in state fiscal capacities.

2.6.4 Assessing coal royalties using a price band approach and achieving HFE

- NSW Treasury notes a price band approach is adopted for other state revenues where this materially impacts the assessed revenue (e.g. stamp duty and land tax). We believe a price band approach for coal royalties is warranted on materiality grounds given the significant structural ongoing difference in the price of thermal and metallurgical coal, differences in the geographic distribution of those types of coal, and the existence of a progressive royalty rate structure in Queensland.
- As pointed out in our previous submission, the current assessment approach is inconsistent with fiscal equalisation as it fails to recognise the interaction between the nature of coal resources in NSW and Queensland and a progressive royalty rate structure that applies at a national level. This is illustrated in the following stylised example where State A (which mines thermal coal) is assessed under the current Commission methodology as being able to raise $8.5 million in royalties even though this revenue outcome cannot be achieved by applying the royalty rate structure of either State A or State B.

Table 2-3: Interaction of Progressive Royalty Rates with Commodity Price

	State A	State B	State A & B
Coal sold – tonnes			
- Thermal	1,000,000	Nil	1,000,000
- Metallurgical;	Nil	1,000,000	1,000,000
Coal price per tonne			
- Thermal	$100	$100	$100
- Metallurgical	$180	$180	$180
Royalty rate	8%	8% up to $110 10% of price in excess of $110	
Royalties paid	$8,000,000	$15,800,000	$23,800,000
National average royalty rate			8.50%
Assessed revenue (current method)	$8,500,000	15,300,000	$23,800,000
Revenue of State A applying royalty regime of State A or State B	$8,000,000		
Excess assessed revenue of State A	$500,000		

- Given this, a price band assessment approach to coal royalties (which resolves the anomaly highlighted in **Table 2-3**) will improve fiscal equalisation.
- The Commission has indicated that it will introduce the price band approach, provided it can be done reliably and that it is material.[6] We address both in turn.

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[6] 2025 Methodology Review - Draft Report June 2024, Mining Revenue, paragraph 74.

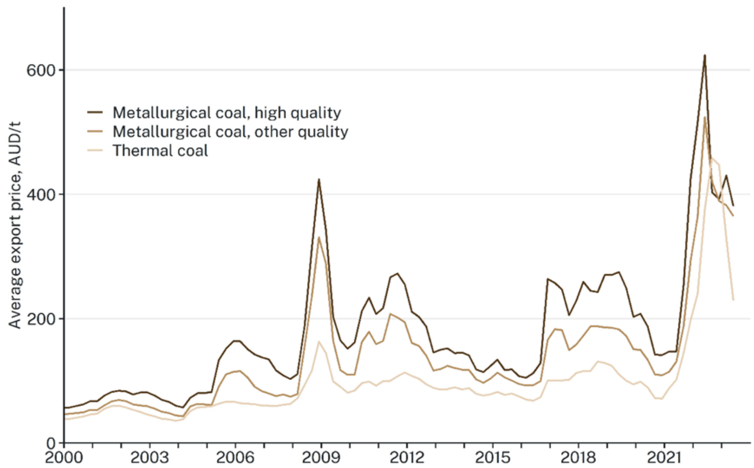
2.6.5 Data Reliability

- New South Wales and Queensland produce around 99 per cent of all coal mined in Australia. Both states tax coal based on the value of production. In broad terms, each state's coal royalties are calculated as follows:
  - New South Wales – the royalty for each producer for each month is calculated as the value of coal sales less allowable deductions (e.g. coal research levy, mine subsidence levy) multiplied by the applicable royalty rate as determined by the nature of the mine operations.
  - Queensland – the royalty rate is determined by the average value of coal sold in the relevant period (calculated as revenue received by the producer less the cost of ocean freight divided by tonnage sold). The royalty paid is equal to gross revenue after subtracting allowable deductions (e.g. coal research levy, Coal 21 levy, port operating costs) multiplied by the royalty rate.
- To calculate royalty revenue, both states are required to have the following data over a relevant period for each coal mine:
  - The tonnages of coal sold
  - The value of coal sold (both gross and after any allowable deductions), and
  - The royalty paid over the relevant period (both gross and after any allowable deductions).
- NSW and Queensland royalty calculations differ in what items are considered allowable deductions. Given these differences in approach to calculating royalties, and to avoid perverse grant design effects, NSW Treasury believes the assessed base for coal royalties should be the gross value of coal production before allowing for any deductions. Based on our research, the Commission should have no difficulties in reliably obtaining this data.

2.6.6 Materiality

- As pointed out in our previous submission, coal prices are volatile as shown in Figure 2-2.

Figure 2-2: Historical coal prices, A$/tonne

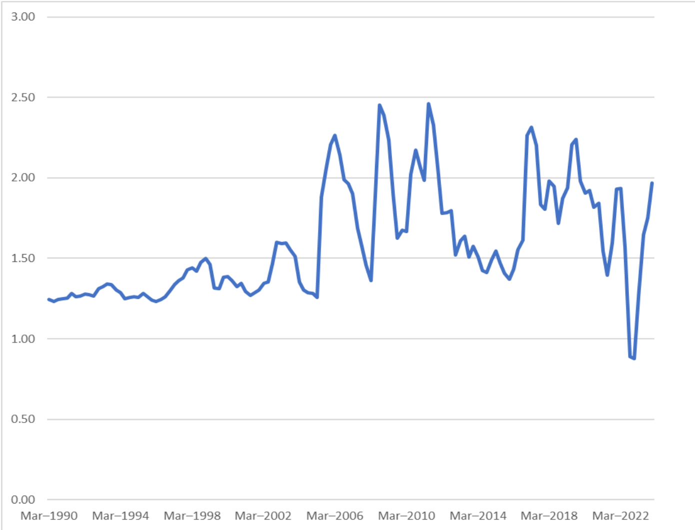


Source: Department of Industry, Science and Resources

- Whether a price band approach results in a material impact on the distribution of GST grants will depend on both the methodology chosen by the Commission for assessing coal royalties and the data years in which it is applied. For example, under a progressive royalty rate structure, a material impact on the distribution of GST associated with a fixed price band approach will only arise if thermal and metallurgical coal are in different price bands. Where thermal and metallurgical coal are in the same price band, the assessment will default to the existing assessment and, by definition, a price band approach will be immaterial.

- History indicates that there is normally a significant difference in the price of metallurgical and thermal coal. Figure 2-3 shows that, on average, metallurgical coal is priced around 1.8 times higher than thermal coal. Further, apart from an extreme historic anomaly for two quarters in 2022, metallurgical coal has maintained a price premium floor of at least 1.2 times higher than thermal coal.

Figure 2-3: Ratio of Metallurgical and Thermal Coal Price



* Source: Department of Industry, Science and Resources

- Assuming the price ratio of 1.8 continues to apply, fixed price bands of above and below $200 will only result in metallurgical and thermal coal being in different price bands where the price of thermal coal is above $111 and below $200.
- Data for the last 10 years indicates that price bands of above and below $200 would have resulted in thermal and metallurgical coal being in the same price band in 15 out of 40 quarters despite metallurgical coal being priced on average twice that of thermal coal in these 15 quarters. In these cases, the price bands proposed by the Commission would not accurately reflect obvious differences in fiscal capacities between states.
- The Commission's aim from this adjustment is to determine the relative difference in state coal royalty capacities. The fixed price band approach will not achieve the Commission's aim, as it will too often fail to distinguish between thermal and metallurgical coal capacities, despite clear evidence of both a consistent floor and average price difference between the two coal types.

2.6.7 A different approach to price banding

- As pointed out in our previous submissions, a coal assessment based on narrow price bands would overcome the risk that thermal and metallurgical coal occupy the one price band despite there being a significant difference in the price of each of these types of coal. While this remains our first preference, we recognise that multiple price bands could result in issues of confidentiality and see price bands occupied by the data of only one state, thus defaulting the assessment in that price band to actual per capita (APC)[7].
- Our key criteria for judging whether a revised coal assessment is appropriate is ensuring that the risk of thermal and metallurgical coal being in the one price band is highly unlikely, except in cases where the prices genuinely converge. Bearing this in mind, we developed an innovative approach that:
    - Overcomes any data confidentiality issues

[7] An actual per capita assessment is not in and of itself bad, but it does introduce policy neutrality concerns.

    - Avoids any policy design issues by ensuring that each price band is never occupied by data from only one state
    - Responds to changes in the coal market and remains fit-for-purpose between 5-yearly Reviews, and
    - More closely achieves horizontal fiscal equalisation (HFE) than is currently the case.
- Under this innovative approach, two price bands would be set with the dividing line between these price bands being the average price of all coal sold for the financial year. Under such an approach:
    - The Commission would not be required to obtain commercially sensitive data
    - Data from both New South Wales and Queensland would be included in both price bands, avoiding any APC assessment
    - Price bands would move up and down in line with the coal market, ensuring that thermal and metallurgical coal are in different price bands and avoiding the potential for the assessment to drift between being material and not material on a year-to-year basis, and
    - Recognise the structural differences in coal production in New South Wales and Queensland and how this interacts with a progressive royalty regime at the national level.
- Concerns have been raised that price bands based on above and below the average annual price for coal could delay the Commission's assessment. We believe this concern is unwarranted. In providing the current data to the Commission in October, all the necessary information to separate coal sales and royalty revenue into the two bands (above and below average coal sale price) must be available. Given this, separating the aggregate data provided to the Commission into above and below the average price is a simple task which could be undertaken with a short turnaround.
- Finally, concerns have also been raised that the above and below average price approach will always deliver a split assessment even when there is not much divergence in thermal and metallurgical coal prices. Based on Figure 2-3, thermal and metallurgical coal prices are almost always significantly different. Given this, we believe the concern that the two-band assessment proposed by NSW would be inappropriate at various times should be dismissed.
- We note that coal prices have surged in recent years, resulting in a temporary convergence of thermal and metallurgical prices. Prices are expected to return to historical trend in coming years, having already materially dropped since peaks in 2021-22 and 2022-23. If the Commission's analysis finds that a price band approach is not material in the 2025 Review, it would be appropriate for the Commission to continue testing materiality in future updates. It would be perverse if the price band approach were not introduced because of an anomalous and temporary convergence of thermal and metallurgical coal prices.

2.6.8 Other Mining revenue assessment positions

- NSW Treasury supports the continuation of the current approach to the assessment of uranium and coal seam gas revenues. While bans on production are obvious examples of policy neutrality concerns, the actual impact in the case of these specific minerals is immaterial given how closely the distribution of production across states mirrors the distribution of mineral resources.
- We support the Commission's preliminary decision to assess Victoria's coal capacity equal to the revenue it raises. However, NSW Treasury believes the Commission should reserve the right to impute this revenue should Victoria move to reduce revenues from this source.

  We support the Commission's preliminary decision to assess onshore oil and gas royalties on a volume of production basis.

2.7 Gambling revenue

- NSW Treasury supports the Commission's decision to continue assessing gambling revenue equal per capita as part of the other revenue assessment. The Commission's analysis is robust and comprehensive.
- We broadly agree with the Commission that, for gambling revenue, there are state policy influence impacts that are not sufficiently accounted for by alternate state proposals.
- We see little justification to revisit this matter in the future given how often it has been considered in the past with no meaningful change in conclusion and no meaningful change in state policy.

2.8 Other revenue

- NSW Treasury supports retaining the existing equal per capita method for this assessment.
- We agree with the continuation of the criteria to determine other revenues and support gambling revenue being captured within this assessment.

2.9 The case for elasticity adjustments

- NSW Treasury welcomes the Commission's acceptance of the conceptual case for elasticity adjustments and, if these adjustments prove to be material and can be reliably measured, that elasticity adjustments would improve the accuracy and policy neutrality of the assessment.
- In the absence of elasticity adjustments, and assuming average national policies, the Commission's current approach assesses states to be able to generate revenues that they cannot generate. This arises because states with below average tax rates will see their tax base shrink should they increase their tax rates to the assumed national average.
- We see this issue as analogous to the Commission's decision to disaggregate the Mining assessment into a mineral-by-mineral approach. This is motivated by the recognition that states with lower value minerals cannot generate the revenue they are assessed to be able to generate if an all-mineral average royalty rate is applied.
- We note the following other comments contained in the 2025 Draft Report:
    - The Commission's consultant from the 2020 Review found four revenue categories where elasticity estimates were statistically significant – land tax, stamp duty on conveyances, insurance tax and motor taxes.
    - After comparing their elasticity estimates with other Australian and international studies, the Commission's consultant found their estimates conservative and within the bounds of those other studies.
    - The Commission's consultant confirmed as part of consultations for the 2025 Review that their elasticity estimates could be applied as part of the current Review.
- Given the above, we are disappointed that the Commission has chosen not to introduce elasticity adjustments as part of the 2025 Review. In our view, the Commission seems to be less tolerant of uncertainty or complication with respect to elasticity than with respect to other adjustments.
- Our Tranche 1 submission demonstrated the materiality of elasticity adjustments in both stamp duty and land tax. We believe the Commission's decision to not make any tax elasticity adjustments represents a significant departure from achieving fiscal equalisation and we seek the reversal of this preliminary decision.
- The Commission has raised a range of issues in its Draft Report[8] justifying its decision not to make tax elasticity adjustments as part of the 2025 Review. Each of these issues are addressed below.

2.9.1 Incomplete coverage of assessments

- Given its acceptance of the conceptual case underpinning elasticity adjustments, the Commission appears to be suggesting that elasticity adjustments should be made only if this is possible for all revenue categories for which it is relevant.
- All taxes impact the measured size of a tax base. However, the materiality of elasticity impacts on the Commission's assessments depends on three factors:
    - The sensitivity of the measured tax base to changes in tax rates. As the Commission rightly points out, the value of compulsory insurance transactions (excluding taxes) is likely to be insensitive to differences in tax rates. On the other hand, the volume of discretionary transactions, such as home and contents insurance, is likely to be more sensitive to differences in tax rates.

[8] 2025 Methodology Review - Draft Report June 2024, Stamp duty on conveyances, paragraph 41.

- The extent to which tax rates vary across jurisdictions. Where tax rates across jurisdictions are similar, relative elasticity impacts are likely to be small and immaterial.
- Where one state dominates a category, such as for iron ore, jurisdictional variations around the national average tax rate will not result in material changes for states with little revenue. In the case of the dominant state, differences between the national average tax rate and the rate imposed by the dominant state will be tiny and unlikely to have any material impact on the estimated size of the tax base.

- The impact of these three factors will vary between taxes. In some cases, the impact of elasticity adjustments will be material, while in other cases, the impacts will be immaterial or, at this time, not quantified. Not adjusting for known significant impacts on the basis that the same adjustment cannot be applied across all taxes risks the 'perfect being the enemy of the good'. We are not aware of other instances where the objective of equalisation is secondary to a desire for completeness.

2.9.2 Incomplete coverage of assessments – Mining revenue

- We understand the Commission is particularly concerned with its inability to apply elasticity assessments to the mining assessment. As the Commission's consultant pointed out, determining the size of the elasticity response in the mining sector is difficult. However, very importantly, the Commission has failed to also consider whether any plausible elasticity estimates for each mining category would be material to its assessments.
- **Iron ore, Lithium and Nickel:** Commission data indicate that Western Australia represents 99 per cent or more of the value of production for each of these minerals. Given this, the difference between the royalty rate in Western Australia and the national average royalty rate is insignificant and this is unlikely to impact the level of production. In the case of other states with very small revenues, any elasticity adjustments would be well below the Commission's materiality threshold. These minerals represent around 42 per cent of total revenue in the mining category.
- **Coal:** Commission data indicate that New South Wales and Queensland represent around 98 per cent of the value of production across Australia with state revenues rising rapidly in recent years reaching over $20 billion in 2022-23. Revenue from coal royalties represented 41 per cent of mining category revenues in 2022-23.
- Determining whether differences in royalty rates between New South Wales and Queensland impact on relative production levels in each state is complex. Prior to 2021-22, Commission data indicates that under the 2020 Review methodology, New South Wales consistently imposed lower than national average royalty rates, while Queensland royalty rates were above average.
- Since 2021-22, both states have increased coal royalty rates. In 2022-23, Queensland introduced additional tiers to its coal royalty rates which, along with a spike in coal prices, pushed its effective royalty rate to 40 per cent above the national average. Since then, coal prices have come off their peaks which would see Queensland's average royalty rate move somewhat closer to the national average.
- In the case of New South Wales, royalty rates increased by 2.6 percentage points from 1 July 2024. This will push the average royalty rate applied in New South Wales from around 7.5 per cent to around 10 per cent, or by roughly one-third.
- Based on the above, we conclude that up until July 2024, Queensland's average royalty rate has been above the national average, but from 2024-25 the average royalty rates in both states are broadly similar.
- Mining activity represents a long-term investment. Given this, once a mine is established, changes in royalty rates are unlikely to result in significant changes in production levels. Historically lower coal royalty rates in New South Wales may have resulted in additional coal production. However, moving forward, the alignment of average coal royalties in New South Wales and Queensland will negate this impact over time.
- Finally, we also conclude that if higher average royalty rates suppress coal production, the Commission's assessments have disadvantaged New South Wales for many years.

- **Gold:** Commission data indicate that gold production is spread across several states but is concentrated in Western Australia, which represents around 70 per cent of national production. Revenue collected from gold royalties across all states has averaged around $700 million per annum in recent years, representing 3 per cent of total revenue in the mining category.
- Western Australia imposes a royalty of 2.5 per cent of royalty value with the first 2,500 ounces produced by each project being exempt. Comparing assessed revenue with actual revenues published by Western Australia[9], the royalty rate in that state is around 85 per cent of the national average. This implies that Western Australia would need to increase its royalty rate to around 3 per cent if it were to apply a national average royalty rate.
- NSW Treasury has tested the sensitivity of the Commission's assessment to an elasticity adjustment for gold production. Assuming Western Australia's gold production fell by 10 per cent if it applied a national average royalty rate of 3 per cent[10], this would see its assessed revenues fall by $48 million, well below the Commission's materiality threshold. Similarly, given the scale of production in other jurisdictions relative to their populations, any other elasticity adjustments for other states would also fall below the Commission's materiality threshold.
- **Copper**: Commission data indicate that copper production is spread across several states. Revenue collections from copper royalties across all states has averaged around $350 million per annum in recent years, representing around 3 per cent of total revenue in the mining category.
- Nominal royalty rates for copper vary across jurisdictions which may impact on levels of mining production. However, based on the total revenues collected in this category, we find it implausible that these variations would produce a material impact on the Commission's assessments. We believe the Commission should test this assertion in a similar manner to the approach we adopted for testing the materiality of elasticity adjustments for gold.
- **Onshore oil and gas and other minerals**: Commission data indicate that onshore oil and gas and other minerals production is spread across several states but is concentrated in Queensland, which represents around 62 per cent of the value of national production. Revenue collections in the category have increased rapidly in recent years to $3.2 billion in 2022 23, representing around 9-10 per cent of total mining revenue.
    - **Onshore oil and gas**: Queensland Budget Papers indicate that it collected $2,350 million from petroleum royalties in 2022-23. Based on our research, Queensland is overwhelmingly the dominant state in this category. As with iron ore, we believe any elasticity impacts associated with interstate variations in royalty rates would result in an immaterial impact on the Commission's assessments. Data extracted from Budget Papers indicates that onshore oil and gas revenues are likely to represent 75 per cent of the total onshore oil and gas and other minerals category.
    - **Bauxite**: Representing revenue around $800-$900 million or 2-3 per cent of total mining revenue, we estimate that royalty revenue from bauxite and alumina is likely to contribute $200-$250 million from mines in Western Australia, Queensland and the Northern Territory. Given the small scale of these revenues, plausible elasticity adjustments are unlikely to result in a material change to assessed revenues. We invite the Commission to test this assertion with the confidential data provided to it by other states.
    - **Other minerals**: Representing revenue of around $600 million or 1-2 per cent of total mining revenue, this category consists of many sub-components. We believe that any plausible elasticity adjustments to mining production in this category are highly unlikely to result in a material impact on the Commission's assessments for any state.

[9] Overview of State Taxes and Royalties 2023-24 published by the Government of Western Australia, Department of Treasury.
[10] We believe such a large reduction in production is implausible.

- Based on the above analysis, we see little justification for a delay in applying elasticity adjustments to stamp duty on conveyances and land tax in the 2025 Review on the grounds that elasticity adjustments would not encompass mining revenue assessments.

2.9.3 Uncertainty over the overall direction of elasticity adjustments

- We know with a high degree of certainty that taxes reduce tax bases. The direction of any given adjustment is readily apparent. We note that the Commission's consultant reported elasticity range estimates for the four revenue heads which would see in all cases an increase in the tax rate reduce the value of transactions or the size of a tax base.
- We acknowledge, however, that some states may have both positive and negative adjustments to their assessed revenue across the range of taxes, depending on states' tax rates relative to the national average rate for each tax.
- We do not see this as a matter of significant concern. Where elasticity adjustments can be calculated and are material, they should be included. The sum of all positive and negative adjustments for a state will be the best available representation of the impact of elasticities on that state.
- This is no different to any other adjustment, driver or method employed by the Commission. Not all methods are able to be fully captured in all assessments. In some cases, materiality thresholds preclude the inclusion of known adjustments or drivers. This does not stop the Commission from introducing achievable, material adjustments or drivers. The same should be true of an elasticity adjustment.

2.9.4 Uncertainty over the magnitude of elasticity adjustments

- We do not consider this to be a valid reason for excluding elasticity adjustments in their entirety given the directional impact of tax elasticity is clear. We could accept that uncertainty would see the Commission adopt a conservative approach to any elasticity adjustments pending further evidence being provided by jurisdictions. As the Commission noted, we suggested that even using the bottom of the estimated elasticity range would be an improvement on the existing approached used by the Commission.
- However, the Commission has chosen to adopt an elasticity estimate of zero. This is outside the range provided by its consultant and outside any range consistent with economic theory. There is no sound basis on which such a decision can be justified.
- The Commission identifies that, 'while the elasticity impact remains material for stamp duty on conveyances, regardless of whether the bottom or the top of the range is used, the impact is uncertain.'[11] While we accept the impact of an elasticity adjustment for stamp duty on conveyances may be uncertain, what is certain is that the Commission's proposed elasticity adjustment of zero per cent is inconsistent with economic theory.
- Uncertainty over the range of the elasticity estimate is not an excuse for inaction.[12] As outlined above, there is no doubt that any elasticity estimate calculated in the future will be consistent with state taxes reducing the size of the measured tax base.

[11] 2025 Methodology Review - Draft Report June 2024, Stamp duty on conveyances, paragraph 42.

[12] The Commission frequently selects an appropriate value from a plausible range, such as in Housing where the Commission has identified various estimates of the appropriate cost weight for indigenous housing, the Commission has drawn from the range of estimates and determined a cost weight of 1.2.

2.9.5 Different elasticities can apply to different parts of the tax base

- Elasticities are an average estimate along a demand curve mirroring the range of tax rates reflected in the available data. At different points on the demand curve the estimated price elasticity differs.
- Estimated price elasticities provided by the Commission's consultant were developed around the tax rates currently imposed by states and therefore could be expected to reflect the world as it is, and not a hypothetical world with very different tax rates. This is consistent with the Commission's supporting principle of 'What states do' and is no different to the averaging approach taken by the Commission across a range of assessments.
- All the Commission's assessments involve some degree of approximation. For example, different areas of each state are placed in regional buckets for the ease of calculating regional cost gradients. It is obvious that such an approach is not perfect and ideally some form of continuous cost gradient would be preferrable. We note that for the 2024 Update, the recommended relativity of New South Wales was significantly affected by changes to the regional designation of various parts of the State.
- We do not believe that the Commission should be prepared to apply approximations in some areas of its calculations and not accept robust approximations in other areas, such as elasticity adjustments.

2.9.6 Sensitivity to the classification of revenues and potential volatility

- NSW Treasury has raised concerns regarding whether state expenditures are currently correctly classified to the appropriate functional assessment category. We believe the scope for misclassification of revenues is far less problematic, particularly for revenues likely to be impacted by elasticity adjustments.
- In the Draft Report, the Commission has raised the issue of the classification of emergency services levies and how these impact on elasticity adjustments for insurance taxes.[13] Insurance is often a discretionary transaction and therefore elasticity impacts from differences in tax rates between states could be significant.[14]
- Currently, the Commission undertakes two separate assessments for insurance taxes. In the case of emergency services levies, the Commission accepts that these insurance levies are, in essence, a user charge and therefore should be assessed on an equal per capita basis. We continue to support this view. However, we accept that the NSW emergency services levies result in a higher effective tax rate on some insurance products and need to be considered when determining the policy adjusted size of the NSW insurance tax base. We raised this in our Tranche 1 submission in the interest of being comprehensive and even-handed in our advocacy for elasticity adjustments.
- The introduction of elasticity estimates will introduce another factor (that is, a disability) into the Commission's assessment methodology and, by definition, this will introduce an additional reason for relativities to shift between successive updates. However, we are unaware of any decision by the Commission to favour stability over fiscal equalisation. We are aware of decisions by the Commission to smooth the impact of volatility in disabilities while still achieving equalisation outcomes over time.[15]

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[13] 2025 Methodology Review - Draft Report June 2024, Stamp duty on conveyances, paragraph 45.

[14] The impact of emergency services on the take up of property insurance is the driver behind current reform attempts in New South Wales.

[15] An example of this is the proposed new wages assessment.

2.9.7 Sensitivity to the tax base used

- The Commission has raised the issue of whether elasticity adjustments for land tax and stamp duty on conveyances should apply to the tax base before or after value distribution adjustments.[16] The Commission has expressed a view that elasticity adjustments should apply to the tax base before rather than after any value distribution adjustments. We believe this view is mistaken.
- The average tax rate applying for both stamp duty on conveyances and land tax in each jurisdiction is a result of:
    - The legislated tax rates, and
    - The value distribution of properties or land subject to tax.
- Consider the following example, two states (State A and State B) have identical progressive tax rates, but State B has what appears to be a higher average tax rate because the value distribution of properties or land is more skewed to higher values.
- Elasticity adjustments need to look through this apparent difference in average tax rates and consider only differences in legislative tax rates (the tax rates actually faced by purchasers or landowners). In doing so, the elasticity adjustment would be considering differences in tax rates between states for properties of the same value.
- The Commission's methodology calculates:
    - Tax revenues of each state if it applied the observed national average tax rate at a state level, and
    - Tax revenues of each state if it applied the observed national average tax rate in each value band.
- The ratio of the first to the second of these estimates is termed the value distribution adjustment (VDA).
- In the above example, the VDA for State A would be less than one while the VDA of State B would be greater than 1. The VDA is then applied to the observed tax base of each state to derive its assessed tax base. In practice, this will ensure that the ratio of actual to assessed revenue in each state is equal (as each state applies the national average tax schedule). This also results in the same average rate of tax for State A and State B (calculated as actual revenue divided by the assessed tax base).
- As outlined earlier, elasticity adjustments should only be made where the legislated tax rates differ between states. In practice, this is achieved by comparing average tax rates derived as the ratio of actual revenue to the assessed tax base. This was the approach adopted in our Tranche 1 submission to derive assessed revenues after elasticity adjustments.
- This matter is not merely hypothetical. Consider stamp duty rates in New South Wales and South Australia. A purchaser of a property valued anywhere between $1 and $3 million in South Australia will pay more in stamp duty than a purchaser of an identical property in New South Wales. Stamp duty is therefore depressing prices in South Australia more than in New South Wales. Yet New South Wales, per the Commission's data, has a higher average stamp duty rate. This is a consequence of higher land values.

2.9.8 The appropriateness of using estimated elasticities when there are large differences in tax rates

- As discussed above, tax rate elasticities are an average estimate along a demand curve mirroring the range of tax rates reflected in the available data. Generally, each jurisdiction keeps their tax rates broadly comparable to other states. This will minimise any problems that arise from a point estimate of elasticity. Nevertheless, as outlined above, all the Commission's assessments involve some degree of approximation. We see no

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[16] Draft Report, Stamp duty on conveyances, paragraph 52.

difference in the approximation entailed in making elasticity adjustments and in other areas of the Commission's assessments.

- Conceptually, where tax rates do vary significantly, the need to make elasticity adjustments becomes even greater. It is the difference between a state's tax rate and the national average tax rate that renders the Commission's current approach unreliable.
- We have suggested elasticity adjustments for land tax and stamp duty on conveyances. The possible impacts of differences in tax rates between the states for the two revenue categories are discussed below:
    - Land tax: Average tax rates for the mainland states in 2022-23 ranged from 0.53 per cent to 0.86 per cent. In the case of Tasmania and the ACT, average tax rates in excess of 1 per cent are imposed, while land tax is not imposed on the Northern Territory. As discussed below, NSW Treasury has proposed an approach to adjust the land value tax base for differences in tax rates between jurisdictions.
    - Stamp duty on conveyances: Average tax rates for states in 2022-23 ranged from 3.7 per cent to 4.9 per cent with the ACT imposing an average tax rate of 2.8 per cent, while in the Northern Territory an average rate of 5.3 per cent applied.
- We believe that differences in tax rates of this order of magnitude do not invalidate the elasticity estimates provided by the Commission's consultant and New South Wales. This is reflected in the plausibility of the adjustments we calculated and proposed in our Tranche 1 submission.

2.9.9 Inability to capture cross-elasticities

- We acknowledge the presence of cross-elasticities. We contend, however, that in the case of land- and property-based taxes, these cross-elasticities would be mutually reinforcing and, at any rate, very likely immaterial.
- **Stamp duty on Conveyances**: Our Tranche 1 submission suggested that a 100 basis point increase in stamp duty on conveyances (e.g. increasing the tax rate from 4 per cent to 5 per cent) reduced transaction volumes by about 10 per cent. The submission also acknowledged that differences in stamp duty rates on conveyances would impact on both transaction volumes and property prices. Given this, we would expect some feedback to the land tax base from above and below national average transfer duty tax rates.
- To test the significance of this feedback, we simulated the impact on the land tax assessment of changes in land prices arising from a cross-elasticity with stamp duty on conveyances[17]. We found any impacts of this interaction fell below the Commission's materiality threshold. In undertaking this analysis, we assumed that the price impact of higher or lower stamp duty on conveyances was equal to the volume impact suggested in our Tranche 1 submission. That is, 100 basis point increase in stamp duty on conveyances reduced both transaction volumes and land prices by about 10 per cent. We note that such an assumption is well above the elasticity estimates provided by the Commission's consultant. In making such an assumption, we demonstrate that even very large cross-elasticity effects are unlikely to produce a material change in GST distributions.

Table 2-4: Impact on Assessed Revenue of Differences in Stamp Duty on Conveyances Tax Rates on Assessed Land Tax Revenue

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
% change in stamp duty on conveyances tax base (1)									
	-0.7%	5.1%	-5.3%	-0.3%	-0.4%	2.5%	-12.6%	-3.1%	0.0%

[17] Economic theory suggests that impact of differences in stamp duty rates on property prices will fall on the value of land.

Impact on assessed land tax revenue (2)

- $mill	-53.4	151.3	-75.9	-23.7	8.2	1.8	-8.7	0.5	0.0
- Per Capita	-7	23	-14	-9	4	3	-19	2	0

(1) Volume of transactions effect as per NSW Treasury elasticity estimates.

(2) Assuming (very conservatively) that the price effect is equal to the volume effect and is fully reflected in land prices.

- **Land Tax**: Our Tranche 1 submission pointed to the significant impact on the price of high valued properties from differences between states in land tax rates. Given this, it would be expected that higher than average land tax rates will reduce both observed land and stamp duty on conveyancing tax bases, and therefore assessed revenues in both categories.
- For the 2025 Review, we believe that adjusting the stamp duty on conveyancing tax base for differences in land tax rates across states is likely to be a 'bridge too far' and we will take up this matter as part of the 2030 Review.
- However, NSW Treasury urges the Commission to go part way to address this inequity in the calculation of assessed land tax revenues by adjusting for the significant impact on high valued properties of differences in tax rates between states.
- Finally, in respect of both stamp duty on conveyances and land tax, we note that higher rates of tax on either conveyancing tax rates and land act to reduce the assessed tax base of both taxes. Given this, the approach we have suggested in our Tranche 1 submission (which effectively ignores cross-elasticities considerations) will inevitably underestimate the required elasticity adjustments. Nevertheless, adopting the suggested approach in our Tranche 1 submission will unambiguously move equalisation in the right direction.

2.9.10 The added complexity and increased reliance on Commission judgement

- We accept that elasticity adjustments will require the Commission to make decisions on several technical assessment issues. However, once these decisions are made, the arithmetic of adjusting for elasticity impacts is relatively straightforward.
- We have outlined our thoughts on the issue of whether elasticity adjustments should be made before or after value distribution adjustments in a separate section above.
- With regard to the need for the Commission to apply judgement, we note that this is a core role and the Commission has applied judgement in every other area of its operations to arrive at its current methods. We see no difference in applying judgement in the area of tax elasticities. We note that even in deciding not to introduce an elasticity adjustment, the Commission is exercising its judgement.
- We agree the Commission should try and avoid the need to use judgement where the evidence for a disability is thin. However, where the evidence for a disability is clear and quantified, we do not see that this involves an excessive use of judgement. We accept that the Commission's consultant has provided a range of estimated elasticity rates for stamp duty on conveyances. We believe selecting the bottom of this range involves no greater judgement than used in any other assessment where a point estimate is selected from a potential range, as is the case across multiple assessments.

2.9.11 Elasticity and land tax

- The Commission notes our proposal that elasticity adjustments for land tax should be applied only to properties above $5 million. To clarify, this position is one of practicality only. Differences in land tax rates between states will impact the price of all land in a state.

- Adjusting the land tax base for interstate differences in tax rates is more complex than for other state taxes as a different proportion of properties in each value range across the economy are subject to land tax. For example, consider a situation where land tax was introduced at a flat rate of 1 per cent on all land. Economic theory, and real-world analysis, indicate that land prices would be lower than would otherwise be the case because of the tax[18]. Now modify the tax to exempt owner occupied residential land which is currently around 70 per cent of residential properties. Under such a model, the new land tax would see the price of residential land fall by less than where the land tax applied to all residential land. Extending this example further, now modify the land tax to introduce a threshold which exempts a significant segment of low valued land. Again, aggregate land values will fall by less than previously with the fall in land prices now concentrated in higher valued land.
- The Commission's consultant determined an elasticity range for land tax of -0.054 to -0.062. That is, a 10 per cent increase in the tax rate will reduce the overall unimproved value of taxable land by about 0.6 per cent. As the consultant acknowledges the estimated elasticity is an average across the entire land value tax base. The consultant assumed the effect of the tax rate is constant across all value ranges.
- We agree with the Commission that there are significant differences in land value elasticities depending on the value of the land. For example, land tax only has a minor impact on rental residential land values as a large proportion of residential land is exempt from tax through the owner occupier exemption or is below the tax-free threshold. This results in land tax having a muted impact on low-valued land. However, the reverse is the case for properties with a high land value where most properties across the economy fall within the land tax net. The impact of land tax on property values therefore increases rapidly as the value of individual pieces of land increases[19].
- The Commission has suggested that elasticity adjustments for land tax are immaterial[20]. In undertaking this analysis, the Commission has adjusted all land values by the estimated average elasticity provided by the consultant. However, as outlined above, the impact of land tax varies considerably with the price of property. To correctly make elasticity adjustments for land tax requires each price band to be adjusted by a progressively higher elasticity (due to the higher proportion of properties being subjected to tax). Under such an approach, the weighted average of these adjustments by price band would equal the estimated average elasticity provided by the consultant. We believe that if the Commission adopted this approach, it would conclude that the impact of introducing an elasticity adjustment for land tax is material.
- We accept that at this time data constraints likely make it impractical to adopt the correct theoretical approach outlined above. It is for this reason, we suggested in our Tranche 1 submission an approach which moves the assessment in the right direction by adjusting for the impact of interstate differences in land tax rates for high valued properties only. We believe it is reasonable to assume that the overwhelming proportion of properties in high value ranges across the economy are within the land tax base. This is particularly the case for central business district (CBD) property.
- Given the consultant has not provided elasticity estimates for individual price ranges, our suggested approach to elasticity adjustments for high valued properties fell back on an income approach to asset pricing. Under this approach, the value of an asset is based on the discounted cash flows generated by the asset. Differences in land tax rates between states therefore have a direct impact on net cash flow associated with a property. There is little doubt that differences in land tax rates for high land valued properties impact on the price of land[21].

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[18] The taxation of any investment lowers the value of the investment.

[19] This arises because both the rate of tax increases and the proportion of total properties captured within the land tax base increases.

[20] 2025 Methodology Review - Draft Report June 2024, Land Tax, paragraph 35.

[21] It would appear axiomatic that a doubling of land tax on Sydney CBD properties would have a significant impact on measured land values.

- We therefore urge the Commission to make at least a partial adjustment (i.e. a conservative adjustment) for land tax elasticities by adjusting land values in price brackets above $5 million for differences in tax rates between states. We also note the importance of this adjustment as a very large proportion of the GST redistribution between states from the land tax assessment arises from high valued properties.

3 Schools

- NSW Treasury supports the Commission's position to include variables in the schools regression reflecting differential costs associated with primary and secondary schools.
- We note the Commission's position that the Nationally Consistent Collection of Data on School Students with Disability is not yet sufficiently consistent across states to use in the regression. We note that the Commission will apply the regression-based model, calculated only on mainstream schools, to state spending on both mainstream and special schools.
- We support the Commission's position to continue to use its regression approach to reflect what states do in funding schools, rather than the Schooling Resource Standard.
- We note the Commission's position to shift to the lowest decile of socio-educational advantage for government schools, in contrast to the lowest quartile, and analysis that indicates a more granular approach would better reflect the needs of states. The Commission otherwise tested the bottom two quartiles and the bottom three deciles as alternatives.
- We note the Commission's position to shift to the lowest two quartiles of socio-educational advantage for non-government schools, in contrast to the lowest quartile. The Commission identifies that this has a positive and significant coefficient, larger than the lowest quartile.
- We note the Commission intends to apply First Nations variables to the non-government schools regression instead of regional cost variables, as this had greater explanatory power.
- We note the Commission will consult with states on changes in regression model specifications, particularly in relation to potential changes in First Nations variables.
- We note the Commission will not introduce a variable for students who speak a language other than English. The Commission has identified that a culturally and linguistically diverse (CALD) driver will be considered as part of its forward program of work. We support the Commission further investigating this matter.
- We note the Commission's position to continue to include early childhood education spending with school spending.
- We note the Commission's position to retain ABS remoteness classifications.

4 Post-secondary education

4.1 Post-secondary education regional cost gradient

NSW Treasury position:

- For the Commission to review the reasonableness of the change in the post-secondary education regional cost gradient for the 2025 Review.

- NSW Treasury requests further analysis from the Commission on the change in the regional cost gradient for post-secondary education. While we recognise state data quality can change over time, we would expect regional gradients to be relatively aligned across similar jurisdictions. Changes in state regional cost gradients between the 2020 and 2025 Reviews is presented in Table 4-1.

Table 4-1: Comparison of state regional loadings for post-secondary education

2020R Loading	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
1.Major cities of Australia	1.00	1.01	1.00	1.00	1.00	0.00	1.00	-	1.00
2.Inner regional Australia	1.10	1.09	1.13	1.11	1.02	1.10	1.00	-	1.10
3.Outer regional Australia	1.10	1.10	1.18	1.40	1.14	1.10	-	1.17	1.17
4.Remote Australia	1.20	1.10	1.57	1.93	1.25	1.10	-	1.20	1.53
5.Very remote Australia	1.20	-	2.04	1.98	1.37	1.10	-	1.93	1.91
2025R Loading	**NSW**	**Vic**	**Qld**	**WA**	**SA**	**Tas**	**ACT**	**NT**	**Total**
1.Major cities of Australia	1.00	1.01	1.00	1.00	1.00	-	1.00	-	1.00
2.Inner regional Australia	1.10	1.09	1.13	1.40	1.02	1.12	1.00	-	1.12
3.Outer regional Australia	1.10	1.10	1.17	1.50	1.14	1.40	-	1.18	1.20
4.Remote Australia	1.20	1.10	1.59	2.90	1.25	1.44	-	1.20	1.91
5.Very remote Australia	1.20	-	2.12	3.20	1.38	1.44	-	1.37	2.19

Source: Commission 2025 Draft Report simulator data, 2020 Review simulator data.

- We are uncertain what has, or what could have, driven Western Australia's 50-60 per cent increase in both the remote and very remote categories. This has resulted in a material increase in the slope of the post-secondary assessment regional cost gradient. This is notably higher than both Queensland and the Territory, as somewhat comparable jurisdictions.
- We believe the growth in these data points between the 2020 and 2025 Reviews necessitates further review, given the reliance on state data to derive this gradient. We note that state post-secondary education gradients were published in the Draft and Final Reports in 2020.

4.2 Post-secondary education assessment positions

- NSW Treasury supports the Commission's decision to not introduce a course mix driver on materiality grounds and consider its supporting analysis to be robust.
- We note that the cross-border adjustment between New South Wales and the ACT will be updated when appropriate, subject to the finalisation of any agreement for New South Wales to reimburse the Canberra Institute of Technology directly.
- We note that the Commission has re-estimated the socio-demographic cost (SDC) weights in this assessment using new data.

5 Health

- NSW Treasury strongly supports the recognition of COVID-19 expenditures and revenues for the 2025 Review and the 2026 Update. This will partially reduce the poor equalisation outcomes caused by COVID-19 in this assessment. While this will not make some states whole, due to the inability to apply critical method changes through the 2021 to 2024 Updates, it is nonetheless a welcome improvement. We disagree with the Commission's view that it is not best placed to adjudicate on residual unpaid quarantine costs as we consider this to be a straightforward cross-border matter, the likes of which are routinely included in Commission assessments.
- We are supportive of the variety of technical adjustments that the Commission has proposed. We support reducing the reliance on proxies and believe that the changes proposed will make the assessment more representative of health activity in states.
- The shift in the Admitted Patients (AP) non-state sector indicator, from separations to expenses, is more representative of the effects of the non-state sector in this component. We support the adjustment as it better reflects the costs states avoid due to their non-state sectors.
- We acknowledge the Commission's preference to defer comprehensive review of the non-state sector model to the proposed forward work program. This is a reasonable course of action, noting disparate state views on the appropriateness of the model. A discount may still be warranted for the 2025 Review, given the apparent uncertainty and lack of supporting evidence for the current approach.
- Other potential adjustments that we consider could still improve the quality of the assessment before the Final Report are considered in this response.

5.1 Treatment of COVID-19 impacts

Draft Commission position:

- To introduce a separate assessment of COVID-19-related public hospital and public health services expenditure and treat relevant Commonwealth payments as 'impact'.
- To not introduce retrospective COVID-19 adjustments for the 2021 Update to 2024 Update.
- That the Commission does not have the mandate to adjudicate on unpaid quarantine costs.

- NSW Treasury supports the Commission's decision to implement an adjustment for health expenditures incurred by states in response to COVID-19. This was an international pandemic that required a comprehensive national response, with alignment between states and the Commonwealth. This alignment was actioned through the National Partnership on COVID-19 Response.
- The Commission has previously outlined its preferred approach for recognising COVID-19 costs and has been cognisant of the impact of COVID-19 in worsening the equalisation outcome in recent years. The Commission's preference to adjust for COVID-19 has long been established through commentary in New Issues papers for previous updates.
- It is correct for the Commission to identify that the existing Health assessment was not able to fully explain the differences between state spending on COVID-19. The epidemiological drivers of COVID-19 spending do not align with the socio-demographic drivers used through this assessment. This has resulted in states relatively less impacted by COVID-19 receiving a windfall gain at the expense of states bearing the brunt of the pandemic.
- Further, state responses were policy neutral and were undertaken due to circumstances materially outside of state control. We have provided commentary on this matter in our Tranche 1 submission, as well as

responses to past New Issues papers. We continue to vehemently disagree with states that imply the experiences of other states stem from policy decisions, rather than being caused by the uncontrollable nature of a global pandemic.

- While the Commission has hitherto been unable to implement its preferred method changes due to the Terms of Reference in annual updates, we appreciate that the Commission has recognised these COVID-19 impacts now that it has the scope to do so.
- We acknowledge that the proposed adjustments will only correct for the 2025 Review and the 2026 Update. The last year impacted by the National Partnership on COVID-19 response, 2022-23, will drop out of the assessment years for the 2027 Update. Accordingly, this will only partially correct for the impacts of COVID-19 on equalisation.
- We are disappointed that the Commission will not make a retrospective adjustment to recognise COVID-19 costs in previous years. We acknowledge, however, that the Commission considers such an adjustment is beyond its remit.
- We also support the Commission's approach to use data on the reconciled value of payments rather than the Final Budget Outcome. This is a more accurate breakdown of state spending.
- We note the Commission's view that, based on state feedback, there are no ongoing implications from COVID-19 for the assessment. We consider that there are ongoing costs related to COVID-19 as well as potential changes to how services are delivered. It is probable that these changes will be sufficiently represented in the existing assessment approach. Nonetheless, we consider that the Commission should monitor the long-term impacts of COVID-19 over future updates.
- We do not accept the Commission's position that it does not have the mandate to include unpaid state quarantine costs in the health assessment. New South Wales incurred costs on behalf of citizens in other states. Where this happens elsewhere, the Commission makes a cross-border adjustment in its assessments. We consider this is a straightforward example of cross-border services requiring adjustment. Further, we note that both Queensland and New South Wales have indicated their support for the Commission considering this matter.
- If the Commission does not consider the provision of quarantine services for other states' citizens an example of a cross-border adjustment, we would seek clarity on why other cross-border adjustments are eligible for inclusion in the Commission's methodology.

5.2 Adjustments for community and public health services

Draft Commission position:

- To introduce a direct measure of the use and cost of specialised community mental health activity for ambulatory services only.
- To expand the proxy indicator of community and public health services to include a subset of non-admitted patient allied health services.
- To implement a split of 55 per cent ED triage category 4 and 5 and 45 per cent for non-admitted patient services.

- We support the Commission's decision to implement a direct measure of activity from Australian Institute for Health and Welfare (AIHW) data. While we consider it would be ideal if the entirety of the component could be captured via the direct measure, we recognise that a primary concern of the Commission was that services covered by AIHW data do not represent the full range of state community mental health services and that socio-demographic characteristics appear to reasonably differ.

- We therefore support the Commission's decision to only introduce the direct measure for approximately 66 per cent of community mental health expenditure, based on Report on Government Services (ROGS) data. In future work, the Commission should continue to consider ways that this data could be used to produce results for the residual expenditure in this component.
- Based on comparative data of regional gradients outlined in Table 5-1, NSW Treasury consider it more appropriate that a mixture of non-admitted patients (NAP) and emergency departments (EDs) is used to derive a remoteness gradient for this expenditure, rather than the existing regional cost-service delivery scale (SDS) gradient.
- Given the Commission already uses an ED proxy in this assessment and is appropriately proposing to extend it to incorporate NAP, it is unclear why the inclusion of a range of non-health services would improve the robustness of the regional gradient, compared to the regional gradient of services already known to be similar.

Table 5-1: Comparison of regional cost-service delivery scale gradient options

Category	Non-admitted patients	Emergency departments	Combined NAP / ED (45% / 55%)	Admitted patients	Combined regional cost / SDS gradient
Major cities	1.00	1.00	1.00	1.00	1.00
Inner regional	1.02	1.03	1.03	1.03	1.03
Outer regional	1.06	1.12	1.10	1.07	1.07
Remote	1.10	1.15	1.13	1.09	1.21
Very remote	1.44	1.38	1.41	1.38	1.45

Source: 2025 Draft Report simulator data

5.2.1 Adjusting the proxy to including NAP services

- We support the Commission's analysis to identify NAP services similar to community and public health services. This is a reasonable approach to ensuring the updated proxy is fit for purpose and sufficiently representative of community and public health service users.
- We note that the Commission identified that the inclusion of all NAP services along with relevant triage ED 4&5 category activity would result in a 26:74 split in the proxy (ED to NAP). However, with the Commission's analysis of only including similar NAP services, a 55:45 split appears to be reasonable. We support the Commission's conclusions.

5.3 Maintaining the existing proxy for public health services

Draft Commission position:

- To maintain a hospital-based proxy for public health activity.

- NSW Treasury disagrees with the Commission's position to retain a hospital-based proxy for all public health expenditure. We support the extent of analysis provided in response to our Tranche 1 submission and other state views supporting a change for public health. However, we consider that the evidence put forward by the Commission instead reinforces the need for a change to the proxy indicator, rather than confirming it should be retained.
- The Commission identifies that a hospital proxy 'is simpler and produces a reasonable estimate' of state spending needs.[22] While we agree that the approach is simpler, we have not seen evidence this represents a reasonable estimate of state spending needs.
- The Commission has undertaken analysis to identify socio-demographic drivers of grouped public health services, excepting 'Other public health services'. These groupings make up 83-89 per cent of total expenditure for public health from 2019-20 to 2021-22. NSW Treasury has repeated the Commission's analysis in Table 5-2 and Table 5-3, though have adjusted Table 5-3 to remove 'Other public health services' from the cost weighting.
- We recognise that COVID-19 will impact the expense weights between groupings of public health services due to the focus on 'Communicable disease control', but the Commission can account for this by updating data on a yearly basis.

Table 5-2: Higher use or targeting of public health services by socio-demographic group[23]

Group of services	**Usage (or targeting) of services by socio-demographic groups**			
	Age	Remoteness	SES	Indigenous status
Cancer screening	20+	Urban / Regional	Higher SES	Non-Indigenous
Organised immunisation (targeting)	Younger	-	-	First Nations
Selected health promotion (targeting)	-	Regional / Remote	Lower SES	First Nations
Communicable disease control (targeting)	Older	-	Lower SES	First Nations
Environmental health (targeting)	-	-	-	First Nations

[22] 2025 Methodology Review - Draft Report June 2024, Health, paragraph 103.

[23] 2025 Methodology Review - Draft Report June 2024, Health, Table 5.

Table 5-3: Public health weights, various years[24]

	2014-2016	2019-2020	2020-2021	2021-2022
	%	%	%	%
Cancer screening	18	14	7	4
Organised immunisation	25	19	14	18
Selected health promotion	30	23	17	19
Communicable disease control	19	36	57	57
Environmental health	8	7	6	2
Indigenous status[1]	*82*	*86*	*93*	*96*
Remoteness	*30*	*23*	*17*	*19*
Socio-economic status	*49*	*59*	*74*	*76*
Age	*63*	*49*	*36*	*39*

[1] SDC percentages are derived from Table 5-2 that identifies the Commission's view on usage by SDC grouping.

- Per Table 5-2, the Commission has identified that all service groupings except 'Cancer screening' are used / targeted at a higher rate for First Nations populations. Per Table 5-3, this would suggest that 82-96 per cent of public health expenditure has a First Nations driver.
- Given the high per cent of expenditure that can be linked to First Nations populations, NSW Treasury considers that it is reasonably appropriate to retain a First Nations weighting across all public health expenditure, recognising simplicity and materiality.
- Per Table 5-2, the Commission has only identified 'Selected health promotion' as being used / targeted at a higher rate in regional and remote communities. Per Table 5-3, this indicates between 17-30 per cent of total expenditure should have a regional gradient. It is identified that 'Cancer screening' is used / targeted at urban and regional communities at a higher rate.
- Given the low level of public health expenditure that the Commission links to remoteness, NSW Treasury contends that the Commission needs to re-evaluate its decision to apply a remoteness driver to 100 per cent of public health expenditure.
- Per Table 5-2, the Commission has only identified 'Selected health promotion' and 'Communicable disease control' as being used / targeted at a higher rate for lower-socio-economic status (SES) individuals. Table 5-3 indicates that between 49-76 per cent of total expenditure should have a link to lower-SES users. This data will be impacted by COVID-19. It is identified that 'Cancer screening' is used / targeted at higher-SES individuals at a higher rate.

[24] 2025 Methodology Review - Draft Report June 2024, Health, Table 6.

- While a high percentage of expenditure is captured under SES drivers, between 24-51 per cent is either not driven by SES factors or is linked to higher-SES in Table 5-3. The Commission could undertake its analysis again with a reduced SES driver.
- Per Table 5-2, the Commission has identified 'Communicable disease control' as being used / targeted at a higher rate for older individuals and 'Cancer screening' for those above the age of 20. Table 5-3 indicates that between 37-64 per cent of total expenditure has an older age driver. It is identified that 'Organised immunisation' is used / targeted at young-age groups at a higher rate.
- While a high percentage of expenditure is captured by older age drivers, between 36-63 per cent is either not driven by age factors or is linked to younger age groups per Table 5-3. The Commission could undertake its analysis again with a reduced age driver.
- NSW Treasury requests that the Commission test the materiality of adjusting the public health expenditure assessment to not use the existing hospital-based proxy. At minimum, it is unclear how the application of remoteness costs to the entirety of public health service expenditure is appropriate.
- The Commission should test reducing the weighting of certain drivers, particularly remoteness, and evaluating whether that result is closer to the hospital-based proxy or to an equal per capita assessment. This would provide greater confidence in the Commission's position that its existing assessment produces a reasonable estimate.

5.4 Maintaining a 12.5 per discount in community and public health

Draft Commission position:

- To retain a 12.5 per cent discount for the share of the community and public health assessment that relies on proxy data.

- NSW Treasury supports the Commission retaining the 12.5 per cent discount. We note our position that the 2020 Review's reduction was not appropriately evidenced and that the Commission should not undertake a further reduction. It remains reasonable that the use of proxy indicators justifies the continued use of a discount.
- It is appropriate, with the introduction of a direct measure of activity, to exclude ambulatory community mental health service expenditure from the discount.

5.5 Updating the emergency department substitutability level

Draft Commission position:

- To use the AIHW method to update the emergency department substitutability level.
- To use the 2020 Review substitutability level of 15 per cent instead of the 13 per cent substitutability level under the AIHW method calculated for the 2025 Review.

- NSW Treasury supported the Commission's decision to use AIHW data as a proxy to update the emergency department substitutability level, in the absence of more timely alternative options. However, we do not agree with the Commission's proposed rate of 15 per cent:

'The Commission proposes to update the substitutability level using the [AIHW] method for measuring substitutable services. This ***method produces an estimate of 13%****, similar to the level from the 2020 Review (15%). The Commission proposes to* ***maintain the substitutability level at 15%****'.*[25]

- We do not consider it necessary or appropriate to round from 13 to 15 per cent. The calculation will remain as straightforward using the calculated 13 per cent substitutability level.

5.6 Changes to admitted patients non-state services factors

Draft Commission position:

- To retain a 15 per cent substitutability level.
- To introduce expenses measured by benefits paid by private health insurers as the proxy indicator for private patient activity, instead of hospital separations.

5.6.1 Maintaining a 15 per cent substitutability level

- We acknowledge the Commission's decision to retain the 15 per cent substitutability level for admitted patients.
- We note that the Commission has determined it will take self-funded patients into account in estimating the substitutability level, resulting in a 25-29 per cent share of comparable services after accounting for private health insurance coverage and self-funded patients.
- As the Commission correctly identifies, this would be an upper bound after accounting for patients not using their private health insurance as well as the examples provided in our previous submissions. We support the recognition that comparable services and substitutable services are distinct concepts when determining substitutability levels.
- The Commission has also identified a lower bound of 8 per cent, based on non-state sources of funding for private patients treated in public hospitals. This has established a range of potential substitutability for this component.
- We remain uncertain that 15 per cent is the most accurate estimate but appreciate that significant judgement is required for this component's substitutability level.

5.6.2 Change to proxy indicator of non-state activity

- NSW Treasury supports the Commission's decision to introduce a more appropriate proxy measure of non-state activity in expenses, rather than separations. A measure for per-person service costs would be preferable than hospital separations in isolation.
- We concur with Queensland's position that separations do not provide an appropriate indication of the different costs of treating patients for different ailments. The Commission's alternate option, of expenses rather than bed days, is appropriate in recognising per-person service cost while also being available in a state-by-state format. However, the Commission raises an important implication of its use of expenses:

[25] 2025 Methodology Review - Draft Report June 2024, Health, paragraph 145.

'The implication for the Commission of using expenses as a proxy indicator of activity when there are differences in average expenses per separation across states is that a state with above-average per separation expenses will appear to have a higher level of activity than a state with below-average expenses per separation, for an equivalent level of activity (standardised casemix).'[26]

- We note the Commission's point. However, we consider that the counter point is that the existing approach implies a state with above-average separations activity will appear to have a higher level of cost avoidance, even if this is not the reality due to differing complexities in providing service.
- The Commission should be endeavouring to determine the costs avoided by states from the non-state sector. An expenses measure is simply a better representation of cost avoidance and non-state sector influence than separations. We support the move to use expenses rather than separations as a proxy indicator of the non-state sector.

5.6.3 Additional admitted patients non-state comments

- We note the Commission's position that further work is required to understand the relationship between private health insurance coverage and hospital activity funded by private health insurance. We remain concerned with the significant differences between states in respect of this data, particularly as the use of private health insurance remains critical to this component. It is appropriate to include this as part of the proposed forward work program.
- The Commission notes that AIHW data on actual hospital activity funded by private health insurance is not disaggregated for the three smallest states (Tasmania, the ACT, and the Territory), leading to the use of Australian Prudential Regulation Authority (APRA) data. We have suggested that APRA data can be used to disaggregate these states' activity in the AIHW data, allowing the more-desirable AIHW data to be used in this component.
- We would seek further comments from the Commission on why APRA data cannot be used to disaggregate AIHW data. This is in line with other solutions that the Commission uses to correct for data or timeliness issues across other assessments.

5.7 Retaining the community and public health services substitutability level

Draft Commission position:

- To retain a 60 per cent substitutability level, recognising later data years are impacted by COVID-19.

- We acknowledge the Commission's position that COVID-19 has likely influenced the expense weights in 2020-21 and 2021-22 and that the Commission has elected to retain the 60 per cent substitutability rate. Given uncertainty from more recent years of data, this may be an appropriate position.
- However, we would consider that even though COVID-19 likely influenced the expense weights, we do not expect that 'Communicable disease control' will completely revert to long-term trend and will likely retain a higher expenditure share for the foreseeable future.

[26] 2025 Methodology Review - Draft Report June 2024, Health, paragraph 148.

- Similar to our arguments for the substitutability rate for emergency departments and non-admitted patients, the decision of the Commission to round the number down is not based in evidence. However, this method is not based on recent data or derived from a rigorous method of determining a substitutability level, unlike the emergency department and non-admitted patients assessments, so there is less confidence about an appropriate figure.
- We note the Commission continuing to assess Commonwealth-funded services provided by First Nations community health organisations in the separate adjustment for Community Controlled Health Services and that the use of these services is not included in the broader non-state sector adjustment.

5.8 Updating the non-admitted patient substitutability level

Draft Commission position:

- To use the midpoint between the two non-admitted patient methods to derive a final estimate for the substitutability level.
- To use the 2020 Review substitutability level of 30 per cent instead of the 28 per cent midpoint of the two methods calculated for the 2025 Review.

- NSW Treasury supports the Commission decision to retain the two existing methods to determine a non-admitted patient substitutability rate, via application of a midpoint. However, we disagree with the Commission's proposed rate of 30 per cent, as it does not align with the Commission's position to use the midpoint. Per the draft report:

> *'Based on the latest available data from 5 states, method 1 produces a substitutability rate of 37% and method 2 a rate of 20%,* ***with a midpoint of 28%.*** *The midpoint is close to the 2020 Review value of 30%. The Commission proposes to* ***maintain the substitutability level at 30%*** *for the 2025 Review'.*[27]

- For the 2025 Review, the most-up-to-date state data evidence a substitutability rate of 28 per cent, derived from the midpoint of the two methods. However, the Commission subsequently rounds this figure to 30 per cent. It is entirely arbitrary to adjust the substitutability rate to be in line with the 2020 Review. There is no clear rationale given for the 2 per cent increase.
- This position worsens the non-state equalisation outcome as it shifts millions of dollars of revenue between states without rationale. The Commission should simply use the figure derived from the midpoint of the methods, rather than arbitrarily adding 2 per cent. We do not consider there to be sufficient rationale to use 30 per cent instead of the calculated substitutability level. This cannot be a matter of simplicity, as the calculation is as straightforward whether 28 or 30 per cent is used.

[27] 2025 Methodology Review - Draft Report June 2024, Health, paragraph 199.

5.9 Consideration of the overall non-state sector model

Draft Commission position:

- To review the non-state sector model in the inter-Review period and not make major changes to the existing model during the 2025 Review.

- NSW Treasury notes the Commission's intention to defer more detailed review of the existing non-state sector substitutability model to after the 2025 Review. This item is included as part of the Commission's proposed forward work program. Given the disparate views of states on this model, we concur it is appropriate to defer more comprehensive work on non-state sector adjustments until after the 2025 Review.
- In the absence of a perfect model, the existing direct method approach may remain the most appropriate, particularly compared to other suggested models such as the former subtraction method and the method identified in Western Australia's submission.
- However, as raised in our supplementary submission, there is significant doubt about the relevance of any non-state model. This specifically pertains to whether the conceptual position, that the health non-state sector reduces the state sector's need to provide services, is demonstrated through available national health data on selected proxies. We contend that this level of uncertainty, about whether the conceptual case exists based on the available data, remains sufficient grounds to introduce a discount on the non -state sector adjustment.
- We have replicated analysis from our supplementary Health submission to include data covering additional years as part of Section 5.11.
- We note that the Commission has agreed that factors identified in our Tranche 1 and supplementary submissions are likely to impact the extent to which non-state services reduce demand for state health services. The Commission identified factors including:
    - non-state services encourage additional demand for substitutable state health services rather than offsetting existing state demand.
    - the timely availability of non-state services.
    - non-state services not always having sufficient capacity to fully replace all state substitutable services.
    - patient decision-making being outside of state sector control, with patient preferences for state services stemming from both perception and health literacy.
- However, the Commission identifies that these are not quantifiable. While we would agree that these are likely difficult to quantify, we are confident that they reduce substitutability and would seek that further investigation of these factors is part of the larger review of the non-state sector model proposed for the forward work program.

5.10 Other Health assessment positions

- NSW Treasury notes the Commission's concern about people in similar circumstances potentially using health services at significantly different rates, based on issues raised by Queensland and the Territory. We will work with the Commission to consider alternate approaches as part of the proposed forward work program. We note that this is an unavoidable artefact of averaging and that the Commission relies on averaging across all its assessments.

- The Commission has identified that a CALD driver will be considered as part of its forward program of work. We support the Commission further investigating this matter.
- We appreciate the Commission testing the materiality of updated age bands and note its intent to retest the materiality in the next review. This is appropriate given the continued aging of the population.
- We note the Commission's position on cost weights for people travelling from regional and remote areas to major cities for treatment.
- We note comments on the National Health Reform Agreement regarding payments potentially funding non-state responsibilities and the Commission's view that any changes are subject to agreement from the Commonwealth and states.
- We note the Commission continuing to separate non-hospital patient transport into its own assessment given uncertainty about the extent patient transport costs are included in admitted patient national weighted activity units (NWAUs). This should continue to be monitored prior to the 2030 Review.
- We note the impacts of updated data adjustments for NSW-ACT cross border services and the updated state spending split between hospital and non-hospital patient transport.

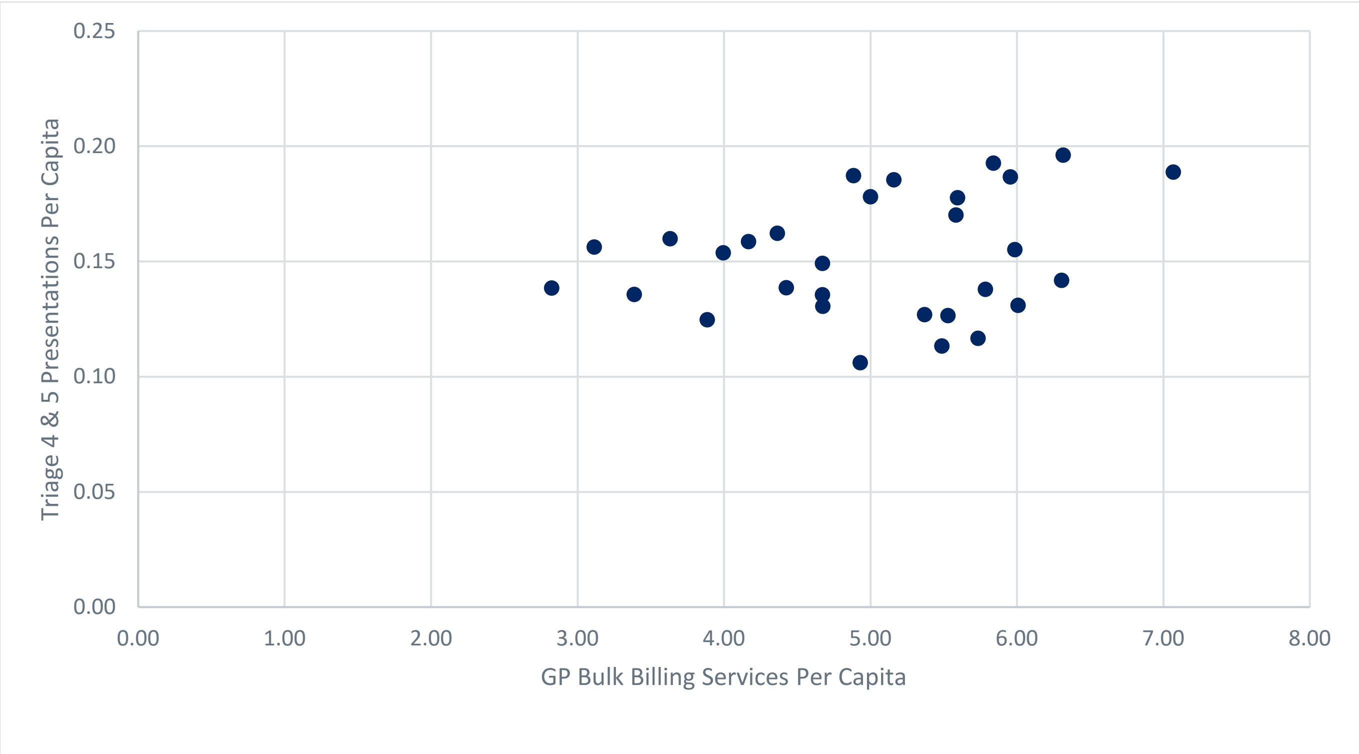
5.11 Appendix A: Extension of supplementary submission

- This appendix replicates the analysis undertaken for our supplementary health submission, testing the relationship between certain variables in the non-state sector components of emergency departments, admitted patients, and non-admitted patients. We have updated all figures included in the previous analysis to include additional years of data.

5.11.1 Emergency departments

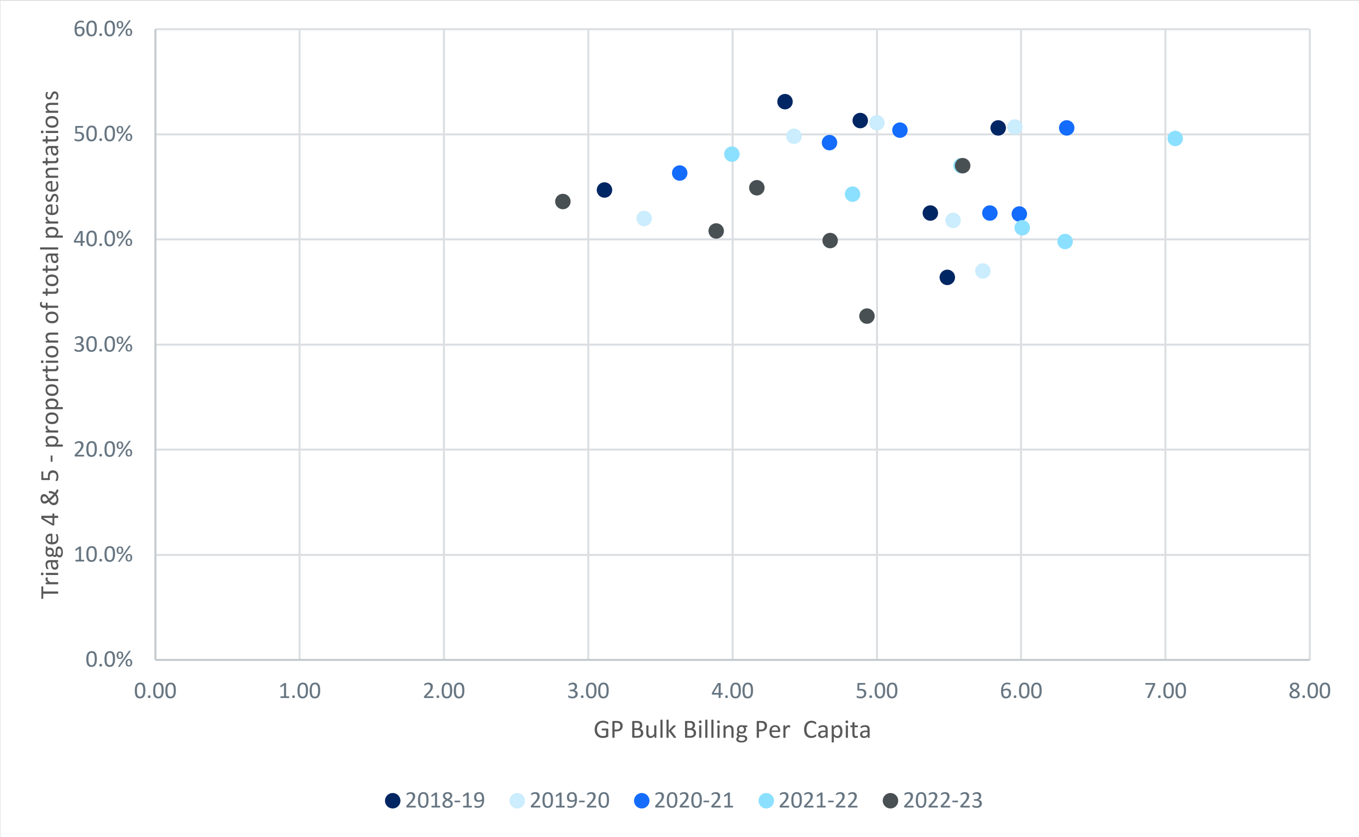
- The Commission's general assumption is that as general practitioner (GP) bulk billing per capita increases in a state, there should be a negative correlation with Triage 4 and 5 ED presentations per capita.
- Figure 5-1 shows the relationship between Triage 4 and 5 ED presentations per capita and the level of GP bulk billing per capita in each state from 2018-19 to 2022-23. The data do not support the existence of a negative relationship.

Figure 5-1: Triage 4 and 5 ED presentations v GP bulk billing – 2018-19 to 2022-23



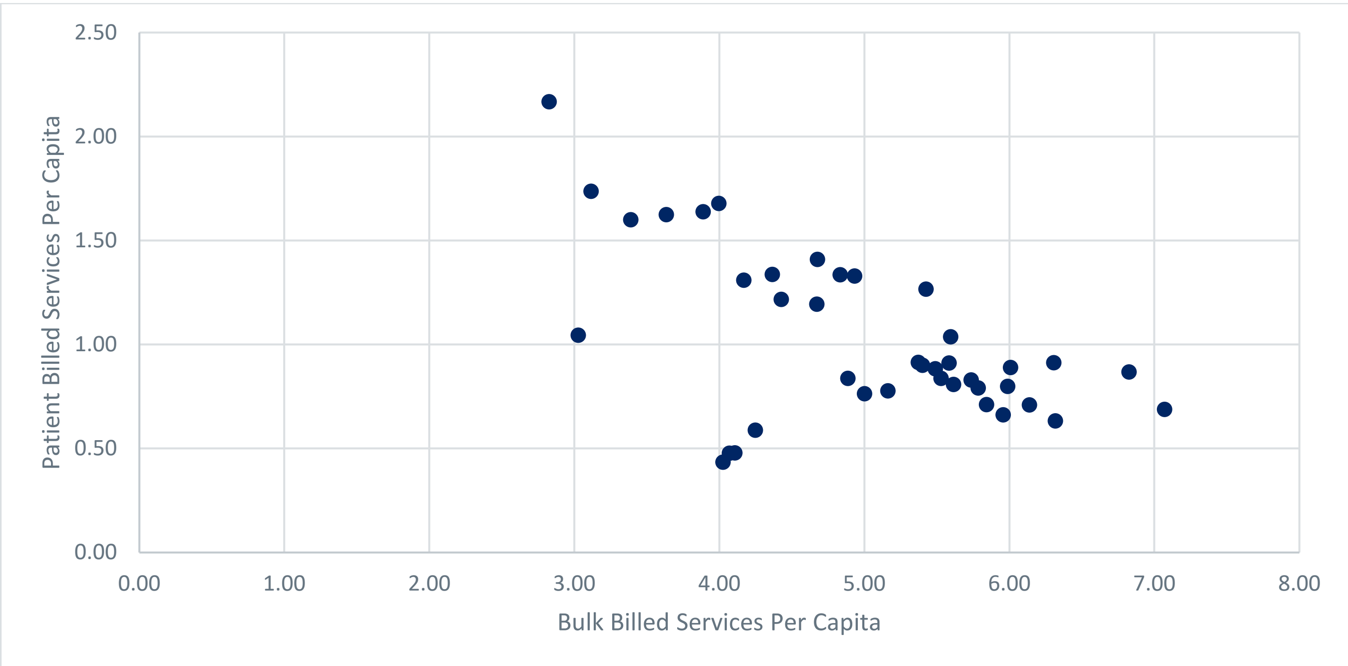
- If a negative correlation between Triage 4 and 5 ED presentations and bulk billed GP visits existed, the share of Triage 4 and 5 presentations as a proportion of total ED presentations should be lower in high per capita bulk billing GP jurisdictions. Figure 5-2 again provides no evidence to support a lower proportion of Triage 4 and 5 ED presentations in high bulk billing GP jurisdictions.

Figure 5-2: Triage 4 and 5 ED presentations share v GP bulk billing – 2018-19 to 2022-23



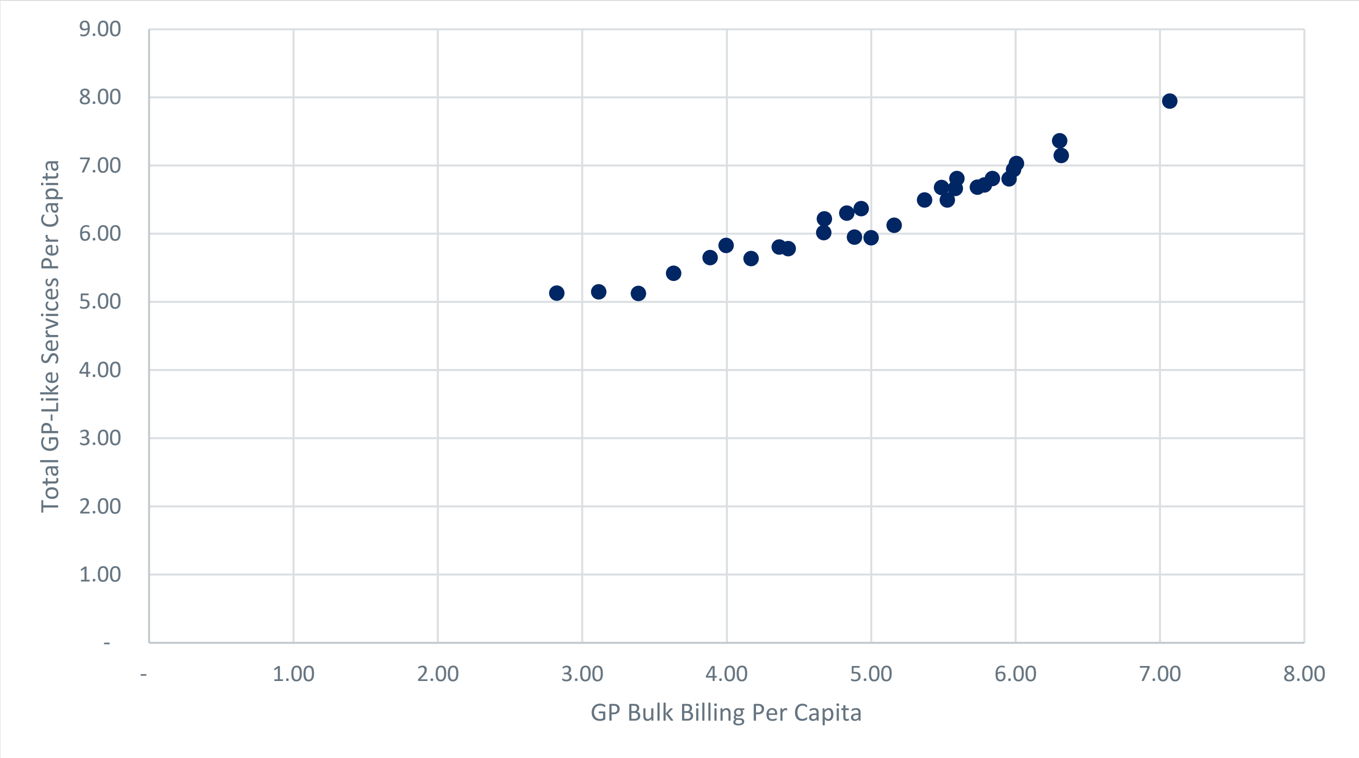
- NSW Treasury investigated the relationship between bulk billed and non-bulk billed GP services. As expected, higher levels of bulk billed services per capita resulted in lower levels of non-bulk billed services per capita as shown in Figure 5-3. However, higher levels of bulk billed GP services per capita did not result in a one-for-one reduction in non-bulk billed services.

Figure 5-3: GP bulk billing v non-bulk billing – 2018-19 to 2022-23



- Finally, we compared the level of bulk billing with an estimate of total service provision per capita.[28] Figure 5-4 showed that higher levels of bulk billed GP services resulted in higher levels of total service provision per capita. Such a result is not surprising and simply reflects basic economics which suggests that services offered for free are likely to be consumed more than priced services.

Figure 5-4: GP bulk billing v total GP-like services – 2018-19 to 2022-23



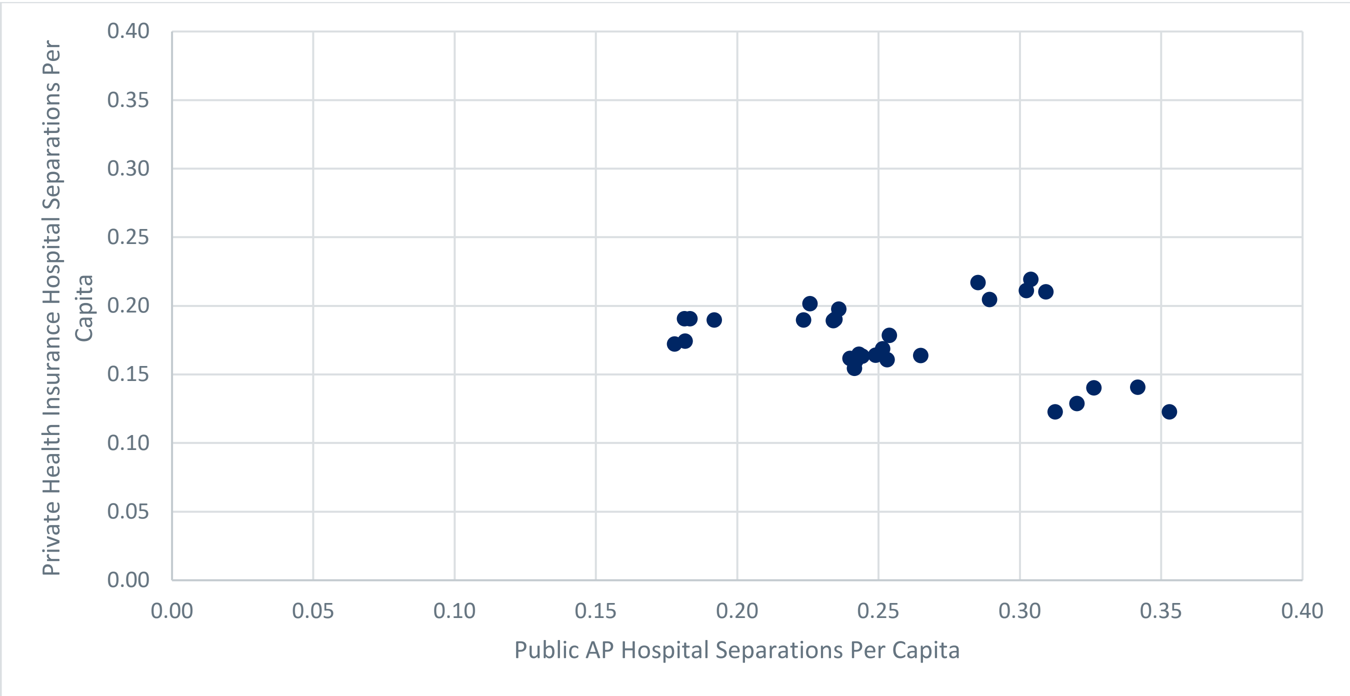
- In summary, extending the analysis over further years reiterates the findings from our Health supplementary submission. It is reasonable for the current conceptual model for EDs being replaced with one that sees higher levels of bulk billed GP services somewhat reducing the level of non-bulk billed services but having no impact on the level of publicly provided services.

[28] Defined as all GP services plus Triage 4 and 5 ED presentations.

5.11.2 Admitted patients

- The Commission's general assumption is that a proportion of admitted patients separations in the public sector could be treated in the private sector and therefore, are substitutable services.
- We note that the Commission has shifted from using separations to expenses as part of its proposed changes to the non-state sector adjustment for Admitted Patients.
- Figure 5-5 compares public and privately insured admitted patient separations per capita across jurisdictions.[29]

Figure 5-55: Public versus private health insurance admitted patient hospital separations – 2018-19 to 2022-23

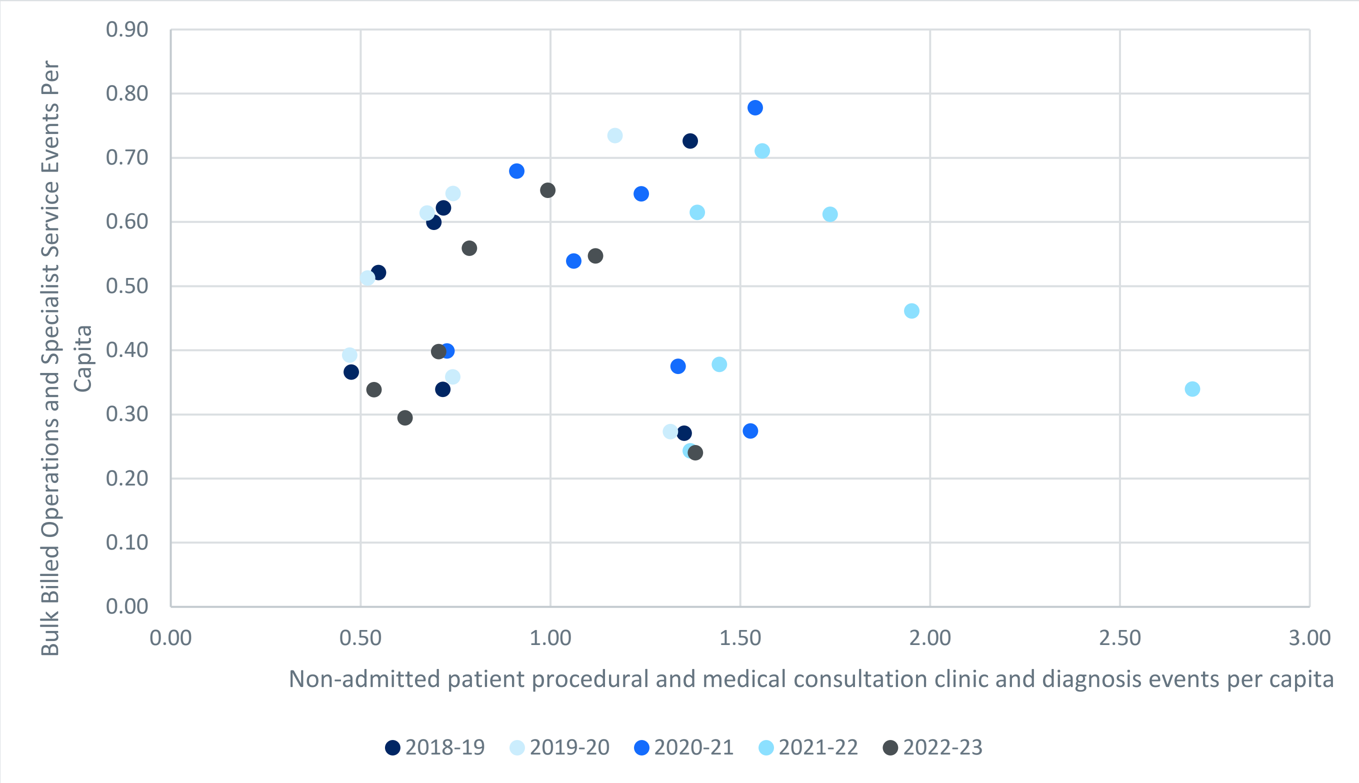


[29] Data for Tasmania, ACT and the Northern Territory is combined by the AIHW for confidentiality reasons.

5.11.3 Non-admitted patients

- The Commission's general assumption is that the provision of NAP-like services by the private sector reduces the need for the provision of these services by the public sector.
- Per Figure 5-6, there is no negative correlation between non-admitted patient service events for procedural and medical consultation clinic and diagnosis service events and bulk billed operations and specialist service events.

Figure 5-66: Non-admitted patient service events v bulk billed operations and specialist service events per capita – 2018-19 to 2022-23



6 Housing

- NSW Treasury has significant concerns about the Commission's proposed positions for this assessment. The introduction of the individuals-based assessment is not based in evidence, not aligned with what states do, and not representative of state expenditure needs in social housing.
- An individuals-based assessment implies that state social housing expenditure is driven by the number of *people* in social housing rather than the number of *households*. Fundamentally, it now suggests social housing costs increase one-for-one with each additional resident in a dwelling, regardless of the dwelling capacity or the actual spend required to house them.
- This is incorrect and results in implausible outcomes. The proposed approach must be abandoned. The Commission should consider options for recognising a potential cost weight for household size, though it must first establish that any cost weight would be supported by data.
- While the Commission identifies that it is solving for a perceived undercount of social housing users, we are also concerned how the Commission has conflated this issue with overcrowding. The Commission considers that the new model addresses the undercount of social housing users, which includes the underestimation of use of social housing for overcrowded households.
- When analysed across states the proposed change does not actually link overcrowding and social housing in states except for the Northern Territory. Addressing this issue must be achieved differently to the Commission's individuals-based approach, ideally in the homelessness assessment that services people in overcrowded dwellings.
- Separately, the Commission has considered that reliable data is not available to establish a relationship between housing stress and the provision of social housing. In our view, all social housing users experience housing stress (or would do in the private market). Other socio-demographic factors are incidental.

6.1 An individuals-based assessment of social housing

Draft Commission position:

- To introduce an individuals-based assessment instead of a households-based assessment.

- NSW Treasury disagrees with the Commission's position to introduce an individuals-based model to this assessment. We believe such an approach would fundamentally misrepresent cost drivers in social housing. We do not believe that the Commission has provided sufficient analysis in the Draft Report to support this change.
- The Commission's proposal is presented as being motivated by the issue of overcrowding in the Northern Territory. Overcrowding relates to the presence of an inappropriately high number of people in a dwelling. It is a measure of the size of a household relative to the capacity of a dwelling. An above average sized household is not necessarily overcrowded.
- Individuals in overcrowded households are at greater risk of homelessness. Indeed, those in severely overcrowded households are considered to be homeless[30]. It follows that individuals in overcrowded homes are at greater risk of needing future social housing support and states with higher levels of overcrowding may have greater pressure to provide social housing. This is a form of housing stress. We consider the relevance of overcrowding to this assessment in Section 6.1.4.

[30] For this reason, we previously argued that overcrowding should be considered in any homelessness assessment.

- The Commission's proposed individuals-based approach does not meaningfully address overcrowding. Instead, it addresses differences in average household size between states[31]. It implicitly assumes that social housing costs are driven by the number of people in social housing rather than the number of social housing dwellings provided. This is misguided.
- It is plausible that a dwelling will deteriorate more quickly and require more maintenance if it has more people within it. Likewise, if households in one state are larger on average than households in another state, then dwelling sizes may need to reflect those differences, driving differences in costs. An individuals-based approach, however, would vastly overstate these costs.
- It is not plausible, as is implicitly assumed by the Commission's proposed approach, that costs should double as a household grows from one person to two. Indeed, all else equal, it is a cost advantage for a state to have more people per household / dwelling.
- The Commission notes that its proposal solves for an 'undercount' of social housing users compared with the current household-based approach. The Commission has identified that there are differences between the proportion of states' *households* that are in social housing and the proportion of states' *populations* that are in social housing. But this is not relevant. What matters for the assessment is which of those proportions accurately represent the relative cost burdens that states face.
- We would ask the Commission to articulate the reason it adopted a households-based approach in the first place and to identify the fault in that reasoning that it is now attempting to address through an individuals-based model.
- Our view is that the individuals-based assessment is not appropriate and should not be introduced. Key issues include:
    - The model assumes that social housing costs are driven by individuals, rather than households and in so doing prioritises service use over service cost.
    - The model does not align to 'what states do' since states provide social housing on a household basis, not an individual basis.
    - The lack of evidence that the individuals-based model better reflects state spending than the existing households-based model.

6.1.1 Service use versus service cost

- Social housing use in states is determined by the provision of properties for entire households, not for each individual within the household. While there may be marginal costs involved with larger households, assessing social housing use based on individuals is not aligned with how social housing is delivered by states.
- Such an approach also leads to self-evidently implausible implications. Consider the following scenario, outlined in Table 6-1:

[31] These differences are partly but not fully explained by overcrowding in the Northern Territory.

Table 6-1: Comparison of states with different household settings

Category	State A	State B
Individuals	4	4
Households	4	1
Bedrooms	4 (1 per house)	4 (4 per house)
Average household size	1	4

- In this scenario, the Commission's proposal would assume that it costs State A the same to deliver social housing to four single-person households as it costs State B to deliver social housing to one four-person household. We do not believe this is plausible.
- We agree, however, that there is a risk that the current model may not capture the cost impact of larger households. The current model assumes that the cost of a larger household is equivalent to the cost of a smaller household. This could suggest a need to introduce a household size cost weight.[32]
- We believe that the Commission has mistakenly focused on an underestimation of ***individual-based social housing use*** rather than account for a potential underestimation of ***household-based social housing cost*** arising from differences in household size.
- As a result, the Commission's proposal:
    - Overestimates the marginal cost of adding an individual to a household.
    - Underestimates the cost of providing for an additional single-person household.
    - Does not recognise that states fund social housing on a household/dwelling basis rather than an individual basis.
- To demonstrate these effects, we expand the scenario above to include plausible differences in costs between households of different size. Table 6-2 assumes all SDC factors are equal. A marginal cost increase from a larger household is included in State B.

[32] The Commission would need to undertake analysis to determine the appropriate weighting.

Table 6-2: Comparison of states using households- and individuals-based models

Category	State A	State B	Total
Individuals	4	4	8
Households	4	1	5
Bedrooms	4 (1 per house)	4 (4 per house)	8
Households-based model (old model)			
Actual spend	3,000	1,000	4,000
Actual spend per household	750	1,000	800
Total assessed spend	3,200	800	
Assessed spend per household	800	800	
Assessed spend per individual	800	200	
Individuals-based model (new model)			
Actual spend	3,000	1,000	4,000
Actual spend per individual	750	250	500
Total assessed spend	2,000	2,000	
Assessed spend per household	500	2,000	
Assessed spend per individual	500	500	

- In this stylised example, the household-based model understates costs in State B by 20 per cent (and costs in State A are overstated by 6.7 per cent). In the individuals-based model, costs in State B are overstated by fully 100 per cent (and costs in State A are understated by 33.3 per cent). Conceptually, a household size cost weight may be reasonable. The Commission's individuals-based approach, however, massively overcorrects and results in a poor equalisation outcome.
- In considering a cost weight it should be recognised that, as per the Commission's Final Report in the 2020 Review, the First Nations cost weighting already captures the impacts of larger household sizes in First Nations communities.[33]
- The Commission's individuals-based model could be conceptualised as assuming a household size cost weight of 100 per cent. This assumption would be incorrect. The most expensive per capita household in social housing is a single-person household.
- Single-person households are the most common form of households in social housing, which has been an increasing trend over the past forty years. Single-person households make up 57.6 per cent of social housing

[33] 2020 Review Final Report, Housing, paragraph 28.

households as of June 2023, compared to roughly 8 per cent in 1981.[34] This would be reflected in the households-based model.

- The Commission now, however, assumes that single-person households only account for 29.5 per cent of the cost of social housing (individual-basis).[35] This approach significantly understates the influence of single-person households in social housing use and cost.
- In the example above, State A, in providing for four single-person social housing households, will incur both higher per capita costs and higher total costs to deliver its social housing portfolio. However, the Commission's model assumes State B has an equivalent need for social housing expenditure, even though State A must provide four times the number of dwellings and associated management as State B.
- This assumption implies that every additional member of a single household costs the same to a state as providing an entirely new social housing dwelling. This is a significant misrepresentation of costs experienced by states. A family of four is not four times more costly than a single-person household.
- Separately, in Table 6-3, we have identified key recurrent costs involved with the provision of social housing in Australia. For each driver, we consider how costs could change as household size increases from one person to two.

Table 6-3: List of key recurrent costs in providing social housing

Recurrent cost	Potential expenditure impact from an additional household member	Comments
Property maintenance	Increased but not doubled.	Increased dwelling size should increase maintenance costs. Costs will not increase linearly.
Depreciation	Increased but not doubled.	Increased dwelling size should increase depreciation costs. Costs will not increase linearly.
Time spent on property (tenancy management)	Increased but not doubled.	Increased dwelling size should increase time on property. Costs will not increase linearly.
Time spent travelling to property (tenancy management)	No change	There will be no change in travel distance.
Other tenancy management	No change.	There will not be increased back-office expenditures.

- We suggest in Table 6-3 that some costs will likely increase with an additional household member while others will remain static. We do not agree that any costs will increase linearly as household size increases. However, these are only suggested conceptual movements and not derived from academic literature.
- The above table assumes that costs increase as household size increases. This may not actually be the case and must be established through data. Concerningly, analysis from the Community Housing Association of Victoria instead suggests that sole-person households incur higher costs for tenant-related service requests

[34] Groenhart, L. & Burke, T. (2014). Thirty years of public housing supply and consumption: 1981-2011. Australian Housing and Urban Research Institute.); Social Housing Households 2024 (AIHW.gov.au).

[35] Social Housing Households 2024 (AIHW.gov.au).

and other property maintenance and repair requests.[36] This introduces significant uncertainty as to how household size impacts social housing cost.

- Given the uncertainty over not just the extent of any cost impact from household size but also the direction of the impact, the Commission will need to undertake further analysis to properly estimate any household size cost weight.
- These issues have implications for the Investment category. We contend that the Commission's new individuals-based model is wholly inappropriate for determining investment needs as it misstates the 'user-base' of social housing.
- The provision of an additional dwelling for a single-person social housing household is significantly more capital intensive than having an additional person join an existing single-person household. While there are marginal recurrent and capital costs to provide a dwelling for a larger two-person household, these costs are significantly lower than those associated with providing two single-person households.
- We would argue that states that are required to deliver **more dwellings** per capita are disadvantaged relative to states that must provide for **larger households** on average.
- A state that has proportionally fewer social housing households, but a proportionally larger social housing population will have to provide larger but fewer dwellings. The larger dwellings will be marginally more expensive than the average dwelling.
- A state that has proportionally more social housing households, but a proportionally smaller social housing population, will have to provide smaller but more dwellings. It will be significantly more expensive to provide an above average number of dwellings, even if the dwellings are less expensive than average.
- Despite this, the Commission's method is now entirely targeted towards the need to provide for larger households and ignores the number of households to be delivered by states. It is evident that the new model does not present a plausible assessment of service cost.

6.1.2 What states do

- One of the Commission's core supporting principles is 'what states do'. We question how the Commission has determined assessing need based on individuals aligns with what states do, which is to provide social housing based on household need.
- Applicants into the social housing system are the 'head of a household'. The needs of a collective household are assessed, rather than the assessment of the need of each individual within that household. Individual factors such as disability, age, or other high service needs, are classified at the household level.
- If a household is larger (i.e. more people), then states will seek to provide a social housing dwelling that fits the household's needs. More people in a household does not represent a need for additional social housing provision, it represents a need to provide a different sized dwelling. States do not provide a per person dollar figure for each new individual in the social housing system as this would significantly under-allocate expenditure required for single-person households.
- The social housing waitlist is driven by several factors, which includes availability of social housing but also a variety of other extraneous factors. Critically, the waitlist is considered in terms of the number of households needing social housing. States do not determine social housing need in relation to individuals.
- As states make social housing expenditure decisions about household needs, determining state need based on individuals is out of line with the core supporting principle of 'what states do'.

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[36] Scutella, R., Kavaarpuo, G., & Johnson, G. (2024). Thinking about the costs of providing social housing to singles: A case study. Community Housing Industry Association (Vic), Melbourne.

6.1.3 Evidence for an individuals-based model over a households-based model

- The Commission indicated in its Draft Report that the use of an individuals-based assessment improved upon the households-based assessment and better reflects the drivers of state spending.
- We would expect for the Commission to be able to evidence this claim. Ideally, we would see:
  - Linking of state expenditure on social housing to the number of individuals in social housing.
  - Demonstrating an individuals-based model better reflects state spending than a households-based model.
- In its draft report, the Commission compares a state's share of estimated resident population (ERP) and households across remoteness areas, before then identifying that the individuals-based assessment is derived using census data enumerated by individuals. This analysis merely demonstrates differences in household size.
- The Commission's analysis does not relate to state expenditure on social housing. The Commission should provide evidence that demonstrates that its proposed approach has better alignment with state expenditure on social housing, and that states respond to the needs of individuals rather than households.
- We expect that if the model better reflects state spending, there would be analysis that shows a 'better' individuals-based assessment and a 'worse' households-based assessment. Given that the Commission's response on housing stress was that reliable data was not available to establish a relationship between housing stress and the provision of social housing, we would seek the reliable data that established the relationship with the individuals-based approach.[37]
- In our proposals through the initial consultation, we suggested potential improvements to the existing assessment in the form of other drivers of use or cost. We did not, and do not, consider there to be substantial issues with the use of households rather than individuals.

6.1.4 An implied relationship between overcrowding and an undercount of social housing use

- While we acknowledge that the Commission is not directly solving for overcrowding, instead considering a perceived undercount of social housing use, the extent of overcrowding in the Northern Territory appears to have been a material factor in the Commission investigating changes to this assessment. We believe there have been some errors that have conflated the new individuals-based model as also correcting for an overcrowding issue.
- The Commission identifies that it agreed with the Northern Territory's view *'that states that have overcrowded social housing are disadvantaged'* by the households-based approach before identifying an individuals-based approach (functionally a per capita approach) could address this issue.[38] However, the Northern Territory's submission only suggests a per capita approach at 'a minimum' and notes the approach 'would not recognise that responses to private housing shortages are borne primarily by the state sector'.[39]
- We also note the Northern Territory's submission did not identify that states with overcrowded *social housing* are disadvantaged. Instead, positions principally related to state disadvantage from overcrowding rates in *private housing*. This distinction should be clarified.
- A state's private overcrowding rate is a more appropriate and less-policy influenced indicator than a state's social housing overcrowding rate in determining state need in social housing. We believe that the Northern

[37] 2025 Methodology Review - Draft Report June 2024, Housing, paragraph 25.

[38] 2025 Methodology Review - Draft Report June 2024, Housing, paragraph 18.

[39] 2025 Methodology Review – Northern Territory Tranche 2 submission, page 8.

Territory also suggested similar in their Tranche 2 response and are supportive of an overcrowding inflator or deflator from ABS data.

- NSW Treasury raised the issue of overcrowding within the Welfare assessment, as we view it as a potential driver of state spending need in homelessness. We note that the Commission has not adjusted for the overcrowding issue in that assessment, where we consider it more pertinent, but have attempted to account for it in social housing. We are concerned about potential inconsistency in the Commission's acknowledgement of overcrowding in its assessments.
- We made key points in our Tranche 2 welfare submission that the Commission should avoid a 'broad strokes' approach to dealing with the Northern Territory's homelessness need, as the causes were clearly not aligned to the traditional drivers used by the Commission. To undertake such an approach would misrepresent the need in Western Australia and Queensland, as the Northern Territory's outlier status would overstate other state needs.
- It is not clear the Commission has considered this in developing their new individuals-based assessment for social housing need. We consider this evident in the Commission's claim about the new model:

*'The Commission proposes to use an individuals-based assessment instead of a household assessment to better reflect the drivers of state spending. This **approach addresses the underestimation of use for social housing due to overcrowding'**.*

- We are concerned about the Commission making such a claim, without reflecting the relationship between their new model and overcrowding in the draft report. If this approach did reflect such a change, we would expect to see a positive relationship between a state's household overcrowding rate and assessed social housing need.
- However, when excluding the Northern Territory, both the individuals-based and households-based model demonstrated a negative relationship between the two variables. In fact, the individuals-based model slightly worsened the relationship, despite the Commission's claim that the new approach addresses the underestimation of overcrowding impacts on social housing.
- New South Wales has the second highest overcrowding rate to the Northern Territory, in terms of both overcrowded households and severely overcrowded households. In contrast, Western Australia has the lowest overcrowding rate for both categories. Yet the new individuals-based model results in an inverse outcome where New South Wales' per capita need has decreased by $16 compared to Western Australia's increasing by $16.
- We are concerned that the Commission has claimed the individuals-based approach addresses overcrowding issues when this is not borne out in comparing the individuals- and households-based models. This subsequently has perverse effects in determining the social housing expenditure need for all other states, as it has only 'solved' for the Northern Territory.

6.2 Excluding housing stress from the assessment

Draft Commission position:

- To not introduce a housing stress driver as a driver of need as reliable data are not available to establish a relationship between housing stress and the provision of social housing.
- To continue to use household income as the socio-economic status measure as this is what states use to determine social housing eligibility.

- The Commission rejected our view that assessed demand for social housing should be linked to a measure of housing stress. The Commission argued that 'increased demand [i.e. demand associated with increases in housing stress] does not necessarily lead to increased provision of social housing.'[40]
- In support of this view, the Commission looked at changes in government social housing expenditure, levels of rental stress and the growth in the stock of social housing dwellings. We believe the Commission's analysis is flawed for several reasons:
    - It was undertaken at a national level rather than at a jurisdictional level
    - Few government expenditures track year-to-year changes in underlying service needs (and social housing has a definite time lag in responding), and
    - The analysis is conducted over differing time periods. Arguably, the Commission's analysis supports our view of the expenditure linkage to housing stress by showing higher expenditure growth in recent years as housing stress has arguably worsened.
- NSW Treasury accepts that there is always a considerable element of policy influence in how, and whether, a jurisdiction responds to a perceived need through the allocation of additional funds to an area of need. Housing is likely to be more prone to this disconnect than other areas of government expenditure, given the availability of other policy tools to address the issue (e.g. planning laws), the ability of social networks to step in to assist in crisis circumstances and the significant costs to government of providing any assistance. However, we note that the current NSW Government and several other governments around Australia are actively responding to housing stress being experienced across the country.
- We also accept that the demand for social housing arises from a multitude of sources and the prevalence of these demand drivers differ across states and should be considered by the Commission. However, the ability to afford accommodation is a key factor in this equation.
- For example, consider a situation where there are two identical states in all respects except State A has higher housing costs than State B. Clearly a higher proportion of low-income households and other disadvantaged groups would need to seek government housing assistance in State A. The Commission's current methodology makes no allowance for this factor.
- In our Tranche 2 submission, NSW Treasury put forward two approaches to rectifying the failure of the Commission's current housing assessment methodology to consider housing affordability by either (1) using a measure of housing stress or (2) modifying the Commission's current methodology to reflect differences in housing affordability between jurisdictions.

6.2.1 Housing stress as an indicator of demand for social housing

- Under this approach, the range of social factors giving rise to the demand for social housing are summarised by the proportion of households struggling to afford accommodation. That is, where social factors give rise to disadvantage, this disadvantage will only give rise to higher demand for social housing where affordable private housing is unavailable. Measuring levels of housing stress therefore provides a convenient direct indicator of relative need for government social housing expenditure.
- NSW Treasury accepts there are some limitations in using the proportion of household in housing stress as an indicator of the need for social housing expenditure. Measures of housing stress fail to capture households not in housing stress but where the dwelling is severely overcrowded and the household is unable to find suitable accommodation at an affordable price.
- Given this, we now favour the second approach outlined in our Tranche 2 submission, which modifies the Commission's existing methodology to reflect differences in the affordability of housing in different jurisdictions.

[40] 2025 Methodology Review - Draft Report June 2024, Housing, paragraph 15.

6.2.2 Modifying the current approach to measuring the number of low-income households

- As outlined in our Tranche 2 submission, the demand for social housing does not derive from the intrinsic characteristics of certain socio-economic groups within the community. Instead, these groups represent a higher share of social housing tenants because these groups are less likely to be able to afford accommodation within the private sector.
- Measuring the ability to afford accommodation in the private sector is therefore key to accurately assessing the need for social housing expenditure. For example, someone on an aged pension in rural New South Wales will be less in need of social housing compared with a similar person in Sydney. Likewise, an aged pensioner in Adelaide is less in need of social housing than a similar person in Brisbane.
- Failure to take this into account, as is currently the case for the Commission's social housing assessment methodology, is a fundamental flaw in the current social housing assessment.
- Table 6-4 shows the proportion of low-income households in each state.

Table 6-4: State Shares of Low-income Households*

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Share of Low-Income Households	26.4%	26.3%	27.7%	25.7%	32.0%	34.2%	13.1%	24.0%	26.9%

* 2016 Census data drawn from the 2024 Simulator.

- Household income per capita and the distribution of income within each state varies. Given this, combined with the use of a <u>fixed</u> low-income threshold across all jurisdictions, it is not surprising that some jurisdictions have a higher or lower share of low-income households compared with national average. Under the current method, this difference drives a redistribution of GST between states. For example, New South Wales has a smaller share of low-income households compared with the national average. This is driven by higher average household disposable incomes per capita in this state. As a result, our assessed social housing expenditure needs for low-income households is less than our per capita share.
- We argued in our Tranche 2 submission that the use of a <u>fixed</u> low-income threshold takes no account of differences in housing costs. This inevitably results in a different proportion of low-income households in each jurisdiction being able to afford housing.
- Table 6-5 shows there are considerable differences in average rent between capital cities.

Table 6-5: Average Capital City Weekly Rents

Sydney	Melbourne	Brisbane	Perth	Adelaide	Hobart	Canberra	Darwin	All Capitals
$839.39	$637.58	$659.36	$720.69	$596.83	$507.16	$646.62	$560.59	$724.68

Source: SQM Research for week ending 4 July 2024.

- As can be seen from Table 6-5, the chances of a low-income household being able to afford housing in Hobart is far higher than the <u>same</u> household finding affordable accommodation in Sydney. Adopting a jurisdiction-specific definition of a low-income household reflecting the relative cost of housing in each jurisdiction would resolve this flaw in the Commission's current social housing methodology.
- Fundamentally, the Commission's model fails to recognise that proportionally more low-income households in Sydney (or New South Wales more widely) will require social housing due to the higher cost of accommodation in the private market.

6.3 Other Housing assessment positions

- NSW Treasury notes the Commission's decision to not separate public and community housing into different assessments. Even if this were material, we would not support separation. We consider there remain conceptual issues with the proposal that have not been fully addressed.
- We note the decision to not introduce a high-service needs cost gradient. We agree that it is not appropriate to implement an adjustment based on the available data at this time.
- We note the Commission's decision to not introduce a housing-specific regional cost gradient.
- The Commission has proposed to retain the First Nations cost weight of 1.2. While we have no specific issue with this, we would reiterate our earlier comments on the potential for a household size cost weight. If the Commission chooses to investigate a household size cost weight, it will need to adjust for the extent that household size is already incorporated within the First Nations cost weight.
- The Commission has identified that a CALD driver will be considered as part of its forward program of work. We support the Commission further investigating this matter.
- We recognise that the Commission has identified the need for additional data in considering the implementation of either an age or head leasing cost driver and will continue to monitor affordable housing developments.
- The Commission has identified that it intends to update the ABS census count of individuals by using the ratio of the AIHW total social household count to the ABS total social household count. We consider that updating the split for AIHW data appears reasonable, though note our continued disagreement with the use of the count of individuals rather than households.

7 Welfare

- The Commission has proposed multiple changes to the Welfare assessment for the 2025 Review. While NSW Treasury is conceptually supportive of the introduction of a homelessness assessment, we consider that the proposed drivers may not be fully representative of the need for states to provide homelessness services. We recognise the Commission's focus on cross-classification as being foremost in its selection of drivers. We would also seek further clarity on the treatment of temporary accommodation programs in the future assessment.
- The Commission should not be addressing overcrowding in the social housing assessment. Overcrowding is an issue of use principally related to homelessness, not social housing. If the Commission does seek to account for overcrowding, it should be addressed through welfare.
- Other proposed changes are relatively minor and improve the simplicity of the assessment without having material impacts on the equalisation outcomes of the assessment.

7.1 Introduction of a homelessness assessment

Draft Commission position:

- To introduce a homelessness assessment.
- To introduce a new annual request for state data.

- We note the Commission's position to introduce a homelessness assessment, based on specialist homelessness services (SHS) data and socio-demographic groupings. We consider a homelessness assessment to be conceptually reasonable. However, we maintain concerns about the Commission's proposed drivers of use.
- The Commission intends to treat temporary accommodation programs as out of scope of this assessment with spending on these programs to be assessed in line with their GFS classifications. We would emphasise that while these programs are not captured under SHS, users of temporary accommodation drive homelessness expenditure in some states.
- We note the Commission's example regarding the population accessing homelessness services in Victoria being larger than that in New South Wales.[41] As raised in our Tranche 2 submission, the exclusion of NSW's Temporary Accommodation program from SHS will result in an undercount of total users of homelessness services in New South Wales.
- An annual state data request is proposed to collect state expenditure on homelessness services. We consider this reasonable given concerns over available data, though would seek clarity on whether temporary accommodation expenses should be specifically excluded from this request, due to being considered out of scope of this assessment.
- The Commission is proposing that if state data on homelessness are unavailable, it will split ROGS data 50/50 between social housing and welfare Classification of the Functions of Government (COFOG) codes. While we would expect most state data will be available, we would seek clarification from the Commission on how it has determined a 50/50 split is appropriate, compared to splitting along a weighted average of expenditure between the Welfare and Housing assessments or any other alternatives.

[41] 2025 Methodology Review - Draft Report June 2024, Welfare, paragraph 35.

7.2 Consideration of an overcrowding driver

Draft Commission position:

- To not introduce a driver for overcrowding in the homelessness assessment.

- We note the Commission's focus on usage of specialist homelessness services based on socio-demographic characteristics of users, rather than the causal factors resulting in service demand. We acknowledge the Commission's desire to have indicators available in AIHW data, though we also note that the Commission has effectively used other data sources to weight socio-demographic characteristics in other assessments.
- If the Commission instead decides to directly measure need by considering the total number of homeless people rather than just service users, then it must consider overcrowding. Overcrowding is closely associated with a risk of homelessness, and in the case of severe overcrowding, is specifically defined as homelessness. While it is a driver of need for homelessness services, the Commission has not incorporated overcrowding as a driver in the new homelessness assessment due to it not being sufficiently available in AIHW data.
- The Commission references overcrowding in the social housing assessment, though we believe it is instead responding to household size in that assessment, rather than overcrowding itself. Overcrowding is more relevant to the welfare assessment than the social housing assessment.
- States will provide services for people in overcrowded situations through welfare and specialist homelessness services in the first instance. Therefore, state policies on overcrowding impacts would be reflected in welfare expenditure, not social housing expenditure.

7.3 Other Welfare assessment positions

- NSW Treasury notes the drivers proposed by the Commission in the Draft Report. Most states recognised that this was a complex assessment and proposed a variety of different drivers that should be included. We note that the Commission has determined that it will use its initially proposed drivers and has not included any additional drivers suggested by states.
- The Commission agrees that 'mental health conditions, family and domestic violence, disability, and housing affordability are potential drivers of state spending'.[42] We would seek further clarity as to whether the omission of overcrowding and drug and alcohol abuse from this comment indicates the Commission does not consider these potential state spending drivers.
- NSW Treasury agrees with the Commission collecting state National Disability Insurance Scheme (NDIS) contributions from the Portfolio Budget Statement of the Commonwealth Department of Social Services. We note the Commission's intent to derive spend on non-NDIS disability services from the difference between total state expenditure on disability and state NDIS expenditure.
- We note the Commission's position to maintain the current method of assessing state contributions to the NDIS and that it will monitor for any changes to Commonwealth-state funding arrangements in this portfolio.
- We note the Commission's position to combine the other welfare assessment and non-NDIS disability services, aged-care and National Redress Scheme assessment into a singular assessment, and to cease collecting state data on the Scheme.

[42] 2025 Methodology Review - Draft Report June 2024, Welfare, paragraph 74.

- We note the Commission’s position to not introduce a welfare-specific regional cost gradient or adjust the SDS factor for child protection and family services.
- We note the Commission’s position to not include a First Nations cost weight for child protection and family services.
- The Commission has identified that a CALD driver will be considered as part of its forward program of work. We support the Commission further investigating this matter.

8 Services to communities

- We note the Commission intends to monitor ongoing developments regarding natural disaster mitigation and that a separate assessment will not be implemented for the 2025 Review. We concur that there is a need to achieve reasonable agreement between states on definitions and measures if a differential assessment were introduced in future.
- We do consider it unlikely that states face an equal requirement in preparing for and mitigating future disasters. Our Tranche 1 submission identifies some potential areas of state difference that we believe the Commission should monitor and review in the coming years.
- We note potential issues with the classification of natural disaster mitigation expenditure in the GFS and the Commission intending to monitor state spending on mitigation and natural disaster resilience policy.
- We note that the Commission proposes to assess water subsidies to small communities and other communities in line with its approach for the 2020 Review.
- We note the Commission’s simplified criteria for determining remote communities in the electricity subsidies component and small communities in the water subsidies component.
- We note the proposal to use a cost weight of 3.0 for very remote communities and to retain the existing regional cost gradient for water subsidies. We consider that these remoteness gradients are not necessarily as robust as gradients used in other assessments.
- We note the Commission does not propose to broaden the expenses included in the discrete First Nations communities assessment nor change the driver of need.
- We note the Commission’s position on the maintaining an EPC approach for assessing environmental protection and acknowledge the difficulty in identifying a common policy neutral driver for a differential assessment.
- We note the Commission’s position to maintain the existing regional cost weights for the protection of biodiversity and landscape.
- We note that the Commission will monitor the net zero transition and that this is considered in more detail in the Services to Industry assessment.

9 Justice

- The Commission has determined that it will defer adjustments to the justice assessment method until the 2026 Update. This is primarily due to truncated timeframes in the 2025 Review not allowing for the same review and analysis as the 2020 Review, though it will also allow for an additional year of data (2023-24) to be included in the assessment. On balance, we support the Commission's position to defer potential changes to the 2026 Update to allow for greater consultation and the development of a more robust method.
- There are key areas of investigation that the Commission is investigating for inclusion within the 2026 Update. Specific areas of focus include the appropriate treatment of central police services, the unique impacts of global cities, adjustments to the prisons regression, and a separate assessment of non-custodial services. We will continue to work with the Commission in determining a more appropriate treatment of these components of the assessment.
- The Commission broadly proposes to retain the 2020 Review method for this assessment.

9.1 Deferral of the assessment to the 2026 Update

Draft Commission position:

- Update the Justice method in the 2026 Update with 2022-23 and 2023-24 data while maintaining the 2020 Review method for the 2025-26 GST distribution.
- Not request justice data from states on an annual basis.
- Not apply any new EPC assessments or discounts due to data concerns.

- We acknowledge that the 2025 Review has likely not allowed for sufficient time to assess all relevant justice data, relative to the 2020 Review. This mostly reflects process issues outside of the justice assessment and not functionally within the Commission's control. We note the proposed timetable provided by the Commission for updating the Justice assessment.
- Accordingly, while not an ideal outcome, we support the Commission's position to defer method changes in this assessment until the 2026 Update. On balance, it is preferable to agree a more robust method with appropriate state consultation that is delayed by a year, compared to implementing changes based on insufficient analysis or without full consultation.
- We agree that an additional year of data (2023-24) will help alleviate some states' reasonable concerns about the reliance on a single year (2022-23) that may still have some residual COVID-19 impacts. We consider that 2022-23 data are still reasonably fit-for-purpose for this assessment, especially compared to earlier COVID-impacted years from 2019-20 to 2021-22.
- We note the Commission's position to not request annual justice data from states. Given difficulties in processing and reviewing justice data in time for inclusion in the 2025 Review, it is reasonable to conclude that an annual request would not be viable.
- We note the Commission's position that it does not intend to apply any new EPC assessments or discounts due to data concerns. We seek clarity from the Commission if this position only relates to the 2025 Review or whether this position applies for the 2026 Update, when method changes are to be finalised for this assessment.

9.2 Treatment of central police services

Draft Commission position:

- Investigate the appropriate treatment for central costs in the police assessment.

- The Commission has requested data from states that will enable a more appropriate apportionment of centrally incurred costs to police districts. NSW Treasury supports the Commission's intention to investigate this matter further.
- We do not believe that the Draft Report properly articulates the concerns we put forward regarding central costs and so we reiterate those concerns here.
- Broadly speaking, central policing costs and functions are made up of:
    - Corporate-type functions that support either the entire state or the entire police force equally. These include HR, finance, and policy functions. These costs should be treated EPC or, plausibly, apportioned based on FTEs.
    - Services provided centrally to or on behalf of police districts. These include forensic services, and state crime and intelligence commands. The use of these services reflects rates of offending. Ideally, they would be apportioned on that basis.
- On the other hand, police district costs are measured directly. Typically, costs are higher in regional and remote areas when measured relative to the service population of the area. This reflects the presence of more dense communities in major metropolitan areas and the need to maintain police presence even in lower population communities.
- The Commission's current method apportions central police costs to police districts in proportion to their direct costs. This means that, where police costs per person are higher in regional and remote areas, those areas are apportioned an above average share of the central police costs.
- Given that central costs represent upwards of 40 per cent of total policing costs, this approach cannot be reasonably justified and the Commission must seek to correct it. A finance officer operating in Sydney does not incur additional costs to process payroll for officers in Broken Hill than for officers in the Sydney CBD. There is no obvious regional cost impost for any centrally delivered corporate function.
- With respect to services provided centrally on behalf of police districts, we accept that these costs should ideally be apportioned based on which police districts use the services. We note that this would represent a service use weight only and not a service cost weight, since the costs do not vary depending on which district's behalf they are undertaken.
- At the time of our Tranche 1 submission, we supported an EPC apportionment of these costs. This reflected that the nature of some central functions meant that the types of offending they deal with cannot be readily proxied by overall offending numbers. We argued that organised crime, terrorism and marine crime, for example, are disproportionately likely to occur in major cities or in coastal communities. These costs shouldn't, therefore, be apportioned based on aggregated offending data.
- Since making our submission, we have obtained further data which can be used to better apportion the costs of these central functions. This data has been shared with the Commission.
- In New South Wales, all proceedings are initiated by a charging command. The charging command is either the local police district or one of a number of central charging commands, including the State Crime Command, the Organised Crime Squad, and the Counter Terrorism and Special Tactics squad. Crucially, these central commands charge through the relevant local police district. This means that we can estimate the geographic focus of these commands.
- We have previously suggested that many of these commands would be focused on major metropolitan areas, as much of the organised and serious crime takes place in these areas. This is borne out in the data we have.

Consider the following list of commands and their proportion of charges linked to the Sydney metropolitan area, noting that the Sydney metropolitan area makes up 64.8 per cent of the population of New South Wales:

  - 92.2 per cent of Financial Crimes Squad charges
  - 91.0 per cent of Organised Crime Squad charges
  - 88.1 per cent of Cybercrime Squad charges
  - 81.1 per cent of Robbery and Serious Crime Squad charges
  - 79.5 per cent of Counter Terrorism and Special Tactics charges
  - 75.2 per cent of Drug and Firearms Squad charges

- Clearly, costs for these central functions should not be apportioned based on direct police district costs. This would assume that, on a per capita basis, the Sydney area uses these services at below average rates. Even an EPC apportionment would understate the extent to which Sydney, as a global city, is driving these costs.
- The Commission has requested similarly disaggregated data from all states. We are pleased that the Commission will soon be in a position to appropriately apportion central costs. We are available to discuss the data we have shared with the Commission at any time.

9.3 Treatment of major city effects

Draft Commission position:

- Investigate the prevalence of major city costs in policing.

- We remain firmly of the belief that major cities experience types of crime, such as serious organised crime or terrorism, that are unique or otherwise significantly disproportionate.
- The presence of these crimes reflects the opportunities presented by major cities, particularly as entrance points and hubs for sophisticated and global criminal enterprises to access Australian markets.
- We welcome the Commission's intent to continue investigating the extent to which these dynamics drive costs for those states with major global cities and possible ways to recognise these costs in its methods.
- In the meantime, we believe that proper and appropriate apportionment of central costs, as discussed above and reflecting the disproportionate focus of multiple central functions and commands on major metropolitan areas, will substantially improve the current assessment.

9.4 Cost weights in the prisons regression

Draft Commission position:

- Investigate the appropriate treatment of service delivery scale and regional cost weights in the prisons assessment.

- We support the Commission further investigating the appropriate approach to these cost weights in time for the 2026 Update. In our Tranche 1 submission, we contend that small prison effects are not reliably driven by remoteness and may be driven by policy influences. Further, as metropolitan prison costs may actually be higher, this will remain an element that is important for the Commission to consider in its investigation of the prisons regression.

- The Commission has identified that the low explanatory power of the prisons regression is not ideal and would prefer greater explanatory power, though also considers that the conceptual case in 2020 was strong and a more reliable measure was not available. We concur that greater explanatory power would increase confidence in the regression approach.

9.5 A separate assessment of non-custodial services

Draft Commission position:

- Include an assessment of community correction orders in the 2026 Update if material.

- We support the Commission's position to include an assessment of community correction orders if it is found to be material in the 2026 Update. We note the Commission's position to apply the SES profiles currently used for finalised defendants for people on community correction orders.
- Concerns about policy neutrality appear to misrepresent the underlying principle. It is average state policy to provide community correction orders. A state shifting its proportion of community correction orders would simply factor into the Commission's approach in establishing a weighted average policy, a technique functionally used in all of the Commission's assessments. This occurs for states both increasing and decreasing their proportion of such orders.
- We note that a differential assessment for custodial and non-custodial corrective services was recommended by Queensland and Victoria in the 2020 Review.[43]

9.6 Other Justice assessment positions

- We support the Commission's position to include a cost weight for juvenile detainees if it is found to be material. We note the Commission's position that the prisons assessment will not need to be changed to account for any changes in the age of criminal responsibility.
- We note the Commission's intent to retain the existing method for assessing police expenses, relating to the socio-demographic composition of offenders, population, and their associated costs. We acknowledge that the Commission will further investigate a cost weight for remote offenders based on available data and we will await this analysis.
- The Commission has identified that a CALD driver will be considered as part of its forward program of work. We support the Commission further investigating this matter.
- We note the position to continue the exclusion of traffic and breach of bail offence data from the assessment. Noting the ABS' 2020 recommendation about excluding this data due to quality and comparability concerns, and in the absence of further ABS review, this position is reasonable.
- We note the Commission's position to continue using proceedings data in the calculation of assessed offenders.
- We note the Commission's comments regarding the use of a three-tier or five-tier structure for assessing First Nations socio-economic status groups, and that the Commission will continue analysis on the most appropriate structure for the 2026 Update.

[43] 2020 Review Final Report, Justice, paragraph 135.

- We note the Commission’s position to not apply a discount due to the assessment not recognising different costs for different offence types or for inconsistencies in data reporting.
- We note the Commission’s position to continue to use the number of finalised defendants as the driver of criminal court expenses.
- We note the Commission’s comments on the use of data in the calculation of the socio-demographic composition and the criminal courts regional cost gradient.
- We note the Commission’s position to continue to apply a cost gradient when assessing regional and SDS costs in the criminal courts assessment.
- We note the Commission’s position to continue using state data to split other legal services and criminal courts expenses.
- We note the Commission’s position to continue using defendant socio-economic status as a proxy for prisoner socio-economic status in the prisons assessment, with no discount.

10 Roads

- NSW Treasury supports the Commission’s introduction of a low discount to the roads assessment, considering the loss of a key data source, uncertainty about state data quality, and the extent and potential impact of cost drivers not currently included within the assessment.
- The Commission’s position on retaining urban population as the road length driver for certain towns and cities is supported, recognising the Commission’s intent to investigate the suitability of National Service Level Standards (NSLS) data when available across multiple assessment components.
- We contend that the Commission should reconsider its position to not include new drivers in the assessment, particularly in relation to soil and rainfall drivers, which can be based on national datasets.
- We have concerns about the shift in the regional gradient to the use of Rawlinsons, highlighting the Commission’s own concerns with that approach in the 2015 and 2020 Reviews.
- We otherwise note the positions raised by the Commission in this assessment.

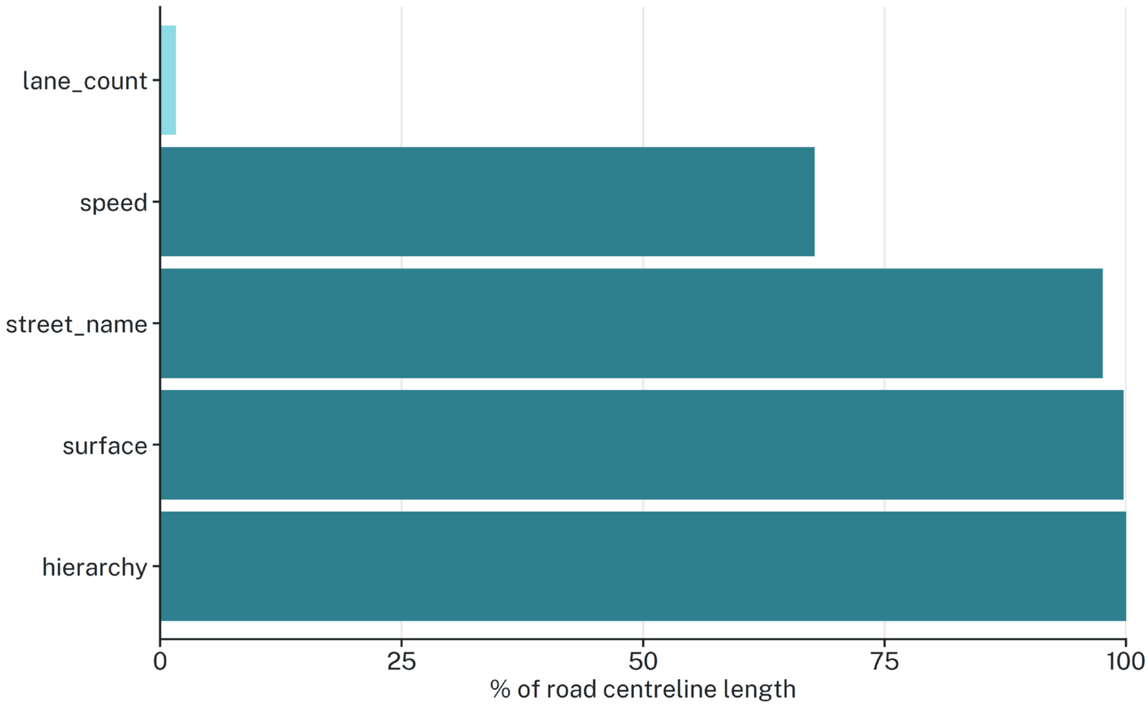
10.1 Urban road length

Draft Commission position:

- Retain urban population as the road length driver for towns with a population over 40,000.

- NSW Treasury supports the Commission’s proposal to retain urban population as a proxy for urban road length in towns and cities with a population over 40,000.
- In densely populated urban areas, the need to accommodate higher traffic volumes and to use land more efficiently will result in a higher proportion of roads having multiple lanes. Consistent with this, it would be expected that the ratio of lane kilometres to road length is likely to increase with urban size and urban density. For example, Sydney relies on an extensive network of highways and toll roads that typically have 3 to 4 lanes in each direction. Measures of road length fail to capture this factor.
- Without being able to reliably account for the number of lanes in urban areas, an assessment of road centreline length is likely to be biased against larger, densely populated cities.
- An analysis of Geoscience Australia’s national roads dataset shows that the lane count is only available for 1.6 per cent of the urban road network, as it is defined by the Commission (see Figure 10-1). These are all road segments located in urban centres and localities (UCLs) with population over 40,000 under the category of highways, arterials, sub-arterials and busways. Other road attributes like speed limits, street names and sealed status are predominantly available in the dataset.

Figure 10-1: Attribute coverage for urban state-type roads



Source: Geoscience Australia

10.2 Impact of climate and subgrade soil conditions

Draft Commission position:

- To not add a cost driver for rainfall or soil composition.

- NSW Treasury does not support the Commission's preliminary position to not introduce a cost driver for rainfall or soil. We consider that there is a viable path to including these factors, and at minimum, the Commission can recognise soil as a cost driver.
- In our submission to Tranche 2 consultation papers, NSW Treasury proposed the recognition of climate and subgrade soil effects in the assessment of road expenses. Below, we have provided evidence that further supports this proposal, showing that 1) subgrade types and climate are both significant drivers of road pavement costs and 2) climate conditions drive landscaping and road operating costs.

Pavement structural design

- Using road segment attributes provided by Transport for NSW, we estimated the build costs according to Austroads design principles:

$$\begin{aligned}\ln(Cost_i) = \beta_0 + \beta_1 \ln(AADT_i) &+ \beta_2 \text{ Climate}_{moderate} + \beta_3 \text{ Climate}_{wet} + \beta_4 \text{ Soil}_{sand} + \beta_5 \text{ Soil}_{loam} \\ &+ \beta_6 \text{ Soil}_{clay} + \beta_7 \text{ Climate}_{moderate} \times \text{Soil}_{sand} + \beta_8\, Climate_{moderate} \times Soil_{loam} \\ &+ \beta_9 \text{ Climate}_{moderate} \times \text{Soil}_{clay} + \beta_{10} \text{ Climate}_{wet} \times \text{Soil}_{sand} \\ &+ \beta_{11} \text{ Climate}_{wet} \times \text{Soil}_{loam} + \beta_{12} \text{ Climate}_{wet} \times \text{Soil}_{clay} + \epsilon_i\end{aligned}$$

- Where:

- $Cost_i$ is the pavement cost per lane kilometre for road sub-segment i. This is derived from the Austroads Pavement Structural Design Guide.[44]
- $AADT$ is traffic volume, measured by Annual Average Daily Traffic (AADT).
- $\text{Climate}_{moderate}$ and Climate_{wet} are dummy variables representing the climate zones, with "dry" as the reference category. Dry is defined as less than 200ml of annual rainfall, moderate is between 200-600ml, and wet is over 600ml.
- Soil_{sand}, Soil_{loam}, Soil_{clay} are dummy variables representing the subgrade soil types, with "rock" as the reference category. These categories are defined using a range of data sources mapped for New South Wales and are used as proxy for the California Bearing Ratio (CBR).
- We include interaction terms to recognise variable climate effects across subgrade types.
- $\beta_0, \beta_1, \beta_2, \ldots, \beta_{12}$ are the coefficients to be estimated.
- ϵ is the error term.

- Table 10-1 shows the regression output, after fitting the model to data on the NSW state road network. The results show that subgrade and climate conditions both have significant standalone and interacted effects on road costs, while controlling for traffic volumes. As expected, rock-based subgrades have the lowest average costs, while sand, loam and clay are progressively more costly to maintain. Meanwhile, the dry climate has the lowest cost on average. All estimated coefficients are statistically significant.

Table 10-1: Road segment cost regression coefficients

	ln(cost)			
Predictors	Estimates		Std. Error	p-value
(Intercept)	11.420	***	0.015	0.000
ln(AADT)	0.144	***	0.001	0.000
$\text{Soil}_{\text{Sand}}$	0.163	***	0.018	0.000
$\text{Soil}_{\text{Loam}}$	0.447	***	0.013	0.000
$\text{Soil}_{\text{Clay}}$	0.892	***	0.013	0.000
$\text{Climate}_{\text{Moderate}}$	0.198	***	0.021	0.000
$\text{Climate}_{\text{Wet}}$	0.065	***	0.021	0.002
$\text{Soil}_{\text{Sand}} \times \text{Climate}_{\text{Moderate}}$	-0.098	***	0.027	0.000
$\text{Soil}_{\text{Loam}} \times \text{Climate}_{\text{Moderate}}$	-0.128	***	0.023	0.000
$\text{Soil}_{\text{Clay}} \times \text{Climate}_{\text{Moderate}}$	-0.248	***	0.021	0.000
$\text{Soil}_{\text{Sand}} \times \text{Climate}_{\text{Wet}}$	0.227	***	0.027	0.000
$\text{Soil}_{\text{Loam}} \times \text{Climate}_{\text{Wet}}$	0.058	**	0.023	0.012
$\text{Soil}_{\text{Clay}} \times \text{Climate}_{\text{Wet}}$	-0.151	***	0.021	0.000
Observations				*27,842*
R^2 / R^2 adjusted				*0.577 / 0.577*
F-statistic				*3,164*

** p<0.1   ** p<0.05   *** p<0.01*

- Applying the estimated coefficients at the average level of traffic volume (AADT = 4,991.06), we find the relative costs between subgrade categories and climates in Table 10-2. This indicates that the subgrade

[44] Austroads (2024). *Guide to Pavement Technology – Part 2 – Pavement Structural Design*. ISBN: 978-1-922700-94-0. https://austroads.com.au/publications/pavement/agpt02

effects are more significant than climate effects. For example, a clay subgrade is more than double the cost of a rock subgrade, whereas a wet climate has only 8 per cent higher cost on average compared to a dry climate. The results are broadly consistent with our prior expectations for subgrade type.

Table 10-2: Modelled road cost weights by climate and subgrade classifications

Climate		Cost per km*	Relative cost
Dry			
	Rock	105,211.20	0.65
	Sand	123,813.42	0.76
	Loam	164,512.03	1.01
	Clay	256,699.91	1.58
	Average	162,559.14	1.00
Moderate			
	Rock	128,214.25	0.79
	Sand	136,801.06	0.84
	Loam	176,433.97	1.09
	Clay	244,119.47	1.50
	Average	171,392.19	1.05
Wet			
	Rock	112,329.07	0.69
	Sand	165,831.75	1.02
	Loam	186,090.99	1.14
	Clay	235,580.27	1.45
	Average	174,958.02	1.08

Subgrade		Cost per km*	Relative cost
Rock			
	Dry	105,211.20	0.91
	Moderate	128,214.25	1.11
	Wet	112,329.07	0.97
	Average	115,251.51	1.00
Sand			
	Dry	123,813.42	1.07
	Moderate	136,801.06	1.19
	Wet	165,831.75	1.44
	Average	142,148.74	1.23
Loam			
	Dry	164,512.03	1.43
	Moderate	176,433.97	1.53
	Wet	186,090.99	1.61
	Average	175,679.00	1.52
Clay			
	Dry	256,699.91	2.23
	Moderate	244,119.47	2.12
	Wet	235,580.27	2.04
	Average	245,466.55	2.13

* Modelled cost per lane km using the average AADT volume.

- The above results provide a good starting point for the Commission to incorporate at least soil type into the roads assessment by mapping the synthetic road network to a nationally consistent soil type data set. For example, the Soil and Landscape Grid of Australia provides a wide range of soil attributes at a national level.[45] We believe we have demonstrated that, subject to data, soil and rainfall characteristics can be incorporated into the Commission's methods.

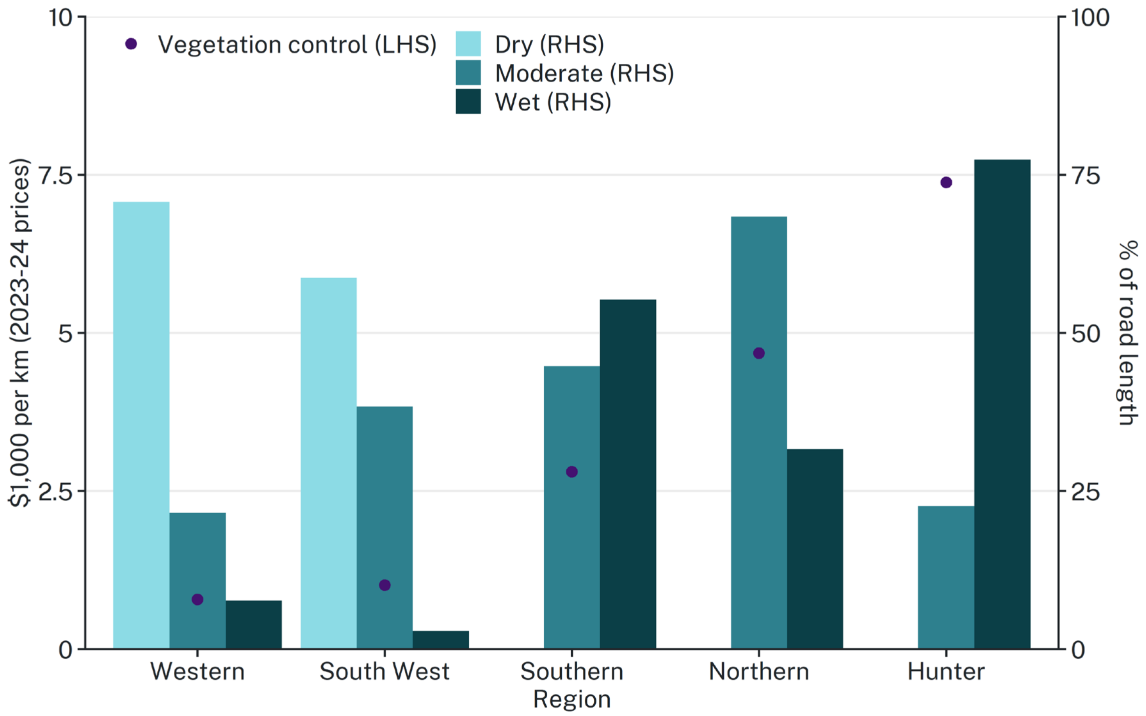
Landscape operating costs

- As outlined in our previous submission, the cost of maintaining the land on either side of a rural road is significantly higher in areas with a wetter climate. Roads in wetter areas require greater expenditure on vegetation management as grass grows more quickly and the volume of trees increases substantially. Both these factors create a greater risk of a collision between motor vehicles and native animals.
- Data from Regional Maintenance Delivery (RMD) and Road Maintenance Council Contracts (RMCC) in New South Wales shows a clear relationship between vegetation control costs and the climatic conditions of regions (Figure 10-2). These costs include tree removal and trimming, landscaping, slashing, and weed spraying from 2020-21 to 2022-23 inclusive.[46] We believe this data should inform the Commission in assessing a disability for differences in rural road operating costs in different climatic regions.

[45] https://esoil.io/TERNLandscapes/Public/Pages/SLGA/ProductDetails-SoilAttributes.html

[46] Cost data were inflation-adjusted to 2023-24 prices basis.

Figure 10-2: Annual roadway vegetation control costs and climatic distribution



Source: Transport for NSW

- The data indicates there is a considerable cost variation between different areas of New South Wales which is correlated with annual rainfall. As shown in Figure 10-2, the dry Western region of New South Wales incurs an average cost of around $785 per kilometre for vegetation control, while the Hunter region has an average cost of $7,379 per kilometre.

10.3 Use of the Rawlinson cost index for regional costs

Draft Commission position:

- To replace the general cost gradient with the Rawlinsons construction gradient for rural road lengths and the bridges and tunnels components.

- NSW Treasury does not support the Commission's position to use the Rawlinsons indices to determine regional costs for these components of the roads assessment. We consider that past concerns with such an approach, including those of the Commission itself, have not been adequately addressed in the Commission's decision to make this change for the 2025 Review.
- Rawlinsons was introduced by the Commission as part of the 2015 Review after extensive consultation with states. An area of focus was the appropriateness of introducing Rawlinsons for the roads assessment specifically. There were concerns that price variations for road materials may be markedly different compared to other construction costs.
- The Commission had sufficient concerns in 2015 in introducing Rawlinsons to the roads assessment that in the 2015 Draft Report, it determined to incorporate Rawlinsons but with a 50 per cent discount.[47] The Final

[47] 2015 Draft Report, Infrastructure assessments, paragraph 98.

Report resulted in an averaged undiscounted approach between Rawlinsons and the recurrent wage and regional cost factors.[48]

- The Commission recognised once again in the 2020 Review that building construction costs may be different from road construction costs.[49]
- We would contend that local sourcing of materials is more common in road maintenance and construction, compared to general construction. Local sourcing would reduce regional and remote cost drivers, which would not be reflected through general construction costs.
- The Commission should explain how their concerns relating to roads construction during the 2015 and 2020 Reviews are no longer applicable in the 2025 Review. We do not consider this has been adequately covered in the Commission's preliminary decision.
- If the Commission does proceed with this adjustment, a high discount should be applied. As noted above, a discount of 50 per cent was originally proposed for the 2015 Review, given the unclear relationship between road construction costs and building construction costs.

10.4 A 12.5 per cent discount to the roads assessment

Draft Commission position:

- To introduce a 12.5 per cent discount to the overall roads assessment.

- NSW Treasury welcomes the Commission's decision to discount the roads assessment based on concerns with the underlying data and the omission of significant disabilities and cost drivers
- We contend that the Commission should not limit its focus on state data concerns to the variability of year-on-year actual to assessed ratios. We believe that the magnitude of actual to assessed ratios should be evaluated for reasonableness, not just the year-on-year variability.
- We also note that the Commission has considered impacts of the discontinuation of the Survey of Motor Vehicle Use (SMVU), and increasing unreliability of traffic volume data, to be captured under this broad discount, rather than as a specific discount to its component.
- Based on our analysis of the impact of missing cost drivers, we believe the discount would more appropriately be set at 25 per cent.

10.5 Other Roads assessment positions

- NSW Treasury supports the removal of roads from the synthetic road network where these roads are often the responsibility of the private sector or local government or are maintained at a much lower standard.
- We support investigating the use of NSLS data across multiple components of this assessment, including whether this could improve the estimated size of the synthetic road network.
- We note the Commission will hold the current shares of urban and rural traffic for light vehicles and heavy vehicles constant pending the availability of a suitable data source, noting the discontinuation of the SMVU.

[48] 2015 Final Report, Infrastructure assessments, paragraph 128.

[49] 2020 Final Report, Geography, paragraph 50.

- We note that the Commission will not apply new drivers to the urban roads component of this assessment, specifically those related to older networks, mean slope, or dense or congested cost drivers factors. We note the Commission’s materiality test regarding night road works.
- We note that Commission’s position to continue using the National Transport Commission (NTC) data to apportion expense categories.
- We note the Commission’s position to retain the existing assessment for bridges and tunnels, noting concerns about state data on floodway crossings and culverts.
- We note the Commission’s position to retain the existing treatment of national road and rail network payments.

11 Transport

- The Commission has demonstrated that its model is robust and fit-for-purpose. It is eminently reasonable for the Commission to undertake continued improvements to the model as it matures, and we acknowledge suggested improvements for the 2025 Review.
- In our view, the Commission should still investigate removal of the blending ratio and recognising urban centre characteristics as reflecting 100 per cent of the urban transport need. This change should be implemented as part of the 2025 Review, but if the Commission insists on waiting until 2026 Census data become available, the Commission should seek authority to make a potential method change to be implemented through the 2028 Update.
- Further, COVID-19 has affected data across multiple assessments, and most of the Commission's temporary measures to account for these impacts are reasonable. Accordingly, we do not support the temporary increase to the blending ratio. Given increased confidence in the model should result in a reduction in the blending ratio, it is evident that this should offset any COVID-19 data concerns as well. The Commission should revise its position to introduce a temporary increase to the blending ratio, and instead maintain the existing ratio or implement a reduction.
- We note that the transport addendum was released to states on 1 August 2024 and released publicly on 5 August 2024. The updated modelling presented in the addendum confirms the underlying theoretical soundness of the model and suggests that COVID-related data adjustments have not appreciably changed the model's estimates. This strengthens the case for the blending ration to be reduced, not increased.

11.1 Updates to the Transport model

Draft Commission position:

- That the regression model is appropriate for assessing urban transport needs, though improvements can be made to strengthen the robustness of the model.

- NSW Treasury agrees that the fundamental features of the Commission's regression model remain appropriate for measuring the transport needs of the states. For a considerable period, the transport expenditure needs of the large states had been underestimated, with the 2020 Review finally addressing this issue.
- We expect the transport assessment to mature over time and we recognise the need for continuous improvements to the regression model, as suggested in the Draft Report. These include:
    - **Updating the model with more recent net expense data.** We are, however, concerned that 2022-23 data will not be a representative year for the application period of the 2025 Review due to residual COVID-19 impacts. We therefore support updating the model with later data as it becomes available.
    - **Calculating population-weighted density using the square kilometre grid rather than volatile SA1 data.** As discussed in our supplementary submission, we recommended moving to larger geographic areas for measuring population-weighted density to remove considerable levels of volatility. Re-estimating the model using the square kilometre grid should see the coefficients of the model more accurately reflecting the impact on transport needs as the distribution of population in Australia evolves over time.

      Our analysis indicates that using the square kilometre grid will have a similar effect on the model as using SA2 boundaries in practice. Other states have raised concerns with using SA2 boundaries.

While we believe these are overstated in many cases, we nonetheless support the grid as a theoretically ideal and stable unit for density calculation. We believe the grid obviates any genuinely motivated concern around boundary issues.

  - **Indexing 2016 Census passenger numbers using the Bureau of Infrastructure, Transport and Research Economics (BITRE) kilometres travelled data.** We believe the use of BITRE data preferable to state ticketing information to ensure data comparability between states.
  - **Modelling passenger numbers using a regression model.** While we agree that a modelling approach to passenger numbers is preferable, we believe the Commission has erred in rejecting the use of population-weighted density as the explanatory variable. We discuss this matter later in this submission.

- In our supplementary transport submission, we responded in detail to criticisms by other states of the current transport model. Much of this criticism failed to recognise the public transport problems faced by densely populated urban areas. Criticism centred around non-recognition in the Commission's model of supply cost savings associated with increasing population weighted density[50], ignoring:
  - the inclusion in the regression model of the log of passenger numbers that recognised net transport costs rise more slowly than passenger numbers, and
  - the inevitable increase in public transport demand arising from higher levels of population weighted density as levels of congestion increase.
- We support the Commission's conclusions that its model robustly and appropriately recognises these factors. We also endorse the Commission's findings that its model is in keeping with international transport literature which finds the presence of economies of density on fixed transport networks. The Commission's model does not relate to fixed networks.
- These model improvements justify a reduction in the assessment's blending ratio, or even the entire removal of the urban populations component. Given this, we do not think that a temporary blending ratio increase is at all necessary, given that the Commission should otherwise be reducing the ratio in the absence of COVID impacts on data. We discuss blending in Section 11.6.
- Finally, we welcome a further independent review of the transport model as part of the expected 2030 Methodology Review which we hope will go at least part way to finally settling the conceptual issues raised by other states.

11.2 The impact of COVID-19

Draft Commission position:

- That the key assumptions underpinning the model remain valid in the face of COVID-19.

- We agree that COVID-19 has caused significant disruption to public transport system. We believe the longer-term impact of COVID-19 on public transport systems around Australia is yet to be fully realised. However, we expect nationally, provision will move to a new equilibrium through service cuts or, more likely, a slowing of network expansion while passenger growth rises.

[50] Studies presented by other states showed a declining cost function as population weighted density increased where the size of the public transport system was fixed.

- We expect any re-estimation of the model would capture the evolving transport landscape and reflect 'what states do'. We are therefore not concerned if the balance between demand and supply of public transport services varies over time.
- COVID-19 has affected part of the data underpinning the transport model. Pragmatically, the Commission has sought solutions to these issues. While no solution is ideal, simply retaining the existing transport model would have undermined the contemporaneity of the assessment. We therefore support the Commission's attempts to update relevant variables in the regression model.
- The Transport addendum has demonstrated that COVID-19 is not having a significant effect on the outcomes of the Transport assessment. We do not agree, therefore, that a temporary increase to the blending ratio is justified.

11.3 Blending ratio

Draft Commission position:

- That the blending approach is temporarily increased to 65:35 between the model and urban population shares before returning to 75:25 in 2028 when 2026 Census data are available.

- We are concerned about the inconsistency between the Commission's increased confidence in the robustness of the model and the decision to introduce a temporary increase to the blending ratio through the 2028 Update.
- The Commission's position is that the proposed changes to the transport regression model will likely improve the estimates of state expenditure needs. This is eminently reasonable. If the Commission considers that this has been demonstrated, after updating its model, then it should be seeking to reduce or remove the level of blending. In the absence of any COVID-19 data concerns, we believe the Commission would be fully considering this course of action.
- The Commission's proposal to increase the blending ratio is motivated by data concerns alone, with these concerns specifically related to the impacts of COVID-19. Yet in contrast, the Commission has satisfied itself that the urban characteristics model is robust and reliable.
- We therefore do not support the Commission's decision to temporarily increase the level of blending, reflecting concerns over COVID-19 and data quality. The increased confidence in the robustness of the model should offset the temporary data concerns that are the basis for the temporary blending ratio increase. The Commission should be seeking to reduce the blending ratio once robust data become available, not introducing a temporary increase until 2028.
- In light of updated modelling, the Commission should (1) reverse its position to introduce a temporary increase to the blending ratio and (2) commit to reviewing a reduction or removal of the existing blending ratio as part of the 2028 Update when 2026 Census data are available.

11.4 Economies of density

Draft Commission position:

- That the model adequately captures economies of passenger density through the log treatment of passenger numbers in the regression.

- The Commission has persuasively defended its transport model against assertions that it misrepresents or otherwise ignores the economic literature related to economies of density. We support the Commission's assessment that its model is conceptually sound.
- In the academic transport literature, the term 'economies of density' is short for 'economies of traffic density'. It is consistently referred to as the relationship between average costs and output, while keeping network size fixed. McGeehan (1993) gives one of the clearest definition of economies of density:

> *"If the network configuration is held fixed, then economies of scale resulting from increased traffic volumes is defined as economies of density. Economies of density measure the relationship between unit costs and the intensity of utilisation of capacity."* [51]

- Given the accepted definition of economies of density, they cannot feasibly be linked to population density. This is because the latter is directly related to the required network size. A crucial element of quantifying economies of density is that the network size must be held constant.
- A consistent criticism of the Commission's model was that it assumes greater costs for a dense city such as Sydney when it should supposedly assume cost efficiencies. In fact, given the evidence supporting the presence of economies of density, it is much more likely that Sydney reaps fewer returns to density compared to other Australian urban rail networks, due to its large intraday peaks in demand (see Section 11.5. Savage (1997) indicates that networks with a) highly utilised tracks and b) low peak-to-base ratios, exhibit the least economies of density in short-run variable costs.[52] Noting that this refers to marginal effects, it means that the available returns to density have largely been exhausted in these networks. Sydney having a high peak-to-base ratio due to its large share of commuter trips indicates that the city does not enjoy lower costs due to economies of density.
- The relationship between peak demand and economies of density is further developed by Coulombel & Monchambert (2023). The study indicates that economies of density behave normally in off-peak periods, but during the morning 'hyperpeak' (8-9am), large diseconomies exist due to congestion and frictions which result in a physical limit to service frequency.[53] Therefore, congested urban transport systems like Sydney have lower cost savings from returns to density than other, less-congested systems.
- One objective of large investments in transport infrastructure, such as Sydney Metro projects, is to relieve congestion and diseconomies of density. This drives additional expenditure, as per the Commission's model. Another strategy to mitigate diseconomies of density is to employ a fare differentiation policy, which we discuss in Section 11.5.

[51] McGeehan, H. (1993). Railway costs and productivity growth: The case of the republic of Ireland, 1973-1983. *Journal of Transport Economics and Policy*, 19-32.

[52] Savage, I. (1997). Scale economies in United States rail transit systems. *Transportation Research Part A: Policy and Practice*. 31(6): 459-473.

[53] Coulombel, N., & Monchambert, G. (2023). Diseconomies of scale and subsidies in urban public transportation. *Journal of Public Economics*, 223, 104903.

11.5 Measuring Population-Weighted Density

Draft Commission position:

- To calculate population-weighted density using the square kilometre grid.

- Our previous submissions and the Commission's own analysis has highlighted problems with using SA1 data to measure population-weighted density (PWD) and the need to move to a broader geographic definition. In these submissions we raised the possibility of using SA2 or a kilometre grid.
- We believe the Draft Report provides sufficient justification for the use of the square kilometre grid in re-estimating the transport regression model. We further believe that such a move improves the overall robustness of the model and should increase the Commission's confidence in its outputs. This would clearly support a reduction or removal of the blending ratio.
- We note that NSW Treasury previously compared the kilometre grid to other levels of statistical geography. This comparison showed there were no apparent biases or discrepancies, as the relative ranking of capital cities' densities in Australia are broadly consistent across all geography levels. The estimated PWD from the SA2 level was especially close to the population grid, indicating there are no systematic biases in the ABS geographical boundaries.
- Nonetheless, we support the kilometre grid as a consistent and theoretically ideal unit for measuring population-weighted density.

11.6 Policy Neutrality – Cost Recovery and Efficiency

Draft Commission position:

- That the blending approach accounts for inherent uncertainty in the assessment and limitations in the model, including differences in states' cost recovery policies.

- The Commission is also correct to base its assessment on what states do, with Sydney contributing to its calculation of average policy. We have previously provided evidence of similar cost recovery ratios across public transports systems in Australia. We acknowledge that cost recovery ratios across Australia are low by international standards. However, this is what states do.
- To the extent that arguments can be made that cost recovery ratios are lower in Sydney, this reflects the need to use higher cost rail services to resolve Sydney's congestion issues. Given this, simple cost recovery models based on bus transport are not appropriate.
- It has also been argued that farebox policies influence public transport patronage. We agree there is a patronage response to changes in public transport fares in the same way we believe state taxes can influence the measured size of a tax base. We suspect that recent Queensland announcements to reduce public transport fares have factored in such an elasticity response.
- We believe modelling of passenger numbers using an independent indicator of need overcomes concerns regarding the individual farebox policies of states as well as other policy differences between jurisdictions. We expect that Queensland's recent decision to reduce public transport fares will increase public transport patronage. This decision will influence modelled patronage numbers and reflect what states do. In effect, modelling passenger numbers looks through the individual public transport fare policies of states to provide a policy neutral estimate.

- Cost recovery can also be related to concession policies and socio-demographic factors. However, we do not agree with claims that concession tickets are a primary driver of net costs. We support the Commission's view that costs are driven by peak demand.
- Due to normal school and business hours, students and workers are both relatively inflexible in terms of their intraday demand schedules, especially during the shared 8-9am weekday morning peak. This drives the capacity requirement of the network. According to Liu & Charles (2013), transit service providers in Australia set their capital stock and labour inputs to meet peak demand, thus a more evenly spread demand can reduce costs.[54]
- In recognition of this fact, nearly all major public transport operators in Australia utilise a differential fare policy to spread demand throughout the typical weekday (Table 11-1).

Table 11-1: Capital city off-peak transport discounts in 2023-24

Capital city	Off peak discount	Off peak time
Sydney	Flat 30%	Before 6:30am 10am to 3pm After 7pm
Melbourne	Free travel before 7:15am. Capped fares after 6pm.	Before 7:15am After 6pm
Brisbane	Flat 20%	Before 6am 8:30am to 3:30pm After 7pm
Perth	No discount	n/a
Adelaide	Up to 44%	9:01am to 3:00pm
Canberra	21% for non-concession users. Free for concession users.	9am to 4:30pm After 6pm
Hobart	Daily cap reduced by 50%.	After 9am
Darwin	No discount	n/a

Source: TfNSW, PT Victoria, Translink, Adelaide Metro, Transport Canberra, Metro Tasmania

- Off-peak periods are characterised by a base level of services with lower demand, little-to-no congestion, and spare capacity in the transport network. This means that during an off-peak period, the network is underutilised. The difference in demand between the peak and off-peak periods will indicate the level of underutilisation. Savage (1997) refers to this as the 'peak-to-base ratio'.[55] Accordingly, imbalanced demand leads to an inefficiency that cannot be fully mitigated by transport operators.
- Travel by individuals eligible for concessional fares is much more spread out across the day. Therefore, it stands to reason that concessional ticket holders generally absorb spare transport capacity and contribute to a more efficiently utilised network operation. States with greater proportions of concessional users therefore enjoy efficiency benefits not available to states with more concentrated demand.
- With relatively low occupancy rates throughout the day, off-peak passengers are associated with a substantially lower marginal cost to the network.[56] Hörcher & Tirachini (2021) also note that fixed costs of

[54] Liu, Y., & Charles, P. (2013). Spreading peak demand for urban rail transit through differential fare policy: a review of empirical evidence. In *Australasian Transport Research Forum 2013 Proceedings* (pp. 1-35). Australasian Transport Research Forum.

[55] Savage, I. (1997). Scale economies in United States rail transit systems. *Transportation Research Part A: Policy and Practice*. 31(6): 459-473.

[56] Horn af Rantzien, V., & Rude, A. (2014). Peak-load pricing in public transport: a case study of Stockholm. *Journal of Transport Literature*, 8, 52-94.

fleet size are 'unaffected by off-peak demand conditions'.[57] Accordingly, it is overly simplistic to associate lower off-peak occupancy with higher average costs because this would ignore that the fixed capital stock is largely independent of off-peak demand.

11.6.1 Impact of Sydney on the Transport Regression Model

- The public transport circumstances faced by individual jurisdictions vary considerably. In an ideal world, there would be many large city data points to benchmark the transport model. We believe the Commission can take confidence in the current specification and output from its regression model. The model reflects 'what states do'[58], it is consistent with international evidence, and modelling passenger numbers overcomes most policy neutrality concerns.
- We have previously articulated the specific circumstances in Sydney that give rise to higher population weighted density and higher levels of congestion. These factors are beyond the control of governments and reflect decisions made in the original settlement of Australia.
- We also reject assertions that Sydney in some way overprovides public transport services, whether generally or in response to COVID-19. Imperial College London (2022) indicates that Sydney Trains maintained a relatively unchanged level of service provision in response to the COVID-19 pandemic when compared to other international examples. This is consistent with average state policy in Australia, as indicated by the Commission's analysis which showed steady public transport availability across all capital cities in response to the pandemic.
- If we were to accept that a) Sydney is overproviding transport service capacity and b) population should be the driver of service needs, then Sydney's mode shares should be approximately equal to those for Melbourne – an urban area with a similar population level.
- Using 2016 Census Journey to Work data on mode shares, we estimated this would decrease public transport use in Sydney by nearly a third (Table 11-2). With these commuters shifted to private transport, this would see a 14.2 per cent increase in road usage at peak times.

Table 11-2: Modelled daily commuters in Sydney by transport mode classification

	Active	Private	Public	Total
Melbourne mode share				
2018-19	126,441	1,857,416	450,186	2,434,043
2019-20	128,001	1,880,327	455,739	2,464,067
2020-21	128,033	1,880,795	455,852	2,464,680
2021-22	127,434	1,871,994	453,719	2,453,147
2022-23	129,657	1,904,647	461,633	2,495,937
Actual mode share				
2018-19	138,686	1,626,628	668,728	2,434,043
2019-20	140,397	1,646,693	676,977	2,464,067
2020-21	140,432	1,647,102	677,146	2,464,680
2021-22	139,775	1,639,395	673,977	2,453,147
2022-23	142,213	1,667,991	685,733	2,495,937
Difference (%)				
Total	-8.8	14.2	-32.7	0.0

Source: CGC calculations, ABS 2016 Census

[57] Hörcher, D., & Tirachini, A. (2021). A review of public transport economics. *Economics of transportation*, 25, 100196.

[58] The Commission has demonstrated that regression model outcomes more closely accord with happens in the real world.

- The additional load on Sydney's road network from reduced public transport provision is unacceptable. Sydney already has the most congested roads in Australia (Table 11-3). Combined with the fact that public transport commuters typically travel to centralised employment hubs, this would disproportionately increase road congestion. Infrastructure Australia estimates that Sydney's economy has the highest cost of road congestion ($8 billion in 2016), while also noting that road congestion and population density were key reasons for its higher public transport share.[59] [60]

Table 11-3: TomTom Traffic Index, Australia 2023

Country rank	World rank	City	Average travel time per 10km	Average speed in rush hour
1	47	Sydney	21 min 30 s	23 km/h
2	63	Melbourne	20 min 50 s	23 km/h
3	91	Adelaide	19 min 20 s	26 km/h
4	141	Brisbane	17 min 30 s	27 km/h
5	179	Newcastle	16 min 30 s	32 km/h
6	189	Hobart	16 min 10 s	31 km/h
7	225	Perth	15 min 10 s	31 km/h
8	266	Gold Coast	14 min 10 s	37 km/h
9	323	Canberra	12 min 20 s	42 km/h
10	347	Wollongong	11 min	48 km/h

Source: TomTom Traffic Index

11.7 Ferry expenditure needs

Draft Commission position:

- To retain the ferry dummy variable in the model.
- To assess Newcastle as having a ferry service.

- We remain concerned that the proposed inclusion of a ferry dummy variable fails to capture differences in the significance of ferry operations in each state. Under the Commission's proposed approach, the same per capita amount would be added to the assessed expenditure of states regardless of whether ferry operations represented 0.1 per cent or 10 per cent of the commuter task.
- Ferries services have a significantly different cost structure from trains and buses. In estimating the assessed expenditure of each jurisdiction, ferry passenger numbers are not included elsewhere within the passenger numbers used in the model. The effect of this is to bias model outcomes which see states with a larger share of the public transport task undertaken by ferry (and therefore lower passenger numbers on other modes of transport) disadvantaged. We believe such a distortion of the model outcomes to be more significant than the inclusion of ferry passenger numbers undertaken by non-state operators. In any event, we believe it likely that many non-state operators are partly funded through state contributions.
- We support the inclusion of the Newcastle ferry service in the assessment.

[59] Infrastructure Australia (2019). Urban Transport Crowding and Congestion, *The Australian Infrastructure Audit 2019*.

[60] Infrastructure Australia (2019). Crowding and congestion, *The Australian Infrastructure Audit 2019,* Factsheet: Sydney, the Hunter and Illawarra.

11.8 Modelling passenger numbers

Draft Commission position:

- To use a regression to model passenger numbers.

- We support a modelling approach to estimate passenger numbers. We believe modelling passenger numbers addresses issues of policy neutrality. However, we are concerned that the Commission intends to continue with a dummy variable approach to the existence of rail services.
- The inclusion of a rail dummy variable results in a discontinuity in modelled passenger numbers where a jurisdiction moves from using buses to providing the same level of services via rail. We believe this outcome should be avoided.
- It is for this reason we suggested a more policy neutral approach which sees passenger numbers driven by population-weighted density. Our Tranche 1 submission demonstrated that this fitted the data well for urban centres with a population weighted density of more than 1,750.
- The Commission has expressed concerns with the arbitrariness of the chosen threshold below which passenger numbers per 10,000 residents show virtually no relationship to population-weighted density. The discontinuity in the relationship between public transport use and population-weighted density is not surprising. The shift to using public transport only arises when congestion costs become too great. It is for this reason that there appears to be little relationship between low levels of population weighted density (and therefore low levels of congestion) and public transport use.
- The purpose of modelling public transport numbers is to overcome questions of policy neutrality, such as the level of fares charged by jurisdictions. We believe modelling passenger numbers based on population-weighted density results in a superior fit to real world data as shown in our Tranche 1 submission, and therefore should be preferred.
- Not adjusting for the presence of urban areas which are of such low density as to render commuter-based public transport irrelevant is skewing the Commission's passenger modelling and significantly understating Sydney's transport task.
- If modelled correctly, any difference between the modelled and actual number of passengers for an urban area would reflect deviations from average state policy. It is implausible that Sydney's higher actual patronage is explained by policy alone, when we have demonstrated that Sydney's roads are the most congested in the country. This congestion – along with concentrated employment – result in large numbers of public transport passengers in Sydney.
- The Commission's approach significantly understates the policy-neutral need of Sydney to provide public transport given the actual number of passengers observed and the characteristics that drive this level of patronage.
- We disagree with the Commission's assertion that the use of a density variable to model passenger numbers results in double counting of this variable in estimating the transport expenditure needs of states. Density is used in the cost regression to estimate the impact of demand on net costs. It is reasonable that density also be used to model demand, since it is congestion – caused by density – which drives demand.

11.9 Other Transport assessment positions

- We note that the Commission will use 2022-23 net expense data to update the assessment in the 2025 Review, provided they are of sufficient quality and confirm the relationships in the model. 2023-24 data will be incorporated into the model through the 2026 Update.
- We note the Commission's position that 2016 Census Journey to work data are the best option until 2026 Census data are available.
- We note the Commission's position that 2021 Census Distance to work data are suitable for use in the 2025 Review and provide a reliable measure of network complexity.
- We note the Commission proposes to index 2016 passenger Census data using BITRE data, and to use BITRE data to adjust 2016 Census data when re-estimating the regression.
- We note that the Commission proposes to retain an EPC assessment of non-urban transport and to assess inter-urban transport expenses in the non-urban assessment.
- We note the Commission's position to retain the current method of allocating Victorian V/Line expenses until 2026 Census data are available.
- We note the Commission proposes to blend urban centre characteristics with urban populations squared if state data supports the relationship, or to apply urban populations if this is supported by the data, in the investment methodology.
- We note the Commission's position to move pipeline and other transport COFOG-A (1171) from the urban transport to the non-urban transport component. We support the Commission's position to retain school transport expenses in the urban transport component.

12 Services to Industry

- NSW Treasury supports the Commission’s decision to correct for COVID-19 costs in the 2025 Review and the 2026 Update. This is in line with the treatment of health assessment costs and appropriately recognises that some states were disproportionately impacted by the unavoidable effects of a global pandemic.
- We otherwise consider that the Commission should further evaluate its technical changes to the assessment of the regulatory burden facing states before the Final Report.

12.1 Treatment of business support COVID-19 impacts

Draft Commission position:

- To introduce an assessment of COVID-19-related spending under the business support national partnership agreements.
- To not introduce retrospective COVID-19 adjustments for the 2021 Update to 2024 Update.

- NSW Treasury supports the Commission’s decision to implement an adjustment for business support expenditures incurred by states in response to COVID-19. This was an international pandemic that required a comprehensive national response, with alignment between states and the Commonwealth. This alignment was actioned through national partnership agreements on business support.
- The Commission has previously put forward its approach to this and has been cognisant of the impact of COVID-19 on worsening the equalisation outcome in recent years. The Commission’s preference to adjust for COVID-19 has long been established through commentary in New Issues papers for previous updates. We note that the Commission considers Option 1 of these past positions as the most practical to implement for this review.
- State responses were policy neutral and were undertaken due to circumstances materially outside of state control. We have provided material commentary on this matter in our Tranche 1 submission, as well as responses to past New Issues papers. We continue to vehemently disagree with states that imply the experiences of other states stem from policy decisions, rather than being caused by the uncontrollable nature of a global pandemic.
- While the Commission has been delayed from implementing these necessary adjustments due to the Terms of Reference in annual Updates, we appreciate that the Commission has recognised these COVID-19 impacts when it has had the scope to do so.
- We acknowledge that the proposed adjustments will only correct for the 2025 Review and the 2026 Update. The last year impacted by the business support national partnership agreements, 2022-23, will drop out of the assessment years for the 2027 Update. Accordingly, this will only partially correct the impacts of COVID-19 on equalisation.
- We are disappointed about the position that the incorrect equalisation outcomes delivered from the 2021 Update to the 2024 Update will not be amended. We appreciate again that this is not the fault of the Commission, given the restrictions imposed during past updates. This is a key example of the benefit of the Commission having the flexibility to change methods.

12.2 Drivers of industry regulation

Draft Commission position:

- To replace total factor income as a measure of industry size with the aggregate measures of industry output.
- To use 2021-22 as the base year rather than an average year.
- To not include the number of businesses as a driver of need.

- While we conceptually support the use of a volume-based chain volume measure of industry value to reduce sensitivity, we retain concerns about the Commission's approach to using a base year of 2021-22. We are not convinced this has been fully addressed in the Draft Report.
- In its consultation paper, the Commission consulted states on whether to use an average or a representative base year. We are unclear that the Commission has demonstrated that it has since tested and analysed both approaches. As per our Tranche 1 submission, we consider it preferable that the Commission uses a three-year average to avoid reliance on a single base year of data and avoid the Commission potentially 'picking winners and losers'.
- Our recommendation remains that the Commission uses a three-year average.
- We do not support the Commission's position to not introduce the number of businesses as a driver of need. It is not evident that the ABS data limitations are too great to implement a business count driver. We would seek further information on why issues with multi-location and small business data are too difficult to overcome for a business count driver.
- The Commission identifies that data on business entries and exits excludes businesses that have a turnover of less than $75,000 ***or*** who have not registered an Australian Business Number (ABN). We would note that the ABS defines this as less than $75,000 ***and*** does not have an ABN.[61] It has not been evidenced that this materially impacts the calculation or why the available ABS business count is not an appropriate indicator of the relative size of the regulatory task.
- The Commission also identifies that multi-location businesses will understate the business count. Again, it is unclear what the actual extent of this issue is. However, the ABS notes that BLADE data can provide some location data at SA1, which could serve as a functional proxy.[62]
- Further, the Commission identifies that a challenge for the assessment will be 'determining use weights for the number of businesses … [as this] will require a degree of judgement'.[63] It is unclear why judgement is an issue for the Commission in this component of the assessment, but not in selecting a base year.

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[61] https://www.abs.gov.au/methodologies/counts-australian-businesses-including-entries-and-exits-methodology/jul2019-jun2023

[62] https://www.abs.gov.au/methodologies/counts-australian-businesses-including-entries-and-exits-methodology/jul2019-jun2023

[63] 2025 Methodology Review - Draft Report June 2024, Services to Industry, paragraph 27.

12.3 Other Services to industry assessment positions

- NSW Treasury supports the Commission continuing to work with states and relevant Commonwealth agencies after the 2025 Review to develop a consistent net-zero definition and work on ways to best identify net-zero spending, including business development and otherwise. This includes work on identifying the drivers of state spending on the net-zero transition.
- We support the Commission continuing to assess business development expenses as equal per capita with a wage cost adjustment.
- We note the Commission has updated development and regulation weights with more recent data, with any additional state data before the final report to still be incorporated.

13 Natural disaster relief

- NSW Treasury agrees that retaining the 2020 Review actual per capita method is reasonable for this assessment and that material changes are not required.

14 Native Title and Land Rights

- NSW Treasury agrees that retaining the 2020 Review actual per capita method is reasonable for this assessment and that material changes are not required. We note the Commission will continue to monitor approaches to Native Title compensation and associated expenditure patterns. It is appropriate for the Commission to continue monitoring developments in Treaty negotiations and any potential impacts on this assessment.
- We note that the Commission is not intending to include Treaty-related costs in the assessment.
- We note the importance of recognising that Native Title claims are distinct from state land rights claims. Land rights policies are broadly consistent across states and are compensatory in seeking to provide redress for historical dispossession of Indigenous land.
- Many land rights claims are recognised as an impairment in the fair value of land and can be written down against an entity's asset revaluation reserve. This is still a form of compensation and is still a cost to the compensating government. However, as this will lead to a reduction in a state's asset position, the Commission is not recognising it as a cost incurred by a state. We believe that the Commission should investigate this issue further as to not understate the extent of land rights compensation across states.

15 Administrative scale

- The Commission proposes no change to its administrative scale assessment, including no change to the salaries proportion of administrative scale costs. It will include a broader examination of the impact of administrative scale as part of its proposed forward work program.
- The Commission briefly summarised the academic work of Chan and Petchey (2024), which found that government expenditure per capita increases with increasing state populations. It noted that it will continue to examine the conceptual case and evidence supporting this view, though it did not explicitly commit to undertaking this work as part of its forward work program.
- We do not consider the Commission's response sufficient. This is a conceptually sound driver, with impacts that will clearly pass the Commission's materiality threshold. While the deferral of introducing a specific driver is reasonable until further investigation is undertaken, inaction on the matter will result in perverse GST distributions. If no driver is implemented, a discount must be applied in recognition of the conceptual validity and materiality of this driver.

15.1 Diseconomies of large-scale states

Draft Commission position:

- To not make any adjustment for congestion costs faced by larger states.

- While the Commission disputed that larger states face higher per capita *administrative* costs, it was largely silent on the broader question of whether larger states face higher per capita *total* costs. We find the Commission's relative silence untenable, given the magnitude of the potential impact identified by Chan and Petchey.
- As we understand it, the Commission's response in paragraph 41 relates only to diseconomies of specifically large-scale administration. We accept that New South Wales does not have higher per capita administrative costs than smaller states. Our position was that the current assessment overstates the higher per capita costs in smaller states by ignoring the increased complexity required in larger states. That is, large states have a marginal cost associated with complexity that smaller states do not.
- If, however, paragraph 41 relates to the case for broader diseconomies of scale, then we suggest the Chan and Petchey article presents both a conceptual position and reasonable evidence.
- Though we raise this in the context of the administrative scale assessment, we recognise that these costs are not necessarily administrative in nature. We believe it is appropriate that congestion costs[64] be considered here since this assessment is the only assessment that attributes costs to population size in a non-linear way. It is population size that drives differences in both per capita administrative costs and per capita congestion mitigation costs.
- Here we reproduce the table from our Tranche 2 submission where we compare relative per capita costs attributable to scale / population size across the states.

[64] Congestion refers to the erosion of per capita service accessibility and benefits as populations increase.

Table 15-1: Relative per capita costs attributable to population size

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	All States
Administrative scale	-71	-61	-47	21	89	531	740	1,457	0
Congestion mitigation	130	66	1	-162	-253	-440	-467	-664	0

- We accept and have not disputed that smaller states face higher per capita costs related to minimum administrative scale. Chan and Petchey provide compelling evidence that larger states face higher per capita costs across a range of functions, to mitigate what they term congestion.
- The magnitude of the impact is such that, for New South Wales, it would more than offset the impact of the current administrative scale assessment. Indeed, if the full effects of population size on per capita costs were properly recognised (assuming they are correctly calculated by both Chan and Petchey and the Commission), New South Wales would see an increase in its assessed relative expenditure needs.
- Further, the direction of the impact is inversely related to the direction of the current assessment. It is not always the case that congestion costs would wholly offset administrative scale costs for all states. But they would, in all cases, reduce the impact of administrative scale.
- For New South Wales, there are potentially billions of dollars of unavoidable cost being largely ignored by the Commission. In our view, this warrants complete re-evaluation of the current administrative scale assessment. Certainly, it warrants further discussion and engagement by the Commission in its Final Report.
- We accept that the Chan and Petchey estimates cannot be taken to be accurate without further investigation. Given the central importance of this work to the Commission, the Commission should undertake to complete this work as a matter of priority.
- However, even if the magnitude of the estimate remains uncertain, its direction is clear. That direction is opposite the direction of the current administrative scale adjustment. We consider equalisation will be clearly improved by the application of a discount to the current assessment, while the Commission works to calculate a disability for congestion of plausible magnitude.
- The Commission cannot ignore this issue for the 2025 Review. The conceptual case is evident from the academic literature – larger states incur significant costs to mitigate the impacts of congestion. The magnitude is almost certain to be significantly beyond the Commission's materiality threshold for introducing a new driver. We accept that a driver likely cannot be implemented for the 2025 Review, given the need for further analysis, but we do not accept that leaving this material issue untouched is appropriate at all. A discount to the administrative scale assessment, as the most appropriate proxy assessment for congestion costs, is the only reasonable course of action to avoid the Commission making a material error in the equalisation methodology.

15.2 Wage related costs

Draft Commission position:

- To maintain existing assumptions around labour cost shares of total expenditure.

- The Commission agreed with NSW Treasury that, in deriving the proportion of administrative scale expenses attributable to labour costs, it should focus on data representing administrative costs of operating core head office functions.

- We acknowledge the Commission’s analysis comparing costs for First Ministers departments across states. This excluded grants, intergovernmental transfers, and interest expenses. We suggest that, in undertaking this analysis, depreciation expenditure should also be excluded, though we admit this is unlikely to drive a material difference in the Commission’s conclusions.
- More pertinently, we consider it more appropriate to average labour cost profiles over a number of different agencies whose costs would be dominated by corporate functions and policy development. This would provide greater confidence in the Commission’s estimate. NSW Treasury included data from multiple non-service delivery agencies as part of our Tranche 2 submission.

15.3 Other administrative scale assessment positions

- We do not support the Commission’s conclusion that the current analysis underpinning the assessment remains valid and that it should be retained for the 2025 Review.
- We note the Commission’s position to not include any impacts for centralisation or shared services within the assessment for the 2025 Review.
- We note the Commission’s intent to undertake a broader review of administrative scale as part of its forward work program. This must include an investigation of Chan and Petchey’s work on congestion mitigation costs faced by larger states, not just a review of minimum scale costs.

16 Wages

- As part of the 2025 Review the Commission engaged its expert consultant, Professor Alison Preston, to review the current Wages assessment regression model. Professor Preston's review followed a similar review by Professor James Morley undertaken on behalf of NSW Treasury.
- Both expert consultants broadly supported the model and were confident in its theoretical justification and its use of the ABS Characteristics of Employees survey. Both also suggested the model be simplified where possible and that the Commission consider greater data pooling to reduce year-on-year volatility.
- In response to its consultant's report, as well as feedback from states and territories, the Commission has proposed a number of amendments to its model, including:
    - Simplifying the model and reducing the number of variables
    - Replacing imputed work experience and imputed work experience squared with 5-year age dummy variables, and
    - Including three categories of usual working hours in the model.
- On the basis of expert endorsement, NSW Treasury considers the wage model to be robust and support its continuation. We do not feel a continued discount is justified nor appropriate given the technical reviews undertaken and the model improvements implemented.
- We note the Commission's analysis supporting the ordering of variables in its stepwise regression, the exclusion of detailed industry controls, and the removal of gender interaction terms.
- We do not support the Commission's proposed approach to smoothing the model. While we accept that we would not expect differences in state wage pressures to change significantly year-on-year, we consider the Commission's approach to smoothing will reduce both the simplicity and the contemporaneity of its model. In both cases, this represents a departure from the Commission's guiding principles.
- We consider that a simple pooling of data across years will work to reduce volatility while still meaningfully responding to changes in state circumstances. It is also significantly more straightforward than the Commission's proposed approach, which is highly technical, difficult to understand, and not preferred compared to the approach proposed by Professor Preston
- We otherwise note the positions of the Commission in this assessment.

17 Geography

- NSW Treasury conceptually supports the Commission's decision to introduce more services into the regional gradients, as well as the use of a weighted average of expenditure. We suggest that there are minor adjustments that could be made to improve the proposed gradient.
- We acknowledge that the Commission is otherwise maintaining a relatively similar approach to the implementation of the regional gradients to the 2020 Review. This includes not implementing any new assessment-specific cost gradients.

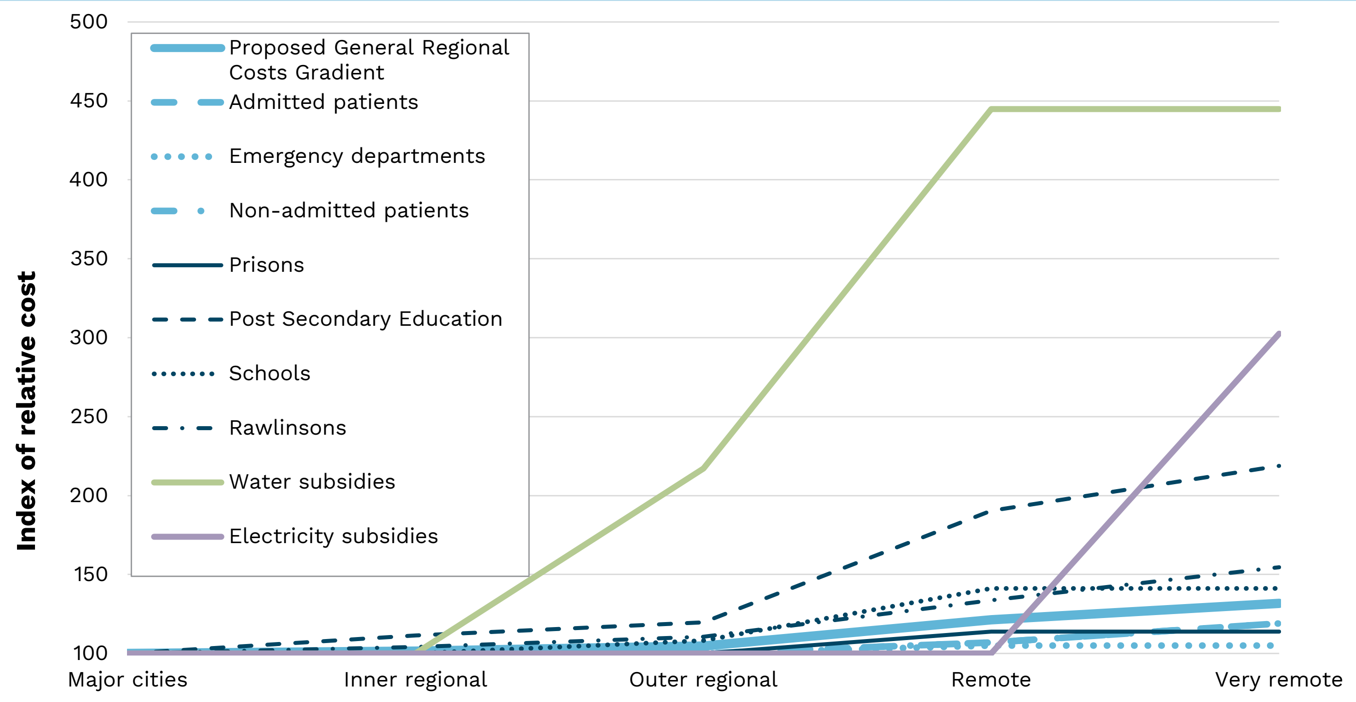
17.1 Expansion of services in the general gradients

Draft Commission position:

- To introduce more services into the regional gradients and use a weighted average of expenditure.

- NSW Treasury is conceptually supportive of the Commission's decision to incorporate additional cost gradients into the general regional cost gradient. We expect that this approach will be more robust and should be more representative of the recurrent cost of state service delivery.
- We also consider that the decision to weight these components based on their share of total national spending of relevant services appears to be a reasonable and simple approach.
- The assessments that continue to use the general regional cost gradient include housing, welfare, services to communities (excepting subsidies), non-urban transport, services to industry, and other expenses. Any combined gradient should be aiming to best represent the conceptual remoteness costs associated with these state services.
- While we support the overall move to incorporate other services into the regional gradients, we do have some concerns about the services selected. Our view was that the combined regional gradients would act to reduce the impact of outlier services and reflect the likely cost of most other state services. The introduction of gradients that have minimal relevance or similarity to other state services, or appear to be outliers, could inappropriately impact the combined regional cost gradient.
- We hold this view primarily for the inclusion of the water and electricity subsidies regional gradients, as well as for the inclusion of Rawlinsons indices used to measure capital construction costs.
- Firstly, the principal concerns about the subsidies gradients are that they:
    - are based on a smaller subset of state data
    - only apply to some remoteness regions, not all, and
    - do not represent similar service activity to other state services, as indicated by their anomalous remoteness impacts compared to other cost gradients.
- We note that the Commission's proposed weighted average approach reduces the influence of these two components, due to their relatively minor expenditure at a state level. However, we believe that conceptually, non-representative services should not be included in the gradient. Our recommendation is that the two subsidies gradients are removed.
- The Commission identified that as neither water subsidies nor electricity subsidies have a relative cost for all remoteness areas, it could not be shown in its figure showing the gradients of the service components used in the new regional cost gradient. For completeness, we have included the gradients as part of Figure 17-1 below. We have assumed an index of 1 for all missing remoteness area data points.

Figure 17-1: Regional costs gradients of service components used in the regional costs general gradient, 2022–23



Source: Commission 2025 Review Draft Report simulator data

- As Figure 17-1 shows, these two services are significant outliers relative to all other services.
- For electricity subsidies, the growth in the gradient from remote to very remote is 202.6 per cent, with the next closest growth being 15.6 per cent from Rawlinsons.
- For water subsidies, the growth in the gradient from outer regional to remote is 104.9 per cent, with the next closest growth being 50.9 per cent in post-secondary education and the growth from inner regional to outer regional is 117.1 per cent, with the next closest being 8.1 per cent growth in schools.
- The gradients of these two services bear no similarities to any other activities used in the combined regional cost gradient. We are concerned that these are anomalies in regional service provision that do not represent other state services delivered in regional and remote areas.
- Both subsidies' regional cost gradients are only derived from the data of some states. Water subsidies do not have a major city data point while electricity subsidies do not have data points for major cities, inner regional, and outer regional remoteness categories. We are concerned this is not sufficiently representative of other state services and not appropriate to be incorporated within a combined general regional cost gradient.
- Our recommendation is that the Commission removes water and electricity subsidies from its new combined regional cost gradient. We consider the combined gradient an improvement upon the previous method, including the weighted average approach, but that these two services are anomalies and not similar in nature to other state services.
- We also have concerns about the use of Rawlinsons as a measure of recurrent state services. Rawlinsons is designed to capture general construction costs across states and has been specifically implemented as part of the Investment category. There are two key concerns of note:
    - Rawlinsons is not representative of, or related to, recurrent state services.
    - Investment expenditure forms 21.6 per cent of the weighted average in the regional gradient, despite not being related to recurrent service costs.
- It is not clear how a measure of construction costs across regions is reasonable to use in deriving recurrent regional costs for other state services. The Commission has not established how construction and investment activity is relevant to the delivery of recurrent services.

- We would seek clarification from the Commission on why Rawlinsons, and investment generally, are appropriate to include as a part of a weighted average to determine regional costs for services with recurrent expenditure. We believe it should be removed from the weighting.

17.2 Other Geography assessment positions

- NSW Treasury acknowledges that the Commission will maintain the existing assessments for the regional cost and SDS gradients in line with the 2020 Review, as well as maintaining a 25 per cent discount on the general gradients. We would continue to support further work to implement assessment-specific cost gradients, where possible.
- We support the Commission’s decision to not implement an interstate non-wage cost assessment.
- We note the Commission’s position to retain the ABS standard classification of remoteness.
- We note the Commission’s commitment to taking steps to avoid any double counting impacts within assessments.
- Regarding assessment-specific geography impacts, in separate sections, we:
    - suggest further review of the proposed regional cost gradient in the community and public health services component.
    - question the reasonableness of data used to determine the post-secondary education gradient for the 2025 Review.
    - question whether the Rawlinson Index appropriately captures cost dynamics related to local road maintenance in regional and remote areas, given the typical reliance on local, low-value materials for road works, as well as the Commission’s concerns in the 2015 and 2020 Reviews about applying the index to the roads assessment.

18 Socio-economic status

- NSW Treasury agrees that it is appropriate to defer any update to the measure of socio-economic status for the non-Indigenous population until after the 2025 Review. There are reasonable concerns about the reliability and relevance of proposed indicators that could be addressed through additional time developing the alternative PLIDA measure.
- However, we do consider that application of the five-year Socio-Economic Indexes for Areas (SEIFA) index is not producing a contemporaneous result and not reflecting the actual socio-economic status of states' populations over the five-year period between censuses. We therefore believe it is important for the Commission to continue work towards developing a more contemporaneous measure.
- We note the Commission's proposal to use socio-economic status for First Nations and non-indigenous people to the extent that it can be supported by data.
- We note the Commission's proposal to work with states on a review of the Indigenous Relative Socioeconomic Outcomes (IRSEO) index after the 2025 Review. This review appears reasonable in principle.

19 National capital

- NSW Treasury supports the Commission’s decision to cease this assessment in recognition of its immateriality. If it chooses, the Commission can revisit the materiality of this assessment as part of the 2030 Review. We note this indicates neither cost advantages nor disadvantages will be assessed as part of the 2025 Review.
- We note the Commission’s position on the ACT’s special circumstances.

20 Other expenses

- NSW Treasury notes the Commission has proposed no changes to the classification of expenses under this assessment. We note the Commission will continue to assess other expenses equal per capita with adjustments for regional and wage costs for a subset of expenses.
- The Commission has updated the percentage of expenditure in scope of the remoteness and wage cost weights since the 2020 Review based on available data. This has reduced from 64 per cent to 47 per cent for remoteness and 67 per cent to 51 per cent for wages.

21 Investment

- NSW Treasury supports the Commission’s decision to not implement smoothing of user population growth in this assessment and the net borrowing assessment. The current approach is simpler and more contemporaneous than introducing smoothing.
- We support the Commission’s position to not freeze asset component shares.
- We note the Commission intends to retain the 2020 Review method and continue to monitor the appropriateness of Rawlinsons cost indices.
- We note the Commission proposes not to introduce a brownfields assessment.
- Regarding the identified user population of individual investment components:
  - We do not agree that social housing investment needs are driven by the number of individuals in social housing as opposed to the number of households in social housing or the number of dwellings provided and serviced. This is the implication of the Commission’s individuals-based approach. We address this matter in detail in Section 6.1 of the housing chapter.
  - We note the proposed change in the welfare calculation to include homelessness services expenses for capital needs but exclude NDIS expenses.
  - We note that the Commission has introduced a direct measure of mental health into the health assessment and subsequently proposes to include mental health needs in the calculation of health capital needs.
  - Impacts from the transport assessment, and their subsequent flow-on effect to investment, were provided in the Commission’s transport addendum in August 2024. We will further consider these impacts as part of our response to the addendum.

22 Net borrowing

- NSW Treasury supports the Commission’s decision to retain this assessment in its current form. We also support the decision not to smooth the population, in line with the investment assessment.
- We note continued claims that state responses to the COVID-19 crisis were driven by policy influences. These remain inaccurate, as they have been since the 2021 Update. COVID-19 was a global pandemic. Its impact on states reflected epidemiological factors. The response of states was nationally agreed and nationally consistent.
- The nature of COVID-19, its impacts on states, and the degree of national alignment in response is made apparent by the existence of the National Partnership on COVID-19 Response, which all states signed.

23 Commonwealth payments

- NSW Treasury agrees with the retention of the existing guidelines for deciding the treatment of Commonwealth payments.
- We agree with the decision to use a default treatment of payments as 'impact'. This is a simple approach, and states will maintain the opportunity to challenge the treatment of new Commonwealth payments through New Issues papers.
- We note the Commission's decision to cease including Commonwealth own-purpose expense payments (COPEs) in this assessment.
- We note the Commission's position to retain scope to assess certain payments as no impact if evidenced as addressing pre-existing structural disadvantage and do not represent assessed needs.

24 Adjusted budget

- NSW Treasury supports the Commission’s decision to use preliminary ABS GFS data for year 3 of the assessment, instead of state data. We note the intent to use state year 3 data in cases where the ABS data is not yet available.
- We appreciate the Commission identifying a proposed adjustment process for the 2025 Review. We note the Commission’s proposal to use the adjustment process to assess whether to fix any identified errors.
- We support the Commission’s continued commitment to improving clarity in the adjusted budget process and the provision of non-confidential data to support reconciliation.
- We note the position of the Commission regarding prior year data errors.
- We also support the Commission, states and the ABS working together to improve the quality and alignment of state budget data and ABS GFS data. We recognise that a reasonable path of improvement would be through the update of the ABS GFS manual in response to the update to the International Monetary Fund’s GFS manual. We note this is expected to be delivered by the end of 2027.

25 Flexibility to consider method changes

- The Commission has made proposals for how to operationalise the flexibility to consider method changes, as well as the circumstances in which this flexibility would be employed. We note the Commission's positions on the flexibility to consider method changes between reviews. Primarily, this will be undertaken by adjusting the standing terms of reference for annual updates.
- We note that the proposed process for considering method changes on a case-by-case basis would be via a consultation paper to states on the relevant issues, before a wider consultation with states on all aspects of possible changes to assessment methods.
- In taking next steps in operationalising these changes, we would seek further advice from the Commission on:
    - the timing of next steps, from providing advice to the Commonwealth Treasurer to the confirmation of the approach to method changes between reviews
    - whether it will share its advice to the Commonwealth Treasurer to states, and
    - whether the Commission intends to have changes operationalised for the 2026 Update.
- We note that the Commission does not propose to retrospectively adjust GST shares for method changes between reviews.

26 Forward work program

- Preferably, all method changes would be made through a major five-yearly review process. The consultation process underpinning a review is intended to be comprehensive, with sufficient time to work through matters of great complexity.
- We are disappointed that some matters have been deferred by the Commission for later decision, presumably to be reflected in the 2030 Review. The forward work program should not be used to defer difficult decisions.
- We are particularly disappointed that the Commission has elected to defer any introduction of an elasticity adjustment across its revenue assessments.
- As we have argued elsewhere, the theoretical justification for an elasticity adjustment is clear and strong. Data exists to support an adjustment now. The matter has been the subject of an extensive consultation undertaken on behalf of the Commission and the consultants have confirmed that the analysis remains relevant and applicable.
- We do not see what more could reasonably be provided for the Commission to implement this adjustment. While the Commission has identified a range of complexities associated with the implementation of an elasticity adjustment (of which, in most cases, we disagree with the Commission's concerns) it is unclear to us why more time is needed or will be helpful in making a decision on whether and how to implement.
- For other matters, it is more apparent that additional time is needed to either settle a conceptual position, further investigate available data and evidence, or develop a workable model to reflect possible method changes.
- In these cases, NSW Treasury supports the Commission's decision to implement a forward work program, as this will support state planning for future updates and the 2030 Review, while also allowing for extended and comprehensive review of complex assessments in the inter-review period. We look forward to receiving continued updates on the progress of this work and will endeavour to support the Commission where needed. We appreciate the commitment to consultation.
- The Commission has identified specific areas of focus for its forward work program. We provide short comments on some proposed focus areas here while suggesting some potential additions.

<u>Assessments identified for the forward work program</u>

- **Urban transport** – We consider that the urban transport assessment is robust and that the Commission has thoroughly addressed concerns raised by other states. We also note that the Transport model was only introduced following comprehensive consideration and expert advice during the 2020 Review. It is not obvious to us that this requires further, special attention in the years between reviews.
- **Health (non-state)** – We agree that there is sufficient need, given uncertainty over the existing model and the extent of discord between state views, to review the validity of the non-state sector model. The Commission needs to properly evidence that the underlying conceptual case holds in reality (i.e. that the non-state sector reduces service demand in the state sector). Only then should the Commission re-evaluate what is an appropriate measure of the non-state sector's influence on the demand for, and cost of, services in the state sector (if any).
- **Health (SDC groups) –** We recognise concerns raised by the Commission and some states that the use of health services may materially differ within socio-demographic groups. As this is a fundamental challenge to the assessment, we consider it appropriate for the Commission to review this matter in more detail as part of its forward work program. We note the potential implication that this could have across the Commission's assessments more broadly, given the Commission's extensive use of averaging.
- **CALD driver** – We support further investigating the viability and materiality of introducing a CALD driver across multiple assessments. While it is conceptually accepted, we acknowledge it may be difficult to

establish nationally consistent definitions and measurements. We also acknowledge that not all CALD individuals will require the same level of assistance or additional support. We do not see how this is different to any other SDC driver of use or cost.

- **Net zero** – We note the Commission will continue to monitor developments in this potential assessment. We have provided extended comments in our Tranche 2 submission on net zero.

<u>Additional assessments that should be considered</u>

- **Housing** – We have written extensively in the Housing chapter of this submission on the proposed individuals-based model and its inappropriateness for the social housing assessment. We firmly believe the proposed approach is wrong and should be abandoned. If the Commission believes there is reason to move to an individuals-based assessment, we suggest that it must first properly consider the issue as part of its forward work program. We note that states were not made aware of this change until the Draft Report and were not consulted, despite the change resulting in the largest per capita movement for any method change for a single state in either the 2020 or 2025 Review.
- **Administrative scale (congestion effect)** – We note that the Commission has identified further investigating administrative scale only in relation to administrative costs. While it has noted its intention to monitor the broader case for increasing per capita costs as populations increase, we believe the Commission should explicitly commit to a program of work to investigate the magnitude of state-based congestion costs and to develop a workable model to recognise these costs if material. The Commission should follow the work of Chan and Petchey (2024).

Appendix 1: Summary of Stamp Duty Literature

Author	Title	Abstract	Identified Rate
Australia			
Malakellis, M. and Warlters, M. (2021)	The economic costs of transfer duty: a literature review *NSW Treasury Technical Research Paper Series*	This paper provides a brief overview of existing research on the economic costs of stamp duty, primarily focusing on its effects on property markets and housing affordability. Studies indicate that stamp duty distorts property markets, leading to negative impacts on property prices and transaction volumes. This paper suggests replacing transfer duties and the existing NSW land tax with an alternative, broad-based property tax based on unimproved land values.	A 100-basis point increase in stamp duty (e.g. increasing the tax rate from 4 per cent to 5 per cent) will reduce transaction volumes by about 10 per cent.
Centre of Policy Studies, Victoria University (2020)	The economic and efficiency impacts of altering elements of the ACT's tax mix	This paper examines the economic and efficiency impacts of altering elements of the ACT tax mix. Through empirical analysis and economic modelling, it evaluates the effects of potential changes to taxation policies on government revenue, economic growth, and equity. Econometric analysis evaluates the impact of tax reforms on property turnover and values in the ACT. Although the coefficient for mean transaction price isn't significant, additional analysis suggests a potential 2.5 per cent increase in mean transaction price for every 10 per cent rise in general rates, indicating positive changes in property values with tax policy adjustments.	A 10 per cent reduction in stamp duty correlates with a 6 per cent increase in property transactions, and a similar reduction is associated with a 2 per cent rise in land values.
Davidoff, I. & Leigh, A. (2013)	How Do Stamp Duties Affect the Housing Market? Economic Record	This article uses variations in average duty rates between Australian States during 1995-2003.	It estimates that a 1 per cent increase in stamp duty lowers turnover by 0.3 per cent in the first year, and by 0.6 per cent if sustained over a 3-year period.
Deloitte Access Economics (2015)	The economic impact of stamp duty: three reform options, Prepared for Property Council of Australia	This paper captures the distortionary impacts of transfer duties on investment in property development but not on property transactions. It considers the replacement of transfer duties with GST at the national level.	For example, a 1 per cent increase in transfer duty paid reduces property turnover by 0.6 per cent. This result can be linearly extrapolated so that a 100 per cent decrease in transfer duty increases property turnover by 60 per cent in the long run.
Steinhauser, R., M. Sinning & K. Sobeck (2019)	State tax elasticities of revenue bases, Tax and Transfer Policy Institute	This article estimates the elasticity of the value of all property transactions with respect to a change in the transfer duty rate. Thus, the elasticities they report capture both a transaction volume and price impact.	It estimates that a 10 per cent increase in the transfer duty rate reduces the value of sold properties by between 0 per cent and 4 per cent.
Canada			
Dachis, B., Duranton, G., & Turner, M.A. (2012)	The effects of land transfer taxes on real estate markets: evidence	A municipal Land Transfer Tax (LTT) was introduced in Toronto in 2008. This study uses a difference-in-difference approach to	Introduction of a 1.1 per cent tax caused a 15 per cent decline in the number of sales.

Author	Title	Abstract	Identified Rate
	from a natural experiment in Toronto	tease out its impacts on prices and volumes of transactions. Uses the number of transactions to measure mobility. Finds that Toronto residents are less mobile relative to their nearby suburban neighbours after the imposition of the LTT than before based on the number of transactions by distance to border.	A 100-basis point increase/introduction of the municipal LTT decreases the number of transactions by 13.6 per cent.
United States			
Hilber, C.A.L., & Lyytikäinen, T. (2017)	Transfer taxes and household mobility: Distortion on the housing or labor market?	This article exploits discontinuities in the UK transaction tax scheme. Study finds that short distance and housing-related mobility is impacted by the transaction tax, but long-distance and job-related moves were not. The authors conclude that transfer duty impacts do not affect labour market efficiency and are only contained to housing market.	Increasing the tax rate from 1 per cent to 3 per cent reduces household mobility by 37 per cent. A 100-basis point increase in transfer duty decreases overall household mobility by 18.5 per cent.
Kopczuk, W., & Munroe, D. (2015)	Mansion Tax: The Effect of Transfer Taxes on the Residential Real Estate Market	A mansion tax was introduced in New York and New Jersey in 1989 and 2004, respectively. This is on top of the usual real estate transfer taxes, creating tax rate notches or discontinuities that are explored in the analysis. The volume of missing transactions above the notch exceeds those bunching below the threshold (beyond the usual extensive-margin response), indicating incentives for buyers and sellers not to transact. The effect is described as “market unravelling” and is attributed to bargaining of buyers and sellers.	A one-percentage point land transfer tax introduced eliminated 2,800 transactions out of 380,000 over the period (0.7 per cent of transactions).
Shan, H. (2011)	The effect of capital gains taxation on home sales: Evidence from the Taxpayer Relief Act of 1997	This article analysed the Taxpayer Relief Act of 1997 (TRA97). Provided capital gains tax relief to those under 55 to equalise tax treatment with those over 55. The short-term effect is much larger than the long-term effect suggesting that owners took advantage of the exclusions immediately. Concludes results are evidence of “lock-in” pre-TRA97.	Based on legislative changes in 2001 and 2003, a $10,000 increase in capital gains taxes reduced sales by 6-13 per cent relative to the semi-annual home sales rate. Sales of houses with up to $500,000 in capital gains increased by 19-24 per cent but did not have an effect on the sale of houses with more than $500,000 in capital gains.
France			
Bérard, G., & Trannoy, A. (2017)	The Impact of a Rise in the Real Estate Transfer Taxes on the French Housing Market.	This paper evaluates the impact of a real estate transfer tax (RETT) rate increase from 3.80 per cent to 4.50 per cent implemented by French départements in March 2014. First, a significant anticipation effect was observed just before the tax increase, leading to a 28 per cent increase in the tax base in the month prior to implementation. Second, the analysis reveals a 7 per cent reduction in transactions on average from March 2014 to October 2015 due to the tax increase.	Overall, the net effect results in a 4.6 per cent decrease in transactions over a ten-month period following implementation, assuming no changes in sale prices.

Author	Title	Abstract	Identified Rate
		The study estimates the elasticity of tax revenue to the tax increase at 0.65, indicating that départements' tax revenues are still increasing but at a diminishing rate.	
United Kingdom			
Best, M.C., & Kleven, H.J. (2018)	Housing Market Responses to Transaction Taxes: Evidence From Notches and Stimulus in the U.K	An analysis of the stamp duty holiday in UK in 2008-09, as in Besley, Meads and Surico (2014). The authors explain that the impact is a combination of a timing effect (intertemporal substitution where sales that would have occurred in the future were brought forward) and an extensive margin effect. Less than half of the stimulus effect was reversed when the tax was re-introduced suggests that the response was largely due to the extensive margin response rather than a re-timing of sales.	A temporary elimination of 1 per cent of a transaction tax increased housing market activity by 20 per cent.
Borbely, D. (2018)	Limiting the distortionary impacts of transaction taxes: Scottish stamp duty after the Mirrlees Review	Analysis of the UK's Stamp Duty Land Tax (SDLT) and new Scottish Land and Buildings Transfer Tax (LBTT), exploiting the tax notches. Finds substantial re-timing effects.	A 100-basis point increase in effective SDLT tax rates leads to a 5.6 per cent reduction in transaction activity (on average).
Germany			
Büttner, T. (2017)	Welfare cost of the real estate transfer tax. Centre for Economic Studies Working Paper Series	The paper examines the welfare costs associated with real estate transfer taxes. The theoretical framework demonstrates how these taxes discourage beneficial transactions and incentivize tax-sheltering activities, leading to a measurable welfare loss. Based on this estimate for the elasticity of tax revenues, the associated deadweight loss is rather large. Each additional euro of revenues raised is associated with an increase of the deadweight loss of about 67 cents.	On average, an increase of the tax rate by 1 per cent is found to result in a revenue gain of about 0.6 per cent.
Finland			
Määttänen, N., & Terviö, M. (2017)	Welfare Effects of Housing Transaction Taxes	Calibrated the model (with heterogeneous household income and housing quality) to generate a counterfactual of a swap from a transaction tax to a revenue equivalent ad valorem property tax.	A 2-percentage point increase in transfer tax reduces volumes by 21 per cent. A 100-basis point increase in transfer tax reduces volumes by 10.5 per cent.
Netherlands			
Van Ommeren, J., & Van Leuvensteijn, M. (2005)	New Evidence of the Effect of Transaction Costs on Residential Mobility	Analyses transaction costs including transaction taxes (e.g. capital gains taxes, transfer duty and sales taxes), but provides indirect evidence on mobility effects of transfer taxes. Residential mobility rate is defined as number of owner moves (to ownership or renting) as a proportion of owners. Rate is	A 100-basis point increase in transaction costs decreases residential mobility by about 8 per cent to 9 per cent for moves to ownership and 8 per cent to 13 per cent for moves to renting.

Author	Title	Abstract	Identified Rate
		calculated based on sample of any household who moves into ownership between 1990- 1996.	

Sydney NSW 2000

GPO Box 5469
Sydney NSW 2001

W: treasury.nsw.gov.au