Government of **Western Australia**
Department of **Treasury**

Western Australia's Submission to the Commonwealth Grants Commission's 2025 Methodology Review

Tranche 1 Assessments

October 2023

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Further information relating to this report may be obtained by emailing igr@treasury.wa.gov.au

Contents

Executive Summary

Introduction

This submission responds to the 'Tranche 1' consultation papers (apart from Wage Costs, due later) released by the Commonwealth Grants Commission (CGC), as part of its 2025 Review of the methods it uses to recommend GST grant distributions among the States and Territories (referred to as States hereafter), within the framework of horizontal fiscal equalisation (HFE).

This Executive Summary outlines the key issues of concern to the Western Australian Department of Treasury. For a complete summary of our views, see the *Key Points* box at the start of each chapter.

Mining Revenue

We welcome the CGC's **Mining Revenue** proposals to assess minerals subject to bans in some States equal per capita (essentially a 100% discount), and to discount revenue from royalty rate increases by mining dominant States by 50%.

However, both of these proposals appear inconsistent with the CGC position paper on principles. This highlights that the CGC has not consistently applied its principles, in particular its rationale for discounting.

The CGC's proposals, although welcome, are inadequate.

- The CGC should not just have a 0% or 100% discount for State policies affecting their mining value of production, but a graduated scale for the range of State policies.
    - The CGC should discount to some extent each revenue base, to reflect the degree of State policy influences.
- Even if the CGC discounts dominant State royalty rate increases, royalty rate changes by those States will still change their pre-reform GST grants by much more than tax rate changes. It is also inequitable towards States that have made past royalty rate increases and to States whose value of production is relatively high, but below the CGC's deemed level of dominance.
    - The CGC should either adopt a global revenue base (covering both royalties and taxes) or fix all standard royalty rates at the levels that applied when the GST was introduced on 1 July 2000. A fall-back would be to discount dominant State royalty rate increases by 100% for the first five years.
        - In the absence of a global revenue base, we support the mineral-by-mineral assessment.

Health

The CGC's allowances for the substitution of non-State services for State **Health** expenses are flawed, both in the existing formula and some of the inputs to that formula.

Instead of trying to measure State substitutable expenses, the CGC should be trying to measure non-State substitutable expenses. This would measure the substitution that is occurring in practice, rather than the theoretical further substitution that could occur if the non-State sector were to expand. The CGC should also be taking account of the different costs per activity between the State and non-State sector. Our submission explains how to fix the formula, and why it makes more sense.

In case the CGC does not accept our corrected non-State services formula, we present the following adjustments it should make to the inputs of its current formula.

- For Emergency Departments, use separate substitutability levels for each remoteness region, and account for the higher cost of treating patients in emergency departments compared to by general practitioners. However, the CGC should not use its proposed method of updating the substitutability level.
- For Non-admitted Patients, cease the alternative measure of substitutability based on bulk-billing rates and, based on Perth data, reduce the discount for outpatient activity linked to a previous inpatient episode from 50% to 10-15%.
- For Admitted Patients, include self-funded patients in both the non-State service indicator (also relevant under our proposed formula) and the substitutability level, and reduce the substitutability level discount from 33-44% to 12½% or 25%.

Also, we do not support the CGC's proposal to expand the proxy activity measure for Community and Public Health to include Non-admitted Patients activity.

Urban Transport

The **Urban Transport** assessment is flawed due to various data and conceptual problems. In particular, the Sydney data point (and hence, New South Wales policy) has an undue influence on the assessment. Also, the confidentiality of at least one State's data makes it impossible for the States to meaningfully examine the CGC's regression, despite the CGC's terms of reference requiring it to consult with the States.

Hence, as the Urban Transport regression should be considered less reliable than other assessments, the blending with urban centre size should be increased to at least 50:50.

This also applies to the Urban Transport capital assessment, but with the further concern that the CGC's 'population-squared' model, with which it blends its regression results, is unreliable and accentuates rather than discounts the regression assessment. This 'population-squared' model should be replaced with an assumption of constant asset requirements per capita.

The assessment should also allow for regional costs.

Water Subsidies

In the 2020 Review, the CGC agreed that water quality and availability is a driver for **Water Subsidies**, but could not quantify the impact. We consider the 'overspending' (relative to the CGC's assessment) by Western Australia and South Australia reflects these costs.

The CGC should assess Water Subsidies by including all non-metropolitan populations in its differential assessment for areas of poor water quality. This would be identified by the method used by the CGC in its 2010 Review. Alternatively, the CGC should assess Water Subsidies by actual State spending (or a blend of this with its current methods).

If the CGC is not using an actual per capita assessment, it should include communities with populations fewer than 50 in the assessment. It should also assess regional cost and wages in the other subsidies component for all outer regional, remote and very remote populations.

Other 'Tranche 1' assessments

Taxes

For **Taxes**, the CGC should:

- measure revenue bases according to capacity to pay, rather than legal incidence; and
- discount revenue bases, as observed revenue bases do not reliably reflect same effort.

Schools

The CGC should adopt the Schooling Resource Standard for the entire **Schools** assessment. In the absence of this, it should:

- apply the Indigenous cost weight from government schools to non-government schools; and
- increase the regional cost weight by either blending with road distance to capital city or using the Schooling Resource Standard weights.

Post-secondary Education

The CGC does not accurately capture **Post-secondary Education** diseconomies of scale in smaller population centres. Also, the CGC should introduce a course mix driver, despite its purported immateriality, as industry mix is already assessed in Services to Industry and Mining Revenue.

Services to Communities

The CGC should include communities with populations of fewer than 50 in its **Electricity Subsidies** assessment. It should also assess regional costs and wages in the Other Subsidies component.

For **Community Development**, the CGC should:

- recognise additional costs of engaging with the mining industry for Indigenous communities; and
- increase the regional costs assessment.

For **Environmental Protection**, the CGC should assess national parks and wildlife services by land area and erosion of beaches by beach length in affected areas. The CGC should also weight the regional cost gradient by these parameters.

Justice

For **Justice**, the CGC should:

- improve its Prisons regression by adding more variables;
- assess service delivery scale for Courts;
- confirm if traffic and breach of bail offences can be included in the offender profile for Police; and
- in Courts, assign Indigenous status to defendants registered as non-responses in proportion to those who responded on their Indigenous status.

Non-urban Transport

The CGC's proposed use of train commuters for the **Non-urban Transport** assessment is too policy influenced. This assessment should be equal per capita unless it can be expanded to include costs faced by more dispersed States (such as air fare caps, and long-distance student travel). There should also be a separate assessment of rural school buses.

Native Title and Land Rights

We support the CGC continuing to assess **Native Title and Land Rights** by actual State spending.

Commonwealth Payments

We largely support the CGC's proposals for **Commonwealth Payments**.

Socio-economic Status

In principle, we support the use of an annual **socio-economic status** measure, but are concerned about differences between the proposed new measure and the existing measure. The CGC should do further analysis, to determine the extent to which its proposed new measure reclassifies areas compared to its existing measure. If the change is large, the reasons must be understood and logical (imply an improvement).

1. Taxes

Key Points – Taxes

Issues of concern to Western Australia

Broader approach to Revenue assessments

We maintain the view that the CGC should measure revenue bases according to capacity to pay principles, rather than legal incidence. This would help reduce the likelihood of mismeasurement, better ensure policy neutrality, and improve HFE.

Reliability of revenue bases

Observed revenue bases do not reliably reflect same effort, as required by the HFE principle, so they should be subject to some discounting, consistent with the assessment guidelines. This should not just be a choice between no discount and 100% discount.

CGC consultation papers

Subject to the above views, this submission directly responds to the issues raised in the CGC consultation papers regarding:

- Motor Taxes;
- Stamp Duty on Conveyances;
- Insurance Tax; and
- Land Tax.

Motor Taxes

Electric vehicle charges

We support the CGC separately assessing revenue raised from electric vehicle distance-based charges and expect this assessment to increase in materiality going forward.

Emissions-based registration fees

We agree that the current assessment method for registration fees remains an appropriate measure to assess a State's capacity, and adjustments need not be made to this method on the basis that some States are now applying registration fees on an emissions basis.

Other taxes

We are comfortable with the CGC's views in relation to its Stamp Duty on Conveyances, Insurance Tax and Land Tax assessments.

Issues of concern to Western Australia

Broader approach to Revenue assessments

As raised in our submission to the 2020 Methodology Review,[1] we maintain the view that the CGC should measure revenue bases according to capacity to pay principles, rather than legal incidence. The implementation of broader assessments, even for only a few assessments where data is available, would help reduce the likelihood of mismeasurement, better ensure policy neutrality and improve HFE.

Reliability of revenue bases

The CGC uses observed revenue bases for most tax assessments, except in the case of gambling tax, where it discounts by 100% due to policy influences.[2]

However, all observed revenue bases are policy influenced.

This is particularly the case for property taxes, as land values are a function of government policies on releasing land, zoning, provision of infrastructure, and land tax rates. The value of taxable land can also be indirectly impacted by policies to increase economic activity through revenue, expenditure and regulatory decisions that boost employment, population growth, wages growth, and overall consumption of goods and services. Strong economic activity is linked to increasing land values (due to higher returns from holding land).

The HFE principle requires assessments to reflect the same revenue-raising effort, so the CGC requires consistent-policy revenue bases. Observed revenue bases have a degree of unreliability as a measure of consistent-policy revenue bases.[3]

The CGC appears to have an unwritten rule that it does not discount revenue bases unless the policy influences are overwhelming, in which case it applies a 100% discount.

- This is inconsistent with the CGC's assessment guidelines, which state that for unreliable data the CGC has the choice of not using it or using it with a discount.
- It is also inconsistent with the CGC's application of discounting elsewhere, where it applies a range of discounts, which include 12½%, 25% and 50%.

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1 Western Australia (2018), *Western Australia's Submission to the Commonwealth Grants Commission's 2020 Methodology Review – Draft Assessment Papers*, pages 29-36.

2 It also makes no assessment for non-real transfer duty, but that is because there are no data on observed revenue bases for States that do not levy it.

3 The CGC's principles position paper (page 12, paragraph 58) comments that the CGC does not agree that the use of observed tax bases means some States are more able to influence revenue assessments than others. This is not the issue – it is merely that States can influence their revenue bases, and do not apply consistent policy in doing so. That observed tax bases will accurately reflect differences in the level of taxable activity between States is also not the issue – it is that that activity is policy-influenced.

We recommend that the CGC discount all observed revenue bases to the appropriate level, depending on the degree of policy influence.

Motor Taxes

Electric vehicle charges

We support the CGC separately assessing revenue raised from electric vehicles through distance-based charges, once material.

We also support the CGC's proposal to assess revenue capacity using distance travelled by electric vehicles on public roads and welcome further consultation with the States regarding specific data requirements. Since electric vehicles still make up only a small portion of total private passenger vehicles (though this is growing), we are comfortable that the CGC uses average distance data from the Bureau of Infrastructure and Transport Research Economics as a proxy until such a time that States can provide more comprehensive data on their distance-based charges when they have come into effect.

For jurisdictions that are not intending to apply distance-based charges to electric vehicles, the data from the Bureau of Infrastructure and Transport Research Economics can still be used as a proxy for their revenue raising capacities if registration data records the quantity of electric vehicles.

Emissions-based registration fees

We agree that the current assessment method based on the number of registered light vehicles remains an appropriate measure (under an observed-revenue base construct) to assess a State's capacity to raise registration fees. This is because the current assessment simply looks at the number of vehicles that are registered in a State and the revenue raised from those vehicles. The method of calculating those registration fees (whether it be weight based, emissions based, etc) is not directly relevant. Therefore, changes in the ACT's capacity to raise revenue from registration fees is largely unchanged despite it moving towards an emission-based system.

Electric vehicle incentives

We believe that the provision of rebates, grants and vehicle licence duty reductions by States to incentivise purchases of electric vehicles going forward, may become material in future assessments.

Therefore, the CGC should consider whether these incentives should be assessed as a separate expense assessment or be kept within the motor taxes assessment. However, the CGC should ensure that regardless of the type of incentive a jurisdiction may implement (e.g., a grant, a transfer duty rebate, registration concession, etc) the assessment should be

policy neutral (i.e., a $3,000 grant provided should be treated the same as a $3,000 transfer duty discount). We consider these should be netted off Motor Tax revenues.

Questions for the CGC – Motor Taxes

Does the CGC propose to assess electric vehicle incentives in future assessments within the motor taxes assessment or as a separate expense assessment?

What specific data would the CGC require from the states for its proposed assessment of electric vehicle charges?

Stamp Duty on Conveyances

We are comfortable with the continuation of the Stamp Duty on Conveyances assessment in its current form, with revenue from the New South Wales property tax assessed with Land Tax, as assessing it alone is likely to be immaterial.

Given the uncertainties in tax rate elasticity estimates (and the range of other policy influences on revenue bases) we support continuing the practice to exclude elasticity adjustments in revenue assessments.

Insurance Tax and Land Tax

We are comfortable with the continuation of the Insurance Tax and Land Tax assessments in their current form.

2. Mining Revenue

Key Points – Mining Revenue

Issues of concern to Western Australia

Mining revenue and principles

This consultation paper states that the CGC proposes to discount mining revenues for policy neutrality and policy consistency reasons. However, this differs from the CGC's positions paper on principles for the 2025 Review, which states that the CGC will not discount revenue bases for these reasons.

Policy neutrality and the dominant State problem

The proposed method change to reduce the dominant State issue is a half-measure that will not solve the issue. Our two proposed solutions to the dominant State issue are as follows.

- Implement a global revenue base. This would effectively eliminate any dominant State concerns and reduce the sensitivity of all Mining Revenue assessments. We have identified two options.
  - AMALGAMATED REVENUE BASE MEASURE: This would simply add the existing revenue bases for the taxes and onshore mining royalties.
  - ADJUSTED GROSS STATE PRODUCT (GSP): This would use GSP as the revenue base, adjusted to remove offshore petroleum and general government consumption.
- Apply the CGC's proposed method, but apply it to 100% of changes to all State royalty rates since the introduction of the GST system (1 July 2000). This system would be equitable to States that have already made changes to royalty rates that may have been influenced by the impact on their GST share, and would not be discriminatory to States just below the CGC's proposed 50% threshold.

As a fall-back, we propose that the CGC apply its proposed method, but increase the equal per capita (EPC) proportion to 100% for the first five years after a policy change. This would remove the influence of State dominance on policy decisions over the forward estimates period.

Mineral by mineral approach

- In the absence of a global revenue base, we support the mineral-by-mineral approach, as we believe amalgamation of Mining Revenue components fails to fix policy neutrality.

Policy consistency with banned and restricted minerals

We support the CGC's aim, but note that fracking (which is restricted) is not the same as coal seam gas.

Also, there are many restrictions and policy influences other than those identified by the CGC, so we propose that instead of a binary measure of whether mining for a mineral is banned or restricted or not, with those minerals receiving a complete EPC treatment, a tiered system should be implemented. This tiered system would vary the EPC treatment depending on the level of restriction present.

CGC consultation paper

Q1. Do states agree the Commission should continue to assess mining revenue capacity using a mineral-by mineral-approach?

In the absence of a global revenue assessment, we support the mineral-by-mineral approach, with the understanding that policy-neutrality concerns exist.

Q2. Do states support the dominant state for a mineral being identified having regard to a state's share of the revenue base, its population share, and the extent to which its GST distribution would be impacted by a change in the royalty rate for that mineral?'

We consider that this is the correct way to identify a dominant State.

Q3. Do states agree that where a dominant state changes its relevant royalty rate, assessing 50% of that state's revenue arising from the royalty rate change equal per capita would represent an appropriate balance between assessing relative state fiscal capacities and policy neutrality concerns?

We do not think this approach goes far enough to address the dominant State problem, and present our proposed solutions.

Q4. Do states agree that uranium and coal seam gas royalty revenue should be assessed equal per capita?

The CGC should implement a tiered system, in order to account for situations where the bans or restrictions are not clearly defined.

Mining Revenue and CGC principles

Although we welcome the CGC's proposals for the Mining Revenue category, these proposals show significant digressions from the CGC's position paper on principles.[1]

- The position paper states that the CGC will not discount for policy neutrality (paragraph 137). However, the Mining Revenue consultation paper explicitly proposes discounting revenue from dominant States' royalty rate increases, due to policy-neutrality concerns (paragraph 22 and 27).
    - This is all the more noteworthy as, in this method review, we have not argued for discounting to address the dominant State problem (although we have argued for more widespread use of discounting to address method and data unreliability, including that arising from lack of policy consistency in revenue bases).

[1] Commonwealth Grants Commission (2023), *2025 Methodology Review, Commission's position on fiscal equalisation, supporting principles and assessment guidelines, June 2023.*

- The position paper (paragraph 99) rejects our position that lack of policy consistency in revenue bases is a reason for discounting, yet the Mining Revenue consultation paper proposes 100% discounts to the revenue bases of minerals that are banned in some States.
    - We struggle to see why, despite other cases of unreliable data attracting discounts ranging from 12½% to 100%, the CGC insists that unreliable revenue base data (due to observed revenue bases not being policy consistent across States) only attract either 0% discount or 100% discount.

The Mining Revenue consultation paper is also not self-consistent. It rejects our proposal in the 2020 Review for an external standard or uniform fixed standard royalty rate because these would give different measures of HFE, and would not sum to equal total States' revenues (paragraphs 37-38). However, the consultation paper proposes discounting revenue from dominant States' royalty rate increases, which is similar to applying a discount. In both cases, a portion of the standard royalty rate is assessed EPC.

Further, the Mining Revenue consultation paper states the CGC is "open to improving the policy neutrality of the assessment", but with the proviso that this is achieved "without unduly affecting its assessment of States' relative fiscal capacities" (paragraph 26). We do not believe improving policy neutrality should be conditional on its impact on assessed State fiscal capacities. Because of policy neutrality and consistency problems, the existing assessments will have been altered by State's policies. Hence, the assessments would be expected to adjust through changed methods to mitigate these problems.

With the above comments in mind, we urge the CGC to adopt approaches that are more effective at mitigating policy neutrality and consistency issues for this assessment.

We agree with the CGC's comments in the consultation paper (paragraphs 28-29) with regards to it being important to consider whether an assessment can be improved from a principles standpoint, regardless of whether the GST reforms lessen the impact of the assessment on a States GST share. We agree that the reforms should not factor into deliberation on those methods. Having said that, the CGC should be cognisant of the rationale for the reforms when developing those methods.

Policy neutrality and the dominant State problem

CGC proposal

In the past, we have discussed methods of reducing the sensitivity of the standard rate to changes in royalty rates made by a single State, to address the issue of policy being influenced by CGC methods. This issue has been discussed in the Mining Revenue consultation paper.

The consultation paper has proposed that, for States which would lose at least 50% of the revenue raised from an increased royalty rate (a 'dominant' State), 50% of that revenue would be assessed EPC.

The identification of a dominant State based on the difference between State share of the revenue base and population shares is appropriate in our view, although the 50% difference is arbitrary.

We acknowledge that the CGC's proposal is an attempt to reduce the inefficient incentives present in the Mining Revenue assessment. However, the impact would still be 50% of the dominant State royalty impacts stated in Table 2-1, which would mean that the impact on States would still be much higher than the impact of tax rate changes. Hence, a dominant State which wants to increase its royalty rate would still lose much more than from a tax rate increase. This is the case for all mineral types, even the minerals where a single State does not dominate the revenue share (under the CGC definition).

Table 2-1

Maximum Loss from Increasing a Tax or Royalty Rate

2021-22

Revenue	Loss	State
Royalties		
Iron ore	88%	WA
Coal	41%	QLD
Gold	60%	WA
Copper	25%	SA
Lithium	89%	WA
Nickel	89%	WA
Bauxite	28%	QLD
Onshore oil and gas	68%	QLD
Other minerals [(a)]	20%	WA
Single onshore component	40%	WA
Taxes		
Payroll Tax	4%	WA
Land Tax	15%	NSW
Transfer Duty	10%	NSW
Insurance Tax	3%	NSW
Light Vehicles	1%	QLD
Heavy Vehicles	5%	WA
Global revenue base		
Amalgamated revenue bases	6%	WA
Adjusted Gross State Product	7%	WA

(a) Excluding nickel.

Source: WA Treasury calculations using data from CGC.

Also, by implementing the CGC's proposal only on future changes to royalty rates, States which have made changes to their royalty rates in the past will have been punished for implementing that policy, which would have been influenced by the impact on their GST (which may have delayed the change in royalty rates, or influenced the scale of the change).

It even gives an incentive for dominant States to reduce their royalty rates while the 2025 Review is in progress, and to raise them afterwards.

Another disadvantage of the CGC's proposal is that the 50% threshold is discriminatory. For example, the proposal would reduce Western Australia's loss of increased gold royalties to 30% (for which it is dominant), while leaving Queensland's loss of increased coal royalties at 41% (for which it is not dominant – see Table 2-1).

Better solutions

We believe that the best method to reduce the sensitivity of changes to the standard rate when a single State makes a change in their royalty or tax rate would be to amalgamate all revenue assessments into a single global revenue assessment. This would not only reduce the sensitivity of rate changes in the Mining Revenue assessment down to those of the tax assessments, it would also reduce sensitivity of rate changes in the most sensitive tax assessments.

We have identified the possible approaches, as follows.[2]

- Amalgamated revenue base measure
  - This would simply add the existing revenue bases for the taxes and onshore mining royalties in Table 2-2 (further below), except that the revenue base for Land Tax would be amortised over (say) ten years.
- Adjusted GSP
  - This would use GSP as the revenue base, adjusted to remove offshore petroleum and (say) 75% of general government final consumption expenditure (reflecting that States have limited scope to derive revenues from government activities).
  - These revenue bases would be applied to the sum of all tax revenues (including taxes within Other Revenue) and all onshore mining revenues.

While the CGC stated in the 2020 Review report [3] that Western Australia's approaches to reduce sensitivity due to royalty rate changes would understate the revenue raising capacity of States with high value mineral endowments, the adjusted GSP method would in fact increase Western Australia's assessed revenue in the 2021-22 data year. In addition, we project that the amalgamated revenue base method would increase Western Australia's assessed revenue in the 2022-23 data year (reflecting high coal prices and Queensland's progressive coal royalty). Fundamentally, all revenue is still accounted for in the global revenue assessment, it is just amalgamated into a figure that is far less sensitive to changes in rates.

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[2] For a more comprehensive discussion, see Western Australia (2019), *Western Australia's Submission to the Commonwealth Grants Commission's 2020 Methodology Review, Improving the Policy Neutrality of the Mining Revenue Assessment, January 2019.*

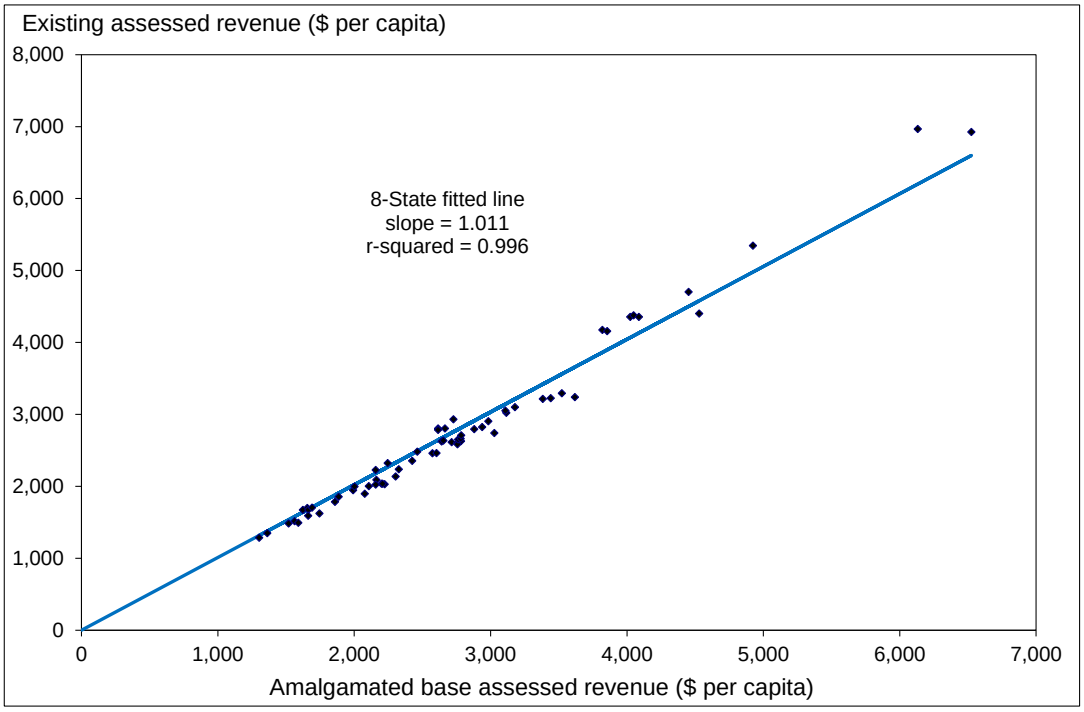
[3] Commonwealth Grants Commission (2020), *Report on GST Revenue Sharing Relativities, 2020 Review,* Volume 2, Part B, page 80, paragraph 21.

Charts 2-1 and 2-2 show the relationship between these measures and the existing measures, and indicates that the existing and proposed methods are relatively in line with one another when applied to the last several years. The fitted line would be where the data points would be if our proposed approach assessed revenue and the current approach assessed revenue were the same, and the variance from this line is the difference between approaches.[4] Note that the data points are individual data years, by State.

Chart 2-1

Global Revenue Base – Amalgamated Revenue Bases

2014-15 to 2021-22

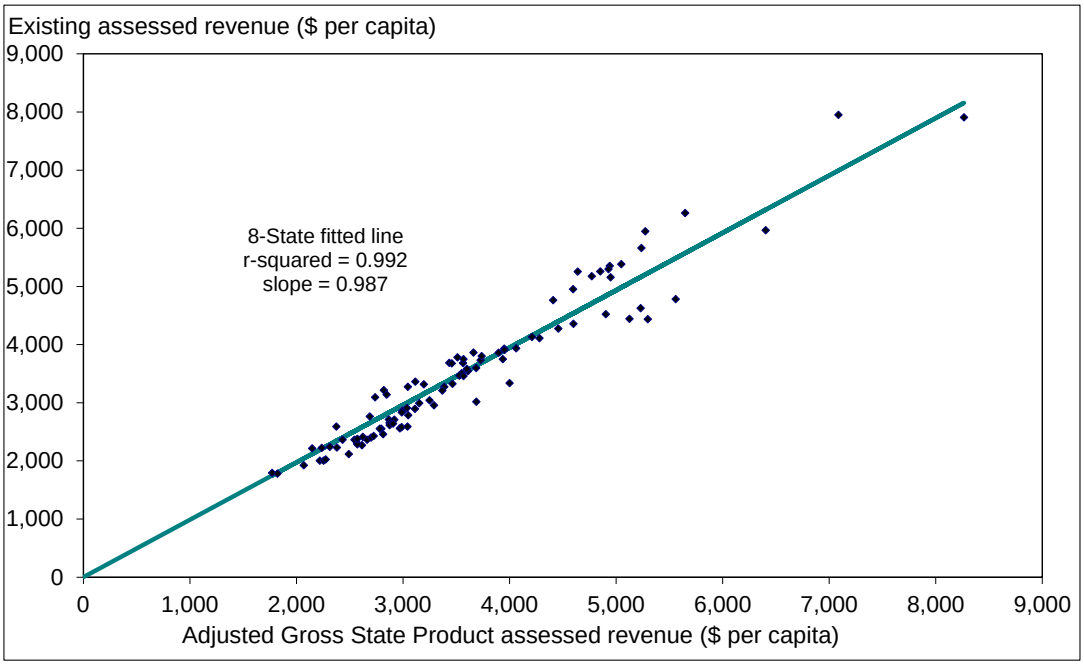


[4] Strictly, this should be the variance from a 45-degree line, but the fitted line is indistinguishable from a 45-degree line in both of these charts, as the slope for both is very close to 1.

Chart 2-2

Global Revenue Base – Adjusted GSP

2010-11 to 2021-22



However, we also propose an alternative method to a global revenue base that would cease the losses incurred by States who change their royalty rates, and would also be equitable to States that have made changes to their royalty rates in the past.

Our proposed method involves setting the standard royalty rate for each Mining Revenue component to what the rate was when the GST system was first introduced (1 July 2000). This would reduce the sensitivity of the assessments to all royalty rate changes to zero.

It is possible that the CGC would see our proposed solution as in conflict with the 'What States Do' principle, as States are being assessed to impose different royalty rates to what they are actually imposing. However, the same argument can be applied to the CGC's proposal of discounting rate increases, which is much more arbitrary by discounting only some States' royalty revenues.

If the CGC rejects both of the options we have proposed above, a different solution that would mitigate policy neutrality concerns would be to implement the CGC's proposed method change, but to temporarily assess 100% of the royalty rate change EPC for five years, from the year that the royalty rate is changed. This would remove the impact of changing royalty rates for dominant States for the duration of the forward estimates period for State government budgets, which is the period where changes to a State's GST share are most significant from a policy-making standpoint. Dominant States would be able to implement efficient policy changes to improve their revenue base, in a way that would be politically feasible. Following the five-year period, the proportion assessed EPC could reduce to 50%, in line with the CGC's proposed method.

In summary, our three proposed solutions to the dominant State issue are:

- Implement a global revenue base that assesses all royalties and taxes together. This would effectively eliminate any dominant State concerns and reduce the sensitivity of revenue assessments to State rate changes.
- Apply the CGC's proposed method, but apply it to 100% of all changes from State royalty rates since the introduction of the GST system (1 July 2000). This system would be equitable to States that have already made changes to royalty rates.
- As a fall-back to the first two options, apply the CGC's proposed method, but increase the EPC proportion to 100% for the first five years after a policy change. This would remove the influence of State dominance on policy decisions over the forward estimates period.

Mineral-by-mineral approach

In the absence of a global revenue assessment, we prefer the mineral-by-mineral approach to assess Mining Revenue capacity. However, we acknowledge that this approach raises policy neutrality concerns when a dominant State changes its royalty rate.

The alternative option, to group minerals, does not help the dominant State problem when mining is dominated by so few States, it sets up other problems as noted in the Mining Revenue consultation paper (paragraph 35), and would not solve the high GST losses from a change in rates compared to taxes (see Table 2-1).

Table 2-2 shows that the range of standard rates across both taxes and royalties is quite broad. In addition, the dominance of any State across these taxes and royalties varies considerably.

Hence, while our proposed global revenue base methods may seem similar to the grouping minerals option, there is an important difference. Amalgamating just the minerals does not solve the dominant State problem. Western Australia would still lose 40% of the revenue from an increase in a royalty rate (Table 2-1). However, amalgamating taxes with those minerals does address the problem. Indeed, it reduces the maximum GST loss to only 6%; more in line with taxes currently.

Table 2-2

National Average Revenue Raising Rate[(a)]

2021-22

Revenue	Rate
Insurance Tax	15.8%
Onshore oil and gas	**10.0%**
Bauxite	**8.8%**
Coal	**8.8%**
Iron ore	**7.2%**
Lithium	**5.1%**
Payroll Tax	5.0%
Transfer Duty	4.4%
Other minerals [(b)]	**3.7%**
Copper	**3.7%**
Gold	**2.9%**
Nickel	**2.4%**
Land Tax [(c)]	0.7%

(a) Motor Taxes not included, as the revenue base is number of vehicles rather than a dollar value.
(b) Excluding nickel.
(c) Becomes 6.6% if land values are amortised over ten years.

Source: WA Treasury calculations using data from CGC.

Policy consistency with banned and restricted minerals

We agree with assessing banned and restricted minerals EPC, as the observed revenue bases for these minerals are not a reliable measure of revenue raising capacity (due to State policies).

Fracking

However, the CGC has incorrectly equated coal seam gas mining solely with fracking. No viable coal seam gas reservoirs have been identified in Western Australia. Mining companies use fracking in Western Australia as a method to extract gas from shale deposits, but this is not coal seam gas. We also do not know whether fracking is the exclusive method to extract coal seam gas in other States.

While Western Australia restricts fracking, it does not explicitly restrict gas extraction and exploration where fracking is not the method used to extract the gas. Likewise, we understand bans on fracking in other States relate to the method of extraction, rather than the type of gas being extracted, or the stratum in which it lies. [5]

[5] As noted later, New South Wales restricts coal seam gas exploration and extraction near residential areas.

We believe that the CGC should only assess gas produced as a result of fracking EPC, and that this EPC assessment should apply to all gases produced by fracking, regardless of type, because it is the method of production that is restricted rather than the products themselves.

Restrictions other than those identified by the CGC

We note that New South Wales has coal seam gas exclusion zones, but these appear to be mostly providing buffer zones for planned and existing residential areas.[6] Other minerals do not have explicit exclusion zones to allow for residential buffers, but proximity to residential areas would be taken into account in the planning and approval phase of a project.

Some States also have restrictions on mining in certain areas for environmental reasons. Queensland has rejected proposals for open-cut coal mines on the grounds that they may impact the Great Barrier Reef.[7] Western Australia has an ongoing moratorium on coal exploration and mining in the Margaret River region.[8] These are functionally similar to the exclusion zones in place in New South Wales, and could be considered a policy of restriction for that particular type of mine in that particular location.

Restrictions on uranium are also complex and varied. In Western Australia, while a restriction exists for issuing leases to develop new uranium mines, existing leases remain valid, and uranium production and export could occur in the State if the owners of these leases chose to pursue development.

Furthermore, States have a range of policies that influence their mining revenue bases, including:

- regulations;
- royalties – level and stability;
- services and infrastructure;
- business development spending;
- regional development – such as affordable housing;
- geological survey;
- approval processes – including environmental approvals;
- fiscal policies – through their impact on business confidence; and
- mining bans and restrictions.

We note that the Mining Revenue consultation paper offers three options to deal with States' unidentifiable tax bases, as a result of restricting mining activity (paragraph 41). However, the CGC has no options to deal with States that promote mining activity. There is no reason

6 https://www.planning.nsw.gov.au/policy-and-legislation/mining-and-resources/coal-seam-gas

7 https://apnews.com/article/politics-australia-government-queensland-business-60404ea8780de8aa157abb3bca2d1555

8 https://www.australianmining.com.au/wa-bans-coal-mining-in-margaret-river-region/

to consider that State policies only operate in one direction. This is especially true for Western Australia when developing the North West Shelf, as discussed in previous submissions. This is part of our Policy Consistency argument,[9] which should be similarly treated with discounting.

The Productivity Commission said "State Governments generally have a greater influence on their mining revenue base than on the size of other tax bases … Extraction activity can be influenced, to varying degrees, by a wide range of policies …"[10]

As a solution to this issue, we propose that instead of a binary measure of whether mining for a mineral is banned or restricted or not, a tiered system could be implemented. Minerals that are banned or restricted in the majority of States by clear policies, like uranium, could be treated full-EPC, while other minerals that are restricted by some States in some cases, such as coal seam gas, could receive a partial EPC treatment. A third tier could be implemented for mineral types that are not restricted by policy but are rejected systematically on a case-by-case basis, such as the example of the coal mine in Queensland. This tier could receive a smaller partial EPC treatment. This would be consistent with the discounts the CGC uses elsewhere, which range from 12½% to 100%.

While this method change may lead to situations where States contest the treatment of different mineral types in ways that would benefit their GST share, this is likely to become an issue with a binary method as well, and would give the CGC options to treat different minerals in a way that aligns more closely with reality.

We also note that, if the CGC has concerns about the quantification of HFE arising from discounting to EPC, it could alternatively use blending with a revenue base measured by land area, which is a policy neutral measure that has a closer relationship to mineral value of production.

[9] See Western Australia (2023), *Principles of Horizontal Fiscal Equalisation, Western Australia Occasional Paper, March 2023.*

[10] Productivity Commission (2018), *Horizontal Fiscal Equalisation*, Report no.88, page 124.

3. Schools

Key Points – Schools

Issues of concern to Western Australia

Indigenous students in non-government schools

There is a conceptual case that Indigenous students cost more regardless of the type of school they attend. The fact that the current non-government schools regression does not capture this additional cost correctly implies that it is flawed. The CGC should apply the cost weight in the government schools model to Indigenous students in non-government schools.

Regional costs

The regional cost weight in both the government and non-government school regressions are insufficient and do not accurately represent the costs experienced within Western Australia (and we would think other States). This cost would be better represented by either:

- implementing a blended approach to regional cost weights with the addition of a road distance to capital city factor; or
- adopting the Schooling Resource Standard (SRS) model cost weights in place of the current regression.

CGC consultation paper

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

We support differential assessments of primary and secondary school students.

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

We support the inclusion of students with a disability in the Schools assessment as long as the data are fit for purpose, and it improves the explanatory power of the regression.

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

We believe that the SRS is a better reflection of State funding models than the CGC's current regressions, and that the CGC should adopt it as the basis for the whole Schools assessment.

Indigenous students in non-government schools

The lack of an Indigenous cost weight for non-government schools does not accurately reflect how schools are funded. The CGC agrees that there is a conceptual case for Indigenous students in non-government schools attracting additional funding needs, but given the unexpected result in the regression, the variable is removed.

The removal of the variable from the regression does not solve the issue. This regression has a low explanatory power. It is possible that variables not currently included in the regression (e.g., students with a disability, low English proficiency) mean the regression is underspecified.

Low socio-economic status (SES) is closely correlated with Indigenous status and low English proficiency. The cost weight for low SES in the non-government schools regression is 1.94, much higher than in the government schools regression. This weight is possibly picking up additional costs that are correlated to, but not caused by, factors not included in the regression.

Given the strong conceptual case and the issues with the regression, the CGC should apply the cost weight derived in the regression for government schools to the Indigenous students in the non-government schools component. This aligns with how funding is provisioned in the SRS, where the Indigenous cost weight is applied without distinction between whether a student is in a government or non-government school.

Regional costs

Government schools

We do not believe the current cost weights for expenses in remote and very remote regions are sufficient. In addition, the funding required to provide a school in a remote area, compared to a major city, has increased. This is partly due to labour shortages and increased building costs, which is experienced by all States, but is more pronounced in regional areas. Further, this is particularly pronounced in Western Australia as the large distances result in high freight costs.

Extreme travel requirements within Western Australia have led to the Western Australia Department of Education developing a Student Centred Funding Model (SCFM). This includes a distance-to-Perth factor to assist in accurately compensating the cost of freight, professional learning, and utilities. As a result, the SCFM includes a blended locality-funding approach that combines ARIA+ and road distance to Perth.

As the CGC's regional cost gradient developed for the government schools component informs the general gradient, it is integral that regional costs are captured correctly. The higher cost of freight, professional learning and utilities experienced as one moves further from a capital city is likely experienced in a range of assessments where the general gradient

is used. For example, the general gradient is applied to the bridges and tunnels component of the Roads assessment. Materials and equipment used for any maintenance or upgrades would likely originate from Perth. Hence, the further the distance to where the work is being undertaken, the higher the freight costs. The cost is exacerbated if the work is performed off the main arterial roads.

To better capture the regional and remote costs faced by States, we consider the CGC should adopt a blended approach to regional and remote costs, that perhaps factors in road distance from each capital city. We will explore this concept further in our submission to the CGC's Geography paper as part of Tranche 2.

Another option the CGC has to improve the regional costs factor in the Schools assessment is to use SRS rather than the current regression to capture additional regional costs. We explore this further below.

Non-government schools

The regional cost weight in the non-government schools regression is also insufficient. As discussed above, it is likely the regression is underspecified, causing misleading results. In this case the outer regional cost weight is higher than the remote and very remote cost weights, something not seen in any other assessment, and seemingly lacks validity. Once again, the SRS appears to better capture the additional costs faced by non-government schools. We explore this further below.

Primary and secondary school students

We support the differential assessment for primary and secondary school students. Any variable that improves CGC regressions is welcomed.

Students with a disability

We support the inclusion of students with a disability in the Schools assessment, on the condition that the data is fit for purpose and improves the explanatory power of the regression. The Western Australian SCFM includes additional funding for students with a disability. This funding is at a higher rate than the SRS.

Under the SCFM, students with an eligible diagnosis are provided funding across seven funding levels. In 2023, Western Australia's funding ranges from $10,501 to $80,227 per student, depending on the level of disability. Total disability spending represents 12.4% of Western Australia's total funding for government schools. This maximum is much higher than the SRS, which calculates disability loadings in 2023 ranging from $13,048 for the lowest levels of adjustment to $40,710 for the highest levels (primary school students), representing 7.5% of total SRS allocation for Western Australian government schools.

Disability funding is rigid; it resists change once it is in place. Western Australia's *Individual Disability Allocation* has been in place for some time, pre-dating its current funding model.

The Commonwealth considers the data it uses to construct the disability factor for the SRS to be of sufficient quality and fit for purpose. Hence, it is unclear why the CGC considers these same data to be of insufficient quality or not fit for purpose.

Schooling Resource Standard

We believe the SRS is a better reflection of the expenses facing States than current CGC regressions. Since the 2020 Review, States have been shifting their funding models to align closer to SRS, as per the agreement in place with Federal Government.

The CGC appears concerned that the SRS cannot be used while States are yet to converge to SRS funding levels. This is because the CGC considers it does not reflect its 'What States Do' principle. However, we consider this should not be a concern. The CGC can still use national State spending on schools (which is what States do), with relativities based on the SRS, as the SRS reflects the drivers of States' spending on schools.

Whilst school funding is not necessarily based on SRS, the cost factors in the SRS model is built from school data. It reflects the average additional cost a school would face based on its location, and the makeup of its school population. The model picks up the cost weights found in the CGC's regressions, as well as other additional costs (other than Wages). This provides cost weights that are more indicative of the complex additional costs of a wider range of students and a more accurate representation of what States do.

The use of the SRS cost weights for both government and non-government schools would assist in resolving the previous outlined issues, such as with Indigenous student cost weights in the non-government regression. The SRS highlighted that Western Australia needed to spend an additional $41 million for Indigenous students in non-government schools in 2022. Western Australia's cost model also factors in loadings for Indigenous students. This highlights that something is wrong with the CGC's non-government student regression model, where the result is the opposite of the conceptual argument. Unceremoniously removing the cost weight for Indigenous students in the CGC's regression does not fix the flaws.

Currently CGC regressions use Index of Community Socio-educational Advantage (ICSEA) that was developed to compare schools based on National Assessment Program – Literacy and Numeracy performance. ICSEA is based on the following formula:[1]

ICSEA = SEA + Remoteness + Percent Indigenous student enrolment

[1] Australian Curriculum, Assessment and Reporting Authority (2020), *Guide to understanding the Index of Community Socio-educational Advantage (ICSEA)*, page 7 https://myschool.edu.au/media/1820/guide-to-understanding-icsea-values.pdf

The CGC's approach is overly complex, as it relies on the accuracy of the regression to identify the additional cost of SES, when socio-educational advantage (SEA) is readily available and could be used directly.

Hence, we consider the SRS model more accurately reflects the effects of different socio-disadvantage levels within schools. Rather than the CGC's current regression approach that uses the bottom quartile, the SRS method uses the bottom two quartiles in a tiered approach.[2] It applies loadings for low SEA for the percentage of students in each of the bottom two quartiles. We prefer this broader approach.

Further, for non-government schools, SRS base funding is adjusted according to a *Capacity to Contribute* score that is calculated for each school based on a *Direct Measure of Income* of parents and guardians. This allows for the base funding to be adjusted to reflect the individual school community's ability to contribute to the operating costs of the school.

The SRS is already used as an appropriate measure in the Commonwealth-funded non-government schools component, reflecting the 2015 Review Terms of Reference requirements. Using the SRS to identify educational disadvantage in the remaining two components would bring consistency to the Schools assessment.

If the CGC replaced its regression with the SRS, the resulting cost weights would be more accurate, simple, and more indicative of how schools are funded in States. The CGC would still achieve national average policy as SRS loadings are formulated using representative school data.

Question for the CGC – Schools

Is there a reason for using ICSEA, rather than a direct measure of SEA, to derive the cost weight for low-SES in the current regressions?

[2] Up to 50 percent of the SRS funding amount for Quartile 1 and 37.5 percent for Quartile 2.

4. Post-secondary Education

Key Points – Post-secondary Education

Issue of concern to Western Australia

Service delivery scale

The Post-secondary Education assessment does not adequately capture the diseconomies of scale experienced in smaller population centres, which pushes out Registered Training Organisations (RTOs). This means the State's TAFE system is required to provide services in these more costly areas. Acknowledgement should be given to these higher costs.

CGC consultation paper

Q1. Do states agree that a course mix driver should not be introduced?

A course mix driver should be included to accurately capture additional cost caused by factors out of the control of States.

Course mix can be considered to be part of the industry mix driver, with materiality considered across all assessments.

Q2. Do states agree that the variable used in the socio-demographic assessment of needs be retained?

The variables used in the socio-demographic assessment of needs remain appropriate, but should all be updated with the latest data.

Service delivery scale

In Western Australia, approximately 65% of contact hours are delivered by the State's TAFE system, with the remaining approximately 35% by RTOs. However, TAFEs attract approximately 80% of State spending. This is partly due to regional and remote areas, which face smaller class sizes, and consequent higher cost per training hour delivered. There is little incentive for RTOs to provide services in remote areas, including Indigenous communities, as smaller class sizes greatly diminish (or completely deplete) their profits. Hence, the State's TAFE system is required to provide the service in these areas. By comparison, in remote areas, TAFEs provide 85% of contact hours.[1]

Whilst the TAFE system allows for better economies of scale than the RTOs, due to its larger facilities, the cost per training hour for each student is increasingly more expensive the smaller the population centre. This can be seen in Table 4-1 below. The Metropolitan TAFE locations both have cost relativities well below the average. However, as student numbers reduce, the cost per student contact hour increases.

[1] The remaining 15% of contact hours are provided by a combination of private training providers, community education providers and other training providers. Hence, the proportion of providers operating for profit is less than this percentage.

Table 4-1

TAFE Regional Cost Relativities (2022)

TAFE College	North Metropolitan	South Metropolitan	North Regional	Central Regional	South Regional	*Total*
Region	Perth	Perth Peel	Kimberly Pilbara	Mid-West Goldfields Wheatbelt	South West Great Southern Esperance	*All Regions*
Students	21,400	22,000	5,400	8,300	9,000	*66,100*
Cost per Student Contact Hour	$15.55	$16.89	$57.69	$27.45	$22.68	*$19.67*
Cost relativity	0.791	0.858	2.932	1.395	1.153	*1.000*

Source: WA Department of Training and Workforce Development calculations

The variation in cost between TAFEs can largely be explained by location. Note that all North Regional TAFE locations, where costs per student hour is nearly three times the average, fall into the remote or very remote category.

In the 2020 Review, the CGC surmises that State data on loadings for regional influences gives a direct measure of both regional costs and service delivery scale. However, the current category-specific regional cost gradient does not adequately compensate for the much higher cost per student contact hour experienced in such thin markets. The averaging process that determines remote loadings does not adequately recognise Western Australia's particular circumstances.[2] This is exacerbated by our industry mix in these regions. This should be recognised in CGC methods.

Course mix

A course mix driver should be introduced. There is a conceptual case that certain types of courses cost more to provide, and there are data that can be used to derive cost weights.

The difference in costs is largely due to higher fixed costs for courses that require equipment, and for courses that require smaller class sizes. States have very little control over these additional costs as they are generally dictated by legislation, due to safety requirements and the longevity of expensive machinery.

Course mix can be considered to be part of the industry mix driver, which is reflected in the Services to Industry regulation components (through the assessment of three different regulation components), and in the Mining Revenue assessment (which reflects the size of the mining industry, which is a major driver of course mix).

[2] Remote and very remote costs are largely driven by Western Australia, Queensland and the Northern Territory (and South Australia for remote). However, for Queensland in particular, remote populations are reasonably close by road to very large centres. By contrast, Western Australia's remote towns in the Pilbara and Kimberley are thousands of kilometres from Perth (with no large centres comparable to those in Queensland). We will address these issues further in our response to the Geography paper.

As course mix is part of this broader driver, materiality should be determined on the impact of the driver across all assessments, not just within the Post-secondary Education assessment.

Socio-demographic assessment of needs

We agree that the socio-economic drivers in this assessment should be retained. We also agree that all driver weights should be updated, from National Centre for Vocational Education Research (NCVER) and/or State data, for this review. Despite the purported stability in regional loadings, better, more mature data may have been produced since the 2020 Review.

5. Health

Key Points – Health

Issue of concern to Western Australia

Calculation of non-State service adjustments

We believe that the current formula is wrong.

- It focuses on the proportion of State expenses that are substitutable, but it should focus on the proportion of non-State expenses that are substitutable.
  - Substitutable State expenses are the expenses that could be replaced if the non-State sector were to grow. But this is not What States Do. States respond to the existing level of non-State services. Hence, the CGC should be looking at the State expenses that have already been replaced by existing non-State services.
- For Admitted Patients, it implies that 4.8 private separations are required to substitute for one public separation.
  - This could be the case if 3.8 out of every 4.8 private separations were for services not provided by the States, such as cosmetic surgery. However, the CGC calculates these numbers based on the proportion of State admissions that are emergencies and the proportion of persons with private health insurance. These provide no information on how many private separations are for treatments not provided by the States.
- A correct formula would take the difference between the assessed and actual levels of the non-State services indicator (private separations, bulk-billed benefits), restricted to the portion of that indicator that is substitutable, and multiply by the ratio of the State cost per service to the non-State cost per service.

However, if the CGC retains its current methods, it should as a minimum consider our arguments on substitutability levels and non-State service indicators under consultation question 5 below.

CGC consultation paper

Q1. Do States agree that in a post-pandemic environment, the hospital and patient transport assessments remain fit for purpose?

We consider the pandemic was only a temporary distortion to the provision of health services, and that (subject to concerns expressed in this chapter) the existing Health assessment remains fit for purpose.

We note that the data years affected by the pandemic will have largely fallen out of the three-year average by the completion of the 2025 Review.

Q2. Do States agree that the proposed changes to the community and public health assessment in this [consultation] paper will contribute to making the assessment more responsive to developments affecting this part of the health system?

Under question 4, we express concerns with the CGC's proposed changes. Accordingly, we do not see any benefit in making an assessment more responsive to poorer measures of need.

However, for more flexibility, we support the CGC's proposal to use State-provided Health component expense data for the latest data year, rather than assuming all components grow at the same rate as the overall Health category.

Q3. Do States consider the experiences with the COVID-19 pandemic have implications for the Health assessment?

We consider the pandemic has no implications for the Health assessment, especially noting that the data years affected by the pandemic will have largely fallen out of the three-year average by the completion of the 2025 Review.

Q4. Do States agree to:

- *use the Australian Institute of Health and Welfare (AIHW) data on community mental health activity, adjusted to compensate for lack of cost weights, to determine per capita use rates for mental health services?*
- *expand the current proxy to include non-admitted patient services, applied to the balance of the component?*
- *continue to apply a discount of 12.5% to the community health socio-demographic assessment?*

We are concerned about the lack of cost weights for the AIHW community mental health data, and consider the proposed adjustments amount to dubious manipulation.

We believe that it would not be appropriate to include non-admitted patient national weighted activity units (NWAUs) in the proxy measure of socio demographic composition for Community and Public Health.

- In remote regions, many non-admitted patient services are provided virtually, whereas both emergency department and community and public health services are almost always provided by practitioners on location.
- Movements in activity during the pandemic should have been picked up by movements in national expenses, which varied much more for Non-admitted Patients than for Community and Public Health and Emergency Departments.

The CGC should not discount the portion of the assessment that uses AIHW community mental health activity data, should the CGC use these data.

Q5. Do States support the use of AIHW data to update the non-state services substitutability level for the emergency departments component, while retaining the 2020 Review method for other components?

We do not support the CGC's proposed change to the Emergency Departments substitutability level. Indeed, we propose other changes across the Health non-State services assessments (within the CGC's current formula), as follows.

For **Emergency Departments**, we do not believe the movement in the AIHW method of measuring general practitioner (GP) treatable services should be used to update the Australian College of Emergency Medicine (ACEM) method of measuring these services.

- These two methods cannot be assumed to move consistently, particularly as the movement is not large.
- The latest AIHW data may have been distorted by COVID-19.

We also believe that:

- the CGC should use separate substitutability levels for differing remoteness regions to pick up interactions between the non-State services indicator and the State substitutability level; and
- the CGC should account for the fact that an extra dollar of GP services saves (according to Perth data) over five dollars of Emergency Department expense (this issue is also relevant to other components).

For **Non-admitted Patients**, we believe that two changes should be made to the calculation of the substitutability level.

- The CGC should not use its 'alternative' measure of 17½%, as the method is irrelevant.
  - This measure multiplies the proportion of State services that are substitutable by the proportion of non-State services that are substitutable, which is meaningless.
  - This measure double-counts the proportion of non-State services that are bulk-billed, because the substitutability level is only applied to bulk-billed benefits.
- The CGC discounts the substitutability level by 50% for outpatient activity that is linked to a previous inpatient episode, but according to our data this should only be 10-15%.

For **Admitted Patients**, self-funded patients should be included in the non-State services indicator, and the substitutability level should be increased to reflect self-funded patients.

- Self-funded patient separations replace State-funded patient separations in exactly the same way as separations funded by private health insurance.
  - In effect, these patients could be considered to be self-insured.
- Including self-funded patients in the non-State services indicator is also relevant if the CGC accepts our proposed change to the non-State services formula at the start of this chapter.

Also for Admitted Patients, the CGC currently discounts the substitutability level by 33-44%, based on a perceived overstatement, despite having no data to justify this.

- Some private hospitals have emergency departments, so restricting substitutable separations to non-emergency understates substitutability.
- The CGC should be consistent with its discounting framework. We suggest a discount of 12½% or 25%.

Most of our concerns with this assessment relate to the non-State services adjustment.

In the 2015 Review, the CGC replaced its subtraction method (which involved an assessment of State and non-State services combined, then subtracting non-State services) with a 'direct' method, which involved an assessment of State services and an adjustment for non-State services.

In the 2020 Review, we focused on arguing for the subtraction method. In this Review, we instead turn our focus to the way in which the 'direct' method is implemented.

In the first section of this chapter, we address the formula the CGC uses for the non-State services assessment, which we believe is incorrect. Should the CGC not accept our corrected formula, we also address problems with the CGC's calculations of inputs to its current formula (in our response to the CGC's consultation question 5).

Calculation of non-State service adjustments

The CGC adjusts States' assessed expenses for differences in non-State services among the States, as those services can substitute for State expenses.

However, we believe that the formula used by the CGC is incorrect.

Problem with CGC formula – Admitted Patients

Using Admitted Patients as an example, the non-State services adjustment is calculated as follows:[1]

$$\frac{\hat{S}_I}{S}\sigma E - \frac{S_I}{S}\sigma E = \frac{\left(\hat{S}_I - S_I\right)}{S}\sigma E \qquad (1)$$

where:

S_I = actual private separations in State I

$\hat{S}_I$ = private separations that State I would have if it had national average non-State provision per person, cross-classified by age, indigeneity, remoteness and socio-economic composition ('assessed' private separations)

S = national private separations

E = national expense by States on Admitted Patients

σ = proportion of national expense by States on Admitted Patients that CGC considers can be substituted for by non-State services

[1] In practice, the CGC divides the actual and assessed private separations by different measures of the national separations due to it using different data sets for the actual and assessed separations. However, conceptually the denominator is the same, and it could be made the same in practice by scaling the assessed separations.

The calculation is the same for other components, except that instead of private separations the indicator for non-State services is bulk-billed GP benefits paid for Emergency Departments and Community and Public Health, and bulk-billed specialist attendances and operations benefits paid for Non-admitted Patients.[2]

Logically, the above formula is flawed in that it applies a percentage variation in non-State services to an amount of State services. This amount of State services is the State services that *could be* substituted for if the non-State sector were to increase. But this is not What States Do. States respond to the existing level of non-State services. The formula does not reflect the State services that have currently been substituted for by the existing non-State services, which is what States do.

The formula can be rearranged as follows:

$$\frac{\sigma E}{S}\left(\hat{S}_I - S_I\right) \qquad (1B)$$

That is, the shortfall in non-State services is multiplied by the ratio of substitutable State services to total non-State services.

- This ratio would make sense if it converted the cost of non-State services into what they would cost if the State sector were to provide them, but this is not what it does.
- We can determine the implicit meaning to the ratio by converting the substitutable proportion of State expenses to separations.
    - In 2021-22, public patient separations were 6,258,855 nationally and private patient separations were 4,542,101 nationally.[3] The substitutability proportion used by the CGC was 15%, so the CGC is only considering 15%x6,258,855=938,828 public separations to be substitutable. Dividing the 938,828 substitutable public separations by the 4,542,101 private separations gives a ratio of 21%. That is, each additional private separation replaces just 21% of a public separation – so 4.8 private separations are required to replace one public separation.
    - The question then is what are the other 3.8 private separations doing?
    - If these are for services provided by the State sector, then States with more non-State services are using that as an opportunity to provide a higher standard of service (through increased quantity of services), instead of cutting back on State services. That should not be funded through HFE.
    - The only other explanation would be that the other 3.8 private separations are for services not provided by the State sector. However, it is unclear how the CGC could have deduced this, when the data it used was an estimate of the substitutable State services, not an estimate of the non-substitutable non-State services.

[2] There is no non-State service adjustment for the Non-hospital Patient Transport component. This discussion also does not address the Community and Public Health Indigenous grant adjustment, with which we have no concerns.

[3] Both numbers sourced from AIHW.

- Looked at another way, the CGC's 15% substitutability proportion is based on the proportion of public hospital separations that are non-emergency, and the proportion of those non-emergency patients that have private health insurance.

  The CGC is implicitly using this to conclude that 3.8 out of every 4.8 private separations are for services not provided by the State sector. For example, they might be for (say) cosmetic surgery.

- However, this would lead to spurious results. For example, suppose climate change results in more cataclysmic natural disaster events, so that emergency admissions rise from the current 40-50% to 70%. The CGC would revise the 15% substitutability down to 7½%,[4] and it would then implicitly assume that every 9.7 extra private separations[5] would substitute for one public separation. However, this would be erroneous, as there is no reason why treatments such as cosmetic surgery would have increased from 3.8 of every 4.8 private separations (79%) to 7.9 out of every 8.9 private separations (89%), due to climate change.

From the above, we conclude that the 15% substitutability proportion should not be multiplied by the shortfall in non-State services.

- Rather than the rate of substitutability, it reflects the limit of substitutability – that is, how much more State expense could be substituted for if the non-State sector were to expand, rather than what has already been substituted for by the existing non-State sector. If substitutable non-State services were to increase by more than 21% (i.e., 1/4.8) then they would cease substituting for State services, as the substitutable State services would have fallen to zero.
  - However, even this would only hold if the non-State services were distributed across the population in line with the State services (otherwise, substitutable State services would fall to zero for some population sub-groups before they had fallen to zero for other population sub-groups.
  - In any case, the CGC should not be concerned with hypothetical growth in non-State services, but with the existing distribution of State services.

This can be illustrated by Figure 5-1.

This compares two States to the national average[6] – State 1 with above-average non-State services and State 2 with below-average non-State services. Activity is measured horizontally and cost per activity is measured vertically, so expense is given by area. (In this Figure, the State cost per activity is higher than the non-State cost per activity – we later discuss the relevance of this in practice). The black rectangle is the saving to State 1 from a

[4] If emergency admissions rise from 40% to 70%, then non-emergency admissions fall from 60% to 30%, so the 15% substitutability level would halve to 7½%

[5] That is, a doubling of the (unrounded) 4.8.

[6] In practice, the national average experience is applied to each State's population composition to give 'assessed' non-State services, which differs among States – but for the purpose of conceptual illustration it is convenient to just have one national average diagram in the Figure.

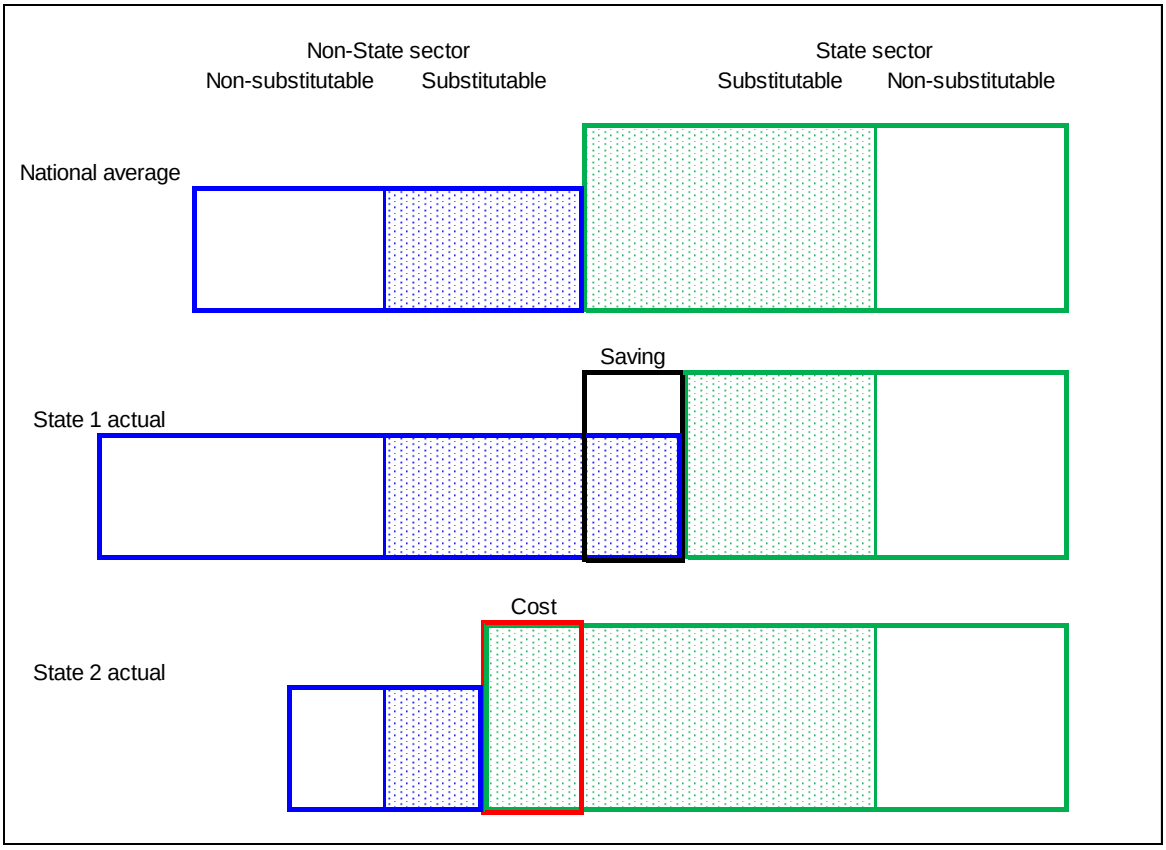
larger non-State sector, and the red rectangle is the cost to State 2 from a smaller non-State sector.

The CGC's approach is, for each State, to take the difference between State's blue rectangle (both dotted and clear) and the national average blue rectangle (both dotted and clear), divide by the total across all States of their blue rectangles (both dotted and clear), and to multiply that by the total across all States of their national green-dotted areas.[7] It can be seen that this will only equal the red and black rectangles by chance, if various unrelated expenses happen to be in a co-incidental relationship.

Later, we present a corrected formula, which will give the red and black rectangles. This involves determining the proportion of non-State spending that is substitutable, rather than the proportion of State spending that is substitutable.

Figure 5-1

Illustration of Non-State Services Substitution



[7] Note that the national blue rectangle and green-dotted rectangle are actually the sum over all States, rather than just the 'national average' shown in this Figure.

Problem with CGC formula – other Health components

The same analysis can be done for the other Health components.

The CGC uses the same formula to calculate the non-State service adjustment for the other components, except that the non-State indicator is bulk-billed benefits,[8] which is a dollar amount, rather than an activity amount.

To make this clear, we restate the formula as follows:

$$\frac{\sigma E}{D}\left(\widehat{D}_I - D_I\right) \qquad (1C)$$

where:

D_I = actual non-State dollar benefits in State I

$\widehat{D}_I$ = non-State dollar benefits that State I would have if it had national average non-State provision per person, cross-classified by age, indigeneity, remoteness and socio-economic composition ('assessed' non-State dollar benefits)

D = national non-State dollar benefits

Our analysis is then as follows.

- Emergency Departments and Community and Public Health are combined in this exercise as they use the same non-State sector indicator (bulk-billed GP benefits). Using the CGC's proposed 13% substitutability level for Emergency Departments, the CGC would have estimated substitutable Emergency Department spending at $804 million nationally for 2021-22.[9] It also estimated substitutable Community and Other Health spending at $6,540 million nationally.[10] These sum to $7,344 million nationally, which when divided by the national bulk-billed GP benefits of $8,056 million gives each dollar of non-State spending substituting for 91 cents of State spending, or $1.10 of non-State spending being required to substitute for a dollar of State spending.
  - As per above, this implies that the extra 10 cents (or 9%) of the national bulk-billed GP benefits are not substitutable. This may be the case, but it would be unrelated to the substitutable proportion of State services that the CGC has identified. Hence, as per Admitted Patients, this illustrates that the CGC's current formula does not make sense.
  - We consider that the vast majority of GP services are substitutable, especially in remote regions, where there are often no GPs (at least in Western Australia).

[8] GP benefits for Emergency Departments and Community and Public Health, and specialist attendances and operations benefits for Non-admitted Patients.

[9] Derived by replacing 15% with 13% in the CGC's 'simulator' spreadsheets.

[10] Based on the existing 60% substitutability level used by the CGC. The consultation paper says that this will be updated.

- It is also the case that it is cheaper to provide an equivalent service through GPs than Emergency Departments, due to the high overheads that hospitals face. This is why the States and Commonwealth have worked to establish more GP services in locations where they can more readily substitute for public hospital services, such as urgent care clinics.
  - In Perth, the cost of a public hospital presentation at a non-specialist hospital was $418 in 2021-22 for records flagged as GP treatable. The current bulk-billed GP rebate is $41.20 (less than 20 minutes) or $79.70 (more than 20 minutes).
  - Hence, an extra dollar of GP bulk-billed services will save the State between $5.24 and $10.15. This means that, at 91 cents, the 9% non-substitutable bulk-billed GP benefits calculated above is well understated.

- Using the CGC's proposed 25% substitutability level for Non-admitted Patients, the CGC would have estimated substitutable Non-admitted Patients spending at $2,079 million nationally for 2021-22, which when divided by the national bulk-billed specialist attendances and operations benefits of $1,445 million gives each dollar of non-State spending substituting for $1.44 of State spending, or 69 cents of non-State spending being required to substitute for a dollar of State spending.
  - Based on the CGC's estimates, this implies that the non-State services assessment for Non-admitted Patients is overstated.
  - However, data from the CGC shows that State services subject to substitution are on average 2.58 times more expensive than corresponding non-State services.[11] Taking this into account would imply that the non-State services assessment for Non-admitted Patients is understated.

Correcting the formula

To correct the Admitted Patients non-State services assessment, we should replace the earlier formula with the following:

$$\frac{\sigma E}{\sigma \mathbb{S}} \theta \left(\hat{S}_I - S_I \right) \qquad (2)$$

where:

$\mathbb{S}$ = national public separations

θ = proportion of private separations that are substitutable

The left-hand ratio $\sigma E / \sigma \mathbb{S}$ converts private separations to a public cost equivalent. Note that this may require modification if the substitutable public separations differ in cost per separation from total public separations.

[11] Ratios of 1.21 for procedure clinics and 3.13 for medical consultation clinics, weighted by bulk-billed activity in each of these.

For each other component, the formula would be slightly different from Formula (2), as the non-State indicator for Admitted Patients is a measure of activity (private separations) but the non-State indicators for other components are dollar amounts (bulk-billed benefits). Hence, the left-hand ratio would be the cost of a State service divided by the cost of a non-State service, as follows.

$$\frac{\$^S}{\$^N}\theta\left(\widehat{D}_I - D_I\right) \qquad (3)$$

where:

$\$^S$ = cost of State service

$\$^N$ = cost of non-State service

θ = proportion of non-State indicator[12] that is substitutable

We can relate this back to Figure 5-1, as follows.

- $\widehat{D}_I - D_I$ is the difference between the national total blue rectangle and the actual State total blue rectangle.
- θ is the proportion of the total blue rectangles that is blue-dotted, so $\theta\left(\widehat{D}_I - D_I\right)$ is the difference between the national blue-dotted rectangle and the actual State blue-dotted rectangle.[13]
- $\$^S$ is the height of the green rectangles.
- $\$^N$ is the height of the blue rectangles.

Hence, it can be seen that Formula (3) gives the black and red rectangles in Figure 5-1. Formula (2) would become the same as Formula (3) if the private separations were to be expressed in dollar terms as non-State expenses.[14]

In theory, as shown by Figure 5-1, the CGC could estimate the black and red rectangles by looking at the difference from the national average in each State's <u>actual</u> substitutable

[12] The non-State indicator is bulk-billed GP benefits for Emergency Departments and Community and Public Health (to apply the formula, this indicator has to be split across these two components) and bulk-billed specialist attendances and operations benefits for Non-Admitted Patients.

[13] We are assuming that this proportion holds constantly across all States. The CGC is implicitly making the same assumption in its formula.

[14] If we use D_I as the dollar value of the private separations in Formula (2), then we can convert Formula (2) to Formula (3) as follows:

$$\frac{\sigma E}{\sigma \mathbb{S}}\theta\left(\hat{S}_I - S_I\right) \qquad (2)$$

$$= \$^S\theta\left(\frac{\widehat{D}_I}{\$^N} - \frac{D_I}{\$^N}\right) \qquad \text{as } \$^S = \frac{\sigma E}{\sigma \mathbb{S}} \text{ and } \$^N = \frac{D_I}{S_I}$$

$$= \frac{\$^S}{\$^N}\theta\left(\widehat{D}_I - D_I\right) \qquad (3)$$

expenses (the green-dotted areas).[15] However, in practice, as this would involve using each State's actual expenses, it would be distorted by policy differences.

To illustrate the potential impact of the corrected formulae for the 2021-22 assessment year, Table 5-1 compares the CGC's existing non-State service assessment, using the CGC's proposed updated substitutability levels in its consultation paper, with the appropriate non-State service assessment based on our above discussion.[16]

- We assume that 90% of private separations are substitutable.
    - The Western Australian Department of Health has suggested that the percentage of private inpatient services that the public system could do is very high, noting that the State does provide cosmetic surgery at various levels now and if patients are prepared to wait there is not much that cannot be done via elective surgery in the public system. On that basis, a guestimate would be that something like 90-95% of activity done in the non-State sector could be done as a State service (we have conservatively used 90%). However, this is not a rigorous estimate, and this proportion would be an area for further research by the CGC.
- We assume that the same 90% substitutability applies to the CGC's other existing non-State service indicators.[17]
- We use the State cost per public separation for the Admitted Patients non-State services adjustment.
- In the previous section, we calculated that the Emergency Departments cost of services is 5.24-10.15 times the cost of bulk-billed GP services (in Perth non-specialist hospitals). We use the lower end of this range, which will significantly understate our corrected assessment.
- In the previous section, we calculated that the ratio of Non-admitted Patients cost of services to non-State services is 2.58 nationally. We use this ratio.
- We assume that the cost of State and non-State services are equal for Community and Public Health, due to our lack of data to suggest otherwise.
- We assume that half of the bulk-billed GP benefits substitute for Emergency Departments services and half for Community and Public Health services.[18]

It is evident that this has a major impact on the distribution of GST in this assessment, implying a substantial failure of HFE to date in this regard.

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[15] The CGC only estimates the sum of the green-dotted areas over all States (and then multiplies that by the percentage difference in the blue rectangles). It does not look at individual State's green-dotted areas.

[16] This does not take into account our argument in the last section of this chapter that the non-State services indicator should be expanded to include self-funded patients.

[17] It should be noted that the CGC has already restricted those indicators to bulk-billed services, so is excluding much non-State provision from the calculation.

[18] This is a placeholder assumption, which would be an area for further research by the CGC. It results in half of the bulk-billed GP benefits being scaled up by 5.24 and the other half being unscaled. If we were to use the 10.15 ratio for Emergency Departments, then we would get the same results if we assumed of 23% of the bulk-billed GP benefits substitute for Emergency Departments services and 77% substitute for Community and Public Health services.

Table 5-1

Health Non-State Services Assessment ($m) [a]

2021-22 Assessment Year

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
CGC proposed [b]								
Admitted Patients	-19	+272	-244	+29	-58	-36	+66	-9
Emergency Departments	-15	-8	-1	+10	+7	+3	+5	-0
Non-admitted Patients	-110	-28	+2	+89	+17	+13	+12	+5
Community & Public Health	-124	-65	-10	+81	+55	+26	+37	-0
Total	***-269***	***+171***	***-252***	***+208***	***+21***	***+6***	***+120***	***-5***
WA proposed [c]								
Admitted Patients	-85	+1,186	-1,062	+125	-254	-159	+288	-39
Emergency Departments	-360	-190	-28	+234	+161	+75	+108	-1
Non-admitted Patients	-178	-45	+4	+143	+27	+22	+20	+7
Community & Public Health	-69	-36	-5	+45	+31	+14	+21	-0
Total	***-692***	***+915***	***-1,091***	***+547***	***-35***	***-47***	***+437***	***-33***
Difference								
Admitted Patients	-65	+914	-818	+96	-196	-122	+221	-30
Emergency Departments	-345	-182	-26	+224	+154	+72	+104	-1
Non-admitted Patients	-68	-17	+2	+54	+10	+8	+8	+3
Community & Public Health	+55	+29	+4	-36	-25	-12	-17	+0
Total	***-423***	***+744***	***-839***	***+339***	***-56***	***-53***	***+316***	***-28***

(a) Excludes Community and Public Health Indigenous grant adjustment. Does not include compounding with wages assessment.
(b) Current methods with updated substitutability levels proposed in consultation paper.
(c) Using assumptions listed in the text above this table.

Source: WA Treasury calculations using data from CGC and AIHW.

Health assessment post-COVID-19

We note that the data years affected by the pandemic will have largely fallen out of the three-year average by the completion of the 2025 Review.

We consider the pandemic was only a temporary distortion to the provision of health services, and that (subject to concerns expressed in this chapter) the existing Health assessment remains fit for purpose.

- We have concerns with the CGC's proposed changes to the Community and Public Health assessment. There is no improvement to HFE in making the assessment more responsive to changed circumstances at the expense of making it less reliable (discussed further below).

  In particular, we think that non-admitted patient NWAUs are a poor measurement of the cost of Community and Public Health services. Even if during the COVID-19 pandemic, the two components moved in the same way (which we question), this cannot be assumed for future changes in circumstance of a different nature.

- It may seem desirable for the CGC to build a component into the Health assessment that would deal with the next pandemic. However, the CGC cannot assume that States would respond to the next pandemic the same way, so an assessment based on the COVID-19 pandemic may be entirely not fit for purpose.

The CGC suggests (paragraph 28 of the consultation paper) that more flexibility could be achieved by using State-provided Health component expense data for the latest data year, rather than assuming all components grow at the same rate as the overall Health category. We support this proposal.

Community and Public Health socio-demographic composition

For the Community and Public Health socio-demographic composition assessment, the CGC currently uses as a proxy NWAUs for emergency department triage categories 4 and 5 (lower priority cases).

The consultation paper proposes:

- using AIHW data on community mental health activity, adjusted for the lack of cost weights;
- continuing to use a proxy for other Community and Public Health spending, but expanded to include non-admitted patient NWAUs; and
- retaining the 12½% discount.

Community mental health activity

We are concerned about the lack of cost weights for the AIHW community mental health data.

We also note that the scope of the AIHW data set excludes non-government organisations funded by the Western Australian Mental Health Commission. Hence, we would consider it to be incomplete for the CGC's purposes.

Proxy activity data

We do not believe that it would be appropriate to include non-admitted patient NWAUs in the proxy measure of socio-demographic composition.

There is much more consistency between service delivery for Emergency Departments and Community and Public Health. In particular, in remote regions, many Non-admitted Patients services are provided virtually, whereas both Emergency Departments and Community and Public Health services are almost always provided by practitioners on location.

The consultation paper notes that during the COVID-19 pandemic the emergency department services decreased and the community and public health services increased. This would have been picked up by the changing national expense for each component. The proxy would

only have been inappropriate if there were differing changes in composition of who uses the services for each component.

Furthermore, the consultation paper gives no indication of how non-admitted patient services varied during the COVID-19 pandemic. In fact, from 2018-19 to 2020-21, national expenses in the CGC's assessments rose by 7.1% for Community and Public Health and by 6.7% for Emergency Departments, but by 24.8% for Non-admitted Patients. This suggests Community and Public Health is more similar to Emergency Departments than to Non-admitted Patients.

- Besides, having a proxy that moves the same way under exceptional circumstances is of no use if it does not give a reliable distribution of costs among States generally. We consider the non-admitted patient NWAUs would not give a reliable HFE assessment.

Discounting

If the CGC uses AIHW community mental health activity data, it should not discount that portion of the assessment, particularly as the lack of cost weights[19] raises the question of whether that assessment would be understated.

Measurement of the current non-State services assessment

The first section in this chapter argued that the formula used for the current non-State services assessment is flawed, and that the CGC should assess the proportion of non-State services that are substitutable, rather than the proportion of State services that are substitutable.

This section describes essential changes to the way the CGC approaches substitutability, should it retain its current formula. It discusses the measurement of the substitutability level for Emergency Departments and for Non-admitted Patients. It also discusses the Admitted Patients non-State service assessment, addressing both the indicator (which is relevant under both the current formula and our proposed alternative formula) and the substitutability level.

Emergency Departments substitutability level

The CGC bases the substitutability level on GP-treatable services provided by Emergency Departments. There are a range of methods for estimating these, including that of the ACEM and that of the AIHW.

In the 2020 Review, the CGC used the ACEM method. However, the consultation paper says that updated estimates are only available for the AIHW method.

[19] We continue to argue that such extra information can, and should, be used to validate discounting and provide direction.

Hence, the CGC proposes applying the movement in the AIHW measure to adjust the ACEM measure. We do not agree with this proposal.

- Given the differences between the methods, they cannot be assumed to move consistently, particularly as the movement is not large (the CGC is only proposing revising the substitutability level from 15% to 13%).
- Further, given the lack of precision in determining substitutability levels generally in the Health assessment, a change from 15% to 13% seems arbitrary.
- Besides, the latest AIHW data relates to 2020-21, which was during the COVID-19 pandemic, so may be distorted, and not relevant to the 2025 Review grant years.

We also believe that the CGC should be using separate substitutability levels for differing remoteness regions. Both the AIHW and ACEM methods show increasing substitutability levels as remoteness increases. Also, Western Australia has greater shortfalls of GP services in more remote regions. Hence, there is interaction between the non-State services indicator and the State substitutability level. However, the CGC averages the substitutability level across remoteness regions and aggregates the GP shortfalls across remoteness regions, before multiplying them, so the CGC understates the impact of GP shortfalls in more remote regions.

This may also be relevant to other components if the substitutability levels can be disaggregated by region.

We also note that the CGC's Emergency Departments non-State services assessment does not take into account that an extra dollar of bulk-billed GP services saves between $5.24 and $10.15 of Emergency Departments expense (as calculated in the first section of this chapter, using Perth non-specialist hospitals).

- The importance of this can be illustrated by noting that if States could provide Emergency Department GP-type services as cheaply as GPs, then every extra dollar of substitutable GP services would save an extra dollar of Emergency Departments spending. However, as it is over five times more expensive to provide the same services in Emergency Departments, every extra dollar of substitutable GP services saves over five dollars of Emergency Departments spending.[20]
- We do not see how the CGC's current assessment makes any allowance for this, and so if the CGC retains its current assessment, we would like it to investigate how it can build this into that assessment (this is relevant to other components as well).
    - The CGC may argue that the ratio $\frac{\sigma E}{D}$ in Formula (1C) implicitly allows for the cost differential, but if the CGC were to factor out the cost differential from that ratio, it would leave a remaining proportion. The CGC would need to explain what this represents. In our view it would represent error.

[20] This is why the State and Commonwealth Governments seek to increase the availability of GP services as a substitute for Emergency Departments.

Non-admitted Patients substitutability level

The CGC assumes that State procedure clinics (19% of State expenses) and medical consultation clinics (45% of State expenses) are substitutable, giving 64% of State expenses as substitutable.[21] However, the CGC reduces this by 50% on the basis that half of the Non-admitted Patients services are linked to a previous hospital attendance, to give a 32% substitutability level.

The CGC also calculates an alternative measure by multiplying the above 19% and 45% by the proportion of specialist attendance and operation benefits that are bulk-billed of 35% for procedure clinics and 24% for medical consultation clinics respectively.[22] This gives a substitutability level of 19%x35%+45%x24%=17½%.

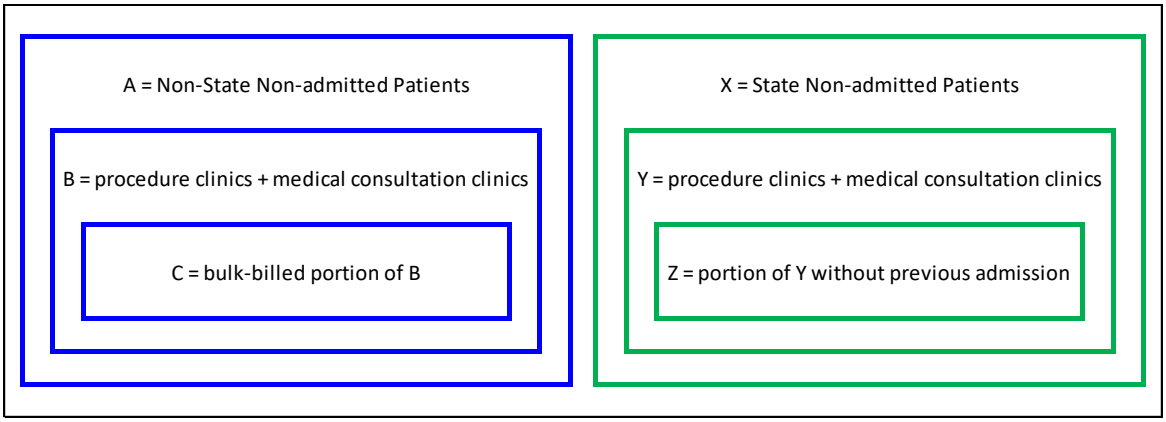
The CGC proposes continuing to average these two measures (32% and 17½%), to give a 25% substitutability level for the 2025 Review.

We consider the 17½% to be irrelevant.

- Firstly, in calculating it the CGC is mixing up the proportion of State services that are substitutable (the 64% of expenses) with the proportion of non-State services (i.e., bulk-billed) that are substitutable. Multiplying these by each other is meaningless.
  - This can be illustrated by Figure 5-2 below. The CGC's first method is calculated as $\left(\frac{Y}{X}\right)\left(\frac{Z}{Y}\right) = \frac{Z}{X}$ = 32%, which makes sense. However, the CGC's second method is calculated as $\left(\frac{Y}{X}\right)\left(\frac{B}{C}\right)$ = 17½%, which multiplies together parts of the diagram that do not intersect, so cannot make sense.[23]

Figure 5-2

Illustration of Non-admitted Patients



[21] The CGC considers allied health clinics (the remaining 36% of State expenses) to be not substitutable.

[22] The CGC has advised that consultation paper was in error – the 35% relates to medical consultation clinics and the 24% relates to procedure clinics. This has little impact on the results, and we have continued to use the calculations as per the consultation paper for ease of reference.

[23] In practice, the calculation is done separately for each of procedure clinics and medical consultation clinics.

- Secondly, the proportion of specialist attendance and operation benefits that are bulk-billed would only be relevant if the CGC were using all specialist attendance and operation benefits as the non-State services indicator. However, the CGC already excludes non-bulk-billed specialist attendance and operation benefits from its non-State services indicator. Multiplying by the proportion of all benefits that are bulk-billed effectively double counts that proportion.
    - Put another way, in Formula (1C), which describes the CGC's current assessment, bulk-billed specialist attendance and operation benefits appear in both $\frac{(\hat{D}_I - D_I)}{D}$ and σ, so are double-counted.

Hence, the CGC should just use the 32% substitutability level.

However, we also consider that to be understated, because the CGC's assumption that half of the Non-admitted Patients services are linked to a previous hospital attendance is overstated.

The Western Australian Health Department's best estimate of outpatients activity that is linked/related to an inpatient episode is in the range of 10-15%, depending on the number of days from the inpatient episode. This used the following methodology.

- It used 2020-21 and 2021-22 data, for metropolitan hospitals.
- It looked for matching medical record numbers where the sequencing/timing of the outpatient episode was up to 6 weeks post the inpatient separation date.
- It used the Inpatient Diagnostic Related Groups (DRGs) grouping and Outpatient Tier 2 clinics, and broadly made an assessment for being related, either directly because of word commonality and/or things like rehabilitation clinics for surgical events.
- Additionally, if the period post the inpatient separation was extended out to 6 months then, for related activity, the percentage increased, but remained less than 25%. Similarly, if we ignore whether the activity was related and just used the medical record number, then the percentage at 6 months was less than 35%.

The last point above shows how higher proportions can be obtained, but these are still less than the 50% used by the CGC, and we do not consider them to be as reliable.

Hence, we believe that the CGC should only reduce its 64% substitutable proportion of State expenses by 10-15% (subject to experience in other States).

This would give a substitutability level in the range of 54-57%.[24] Hence, we propose that the CGC should be using a substitutability level of 55%, instead of its proposed 25%.

Table 5-2 shows the impact of this higher substitutability level.

[24] This could still be an underestimate, as patients with a previous inpatient episode may find that follow-up care in the State sector has too long waiting times, and so switch to the non-State sector.

Table 5-2

Non-admitted Patients Non-State Services Assessment under Current CGC Methods ($m) [a]

2021-22 Assessment Year

Substitutability level	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
CGC 25% [b]	-110	-28	+2	+89	+17	+13	+12	+5
WA 55% [c]	-243	-61	+5	+195	+37	+30	+27	+10
Difference	-133	-33	+3	+106	+20	+16	+15	+5

(a) Based on the CGC's current formula, but reflecting alternate substitutability levels. Does not include compounding with wages assessment.
(b) Using updated substitutability levels proposed in consultation paper.
(c) Without double counting of the proportion of specialist attendance and operation benefits that are bulk-billed, and with a 10-15% discount for Non-admitted Patients services linked to a previous hospital attendance (based on WA Health Department experience) rather than the CGC's 50% discount.

Source: WA Treasury calculations using data from CGC and WA Department of Health.

Admitted Patients

Non-State services indicator

The non-State services indicator for the Admitted Patients component is hospital separations funded by private health insurance. We believe that the CGC should be adding self-funded patient separations to the non-State services indicator.

Self-funded separations replace State-funded separations in exactly the same way as separations funded by private health insurance. In effect, they could be considered to be people who have self-insured. About 90% of self-funded separations occur in private hospitals. As these patients would have the choice of being public patients (just like patients using private health insurance), they also substitute for public patient separations.

As shown in Table 5-3, there are significant differences in the distribution of self-funded separations across States compared to the distribution of separations funded by private health insurance.

Table 5-3

Distribution of Non-State-Funded Separations across States

2021-22

Funding source	NSW	Vic	Qld	WA	SA	Tas/ACT/NT [a]
Private health insurance	31%	23%	24%	10%	8%	4%
Self-funded	35%	27%	23%	6%	6%	3%

(a) Not separately published.

Source: AIHW.

We expect that the distribution of assessed separations will not vary as much between private health insurance and self-funded, so the above differences would impact on the non-State services assessment.

Note that including self-funded separations is relevant under both the CGC's current non-State services formula and the formula we recommended in the first section of this chapter.

Non-State services substitutability level – impact of self-funded patients

Note also that the substitutability level the CGC currently uses reflects the proportion of persons with private health insurance. This proportion should be increased to reflect self-funded patients without private health insurance. In 2021-22, the self-funded patients were 9.1%[25] of the patients using private health insurance, so the 44.9% of persons with private health insurance (used in the consultation paper) could potentially be increased by 9.1% to 49.0%.

This would give a substitutability level of 16.4% instead of 15%. The impact of this is shown in Table 5-4.

Table 5-4

Including Self-funded Patients in Admitted Patients Non-State Services Assessment under Current CGC Methods ($m) [(a)]

2021-22 Assessment Year

Substitutability level	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
CGC 15% [(b)]	-19	+272	-244	+29	-58	-36	+66	-9
WA 16.4% [(c)]	-21	+298	-267	+31	-64	-40	+72	-10
Difference	-2	+25	-23	+3	-5	-3	+6	-1

(a) Based on the CGC's current formula, but reflecting alternate substitutability levels. Does not include compounding with wages assessment.
(b) Using updated substitutability levels proposed in consultation paper.
(c) Scaling up CGC's substitutability level by the ratio of self-funded patients to patients funded by private health insurance.

Source: WA Treasury calculations using data from CGC and AIHW.

Although this appears small, it equates to $14 per capita for the ACT, which exceeds the CGC's proposed $12 per capita materiality threshold for data adjustments.

Non-State services substitutability level – impact of CGC discounting

The CGC calculates the Admitted Patients substitutability level by multiplying the 50-60% of public hospital separations that are non-emergency by the 44.9% of persons who have private health insurance to get 23-27%. It then lists reasons why this might be overstated, so it uses judgement to reduce this to 15%.

This is a discount of 33-44%. We are concerned about this for the following reasons.

- It is a very large discount, which does not fit into the CGC's usual discount options.

[25] AIHW admitted patients dataset.

- The CGC has virtually no quantification of the reasons for which it applies this discount. If a State were to ask for such a discount, the CGC would insist that State produce data to support its position.
- Some private hospitals have emergency departments, so restricting substitutable separations to non-emergency understates substitutability.

We accept that the 23-27% may be overstated, but suggest that, if the CGC intends discounting this, then it would be more reasonable for the CGC to use a 12½% discount (for low unreliability) or a 25% discount (for medium unreliability).

Using the mid-point of the 50-60% of public hospital separations that are non-emergency, these discounts would give 21.6% and 18.5% substitutability levels respectively.[26]

Table 5-5 shows the impact of using these alternate substitutability levels. For the ACT, these impacts equate to $34 per capita or $64 per capita.

Table 5-5

Appropriate Discounting of Admitted Patients Non-State Services Assessment under Current CGC Methods ($m) [(a)]

2021-22 Assessment Year

Substitutability level	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
CGC 15% [(b)]	-19	+272	-244	+29	-58	-36	+66	-9
18.5% [(c)]	-24	+336	-301	+35	-72	-45	+81	-11
Difference	-5	+64	-57	+7	-14	-9	+15	-2
21.6% [(d)]	-28	+392	-351	+41	-84	-53	+95	-13
Difference	-9	+120	-107	+13	-26	-16	+29	-4

(a) Based on the CGC's current formula, but reflecting alternate substitutability levels. Does not include compounding with wages assessment.
(b) Using updated substitutability levels proposed in consultation paper.
(c) Discounting the substitutability level by 25%, instead of the CGC's 33-44%.
(d) Discounting the substitutability level by 12½%, instead of the CGC's 33-44%.

Source: WA Treasury calculations using data from CGC.

Non-State services substitutability level – conclusion

We recommend that the CGC change the Admitted Patients substitutability level by:

- increasing the private health insurance coverage from 44.9% to 49.0% to reflect self-funded patients; and
- only discount its calculation by 12½% or 25%.

This would give a substitutability level of 23.6% or 20.2% (depending on the discount), which the CGC could then round to 24% or 20%.

[26] In practice, the CGC would want to round these, but we have left them unrounded for clarity.

Question for the CGC – Health

If the CGC does not agree with our proposed corrected formula for calculating non-State services adjustments, then can it logically explain and justify its formula using our Figure 1 or its own diagram?

6. Services to Communities

Key Points – Services to Communities

Issues of concern to Western Australia

Water and Electricity Subsidies

- Communities with populations of fewer than 50 should be assessed, as most receive subsidised utilities.
- In the Other Subsidies subcomponents, regional and wage cost weights should be applied to communities with populations greater than 3,000, for all levels of remoteness.

Water Subsidies

Water quality and water availability issues significantly impact the cost of water subsidies. Based on the analysis of the 2010 Review, we propose two approaches to assessing this.

- Expand the small communities assessment to include all non-capital towns (regardless of size) in areas of low water quality and availability.
- Assess Water Subsidies actual per capita, or blend the current assessment with an actual per capita assessment.

First Nations Community Development

- Costs to support the governance and management of discrete Indigenous communities are higher in Western Australia due to the additional engagement with local Aboriginal communities regarding the mining industry.
- The general regional costs gradient is heavily underestimating the costs of providing services in Western Australia's regional areas.

Environmental Protection

The CGC assesses this component equal per capita (EPC) as it could not determine States' average policy to declare land to be parks and reserves.

- National parks and wildlife services should be assessed by land area of those parks, and the erosion of beaches should be assessed by the length of the beach in affected areas.
- The regional costs adjustment for national parks and wildlife, and control and prevention of erosion of beaches and foreshores, should be assessed by multiplying the gradient by the land area and length of affected beaches, respectively, rather than the populations of those areas.

CGC consultation paper

Q1. Do States agree that the existing assessment methods for spending on disaster mitigation remain appropriate?

We agree. Although there is potential to identify a driver for disaster mitigation expenditure, we believe the volatility of the assessment and lack of consistent data would make this difficult.

Q2. Do the definitions used in the National Partnership on Disaster Risk Reduction provide an appropriate basis for describing the type of spending that could be classified as natural disaster mitigation?

Possibly, but we find the definitions to be quite broad and subjective.

Q3. Where is this spending currently classified in the Government Finance Statistics framework?

The spending on disaster mitigation is not clearly classified in the Government Finance Statistics framework. Each Western Australian government agency classifies the spending differently. Therefore, to determine the exact Classifications of the Functions of Government (COFOG) codes would require considerable work.

Q4. Is spending on mitigation measures expected to increase significantly over the next five years?

Yes. The Commonwealth has established the Disaster Ready Fund, which provides $200 million annually over the next five years from 2022-23 (with an additional 50% of co-contribution to be provided by the States) to build community resilience through disaster prevention.

Water and Electricity Subsidies

Definition of small/remote communities

For Water Subsidies, the definition of 'small communities' is communities in inner regional, outer regional, remote, and very remote areas with fewer than 3,000 people, but greater than 50 people, and a population density of at least 60 people per square kilometre. For Electricity Subsidies, the definition of remote communities is communities with populations of over 50 people and a population density of at least 60 people per square kilometre, in remote and very remote areas.

The CGC believes that people living in very small communities, and on isolated farms and stations tend to rely on their own water and electricity services, rather than State provision. Hence, it excludes communities with a population of fewer than 50.[1]

The CGC's lower limit of 50 people for relevant communities is arbitrary.[2] Western Australian data from the Water Corporation shows 60% of regional and remote communities with populations fewer than 50 rely on subsidised State water and electricity services. Not only does the CGC exclude these small communities, but the subsidies are larger because of the additional effort needed to provide services in an economically viable manner. Further, many

[1] Commonwealth Grants Commission (2020), *Report on GST Revenue Sharing Relativities 2020 Review,* Volume 2 (Part B), page 230, paragraph 42.

[2] Commonwealth Grants Commission (2015), *Report on GST Revenue Sharing Relativities 2015 Review,* Volume 2, page 287, paragraph 45 and 46.

isolated farms and stations are also connected to State services, depending on their distance to local centres.

Additionally, since the 2020 Review, the Western Australian Government has announced the transfer of responsibility for power and water services for 141 remote Aboriginal communities from the Department of Communities[3] to Horizon Power and the Water Corporation.[4] From April 2023, water and electricity services in these 141 communities are being upgraded to ensure comparability with other communities in Western Australia. These communities rely on State-provided electrical and water services, and over 65% have populations of fewer than 50 people.

Hence, excluding communities with a population of fewer than 50 is not justified. We believe that the lower limit should be removed. Therefore:

- for Electricity Subsidies, the entire remote and very remote population of each State should be used as the relevant population; and
- for Water Subsidies, all areas with a population fewer than 3,000 people should be used.

Other water and electricity subsidies

The CGC believes that providing subsidies to communities with populations over 3,000 is likely to be a policy choice rather than convey some underlying need. It argues that electricity and water supply is more likely to be affordable for those residential customers.[5] Therefore, other water subsidies and other electricity subsidies are assessed on an EPC basis.

Although we note that CGC analysis shows that subsidies are less prevalent for communities over 3,000 people, for some States including Western Australia, it is necessary. Providing services to communities larger than 3,000 people can be due to other factors such as higher regional and wage costs, and water quality and availability issues.

Regional costs and wage costs

There are additional utility subsidies in regional communities due to generally higher costs to service customers in these areas. The CGC accepts that costs such as fuel, construction, maintenance, and staffing are higher in more remote areas. However, wage costs and regional costs are not applied to Other Water Subsidies and Other Electricity Subsidies.

Western Australia has many regional towns with populations greater than 3,000 people that face higher regional costs and wage cost pressures for water and electricity services. For example, Katanning, Narrogin, Carnarvon, Newman, and Kununurra.

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[3] This was in itself due to the Commonwealth withdrawal of its responsibility to these communities.

[4] https://www.wa.gov.au/government/media-statements/McGowan-Labor-Government/Transfer-of-remote-power-and-water-a-licence-for-success-20230401.

[5] Commonwealth Grants Commission (2020), *Report on GST Revenue Sharing Relativities 2020 Review,* Volume 2 (Part B), page 231, paragraph 52 and page 236, paragraph 81.

The Water Corporation's experience is that treating and transporting water over long distances is one of the key factors driving up cost. Due to Western Australia's dispersed regional population, to provide adequate water to regional areas will require the development of expensive desalination plants across the State. Maintenance and up-keep of these desalination plants are costly, particularly in remote and very remote regions.

We expect regional desalination plants will be required in the following towns in the near to medium term, with feasibility studies commenced:

- Exmouth (most urgent);
- Geraldton;
- Albany;
- Port Hedland; and
- West Pilbara.

To recognise these costs, the CGC should apply regional and wage costs weights to outer regional, remote and very remote communities with populations greater than 3,000.

We will explore the regional cost concept further in our submission to the CGC's Geography paper as part of Tranche 2.

Water quality and availability

Water quality and availability greatly affect the cost to provide water services. Low water quality requires extensive treatment to meet the national drinking water standards. Low water availability often results in water being pumped from distant underground sources or transported long distances.

State governments regulate and subsidise water and sewerage providers to ensure communities have access to services at a reasonable price and a nationally determined quality. They subsidise providers to assist with the cost of providing services in regions where full cost recovery is not viable.

In the 2010 Review, the CGC recognised that there is a conceptual case that water quality and water availability influences costs.[6] It acknowledged the high overhead costs to provide water in small communities in areas with low water availability and/or poor water quality. These result in the need for differential subsidies. In addition, per-capita overhead costs are higher in small and remote communities because the basic infrastructure and operating costs are spread across smaller populations.

However, in the 2015 Review and 2020 Review, although the CGC acknowledged that water quality is a factor that drives States' costs, it was 'unable to derive a simple and reliable way

[6] Commonwealth Grants Commission (2010), *Report on GST Sharing Relativities – 2010 Review*, Volume 2, page 287, paragraph 18.

of measuring water quality'.[7] Further, soon after the 2020 Review concluded, CGC staff verbally committed to further investigating this for the 2025 Review.

Hence, a conceptual case exists that water quality and water availability issues significantly impact the cost of subsidies. Yet it is not assessed. However, Western Australia acknowledges that it is reasonable to exclude highly accessible areas from the analysis.[8]

The CGC last assessed water quality in the 2010 Review, and we consider, given the conceptual case, using that method is preferable to not assessing water quality.[9]

There are also differences among States. As noted by the CGC in the 2010 Review: "The data suggest that there are wide variations between regions of Australia in terms of water availability and quality. For example, South Australia and Western Australia experience poorer water availability and quality than Tasmania and areas of Northern Australia".[10]

For the 2010 Review, the CGC used data on water quality from *The Macquarie World Atlas* and CSIRO to conclude that there is poor water quality and availability in most of Western Australia, and the Murray-Darling and South-Australian Gulf drainage divisions. The CGC's table and map from its 2010 Review are reproduced as Figure 6-1.[11]

The problems with water availability and quality are why, as a prime example, Western Australia has to pipe water long distances to Kalgoorlie, which far exceeds the CGC's 3,000-person limit.

We suggest two options for assessing water quality.

- Expand the Water Subsidy assessment to include all non-capital towns (regardless of size) in areas of poor water quality and availability (as identified in the 2010 Review).
- Assess Water Subsidies by the actual per capita method, or blend the existing assessment with an actual per capita method. As shown by Table 6-1, there is substantial overspending in Western Australia and South Australia, which would be driven by water quality problems. This is consistent with the CGC's 2010 observation, noted above.
    - The only other State with overspending is the Northern Territory, which is probably also the result of unassessed disabilities.

7 Commonwealth Grants Commission (2020), *Report on GST Revenue Sharing Relativities 2020 Review,* Volume 2 (Part B), page 249, paragraph 157.

8 Commonwealth Grants Commission (2010), *Report on GST Sharing Relativities – 2010 Review*, Volume 2, page 297, paragraph 57.

9 *ibid.*, pages 292-295, paragraphs 32-41.

10 *ibid.*, page 292, paragraph 33.

11 *ibid*., page 293.

- A recent National Water Reform Inquiry by the Productivity Commission found there is evidence of under-pricing in only Tasmania, New South Wales and Queensland.[12] This suggests that pricing policies are not the reason for the overspending by Western Australia, South Australia and the Northern Territory, and is consistent with underspending in those three States.

Table 6-1

Water Subsidies[(a)]

$ million, 2021-22 data year

	Actual expense	Assessed expense	Overspending
NSW	35	135	-100
Vic	17	96	-79
Qld	36	108	-72
WA	245	55	+190
SA	108	39	+69
Tas	-	19	-19
ACT	0	5	-5
NT	34	18	+16
Total	474	474	-

(a) Small communities and other.

Source: WA Treasury calculations from CGC data.

[12] National Water Reform - Inquiry Report (pc.gov.au), page 37, Finding 6.4.

Figure 6-1

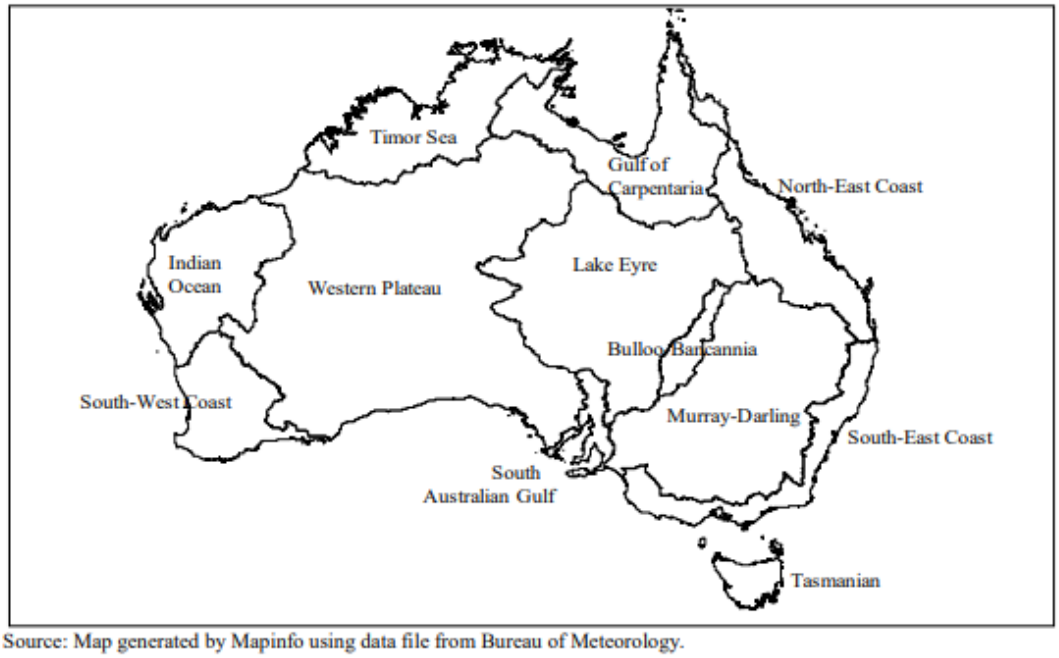
CGC 2010 Review Water Quality Data

Table 15-9 Water quality and availability, summary

Drainage divisions	State(s)	Availability (a)				Quality (b)
		Surface water		Groundwater		Surface water
		GL	ML pc	GL	ML pc	GL
North-East Coast	Qld	57 955	16.41	15 613	4.42	10 - 100
South-East Coast	NSW, Vic, SA	12 933	1.26	17 769	1.73	100 - 500
Tasmanian	Tas	37 668	95.31	12 471	31.56	500 - >1000
Murray-Darling	NSW, Vic, Qld, SA, ACT	12 946	7.82	15 694	9.47	1 - 10
South Australian Gulf	SA	466	0.36	2 011	1.54	1 - 10
South-West Coast	WA	4 467	2.44	8 655	4.72	1 - 10
Indian Ocean	WA	16 577	186.19	14 728	165.42	1 - 10
Timor Sea	WA, NT	149 239	857.36	49 113	282.15	100 - 500
Gulf of Carpentaria	Qld, NT	115 584	2 169.58	40 882	767.37	100 - 500
Lake Eyre	Qld, SA, NT	21 172	532.61	22 403	563.58	1 - 10
Bulloo-Bancannia	Qld	870	1 078.94	1 577	1 956.39	1 - 10
Western Plateau	WA, SA, NT	56 041	919.64	45 069	739.59	unknown

Note: GL=gigalitre, ML=megalitre.
(a) 10 year annual average runoff (surface water) and deep drainage (groundwater).
(b) Expressed as the quantity of fresh surface water that contains less than 1000 milligrams per litre of dissolved solids. The measure that represents the majority of the basin has been noted.
Source: Availability data sourced from the CSIRO, *Australian Water Availability Project*, special data request. Quality data sourced from Macquarie Library, *The Macquarie World Atlas*, *1994*, pages 158-9.

Figure 15-3 Drainage division map



Source: Map generated by Mapinfo using data file from Bureau of Meteorology.

[6] While no data were available from the Macquarie Atlas on the quality of water in the Western Plateau, this division is considered to have low water quality because it is likely to have the same water quality as the surrounding divisions.

Source: CGC 2010 Review Report, Volume 2

First Nations Community Development

The CGC includes expenses to support the governance and management of discrete Indigenous communities. This is assessed using State-provided data and is based on the number of Indigenous people living in such communities.

Mining industry impact

Although we agree that State data provides a solid base for determining Indigenous community development expenses, higher actual costs in Western Australia are partly due to the additional engagement needed with local Aboriginal communities, due to the State's mining industry. However, it appears State data are not capturing these costs. That is, in Western Australia if any decisions involving major ground disturbances affect a site of Aboriginal importance, an approval process between the applicant Aboriginal community and the State is necessary. This often involves multiple communities.

Regional costs

Although the CGC captures remoteness costs through the general regional cost adjustment, it falls far short of capturing the extra costs in Western Australia's regions.

Data from our Department of Planning, Lands and Heritage clearly demonstrates that significant differences exist in the direct costs of employing a person to provide services to support the governance and management of discrete Indigenous communities. Table 6-2 outlines the cost per full-time equivalent (FTE) at different office locations for 2022-23.

- For example, the cost per FTE in Kalgoorlie (Goldfields) is more than three times greater than in Perth.[13] However, the general regional cost gradient allows only 4% more.

Table 6-2

2022-23 Office Costs[(a)], by regions

WA Department of Planning, Lands and Heritage

WA region	Costs per FTE ($)	*% of Metro costs*
Metro	$7,658	*100%*
South West	$12,237	*160%*
Pilbara	$17,711	*231%*
Goldfields	$26,000	*340%*
Mid West	$26,134	*341%*

(a) Includes costs such as rent, insurance and utilities.

Source: Western Australian Department of Planning, Lands and Heritage.

In addition to office costs, there are supplementary costs for travel to the regional areas, and the cost to rent housing for employees, in order to effectively deliver services in these areas.

[13] Kalgoorlie is classified 'outer regional' and is 600 kilometres from Perth.

This is also an issue with use of the general cost gradient in the Other Community Development and in Environmental Protection components, and compares starkly with the more reasonable gradients used in other components of this assessment.

We will explore this further in our submission to the CGC's Geography paper as part of Tranche 2.

Environmental Protection

Expenditure drivers

Expenses for the Environmental Protection component include services such as:

- developing and monitoring pollution and air quality standards;
- pollution abatement and control and research;
- control and prevention of erosion of beaches and foreshores;
- flood mitigation in urban areas; and
- national parks and wildlife services.

The CGC assesses the expenses of this component EPC, with a wage costs factor applied (and a regional costs factor for the Protection of Biodiversity and Landscape subcomponent only). It believes the expenses cover a wide variety of services, and it is neither practical to disaggregate expenses nor possible to identify a single broad indicator for assessing spending.[14]

For national parks and wildlife expenses in particular, the CGC assesses EPC as it could not determine the average policy that applied in declaring land to be parks and reserves.[15] However, we believe one of the main drivers for national parks and wildlife services is meeting international obligations (global and Federal targets), and this is the average policy that is applied by States when declaring land to be protected areas. We would like the CGC to investigate this avenue. We will also follow up with more information following this submission.

The EPC status for national parks and wildlife implies that spending is based on State populations, irrespective of the land area covered by those parks. Park areas will be much greater in a large State like Western Australia, including all our marine parks, than say, Victoria, with a much larger population. Yet Victoria would receive greater assessed spending. This would imply that spending should be based on populations residing in the parks themselves. However, under Federal environment law, it is prohibited to live in national parks and therefore there is no population in these areas.

[14] Commonwealth Grants Commission (2020), *Report on GST Revenue Sharing Relativities 2020 Review,* Volume 2 (Part B), page 242, para 121.

[15] *ibid*., page 242, para 126.

To better capture national parks and wildlife costs, the assessment should be based on park land area, rather than population. We understand using land area has some limitations, but it is a more accurate (and logical) alternative to using populations. Larger national parks have greater maintenance needs. Those needs extend beyond tourism, to the maintenance of roads and bridges (critical to access for weed and pest control, fire control, and other national disaster mitigation).

Similarly, the control and prevention of erosion of beaches and foreshores are also assessed EPC. However, the spending on erosion and foreshores is also not correlated to population, but rather on the length of the beach that needs to be maintained. For this reason, this spending should be assessed by length of the beach in affected areas.

This issue also relates to the way in which regional costs are assessed for these expenses.

Regional costs

For this component, the CGC captures remoteness costs using the general gradient. As discussed above in the First Nations Community Development section, we believe this gradient does not adequately reflect the additional expenses Western Australia incurs in its regions.

Further, as with the discussion of expense drivers above, the spending on these services is not correlated to the populations in the relevant areas.

We come to the same conclusion. To better capture the higher costs of delivering comparable services, the regional costs adjustment for the national parks and wildlife expenses should be related to their land area. For the control and erosion of beaches subcomponent, the regional costs gradient should be related to the length of the affected beach. The populations of the regions in which these parks and beaches exist are irrelevant.

The costs associated with the maintenance of larger national parks and control and prevention of erosion on beaches in remote areas will increase with remoteness. Maintenance costs to provide adequate facilities for tourists and the maintenance of roads and bridges, weed and pest control, fire control, and other national disaster mitigation, is all more costly as remoteness increases. In addition, the time taken to travel to these areas, costs of shipping supplies, and the cost of employing a person in the metropolitan area versus the regional areas, increases with the level of remoteness.

This alternative application of regional costs to factors other than population does not set a precedent. The CGC does this in other assessments. For example, in the First Nations Community Development subcomponent of this assessment, remoteness costs are calculated by multiplying the regional costs gradient by the number of Indigenous people in remote Indigenous communities rather than entire populations.[16] Similarly, in the Roads

[16] As per the CGC 2023 Simulator, *530-30 Indigenous community development expenses Simulator.*

assessment, regional costs are calculated by multiplying the regional costs gradient by the road length.[17]

We will explore this concept further in our submission to the CGC's Geography paper as part of Tranche 2.

Questions for the CGC – Services to Communities

Water Subsidies

Q1. The 'small community' water subsidies regional cost weights have not been updated since the 2020 Review. The CGC do not have all State data for the water subsidies and estimated the regional costs for New South Wales and South Australia. Are the CGC attempting to get updated data for this Review?

Q2. Has the CGC looked further into the water quality and availability issues?

[17] As per the CGC 2023 Simulator, *710 Roads – Assessment – Road length Simulator*.

7. Justice

Key Points – Justice

Issues of concern to Western Australia

Prisons regression for regional costs

The explanatory power of the Prisons regional costs regression is low, implying that a large proportion of variance in the model is not explained by the included variables.

A number of other factors that influence prison costs are prisoner sex, whether the prison accepts prisoners in remand, whether the prison can house disabled prisoners, prison age, and prison funding model (private-public partnership vs public vs private).

We believe that the inclusion of these variables would improve the regression's explanatory power, which should be a priority. States should be able to provide data on these variables.

Regional cost and service delivery scale adjustment for Courts

The Courts component includes remoteness as a cost driver. However, unlike Police and Prisons, regression analysis is not employed to identify regional cost and service delivery scale factors. This is despite likely economies of scale due to fixed costs on essential administrative staff and security requirements.

If not through a regression, the CGC could apply the factor derived for Prisons.

Traffic and breach of bail exclusion

The CGC should inquire as to whether it is still appropriate to exclude traffic and breach of bail data. We believe the inclusion of these offences would better reflect State expenditure.

Treatment of Indigenous status non-response

The CGC applies the Indigenous population share to defendants that do not state their Indigenous status in the Courts assessment.

This approach is at odds with how the CGC typically approaches these situations, where it extrapolates on the basis of stated responses, unless there is strong evidence for an alternative. We argue that non-response data should be allocated according to the distribution of recorded responses.

Indicative data for 2022-23 have a much smaller proportion of unknown responses. This provides an indication that the CGC's approach is indeed substantially underestimating the Indigenous defendant rate, and overestimating the non-Indigenous defendant rate.

CGC consultation paper

Q1. Do states agree that COVID-19 resulted in a temporary departure from long term patterns of justice service provision, use and costs such that the 2020 Review Justice model remains appropriate if used with fit for purpose data?

We agree.

Q2. Do states agree that data from 2019–20, 2020–21 and 2021–22 include the effects of COVID-19 related public health orders and do not reflect typical justice services and costs?

We agree.

Q3. If data from 2019–20 to 2021–22 are not fit for purpose, do states support using data from 2022–23 to update the justice assessment? If so, can states provide an indication of when 2022-23 data could be provided to the Commission?

We support using 2022-23 data to update the Justice assessment. However, we believe it would be prudent to also include 2023-24 and 2024-25 data (when each of these become available) in the assessment, as this would mitigate the impact of lingering COVID-19 impacts on service provision.

Our agencies have indicated that reliable data for each year would be available within six months of each year end.

Q4. If data from 2022–23 are considered fit for purpose but are not available in time for inclusion in the 2025 Review, do states support updating the assessment in an update following the 2025 Review?

We support this.

Q5. Do states agree that the Commission:

- *apply a cost weight for juvenile detainees in the prisons assessment if material?*
- *not make any changes to the juvenile detainees age groups in the prisons assessment?*

We agree with both points.

Regression analysis in the assessment

We have two concerns with the use of regression analysis within the Justice assessment. For Prisons, the regional cost and service delivery scale factors have low explanatory power, and for Courts, regression analysis is not used to account for regional costs.

Explanatory power in the Prison regional costs regression analysis

The CGC utilises multiple regressions in the Justice assessment, with a regression used to generate regional costs and service delivery scale for Police, and another for Prisons. In general, we have no concerns with the use of regression analysis for these components.

The conceptual case for costs being higher for prisons in remote areas is very strong. However, the Prisons regression that calculates regional cost factors has a relatively low explanatory power. In the 2020 Review, the adjusted R-squared statistic was 19%. This implies that a large proportion of variance in the prisoner cost variable is not explained by the independent variables included in the regression. It also implies that the coefficients of those variables are not robust.

We acknowledge that the prisons dataset is small, due to the overall low number of prisons nationally (compared to police stations in the Police regression), which would explain its low explanatory power to some degree.

The regression controls for prison remoteness, security level, and number of prisoners. Through discussions with our Justice department, we have been advised of a variety of other variables that influence the cost per prisoner at prisons in Western Australia, including:

- **Prisoner sex:** Female prisoners have more complex health needs and require higher expenditure. Prisons which house both male and female prisoners often have higher fixed costs to appropriately house both sexes in the same complex (Western Australia has five of these complexes).
- **Remand prisoners:** Prisoners in remand are processed more frequently than sentenced prisoners in order to attend trials, move to alternative prisons, and to receive medical care. This additional processing can be a significant burden on prison administration capacity and costs. Prisons that are equipped for such processing incur higher costs per prisoner.
- **Prisoners with disabilities:** Only certain prisons with infirmaries can house prisoners with severe disabilities. For Western Australia, this is only Casuarina prison. Other prisoners with less severe disabilities in other prisons will require additional care.
- **Prison age:** Older prisons have higher maintenance costs, and are less purpose-built to accommodate modern prison requirements for staff and prisoner safety, increasing costs.
- **Prison funding model:** Prison funding models can differ, and influence its running costs. Indicatively, public-private partnership prisons can often have lower running costs, due to the flexibility to attract staff with higher wages, and rely less on higher overtime wages to make up for staffing gaps. The popularity of different funding models varies by State.

While we do not know what the results of the regression would be if these variables were included, we believe their relationship to average prisoner costs could potentially increase its explanatory power.

We are confident that States would be able to provide data for the above variables on an individual prison basis, as part of a Prisons data request. We consider it would not be a significant burden, as most of the variables are simple classifiers, or based on publicly available information.

Absence of regression analysis for the Courts regional cost driver

The regression analyses noted above are based on State-provided data on individual police districts and individual prisons, and their overall costs.

Similar data is provided by States for court operations, but no regression analysis is employed to quantify a regional cost driver. We consider there is a strong conceptual case for a service delivery scale effect on court costs, with fixed overhead costs for administrative and security staff, which would lead to a higher cost per case for courts that have lower case volumes.

We seek a better understanding of why a regression analysis is not used for Courts to take account of service delivery scale. An issue could be that only four States have provided court cost data for analysis, reducing the sample size of the courts dataset. However, this problem also applies when the CGC is calculating the regional cost factor for Courts under its current methods. Further, we note that the CGC derives expense drivers by means other than regression analysis if the alternative methods are robust and simple.

Hence, while a Courts regression could be a solution, if the CGC were not confident in the robustness of State data, but agreed on the need to acknowledge the service delivery scale effect, it could apply the service delivery scale factor derived from the Prisons assessment. We believe either of these options would more accurately capture the real additional costs facing courts that have relatively fewer cases.

In summary, options for addressing this issue are as follows.

- Develop a regression analysis using State-provided data on courts to determine if there is a significant service delivery scale factor in the data, and apply this factor in the Courts assessment.
- Apply the service delivery scale factor derived from the prisons cost per prisoner regression in addition to the existing Courts regional cost factor.

Exclusion of offences from data

As part of the 2020 Review, the ABS informed the CGC that information provided by States for traffic and breach of bail offences was not of sufficient quality to include in the calculations for the Police component.

As these offences make up a significant proportion of total offences, we believe including them would allow for a more accurate representation of police expenses across States.

We believe the CGC should determine if there have been any substantive changes to the robustness of these data, and potentially reconsider its use in the assessment.

Treatment of Indigenous status non-response

The CGC applies population-wide demographics to defendants who do not state their Indigenous status, rather than applying their standard approach to extrapolate demographics based on recorded responses.

The defendant data Western Australia provided to the CGC for the 2020 Review is shown in Table 7-1. It indicates that there was a substantial number of respondents who provided a status (approximately 60%). We consider this would have been sufficient data to extrapolate to the remaining unknown defendants. However, the CGC's approach would identify only about 3% of the declined or unknown defendants as being Indigenous (taking the total to

approximately 16%). If the data were extrapolated based on reported figures, it would be approximately 23%.

Table 7-1

Indigenous Status of Traffic Defendants

2015-16 to 2016-17

Indigenous Status	Defendants	Proportion
Aboriginal or Torres Strait Islander	11,393	14%
Neither Aboriginal or Torres Strait Islander	37,886	45%
Declined or unknown	34,374	41%
Total	**83,653**	**100%**

Source: Western Australia Department of Justice.

Indicative data from our Department of Justice for the 2022-23 financial year show a lower proportion of defendants with an unknown Indigenous status (7% of traffic defendants), as shown in Table 7-2. The proportion of traffic offence defendants identifying as Aboriginal or Torres Strait Islander in this data is 24%, which is far higher than the 16% that was derived for the 2020 Review, and in line with the proportion that would have been derived if the CGC applied their standard approach and extrapolated defendant figures based on reported responses (23%).

In most situations where relevant data does not exist, such as when drivers are derived from data only provided by a few States,[1] the CGC is comfortable extrapolating the data to other States, and does not make judgments or assumptions about what the missing data could be.

Table 7-2

Indigenous Status of Traffic Defendants

2022-23

Indigenous Status	Defendants	Proportion
Aboriginal or Torres Strait Islander	10,753	24%
Neither Aboriginal or Torres Strait Islander	30,597	68%
Declined or unknown	3,340	7%
Total	44,690	100%

Source: Western Australia Department of Justice.

Making the reasonable assumption that the composition of offenders has not changed structurally from 2016-17 to 2022-23 for traffic offences, it is likely that the CGC has been significantly underestimating the Indigenous defendant rate, and overestimating the

[1] An example of this in the Justice assessment is deriving the regional cost driver for Courts based on the data of four States and applying this driver to all States.

non-Indigenous defendant rate, since the 2020 Review. This has impacted both the Courts and the Prisons components of the assessment for several years.

The CGC needs to apply their standard approach and extrapolate the Indigenous status composition of the defendants to the 'not-stated' proportion for all data years of the 2025 Review and beyond.

Impact of COVID-19 on justice services

We agree that there are differences in the offender and defendant profile during COVID-19-affected years relative to pre-COVID-19 years, evident in the analysis provided in the consultation paper. The data for the affected years is likely impacted by COVID-19-related policies (particularly for Police) and will not reflect normal operating conditions.

Hence, we support using 2022-23 data to update the Justice assessment. However, we are concerned that these data will likely still contain COVID-19-related impacts. This is particularly likely for prison and police service costs, due to a number of factors including staff shortages and transport costs (which are particularly impactful in regional areas). We believe that these cost pressures are likely to be temporary, so using only data for 2022-23 may still not reflect conditions in future years.

While we acknowledge that this data request could be burdensome for States to complete on an annual basis, we believe it would be prudent to also include 2023-24 and 2024-25 data (when each of these becomes available) in the assessment, as this would mitigate the impact of lingering COVID-19 impacts on service provision in the Justice assessment.

If 2022-23 data is unavailable for the 2025 Review, we would support updating the data in a later update, with 2020 Review data being applied until updated data are available.

8. Transport

Key Points – Transport

Issues of concern to Western Australia

Urban Transport – recurrent assessment

We consider the Urban Transport regression to be flawed.

- The assumption that demand and supply are in equilibrium has been demonstrated to be false by the COVID-19 pandemic. Alternative models could be considered.
- The model relies too heavily on population density.
  - The international literature recognises economies of density.
  - The measurement of population density is not consistent across States.
  - The impact of density in the regression is driven by Sydney policy.
  - The high density of Sydney is at least partly policy driven.

There are fundamental problems with using the Urban Transport assessment.

- States do not have access to the net expense data, restricting peer review of the assessment.
  - This is inconsistent with the requirement in the terms of reference for the CGC to consult with the States.
- The regression is unduly influenced by Sydney policy.

Consequently, the CGC should consider the Urban Transport method to be much less reliable than other assessments.

- The existing blending with urban populations reflects data concerns.
- This blending should be increased to reflect method unreliability, to at least 50:50.

Many significant urban areas are in remote and very remote areas, with substantially higher costs to run transport services. However, there is no allowance for this in the assessment.

Urban Transport – capital assessment

The assessment based on the regression should not be blended with the population-squared model, as it has the following problems.

- It is unreliable – when introduced in the 2015 Review, the CGC blended it 50:50 with an equal per urban population model.
- It is just an older, simpler version of the regression model, so does not provide an independent assessment. It accentuates the regression model, rather than moving towards equal per capita, so is inconsistent with CGC discounting protocols.

Consequently, the CGC should blend the regression model with constant assets per capita, instead of with the population-squared model.

For the same reasons as the recurrent assessment, the CGC should increase this blending to at least 50:50.

Non-urban Transport

We do not consider the number of train commuters to be a policy-neutral indicator for non-urban transport expenses. Equal per capita remains appropriate.

The assessment does not acknowledge costs faced by more dispersed States. Western Australia subsidies air fare caps within the State, and travel for away-from-home students between Perth and their home.

There should also be a separate assessment of school buses in non-metropolitan areas.

CGC consultation paper

Q1. Do States agree that the 2020 Review model for assessing urban transport needs remains appropriate?

No. Western Australia has serious concerns with the model. We consider it important for the CGC to re-examine the Urban Transport assessment both because of experience since the 2020 Review (through the COVID-19 pandemic) and because it reflects unaddressed concerns from the previous two method reviews.

Q2. Do States consider the urban transport net expense data from 2019-20 to 2021-22 are likely to be overstated?

Yes. Passenger numbers declined far more than expenses, due to a drop in demand during the COVID-19 pandemic, with little change in supply.

Q3. If 2019-20 to 2021-22 data are not fit for purpose, do States support updating the regression with data from 2022-23? Can States provide an indication of when this data could be provided to the Commission? (See Attachment B)

Yes. We support using most up-to-date fit-for-purpose data. Western Australian data can be provided within the timeframes requested by the CGC.

Q4. If 2022-23 data are considered fit for purpose but are not available for inclusion in the 2025 Review, do States support updating the assessment in an update following the 2025 Review?

Yes. We support using most up-to-date fit-for-purpose data.

Q5. Do States support retaining the 2020 Review proxy variable data in the regression model until fit for purpose net expense data are available?

Yes. However, we consider the use of proxies in the model to be undesirable.

Q6. Do States agree that the 2021 Census journey to work data were distorted by the COVID-19 lockdowns and are not a fit for purpose measure of current passenger numbers?

We agree.

Q7. If the 2021 Census journey to work data are not fit for purpose, do States support the continued use of 2016 Census journey to work data in the model?

Yes. However, we consider using the Census journey to work data as a proxy for supply to be undesirable.

Q8. Do States agree that 2021 Census distance travelled to work data were not significantly distorted by COVID-19 lockdowns and are a reliable measure of network complexity?

Yes. The CGC has advised that the 2021 Census instructed respondents to list their ordinary place of work even if they were working from home during COVID-19, therefore we expect the data were not significantly impacted by the pandemic.

Q9. Do States agree that, if material, 2016 Census journey to work data should be adjusted using the Bureau of Infrastructure and Transport Research Economics (BITRE) measure of passenger kilometres travelled until the 2026 Census data are available?

We support adjusting the data, but prefer that the CGC use State ticketing data. Given that the CGC models passenger numbers, policy influences and lack of data from some States should not be a problem.

Q10. Do States agree that if net expense data are available before the 2026 Census it is appropriate to use BITRE data to index actual passenger numbers?

In principle, we support adjusting the data. As actual passenger numbers are required, policy influences from State ticketing data would not be a problem. However, using adjusted data means the results of the regression would be even less reliable, and so should attract a larger discount.

Q11. Do States support retaining the 2020 Review blending ratio for urban transport?

No. We believe the blending ratio should be increased to reflect method unreliability, to at least 50:50.

Q12. Do States support replacing the ferry dummy variable in the urban transport model with the proportion of total commuters using ferry services?

Yes. We consider using the ferry dummy variable undesirable.

Q13. Do States agree that using a regression model to recognise the growth in passenger numbers in urban areas is a more suitable method for modelling passenger numbers?

Based on the information currently available, this appears reasonable.

Q14. Do States support the following changes to the non-urban transport assessment:

- *assessing non-urban rail passenger expenses based on shares of non-urban train commuters?*
- *assessing all remaining expenses based on shares of non-urban populations*

No. We believe that the number of non-urban train commuters is a policy-influenced indicator that only picks up part of demand. Non-urban transport is primarily influenced by the population scattered across States. Hence, equal per capita remains an appropriate assessment, unless all demand for non-urban travel is included, and a policy neutral measure can be determined.

Urban Transport

We consider it important for the CGC to re-examine the Urban Transport assessment both because of experience since the 2020 Review (through the COVID-19 pandemic) and because it reflects unaddressed concerns from the previous two method reviews.

Recurrent assessment

Problems with the model specification

In our submissions to the 2020 Review, we argued that the number of passengers using public transport is not an appropriate proxy for supply of public transport. Rather, available capacity of public transport reflects quantity supplied.

The COVID-19 pandemic resulted in significant changes in public transport passenger use. Although there was a reduction in some public transport services, for example cancellation of late-night trains, the quantity of public transport passengers decreased substantially more than the decrease in the quantity supplied (as measured by the capacity of trains and buses operating at the time). This is evident by trains and buses clearly operating significantly below full capacity.

The CGC justifies using passenger numbers as a proxy for supply by assuming an equilibrium condition, where theoretically, quantity demanded should equal quantity supplied. However, the pandemic supported Western Australia's maintained argument that equilibrium in the public transport sector is not a realistic assumption. It will alternate between excess supply and excess demand. This is also evident in 'dead runs' and the inability to expand infrastructure incrementally, as well as inability to expand or contract infrastructure at will without a time lag.

Essentially, the pandemic demonstrated the existing flaws in the model.

The 2020 Review consultant provided a range of models. It may be worth exploring these alternatives with the latest data.

Problems with the use of population density

The CGC's regression relies very heavily on population-weighted density, where it is assumed that costs increase with density. We are concerned about this because of the following.

- The **world-wide literature** on heavy rail almost uniformly recognises economies of density, rather than diseconomies of density.
  - Consistent with this, the Productivity Commission found that heavy rail in Australia has a lower cost per passenger-kilometre than other public transport modes. Heavy rail is only more costly per trip because it caters for longer trips.[1]
- The **calculation of density** depends upon the shapes of Statistical Local Areas (SLAs) and the extent to which they are residential.
  - SLAs which are only partly residential are measured as having low density. Sometimes SLAs are shaped to exclude non-residential areas, but the extent to which this occurs is inconsistent across States.
  - The problems are illustrated by the substantial revisions to population density for the 2021-22 data year due to the 2021 Census, which range from 0.4% growth for Adelaide to 21.8% growth for Brisbane. Sydney had 12.6% growth, which was above the national average of 10.4%.[2]
- The regression is **highly influenced by the Sydney data point**, which has relatively high density, so the Sydney policy of a high standard of urban transport gets interpreted as density, significantly increasing per-capita expenses.
- **State policies** influence density.
  - Generally, States have policies of increasing infill in capital cities. However, the success of this depends heavily on their zoning and other regulations (State policies).

Table 8-1 shows that setting the density co-efficient to zero has a dramatic impact on the urban transport needs (assessed differences). In practice, the impact would be less significant, because with density removed from the regression, the other coefficients would change. However, this calculation illustrates the importance of density.

Table 8-1

Urban Transport Needs(a)

$ million, 2021-22

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
CGC current method	+1,167	+335	-669	-234	-242	-210	-60	-87
With no density co-efficient	+455	+572	-469	+71	-127	-240	-155	-106
Difference	-712	+237	+200	+305	+114	-30	-95	-20

(a) Excludes wage costs.
Source: WA Treasury calculations using CGC data.

1 Productivity Commission (2021), *Public transport pricing*, Research paper, Canberra, pages 78-81.

2 Commonwealth Grants Commission (2023), *New issues in the 2024 Update*, page 11, Table 2.

Unfortunately, the States are not able to analyse the regression, as they do not have the per-capita expenses by urban centre, due to confidentiality.

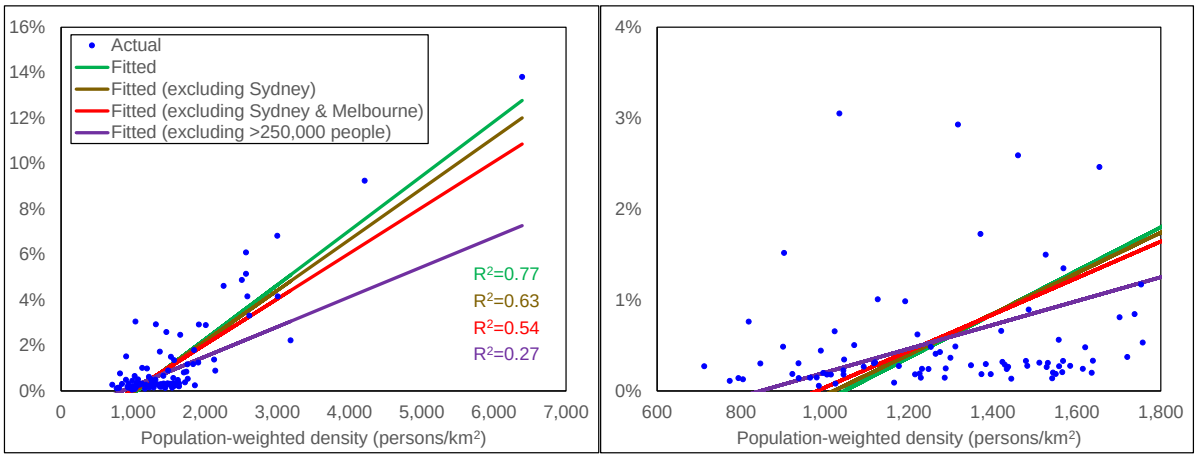
As an attempt to see the potential relationship with density, we looked at the relationship between density and the estimated actual passenger numbers per capita.

- We used the CGC's passenger numbers estimated from the Census journey-to-work data, prior to the modelling of passenger numbers by urban centre size.
- The results are shown in Chart 8-1. The full chart is on the left, with the lower value portion expanded on the right.
- We fitted a straight line using all data points, then alternative lines after excluding Sydney, excluding Sydney and Melbourne, and excluding all urban centres with over 250,000 persons.
- As can be seen, the fitted line depends significantly on the high population data points (with Sydney and Melbourne policies having a disproportionate impact), and the reliability of the fit reduces substantially without the high population data points.
- The right-hand chart shows that all fitted lines are a remarkably poor fit for the vast bulk of urban centres.

Chart 8-1

Per-Capita Passengers[(a)]

2021-22



(a) Actual train, light rail and bus passengers (estimated by CGC from Census journey to work data) divided by urban centre population.

Source: WA Treasury calculations using CGC data.

We also modelled population-weighted density against urban centre population size, as shown in Chart 8-2.

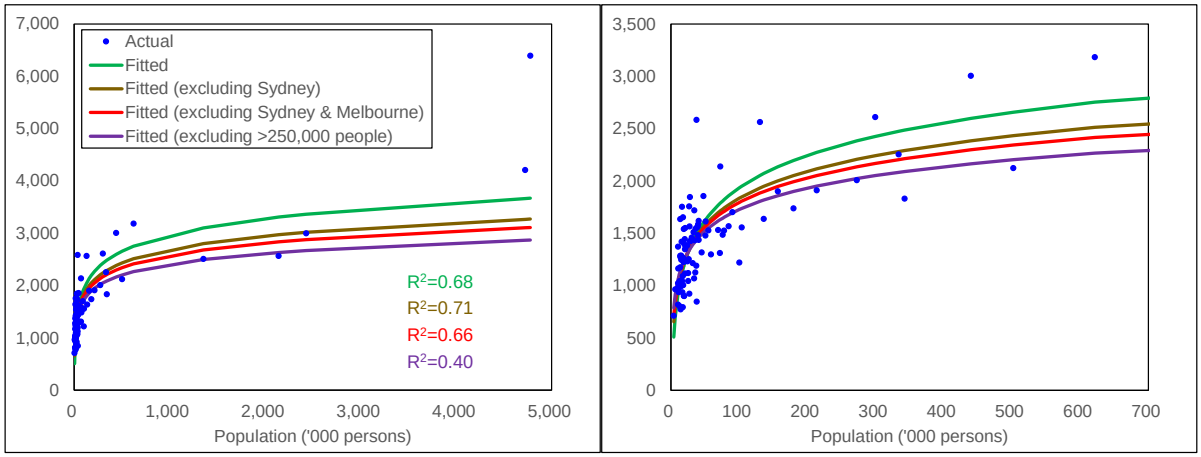
- We fitted a log curve using all urban centres.
- This has a better fit than the above fitted lines that have urban centres removed.
- As shown by the left-hand chart, the glaring anomaly is Sydney (the dot in the top right corner), which has well above the fitted density.

- Excluding Sydney improves the fit. Excluding further urban centres reduces the fit, but not as dramatically as in the per-capita passengers analysis above.
- As shown by the right-hand chart, all of the fitted lines have a strong relationship with the vast bulk of urban centres.
- We consider this modelling calls into question the policy-neutrality of the Sydney population density and the consistency of the population density data.
    - We note that former New South Wales Premier Bob Carr once famously said "Sydney is full." That of course did not stop the Sydney population from growing, and so imposed higher population density on the city.
    - Although the hills to the east of Perth are less of a barrier to expansion than the Blue Mountains, successive Western Australia governments have dealt with these hills through growing Perth long distances north and south along the coast. The same option has been available to successive New South Wales governments.

Chart 8-2

Population-weighted Density

Persons per Square Kilometre, 2021-22



Source: WA Treasury calculations using CGC data.

A solution to concerns about population density would be to discount the density co-efficient when applying the regression. We would be happy with that option, but feel that concerns about density are just part of wider concerns with the Urban Transport assessment, which merit a larger discount to the assessment overall.

Fundamental problems with the Urban Transport assessment

Fundamental problems with the Urban Transport assessment include the following.

- The States do not have **access to the net expense data** by urban centre, due to confidentiality.
    - Because of this, States cannot examine the regression to determine how reasonable it is, or explore alternative assessments.

- The regression is inordinately **influenced by the Sydney data** point.
  - This was confirmed when we requested the data for States other than New South Wales (which we understand is the State for which data are confidential), and were advised by the CGC staff that:

    > "While there are 106 significant urban areas considered in the urban transport assessment, urban transport expenses are mostly driven by large capital cities-particularly by those with heavy rail services. If the Commission were to provide these data for all states except those which marked their data as confidential, it would be a trivial task to "back-solve" what those withheld expenses would be."

  - We further asked if the CGC staff could rerun the regression excluding Sydney or all the New South Wales data points, and were advised that:

    > "We are unable to send you the results because removing the confidential data points, in particular Sydney, would alter the coefficients significantly and allow the actual costs to be identified."

Based on the above, we believe that the assessment is highly influenced by New South Wales policy. We also believe that the assessment is inconsistent with the terms of reference requirement (clause 13) that:

> "The Commission will consult regularly with the Commonwealth and the states as it considers these terms of reference."

If States cannot review the data on which the assessment is based, they have not been genuinely consulted.

We also note that only State Treasuries have the capacity to genuinely understand HFE, and hence only State Treasuries can independently peer review the CGC's work.

As long as the above problems remain, any assessment method must be seen as much less reliable compared to those in other categories. Consequently, we believe that, at a minimum, the CGC should be blending the urban characteristics assessment 50:50 with the urban populations assessment.

- The current blending is based on two main data-related issues – concerns about the reliability of net urban transport expense data provided by the States; and the use of several proxy variables to capture supply and demand.[3] Our method concerns are in addition to these problems, so warrant an increase in the blending.

[3] Commonwealth Grants Commission (2020), *Report on GST Revenue Sharing Relativities 2020 Review*, Volume 2, Part B, page 325, paragraph 22.

Regional costs

The CGC uses 106 significant urban areas (SUAs) in the Urban Transport assessment. The econometric analysis used 70 SUAs, reflecting those on which States could provide data.[4]

Many of those SUAs will be in remote and very remote regions, with substantially higher costs to run transport services. However, there is no allowance for this in the assessment. Perhaps dummy variables could be introduced to the regression to capture such costs.

We will explore this further, and other regional cost concerns, in our submission to the CGC's Geography paper as part of Tranche 2.

Capital assessment

In the Investment category, the CGC uses a blended model – 75% based on the recurrent regression and 25% using a population-squared model.

This population-squared model uses the assumption that the per-capita asset quantity requirement of an urban centre is proportional to the population of that urban centre.[5] This means that the asset quantity requirement is proportional to the square of the population of the urban centre.

- The slope of the relationship does not matter, as it has no impact on the assessed needs.
- However, the relationship assumes a linear relationship between population and per-capita asset requirement.
    - If the relationship is not linear, then the model is no longer valid.

This population-squared model was introduced in the 2015 Review.

- In that Review, the CGC fitted a straight line through the origin to the asset per capita data. However, the CGC did not share the data, so States were unable to confirm the reasonableness of this analysis.
- We raised concerns that a differently shaped curve might better reflect reality (as did the ACT), and pointed out that expansion of the Perth urban transport system would increase the likelihood of this over time.[6]
- The CGC claimed that its conclusions were valid as the "data are sufficiently accurate to show there is an upward sloping relationship between city size and assets per capita. It would remain upward sloping even if the asset values of a number of cities were substantially overstated or understated."[7]

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4 *ibid*, page 338, paragraph 82-83.

5 This model then calculates the growth in the asset quantity requirement, and adjusts for cost differences.

6 Commonwealth Grants Commission (2015), *Report on GST Revenue Sharing Relativities 2015 Review*, Volume 2, page 426, paragraph 84.

7 *ibid*, page 426, paragraph 87.

- This response ignored the fact that we were not disputing that the relationship would be upward sloping, merely that the relationship would be a straight line – which is essential to the population-squared model.
- There is no evidence available to us that suggests the CGC ever reviewed the shape of the curve. Hence, we view the population-squared model as an unaddressed concern from the 2015 Review.

- Nevertheless, the CGC acknowledged that "there are concerns about the shape of the relationship between city size and infrastructure requirements and whether other drivers, which we have not been able to measure, affect infrastructure requirements."[8]
  - On this basis, the CGC blended the population-squared model 50:50 with a model that assumed that per-capita asset quantity required is constant with regard to urban centre population.

In the 2020 Review, the CGC examined its data and concluded "While there is strong evidence that per-capita asset values increase as city size increases, the rate of this decrease [sic] is less clear. The Commission will further consider this issue in the next methodology review."[9] Therefore , the population-squared model is also an unaddressed concern from the 2020 Review.

Hence, we conclude that the population-squared model is based on decade-old data (that was expected to change over time), was never subject to peer review, was never rigorously investigated by the CGC (to our knowledge), and was (even at the time) considered by the CGC to be sufficiently questionable that it was subject to what was effectively a 50% discount.

In the 2020 Review, the CGC blended the stock factors based on the regression with the population-squared model because of the same concerns that led it, in the recurrent assessment, to blend the regression model with equal per urban population assessment. However, the population-squared model is not an appropriate alternative to the regression.

- As discussed above, the population-squared model is unreliable and itself requires blending.
- The population-squared model is really just on older, simpler variant of the regression model (so does not provide an independent assessment).
  - It uses the same dataset, with which the CGC has expressed concern.
  - It is in fact a more severe form of the regression, in that it posits a straight-line relationship with urban population, rather than the logarithmic relationship with passenger numbers in the regression.
    - This means that blending with the population-squared model is akin to, instead of discounting to equal per capita, scaling the results up way from equal per capita – inconsistent with the CGC assessment guidelines.

[8] *ibid*, page 427, paragraph 92.

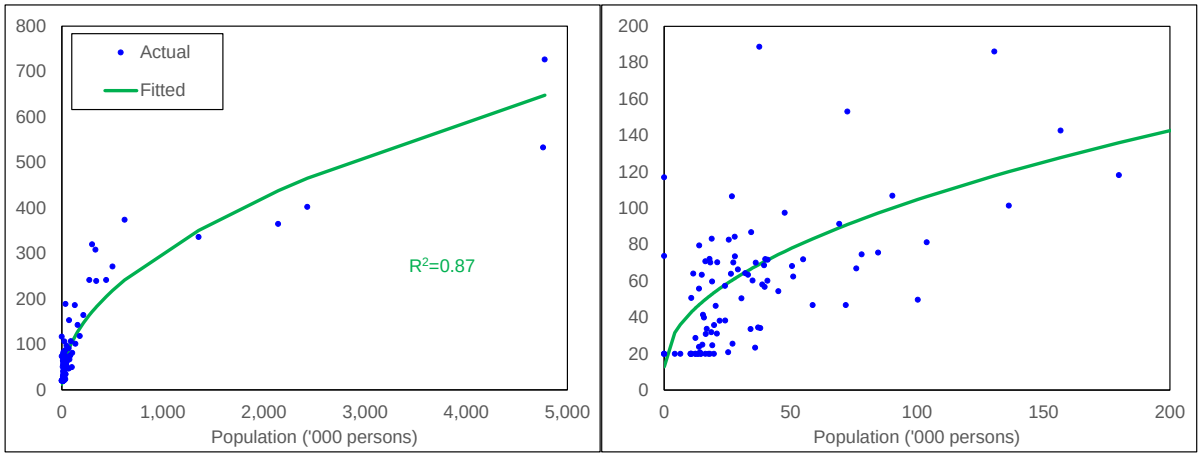
[9] Commonwealth Grants Commission (2020), *Report on GST Revenue Sharing Relativities 2020 Review*, Volume 2, Part B, page 344, paragraph 119.

– This is illustrated by Chart 8-3, which shows that the CGC's per-capita net expenses derived from its regression model can be fitted very well to the square root of urban centre population.

Chart 8-3

Per-Capita Net Expenses[(a)]

$ per capita, 2021-22



(a) Derived from the CGC regression model (with the minimum applied). Line fitted through these is square root of population.

Source: WA Treasury calculations using CGC data.

Hence, we believe that, instead of using the population-squared model, the CGC should be blending the regression model with a model that assumes that per-capita asset quantity required is constant with regard to urban centre population, as it did in the 2015 Review.

Furthermore, the concerns we raised earlier with the regression method being unreliable due to the Sydney policy influence and the unavailability of review by the States are also relevant to using that model in the Investment category. Hence, the blending should be increased to at least 50:50 in this case as well.

Non-urban Transport

In the 2020 Review, Non-urban Transport expenses were assessed equal per capita, with adjustments for regional and wage costs. The CGC had investigated alternative policy-neutral indicators but was unable to find a more appropriate broad indicator that is material for the four most populous States.[10] We do not believe this has changed.

Non-urban Transport services include bus and rail services linking regions with the capital city and between regions, air services to regional centres and remote areas, rail freight, and ports. For 2020-21, the CGC found that the proportion of Non-urban Transport expenses related to passenger rail has increased to over 80%. Hence, the CGC proposes to change

[10] *ibid*, page 340, paragraph 95.

the Non-urban Transport assessment to use a measure based on non-urban train commuters, as recorded in the 2016 Census.

The CGC considers that the policy influences are minor. However, we disagree. The number of train commuters will reflect the provision of services. The price of tickets, availability, reliability, and quality of services, operational efficiency, and system design are all drivers of the number of non-urban train commuters. These are all directly policy influenced. The primary influence of non-urban transport is the population scattered across States.

We also consider that this does not reflect the varying circumstances faced by States. For example, due to the long distances in Western Australia, the State Government subsidies air fare caps within the State, as a more efficient means of travel than rail. The State also provides a free return trip home from their place of study (usually Perth) to students studying away from home, within the State.

Overall, we consider that there is a lack of evidence, conceptual or empirical, to support the view that the number of non-urban passenger rail commuters is a policy-neutral indicator. We consider that the only appropriate option is an equal-per-capita assessment, unless all demand for non-urban travel is included, and a policy neutral measure can be determined.

Another concern is student travel. The CGC previously absorbed student travel into the Transport assessment. This may be reasonable for the metropolitan area, where students use mainstream public transport, but in more remote areas of Western Australia, the government provides school buses. This would be better assessed by a separate component within the Transport (or Schools) assessment.

CGC consultation paper

Our responses to the CGC consultation questions should be read in the light of the discussion above. Our responses are in the *Key Points* at the start of this chapter.

9. Native Title and Land Rights

Key Points – Native Title and Land Rights

CGC consultation paper

Q1. Do states agree that the actual per capita (APC) assessment of Native Title expenditure remains appropriate?

APC remains the only appropriate way to assess Native Title expenses. States are acting broadly the same due to legislative requirements. There is unlikely to be significant differences between States in this process.

Q2. Do states anticipate that treaty processes will affect how they negotiate Native Title and land rights claims?

We do not anticipate any changes that would affect how Western Australia negotiates Native Title and land rights claims.

As outlined in the consultation paper, States are negotiating claims that are unique, for reasons such as:

- number and location of extinguishment and impairment acts;
- nature of Native Title rights held by the claim group;
- value of land; and
- cultural damage caused by acts.

We cannot see how the CGC could identify drivers that capture these influences, and there is little scope for State policy to affect expenses.

Although there have been developments in the negotiation process for Native Title claims, including the *Native Title Legislation Amendment Act 2021*, which has allowed greater flexibility, States are still operating within the Commonwealth's National Guiding Principles for Native Title Compensation Agreement Making. This ensures there is general consistency in how claims are being negotiated.

Further, all States will actively aim to mitigate their expenses, within the Commonwealth's guidelines, including seeking to avoid litigation where it would likely exacerbate costs.

As such, an APC assessment remains the only appropriate option for assessing Native Title and land rights expenses.

Western Australia is not currently pursuing a formalised State-wide Treaty mechanism, but acknowledges that other States are actively preparing to enter formal Treaties with Aboriginal and Torres Strait Islander people within their jurisdictions (at either a State-wide or regional level). Hence, we do not expect any changes in how Western Australia negotiates Native Title and land rights claims.

10. Commonwealth Payments

Key Points – Commonwealth Payments

Q1. Do states agree the guideline for deciding the treatment of Commonwealth payments remains appropriate?

Yes, the current guidelines for treatment of Commonwealth payments is appropriate.

Q2. Do states agree to a default treatment of 'impact' in cases where there is substantial uncertainty about the payment's purpose or whether relative state expenditure needs are assessed? It remains open to states to provide evidence in support of no impact.

Yes, this removes the need to speculate the treatment of new payments.

However, if States are able to challenge the default treatment of a payment after the new issues paper is released, the CGC needs to communicate details on which payments are having this treatment challenged so other States can consider if the default treatment should remain (and potentially provide evidence in support of the default treatment).

Q3. Do states agree to discontinue the assessment of Commonwealth own-purpose expense payments?

Yes.

Q4. Do states agree that the guideline for determining the GST treatment of Commonwealth payments should be applied in cases where payments include elements aimed at addressing pre-existing structural disadvantage?

We believe the guideline remains valid for these payments and any payments that are intended to correct structural disadvantage can be excluded from treatment through Commonwealth direction in the Terms of Reference. However, the CGC must be careful that the payment addresses needs that it indeed assesses.

CGC consultation paper

We agree with the current guideline for deciding the treatment of Commonwealth payments. When we are unsure about the manner in which a particular payment will be classified (which we assess before Western Australia signs any agreement), CGC staff are helpful and provide additional guidance.

We accept the use of a default treatment in cases where the purpose of a payment is vague or if it is unclear whether relevant expenditure needs are assessed. A default treatment of 'impact' would provide some clarity when providing advice within our organisation on how a particular treatment will impact State GST shares.

However, we have a concern that a State could submit to the CGC that a certain payment should be treated as 'no impact'. Then, if the CGC accepted this and changed from the default 'impact' treatment, no other State would have knowledge of the request or decision until after the release of the update report.

A solution to this would be for the CGC to provide a list of payments that have had the default treatment challenged by States after all States have provided their submissions. Other States could then respond to the CGC and provide evidence to support the CGC's initial proposed treatment, if desired.

We agree with the CGC's proposal to no longer include Commonwealth own-purpose expense payments (COPEs) in the assessment. The full breadth of COPEs is not transparent, and for the CGC to pick up some and not others is not equitable. Also, if they were properly classified as COPEs by the Commonwealth, they should be treated as 'no impact'. Hence, we see this a practical solution.

We agree with the CGC that if the intention of a Commonwealth payment is to address pre-existing structural disadvantage, it should be acknowledged by the Commonwealth Treasurer through quarantining of the payment. It should not be addressed by adjusting the methods used in the Commonwealth payments assessment. However, the CGC must consider whether the payment addresses the needs that it indeed assesses. This is related to the issue above, where a default treatment of 'impact' should be challengeable by an affected State.

11. Socio-economic Status

Key Points – Socio-economic Status (SES)

Q1. Do states agree that an annual Multi-Agency Data Integration Project (MADIP) based measure of socio-economic status for non-Indigenous people has the potential for a more contemporaneous assessment?

In principle, we support the use of an annual SES measure.

However, we have the following concerns with the CGC's proposed new measure.

- The proposed new measure has only three indicators, compared to the fifteen used by the current measure, with no overlap among the indicators.
- The proposed new measure uses a mix of disadvantage and advantage indicators, whereas the CGC previously chose the current disadvantage-only measure.
  - We are concerned that the advantage indicator (couple income) could classify fly-in-fly-out (FIFO) workers as high SES, despite their tendency to use services consistent with low SES persons.
- The consultation paper has not said if the CGC has examined whether its proposed new measure gives similar results to the current approach in the Census years.
  - The CGC should do this analysis and, if the results differ, consider why this is the case and which is the better measure.
  - An alternative would be to index the current measure by changes over time in the proposed new measure.

Currently, the CGC generally assesses non-indigenous SES by the Australian Bureau of Statistics (ABS) Socio-Economic Indexes for Areas (SEIFA) Index of Relative Socio-economic Disadvantage (IRSD), but recalculated to only include non-indigenous persons. The consultation paper makes a preliminary proposal to replace this with a measure that uses data from the MADIP.[1]

The advantage of the MADIP approach is that data are available annually, whereas SEIFA is Census-based, so only updated every five years.

In principle, we support use of an annual SES measure.

However, we have the following concerns with the proposed MADIP approach.

- The proposed MADIP approach has only three indicators, compared to the fifteen used by the SEIFA IRSD,[2] with no overlap among the indicators.

[1] The CGC does not yet have permission to use Indigenous-specific datasets, so has not yet considered any alternative to the Indigenous Relative Socio-Economic Outcomes measure that it currently uses.

[2] https://www.abs.gov.au/statistics/detailed-methodology-information/concepts-sources-methods/socio-economic-indexes-areas-seifa-technical-paper/2021/construction-indexes#technical-details-of-each-index-variables-and-loadings

- The proposed MADIP approach uses a mix of disadvantage and advantage indicators, whereas the SEIFA IRSD has only disadvantage indicators.
- The CGC has not examined whether its proposed MADIP approach classifies areas to the same SES quintiles as the SEIFA IRSD in the Census years (it has only compared their prediction of other indirect measures of SES).

Table 11-1 lists the indicators used in each of the SEIFA IRSD and the CGC's proposed MADIP approach.

Table 11-1

Indicators used to Compile the SEIFA IRSD and the CGC's Proposed MADIP Approach

SEIFA IRSD	Proposed MADIP approach
Percentage of people living in households with stated annual household equivalised income between $1 and $25,999 (approximately 1st and 2nd deciles).	Age standardised proportion of population receiving age pension, youth allowance, Newstart allowance, disability support pension, single parent payment, or partnered parent payment.
Percentage of families with children under 15 years of age who live with jobless parents.	Age standardised proportion of population receiving prescription medication for alimentary tract and metabolism related disorders.
Percentage of people aged 15 years and over whose highest level of education is Year 11 or lower. Includes Certificate I and II.	Proportion of population with couple income over $200,000 per annum.
Percentage of occupied private dwellings paying rent less than $250 per week (excluding $0 per week).	
Percentage of people (in the labour force) unemployed.	
Percentage of employed people classified as 'labourers'.	
Percentage of people aged under 70 who need assistance with core activities due to a long–term health condition, disability or old age.	
Percentage of one parent families with dependent offspring only.	
Percentage of occupied private dwellings requiring one or more extra bedrooms (based on the Canadian National Occupancy Standard).	
Percentage of employed people classified as Machinery Operators and Drivers.	
Percentage of people aged 15 and over who are separated or divorced.	
Percentage of people aged 15 years and over who have no educational attainment.	
Percentage of employed people classified as Low Skill Community and Personal Service Workers.	
Percentage of occupied private dwellings with no cars.	
Percentage of people who do not speak English well.	

Source: ABS and CGC consultation paper.

For the proposed MADIP approach, the first indicator (income support payments) is a direct measure of low SES, and although it is not included in the SEIFA IRSD, many of the support payments would be received by people meeting some of the SEIFA IRSD indicators.

The second proposed MADIP indicator (medications) is a rather indirect measure of low SES, which bears no similarity to the SEIFA IRSD.

The third proposed MADIP indicator (couple income) is a measure of advantage, rather than disadvantage. In the 2010 Review, the CGC considered all four ABS SEIFA indexes,[3] but chose the IRSD, including in preference to the SEIFA Index of Relative Socio-economic Advantage and Disadvantage.

- Hence, using this indicator would be a method change (from disadvantage to both disadvantage and advantage), which should be considered on its own merits, rather than just because it enables an annual measure.
- We are concerned that this indicator might measure FIFO workers as high SES, despite their tendency to use services consistent with low SES persons. Many FIFO workers would at least have their measured SES lowered by the SEIFA IRSD indicators of education, and machinery operators and drivers.

Because the proposed MADIP approach uses only three indicators, each indicator is of greater importance, so it is important to get them right. It also runs the risk of more volatility and less reliability.

The CGC compared how well the SEIFA IRSD and its proposed MADIP approach predict alternative SES measures of vulnerable children, age-standardised deaths and cardio-vascular drug use. It found the two approaches were similarly effective for Census years, but that the proposed MADIP approach is a bit better in other years.

However, of these alternative SES measures, only vulnerable children is a direct measure of low SES. Deaths and cardio-vascular drug use are indirect measures, the second of which is likely to be correlated with the medication indicator in the proposed MADIP approach.

We believe that an important analysis (different to the above predictive comparison discussed in the consultation paper) is how similar the SEIFA IRSD and the proposed MADIP approach are in the Census years. That is, if the CGC were to adopt the MADIP approach, to what extent would this shift areas among the SES quintiles?

- It is not necessary for the two approaches to give the same results. However, if they do give different results, then it is appropriate to consider why this is the case, and which is a better measure.
- An alternative would be to index the SEIFA IRSD by changes over time in the proposed MADIP measure. However, we acknowledge that this would add complexity.

[3] Commonwealth Grants Commission (2007), *2007-15-S Assessing socio-demographic composition in the 2010 Review*, page 7 paragraph 28.

Question for the CGC – Socio-economic Status

If the CGC were to replace the SEIFA IRSD with its proposed MADIP approach, to what extent would this shift areas among the SES quintiles?