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

Western Australia's Submission to the

Commonwealth Grants Commission's 2015 Methodology Review

July 2013

Contents

Executive Summary

Western Australia considers that economic and policy developments since the last methodology review have highlighted significant problems with the implementation of horizontal fiscal equalisation (HFE) that urgently need to be addressed in the 2015 Methodology Review. The most glaring of these problems are:

- fiscal equalisation acting as an inhibitor to the movement of labour and capital to their most productive uses. Importantly, this is not a problem with the HFE **principle**, but rather the HFE **implementation**, through lack of policy neutrality and significant gaps in the assessment of needs;
- an unstable and effectively unspecified mining revenue assessment, which potentially allows for a billion dollar impact on Western Australia's GST from a very small increase in royalties; and
- a lack of recognition of needs for Western Australia related to the rapid expansion of its mining sector and the economy generally. We estimate that potentially $2 billion of needs per annum are unrecognised.

The latter two issues have been highlighted by the report of the Commonwealth's GST Distribution Review, and are stated priorities for this review.

Principles guiding the implementation of HFE

We believe that the present approach to implementing HFE is too extreme, and actually detracts from the HFE aim. Fundamentally, this is because the HFE principle calls for a level of knowledge and data that is simply not available to assess needs fully, and in a policy neutral manner.

- The selective assessment of needs and discounting of 'unreliable' needs risks biased HFE outcomes.

- Fiscal equalisation as presently implemented fundamentally lacks long-term policy neutrality, as the impact on States' economies (and hence revenue capacity) of their past policy choices is not taken into account (e.g. Western Australia's efforts to develop the North West Shelf project).

- The current implementation of HFE also affects policy choices going forward. States that make difficult choices to improve growth receive little fiscal reward, and therefore cannot offer lower taxes or higher benefits to help justify the pain of reform or to compensate 'losers'. As well, they cannot finance infrastructure in the long-term from resultant tax growth. Similarly, States that fail to perform can still rely on HFE to be raised to the same fiscal capacity as successful States. These long term incentive effects do not appear to have been understood by the GST Distribution Review.

The impact of the current implementation of HFE on national structural adjustment is particularly problematic and has been extremely evident in Western Australia, where the stripping away of growth revenues by HFE has significantly limited the State's capacity to facilitate economic growth opportunities through provision of appropriate common user infrastructure and amenities.

A more 'market oriented' implementation of HFE would allow States to retain some of the proceeds of economic development, to provide the incentives and capacity to facilitate economic growth and structural adjustment opportunities.

Commonwealth infrastructure funding assistance is not a solution to the present implementation difficulties with HFE, as such assistance is unlikely to be allocated on a genuine national interest basis, both due to political constraints that favour highly populated established areas, and the subjectivity of any central planner approach to allocating investment resources when demand far exceeds financing capacity.

We continue to support the strong economic (and equity) case made in our submissions to the GST Distribution Review for transitioning to equal per capita GST shares (with the Commonwealth directly funding additional needs of the smaller States) - a reform model endorsed in that Review's 'long term vision'.

In the absence of such fundamental reform, we recommend that the Commonwealth Grants Commission (CGC):

- make it explicit that HFE should not materially distort economic behaviour or reduce productivity growth;

- take a 'deeper', more 'dynamic' and long-run perspective on the implementation of HFE; and
- be prepared to make broader use of discounting across both 'reliable' and 'unreliable' assessments to better achieve policy neutrality and deal with the problem of needs that are unquantifiable.

Priority Issues for the 2015 Review

The terms of reference have identified a number of issues as priorities, including three arising from the GST Distribution Review. Our recommendations on these issues are as follows.

A New Mining Revenue Assessment

- This is an absolutely key issue for Western Australia. The State Government should not need to frame a budget with uncertainty about whether the CGC will or will not choose to make a change in the treatment of iron ore fines that will cost the State $900 million per annum.
- We strongly support the need for a new mining revenue assessment that is far less sensitive to State policy changes, and is consistent with what States do. To achieve this, we recommend that the CGC consider:
  - a discounted assessment based on actual revenues; or
  - a discounted mineral by mineral assessment; or
  - a discounted two category assessment (for hydrocarbons and non-hydrocarbons).
- We believe a discount of at least 25% is essential to:
  - provide adequate policy neutrality (both in relation to what States have done to develop their resources, and incentives for the ongoing optimal development and pricing of mineral endowments); and
  - recognise intergenerational risks in relation to equalising away revenues from exploitation of a finite resource.
- The discount should be increased to 50% if the CGC is unable to appropriately assess mining related expenditures.

- We also support consideration of a global revenue assessment (based on Gross State Product) to more comprehensively address the policy neutrality issues associated with the mining-specific and tax-specific assessments.

Mining Related Expenditure

- This is again a critical issue for Western Australia. It is fundamentally asymmetrical to equalise all mining related revenue (costing Western Australia billions of dollars each year) but not all mining related expenditure.

- The GST Distribution Review recognised this issue and suggested, as an interim measure, an effective 3% discount to the mining revenue assessments. We believe that a 3% discount far understates the true costs, which we have preliminarily estimated at $2 billion per annum (equivalent to a near-50% discount to the mining revenue assessments).

- The discussion in the GST Distribution Review report is exceptionally vague. This is a difficult area, and we look forward to detailed engagement by the CGC on our proposals and on issues where understandings need to be clarified, or where there are differences of view. It is important to get to the bottom of this issue.

- We recommend that, to address deficiencies in the assessments for mining related development, and economic development more generally, the CGC:

  - develop assessments for specific gaps in its current methods (possibly using our proposed methods as a guide), including: common user infrastructure investments in 'frontier' development regions (that cannot realistically be fully cost-recovered); amenities for mining communities; FIFO-related costs; high remote area costs in mining regions; and more general cost pressures relating to the State-wide economic and population growth driven by mining development;

  - discount revenue capacity (e.g. North West Shelf royalties) that is clearly linked to past State expenses (i.e. effectively State 'investment') that has not been subject to equalisation;

  - discount taxation capacity generally to recognise policy 'contamination', and to improve incentives and capacity for national structural adjustment and economic growth; and

  - as noted above, discount mining revenue capacity by 25% to 50% to recognise mining related expenditure that is particularly difficult to assess; recognise intergenerational risks in relation to equalising away revenues from exploitation of a finite resource; and provide adequate policy neutrality.

Characteristics of the Indigenous population

- We recommend that separate measures of socio-economic status be used for Indigenous and non-Indigenous populations. This will better reflect the different relationships between location and socio-economic status for Indigenous and non-Indigenous populations, and better identify differences across States in the socio-economic characteristics of these populations.

A New Transport Infrastructure Assessment and Possible Concessional Treatment of Commonwealth Payments for Nationally Significant Transport Infrastructure

- We recommend that the present urban public transport assessment (based on increasing per capita subsidies for increasing urban population size) be replaced. The current method does not adequately distinguish between policy and disability issues, and we consider that a close to equal per capita assessment would be appropriate.

- We recommend that the CGC does not introduce special treatment for certain classes of Commonwealth infrastructure funds. This distorts HFE and it is unlikely that the allocation of Commonwealth payments for 'nationally significant' projects would genuinely reflect States' relative needs for such funding.

- Nevertheless, to the extent that States' revenue capacity is generally discounted, as recommended above, a similar discount would be appropriate for all Commonwealth infrastructure support.

Treatment of Disability Services Reform

- We recommend that the CGC facilitate a shared understanding of the ongoing service delivery role for States (for both non-National Disability Insurance Scheme (NDIS) clients, and NDIS clients over and above what is funded by the NDIS).

  - This will help guide the appropriate treatment of disability services (e.g. whether to separately assess NDIS clients and non-NDIS clients).

- The current assessment for disability services requires revision, regardless of the NDIS (whose impact in the next few years is relatively minor). In particular, the current proxy measure of demand for disability services bears little relation to the direct estimates published by the Productivity Commission.

National Education Reform Agreement (NERA)

- We recommend that the CGC apply its normal fiscal equalisation principles for School Education to the greatest extent possible (noting that the existing assessment needs improvement), consistent with the instructions in the terms of reference (i.e. to not 'unwind' the recognition of educational disadvantage in the NERA; and to ensure no 'windfall gain' for non-participants).

- Whether or not Western Australia is a participating State, we consider that the CGC needs to compensate Western Australia for its low NERA offer to ensure Western Australia is not disadvantaged by its relatively high existing funding for education.

Other Issues

The terms of reference have identified some further issues arising from the GST Distribution Review. In addition, we believe that significant change is needed in the Land Tax, Justice Services and Services to Communities assessments.

Materiality Thresholds

- We note that the GST Distribution Review recommended a quadrupling of the current thresholds. We support consideration of higher materiality thresholds in the context of improving HFE by developing broader indicators of fiscal capacity that avoid the pitfalls of the current very detailed assessments (e.g. bias occurs when some details are assessed while others are not).

- We do not support the CGC's current mechanical application of materiality thresholds, where details in the assessments that do not meet materiality thresholds are simply removed (although confusingly some parts are retained). Instead, the detail should be replaced with broader indicators.

Location Costs

- We recommend that the CGC's cost assessments recognise Western Australia's very high remote area housing costs (e.g. in the Pilbara) and high capital city office rental costs.

- The 'spend gradient' approach to assessing interstate costs suggested by the GST Distribution Review appears to inappropriately focus on nominal prices of services, rather than prices relative to income. If the CGC were to go down this route, it would fundamentally alter the nature of HFE and support a greater emphasis on an equal per capita distribution of the GST.

A Simplified and Integrated Assessment Framework for Capital Costs

- We strongly support the existing capital assessments (based on actual capital spending requirements), but are prepared to consider an alternative 'holding cost' approach if a reasonable holding cost rate can be determined.

Land Tax

- We recommend that the CGC replace the land value revenue base with an indicator of capacity to pay (such as household income), as land values are heavily influenced by speculative factors and government policy, and the current method can see some States potentially lose more money (through lost GST) than they raise through increased compliance.

Justice Services

- We strongly suggest that the effective 62.5% discount presently applied to the police assessment should be substantially reduced, based on the evidence available to us.

Services to Communities

- We consider that a more comprehensive assessment is needed to capture the need to improve community amenities to facilitate sustainable economic development (see above under *Mining Related Expenditure*).

- We believe that the current water subsidy assessment needs to recognise Western Australia's need for an extensive pipeline network. We would alternatively support consideration of a combined assessment for water and electricity subsidies based on a general indicator reflecting elements including water availability and area of State.

Rounding of Relativities and Updating of Data

- We support the current five decimal place calculation of relativities, as it makes the calculation easier to follow.
- We support the practice of retrospectively updating data, because some of these revisions are significant, and they help facilitate analysis of trends in HFE (e.g. for forecasting purposes).

1 Equalisation Principles and Architecture

Key Points

- Even if the CGC's current full equalisation objective is accepted, Western Australia is concerned that the CGC's inability in practice to fully equalise needs and account for policy differences distorts economic development incentives and inhibits national economic structural adjustment.

- In this context we recommend that:

  - the guiding HFE principle include a statement that the GST distribution should not significantly distort economic behaviour or reduce productivity growth (similar to wording used in past Commonwealth Budget papers);

  - the CGC be prepared to make broad use of discounting to better achieve its supporting principle of 'policy neutrality', including to recognise policy 'contamination' of disabilities (especially revenue disabilities); and

  - the CGC acknowledge the need for equalisation to be a 'dynamic', long-run and 'deeper' process; and for a more objective, systematic and unbiased approach to dealing with unquantifiable or unreliable needs; and ideally embed these as additional supporting HFE principles.

- We also recommend that:

  - the guiding HFE principle refer to 'comparable' rather than 'same' standards to better recognise the inherently imprecise nature of equalisation, including the extensive use of judgement;

  - consideration be given to higher materiality thresholds in conjunction with the development of broader indicators that better capture differences in States' underlying fiscal capacity;

  - the 'contemporaneity' supporting principle be replaced with an 'equalisation over time' principle to better reflect the reality of what occurs in practice, and consistency with a long run dynamic approach to HFE;

  - relativities (and associated calculations) continue to be rounded to five rather than two decimal places, including because the former makes it easier to 'track' or understand and replicate the CGC's calculations; and

- the practice of retrospectively updating data (where applicable) also be continued, including because of the significance of some revisions and to help facilitate analysis of trends in HFE (e.g. for forecasting purposes).

- We are similarly concerned that HFE currently over-equalises (i.e. raises other States to a higher fiscal capacity than Western Australia), to the extent that it comprehensively equalises mining revenues but fails to equalise all of the associated costs (covered in more detail in Chapter 3 of this submission).

The rapid pace of national structural adjustment in recent years has highlighted questions about the ability of the current implementation of HFE to facilitate this adjustment, and productivity growth more generally. Accordingly, Western Australia believes that the 2015 Review is an appropriate opportunity to re-examine the principles that shape the CGC's implementation of HFE. In this regard we understand that the current principles used by the CGC include:

- the overarching guiding principle of HFE (which implies full equalisation of States' fiscal capacities);

- four high level supporting principles (internal standards, policy neutrality, practicality, contemporaneity); and

- operational principles (e.g. use of materiality thresholds; discounting).

Guiding Principle of HFE

The current wording of this principle is as follows.

> *State governments should receive funding from the pool of goods and services tax revenue such that, after allowing for material factors affecting revenues and expenditures, each would have the fiscal capacity to provide services and the associated infrastructure at the same standard, if each made the same effort to raise revenue from its own sources and operated at the same level of efficiency.*

We continue to support but will not repeat the strong economic (and equity) case made in our submissions to the GST Distribution Review for transitioning to equal per capita GST shares (with the Commonwealth directly funding additional needs of the smaller States) - a reform model endorsed in that Review's 'long term vision'.

In the absence of such fundamental reform, we consider that the HFE principle should incorporate an economic objective, namely, that the distribution of the pool should not significantly distort economic behaviour or reduce productivity growth (similar to the wording used to describe HFE in Commonwealth Budget Paper No. 3, 2012-13, p123).

We don't see this as a change to the intent of HFE, but rather as better aligning the statement of the guiding principle for HFE with the intent. Specifically, we propose the following addition to the existing wording:

> *… and so as to ensure that the distribution of the pool should not significantly distort economic behaviour or reduce productivity growth.*

The GST Distribution Review panel reported that it was split on the question of whether the wording should refer to 'comparable' or 'same' capacities. We consider that 'comparable' capacities better conveys the nature of the process, which involves judgements on both conceptual and data issues.

Supporting Principles

We believe that the supporting principles of internal standards ("what States do"), policy neutrality and practicality are appropriate. However, we consider that equalisation needs to be a 'dynamic', long-run and 'deeper' process, and that the current selective conservatism exercised by the CGC needs to be more objective, systematic and unbiased.

We also consider that the contemporaneity principle should be replaced with an "equalisation over time" principle.

Equalisation as a Dynamic and Deeper Process

The CGC's existing approach could be characterised as a static, short-run and somewhat shallow process, in the sense (for example) that it essentially accepts the circumstances in each data year (e.g. population settlement patterns and economic activities) as fixed or in equilibrium,[1] and focuses on specific State practices rather than underlying objectives. In this regard:

- 'what States do' is based on ***what*** States have implemented, rather than ***why***. Failure to take into account the outcomes States are seeking to achieve can lead to misidentification of 'standard policy';

[1] That is, national resource allocation is optimal in each data year and has no tendency to change unless external circumstances change. The infrastructure assessments reflect a shift across successive annual equilibriums – there is no consideration of adjustment costs, time lags and cause/effect relations between the provision of infrastructure and economic/population impacts.

- States' actual circumstances are taken at face value in measuring disabilities, rather than being recognised as the aggregate outcome of underlying disabilities and past State policies;

- policy neutrality is focussed on reducing any immediate/existing grant share rewards or penalties for different State policies, rather than on longer term incentives for States to vary (or not vary) their behaviour; and

- there is no explicit consideration of how HFE needs to be designed to ensure that market-driven, welfare optimising movements of labour and capital across the nation (i.e. economic structural adjustment) are not impeded.

What States Do

The excessive focus on the detail of what States do is seen in the following CGC practices.

- Standard tax policy is interpreted as, for each observed tax base, the application of an average tax rate, with the average degree of progressivity. However, States may (for example) reduce land tax rates when land values are rising strongly, on 'capacity to pay' grounds.

  - Hence, a broad measure of 'capacity to pay' may be more consistent with standard policy than a 'tax by tax' assessment.

  - This example could be broadened to encompass revenues as a whole (i.e. taxes and royalties combined).

- The CGC has constructed dispersion cost assessments based on equal per capita spending standards (adjusted for socio-economic status influences) in five regions of increasing remoteness in Australia, defined by population size/distance from major centres characteristics.

  - However, economic objectives (e.g. assisting sustainable long term development of mineral resources or other natural endowments) will demand that States such as Western Australia provide above average services and infrastructure provision in some regions.

Disability vs Policy

A prime example of how current 'disabilities' can be affected by past policies is royalty-related revenue from the North West Shelf petroleum project. The Western Australian Government's substantial assistance for this project helped the project to proceed (see also Chapter 2 of this submission).

Western Australia's long-term pro-resource development policies (including appropriate royalties) have also helped the resource industry to prosper. In this regard, Western Australia's resource endowment is no greater than in many other regions around the world, where lesser development has occurred.

Another example is the potential impact of past urban infrastructure provision and past urban use/density policies on the current 'needs' for government spending in urban areas.

These issues could be recognised by the CGC either on a case-by-case basis (e.g. discounting the North West Shelf project revenue assessment), or applying a general discount factor across most or all assessments to recognise the uncertainties relating to policy 'contamination' of disabilities.

Incentives

The CGC is concerned (in principle) to minimise the direct impact of State policies on grant shares of changes in tax or royalty rates, and in spending levels. However, its use of States' actual economic and social circumstances in measuring disabilities (at the 'point in time' of its reviews and updates) can reduce incentives for States to improve their circumstances in the longer term.

In this regard, States can improve productivity through regulatory and fiscal instruments (including the level and mix of infrastructure investments) but may be inhibited by vested interests, community resistance to change, or the financial costs of economy-enhancing infrastructure. States that make hard choices to improve growth receive little fiscal reward, and therefore cannot offer lower taxes or higher benefits to help justify the pain of reform or to compensate 'losers'. As well, they cannot finance infrastructure in the long term from resultant tax growth.

Similarly, States that fail to perform can still rely on HFE to be raised to the same fiscal capacity as successful States.

These long-term incentive effects do not appear to have been understood by the GST Distribution Review, and are not captured by the usual static general equilibrium models of HFE efficiency effects that assume fixed relationships between production and private labour and capital inputs (such as the modelling put forward by South Australia in the GST Distribution Review[2]).

[2] The South Australian modelling also had a number of serious technical problems that were pointed out in Western Australia's August 2012 submission to the GST Distribution Review (pages 48-51), and in subsequent correspondence with the Review Panel.

While it is very difficult to quantify the impact of these incentive effects, the irrefutable *a priori* case for their existence (and the fact that HFE is a discretionary public policy intervention) means that the onus should be on the CGC (and/or the Commonwealth government) to demonstrate that they are not material, rather than on States such as Western Australia to demonstrate that they are.[3]

National Structural Adjustment

HFE is sometimes argued to be efficiency enhancing, to the extent that it helps ensure that migration across States is not in response to differential levels of State government taxes and services. However, this needs to be balanced against the fact that migration will often be in response to labour and capital productivity differences, which is necessary to ensure an efficient allocation of resources, and should not be muted by HFE.

In this regard, HFE is currently too extreme. It assumes the existing population settlement pattern to be efficient, and denies States the capacity to provide the infrastructure and services necessary to help facilitate national structural adjustment.[4] It is also inequitable for States to have to shoulder the costs (and risks) of structural adjustment that has national benefits.

Furthermore, population movement that will in itself help to equalise per capita outcomes across States with different fiscal capacities is inhibited by the present design of HFE.

It is sometimes argued that States facing economic weakness and out-migration need to spend more to improve the productivity of their economy (e.g. through investments in education and technology). However, such 'investments' are an equally high priority for all States. Resource States (for example) need to remain internationally competitive and ultimately to diversify their economies.

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[3] Western Australia's August 2012 submission to the GST Distribution Review (page 52) estimated that HFE increases the marginal rate of tax on a State community's choice to improve its productivity from about 21% (in the absence of HFE) to nearly 26% (the number varies a little depending on the State's population size). Assuming a welfare loss of around 30-40% from the additional 5% tax translates into a GDP loss of 1.5% to 2%.

[4] These issues have not been recognised by efficiency modelling of HFE such as put forward by South Australia in the GST Distribution Review. Such modelling assumes no link between public investment and private production.

Ensuring that HFE provides capacity for national structural adjustment is also important to the extent that the allocation of Commonwealth government infrastructure assistance is unlikely to properly reflect national interest considerations, due to political pressures (i.e. 'pork barrelling'). A former Commonwealth Finance Minister has publicly acknowledged this to be the case.

There are in any case formidable obstacles to a centralised infrastructure approach. Infrastructure Australia's reports emphasise just how difficult it is for a central planner to allocate funding, with a 'profound disconnect'[5] between demands for new infrastructure and the community's willingness to pay, and uncertainty about the true comparative benefits of proposed projects.[6]

One way for the HFE process to facilitate structural adjustment is to discount the revenue assessments. This would allow States to invest in economy-enhancing infrastructure, and at least partly recoup the costs of successful investments through expanded tax and royalty revenues (with population mobility contributing to equalisation of per capita outcomes as adjustment occurs over time).

This approach would restore a greater role for the market in bringing about structural adjustment, in the national interest. It suggests a need to relax the CGC's current selectively applied full equalisation objective. In this regard, HFE is a public policy intervention that needs to be justified on cost-benefit grounds.

In the absence of restoring a greater role for market forces, Chapter 3 identifies a range of structural adjustment costs that should be assessed by the HFE process.

Conservatism

The CGC guidelines already endorse a selective form of conservatism to address ***lack of reliability*** (e.g. because of data constraints) in specific elements of its assessments, through:

- use of 'equal per capita' assessments;

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5 Infrastructure Australia's June 2011 report to COAG, *Communicating the Imperative for Action*, page 16.

6 "By themselves, Benefit Cost Ratios (even including so-called 'Wider Economic Benefits') are an insufficient basis for prioritising the 'Ready to Proceed' projects. Benefit Cost Ratios … need to be complemented by a consideration of a project's 'strategic fit'" (ibid, page 72).

- discounting specific disability factors on the basis of judgement; and
- not assessing some disability factors at all.

The problems with this approach include:

- the focus on reliability of each component of HFE rather than the reliability of the aggregate HFE outcome;
- the potential for bias in the category assessments when unreliability is just as likely to be in the direction of under-stating a need or disability as it is of over-stating the need or disability; and
- the asymmetry introduced into HFE by discounting or not assessing some needs, while fully assessing others.

We consider that a more objective, systematic and unbiased approach is needed.

Replace Contemporaneity with Equalisation over Time

The CGC defines its contemporaneity principle to mean that "as far as possible, equalisation should reflect State circumstances in the year funds are used" (2010 Review Report, Volume 1, page 37). On this basis, the CGC justified a change from a lagged five year average relativity to a lagged three year average relativity.

However, in practice neither the three nor five year average relativities are a good approximation of circumstances in the grant year.

It may be possible to achieve a closer approximation to circumstances in the grant year by using forecasts, with subsequent reconciliations when actual data becomes available. However, we do not support this approach, as it is complex and will make budget forecasts of GST grant revenues more difficult.

We believe that the lagged availability of data is most simply accommodated by acknowledging the reality that concurrent equalisation is not achievable, and that this does not really matter if equalisation is achieved over time. The latter broadly occurs to the extent that lagged needs are effectively escalated by growth in the GST pool (which acts like the application of an interest rate factor).

With a lagged three year rolling average already in place, some might argue that there is little point in formally changing to an 'equalisation over time' principle. However, we believe a change is merited, to achieve greater transparency for the wider audience, and clarify the real goal for the specialist audience. It would also be consistent with, and help to highlight, a dynamic long-run approach to implementing HFE.

One practical instance where using the new principle will make a difference is where the CGC currently (in pursuit of relativities that are appropriate to the grant year) makes decisions about whether to continue with assessments that are relevant in the (earlier) data years, but not so relevant in the grant year (e.g. taxes abolished under the GST Agreement). The deletion or modification of needs in the data years will limit equalisation over time, and would not usually occur under an 'equalisation over time' approach.

Operational Principles

Materiality thresholds

The GST Distribution Review recommended quadrupling the current materiality thresholds (which apply to categories, disability factors and data adjustments).

We believe that materiality thresholds should be seen as a way of enhancing HFE by encouraging a broader approach to assessments. In this regard we believe that the existing detailed assessments are detrimental to HFE, as:

- the detail tends to lead to bias (some details are recognised and assessed while others are not);
- the detail is in danger of misrepresenting standard policy by focussing on 'the leaves rather than the trees'; and
- there is uncertainty about much of the detail due to deficiencies in the suitability and quality of available data.

Accordingly, we are open to higher materiality thresholds, if these are used to drive a better HFE outcome. However, we do not support higher materiality thresholds simply to eliminate 'moving parts' in existing assessments, as seemed to be the motivation behind the relevant GST Review, recommendation (which is reflected in the CGC's 2015 Review terms of reference).

Discounting

We have been very concerned about the CGC's use of discounting in the 2010 Review.

- Discounting decisions have lacked transparency. For example, 'location' disability factors were discounted, while the unreliable assessments for transport, welfare and housing, and mining revenues, were not.
- As noted above, discounting has a tendency to introduce 'understatement' bias in the various assessments.
- There is much implicit discounting through decisions not to assess factors (sometimes these decisions are documented, sometimes not).
- Most of the CGC's explicit discounts have been to expense assessments, with the associated bias disadvantaging Western Australia vis a vis other States.

We believe that discounting is best applied as an across-the-board tool to improve the level of policy neutrality and recognise the general uncertainties in the CGC's assessments.

Rounding of Calculations

The GST Distribution Review proposed that relativities be rounded to two decimal places, on the basis that this would reduce the 'false precision' implied by unrounded relativities.

While only a minor issue, we consider that retaining the current five decimal places has some merit (both at the aggregate level and within the individual assessments).

- It makes it easier to check that calculations are operating as intended or understood (both by CGC staff and State Treasury staff).
- Greater rounding may create incentives to waste time on arguments over small issues (as a small change could have a significant impact if it makes a State's relativity round up rather than down).

Updating Data

The GST Distribution Review proposed that assessments should not be retrospectively updated for data revisions.

We note that, although some data revisions are highly significant, in the long run they are unlikely to significantly favour some States over others in the GST distribution.

Nevertheless, we favour the continued updating and correction of data, including to facilitate analysis of trends in HFE (e.g. for forecasting purposes).

2 Mining Revenue

Key Points

We strongly recommend that:

- the current high rate/low rate mining revenue assessment be replaced with a new assessment that avoids excessively large GST share effects from changes in State royalty rates (as recommended by the GST Distribution Review);

- a discount of at least 25% be applied, to improve policy neutrality (in relation to what States have done to develop their resources, and preserving incentives for the appropriate development and pricing of mineral resources) and recognise intergenerational risks from future changes to HFE. A discount of 50% would be justified if the CGC is unable to appropriately assess unrecognised mining related expenditures.[1]

- the CGC consider the following alternative assessments (noting that a discount factor should be applied in all cases):

  - an 'actual per capita' assessment (as proposed by Victoria in a submission to the independent Review); a mineral by mineral assessment (consistent with the CGC's benchmark in its 2011 Update report); and a hydrocarbon/non-hydrocarbon assessment (consistent with the CGC's original proposal in its 2010 method review);

- the 'grants in lieu of royalties' assessment also be discounted to recognise the costs (including both financial subsidies and infrastructure) that Western Australia incurred to help establish the North West Shelf petroleum project; and

- as an alternative to a revamped mining assessment, the CGC consider replacing the current mining revenue assessment and all of the State tax assessments with a 'global' revenue assessment (e.g. based on Gross State Product).

We note that amalgamating all minerals into one group (or more generally combining iron ore and export coal) would give a poor equalisation outcome, as it would pay no regard to differences in royalty raising capacity across different minerals.

[1] See Chapter 3 for discussion of intergenerational risks and mining related expenditures.

Introduction

The Mining Revenue category has a greater impact on the GST distribution than any other assessment. The impact also varies greatly between alternative assessment methods.

For example, for the 2011-12 data year, we estimate that a hydrocarbon/non-hydrocarbon assessment of onshore mining royalties[2] would imply a GST share for Western Australia of $800 million more than the low rate/high rate assessment with iron ore fines re-classified to high rate (as argued for by some States).

The Mining Revenue category also has the poorest overall policy neutrality or 'grant design efficiency' of any category (i.e. policy differences between States have a greater impact on GST shares than for any other category).[3]

- The CGC's existing low rate/high rate grouping has resulted in the anomalous situation where Western Australia's removal of iron ore fines royalty rate concessions could cost the State (in reduced GST grants) well over 100% of the additional iron ore royalty revenue, if iron ore fines are re-classified from 'low rate' to 'high rate' by the CGC.

- The impact of policy changes on GST shares is also non-linear – even a small increase in the iron ore fines royalty rate could potentially reduce Western Australia's GST grants by around $1 billion per annum.[4]

- Furthermore, even if a change in royalty rates does not cause minerals to be re-classified, the impact on GST grant shares (although less than 100%) is still very high - if Western Australia increased its royalty rates for the low rate minerals in 2011-12, it would lose 62% of the additional royalty revenue through reduced GST grants.

It is essential to avoid grant design inefficiency that exceeds 100%, and to avoid non-linear grant impacts (small policy changes should have proportionately small grant impacts). This can be achieved by avoiding classifications of minerals based directly on royalty rates (a number of reform options are considered below).

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2 This would be a simplification of the 2004 Review methods and was supported by the CGC and all States throughout most of the CGC's 2010 Review process.

3 The Land Tax category/assessment has poorer grant design efficiency for low value properties for some States.

4 The loss is non-linear because the size of the GST loss does not depend upon the size of the royalty revenue increase – as long as the royalty rate increase is sufficient to trigger the reclassification of iron ore fines, it would result in a major GST grant loss.

However, we do not believe that any stand-alone Mining Revenue assessment based on 'internal standards' (i.e. on the average of States' actual royalty policies and revenues) can avoid substantial grant design inefficiency. This is due to Western Australia's very high value of mineral production compared to other States.

The 'residual' problem (i.e. after removing the extreme distortions caused by mineral groupings based directly on royalty rates) should be reduced by some discounting (e.g. 25%) of the assessment. We consider discounting to also be justified on other grounds, as indicated in Chapters 1 and 3 of this submission and in our submissions to the independent GST Distribution Review.

Reform Options (Pre Discounting)

Mineral by mineral assessment

In its 2011 Update Report, the CGC considered whether or not to reclassify iron ore fines to its high rate group, and decided not to do so. It based this decision on the results of an individual mineral by mineral assessment, which it considered to be a good measure of the most 'accurate' equalisation result if policy neutrality were not an issue.[5]

We agree that a mineral by mineral assessment (using value of production as the revenue base) is likely to give a better equalisation outcome than the current approach, subject to also addressing other concerns noted in the *Introduction* section (including remaining policy neutrality concerns) through an appropriate discount factor.

The reason for expecting a better fiscal equalisation outcome is that under the standard policy of applying royalty rates to value of production, States need to consider a complex mix of factors in setting royalty rates for a mineral, including:

- the minimum return or 'price' that should be received for the sale of the mineral by the community to the producer;

[5] CGC 2011 Update Report, page 42, paragraphs 19-20.

- the degree of processing of the mineral by the producer downstream of the mine head[6] before the royalty is levied;
- the general profitability of producing the mineral;
- the impact on the viability of more marginal operations; and
- the impact on incentives for expansion of production.

Hence, on a standard policy basis, royalty decisions will vary from mineral to mineral.

In addition, the 'value of production' revenue base will reflect variations from mineral to mineral of the impact of past decisions by State governments in areas such as regulatory regimes, infrastructure provision and the trade-off (through the choice of royalty rates) between exploiting minerals immediately as opposed to ensuring an adequate price for the community for these finite resources in the long term.

A mineral by mineral assessment would capture these variations.

Mineral by mineral assessment with some amalgamation

Although a mineral by mineral assessment would be more 'accurate', some amalgamation of minerals could reduce both the remaining grant design inefficiency and data requirements. This would need to be balanced against the materiality of the impact on equalisation outcomes.

Actual per capita assessment

Another option worthy of consideration is an actual per capita (APC) assessment of (onshore) mining revenues, whereby each State's revenue raising capacity is assessed to equal its actual revenue.

This option was proposed by Victoria in its August 2012 submission to the GST Distribution Review (p23 and pp31-32). It would capture the mineral by mineral capacity variations noted above, as well as variations between States for the same mineral (and hence arguably provide an even better equalisation assessment than a mineral by mineral assessment). It would also be very simple to assess.

[6] Such processing could be limited to crushing and screening the ore, or extend to 'concentrating' the ore or refining the ore to near-pure metal. The 'mine head' is fundamentally different from the 'mine gate' concept identified in some previous CGC reports. Substantial processing may occur between the mine head and what might be considered the mine gate, prior to transport/export of the product that is sold (and captured in value of production data).

On the down side, this option would be subject to the greatest 'residual' concerns about policy neutrality.

Hydrocarbon/non-hydrocarbon assessment

This simplification of the 2004 Review method was supported by the CGC and all States throughout most of the 2010 Review. It would reflect that in practice a lower average royalty rate is applied to iron ore than black coal, while achieving more policy neutrality than an APC or mineral by mineral assessment.

Other reform options

Some economists may argue that economic rent is the best measure of mineral revenue capacity, but this would ignore the fact that royalties are intended to be the price charged for the sale of mineral assets, rather than a tax. In this regard Western Australia's royalty regime aspires to charge 10% of the mine head value of production for all minerals, but other factors come into play.

Alternatives to the current value of production measure appear, in any case, to not be available. The CGC previously used a value-added measure (with various cost deductions), but the relevant data are no longer published by the Australian Bureau of Statistics (ABS). Consistent data on mine head values across States are also unavailable.

Another theoretical value of production-based option would be to amalgamate all onshore minerals into a single category. However, this would not reflect revenue capacity differences across minerals (presumably the reason for it not being used previously) and would over-equalise Western Australia (see Table 2.1) compared to the 'best' options (APC or mineral by mineral assessments).

- More generally, any option that combines iron ore with export coal into one group will give a poor equalisation outcome, as Western Australia's high share of iron ore and low share of export coal means that the difference in royalty rates between iron ore and export coal would have a substantial impact on the CGC's measure of revenue raising capacity.

A single category assessment would also, counter-intuitively, see an increase in the value of export coal production in Queensland causing a cut to Western Australia's GST grants.

- This result would arise from the additional export coal production (which attracts relatively high royalty rates) increasing the national average royalty rate for all minerals. It turns out that this higher rate would increase Western Australia's revenue capacity by more than the benefit Western Australia receives from the redistribution of the additional Queensland coal royalties.

Preliminary Analysis of GST Share Implications of the Reform Options (Pre Discounting)

Using recent history as a guide, we have estimated the impact on Western Australia's GST grants of the following options for assessing onshore minerals (the results are summarised in Table 2.1 below).

1. A two component split, into hydrocarbons and non-hydrocarbons.

2. A two component split into the existing low rate minerals (including iron ore fines), and the existing high rate minerals (as applied in the 2013 Update).

3. An APC assessment.

4. A three component split comprising: the existing low rate minerals excluding iron ore; the existing high rate minerals excluding iron ore; and total iron ore.

   With the data currently available, this is the closest we could come to modelling a mineral by mineral assessment.

5. A single category, with the value of production of all (onshore) minerals aggregated.

6. A two component split, into the existing low rate minerals excluding iron ore fines, and the existing high rate minerals including all iron ore.

Table 2.1: Alternative onshore mining royalty assessments,[(a)(b)] 2011-12 data year

Assessment method	WA assessed revenue $b	WA needs $b	Difference from Method 4 $b
1. Hydrocarbon/non-hydrocarbon	4.04	-3.08	+0.30
2. Low rate/high rate - iron ore fines low	4.16	-3.20	+0.18
3. APC	4.33	-3.37	+0.01
4. Low rate/iron ore/high rate	4.34	-3.38	-
5. Single component	4.70	-3.74	-0.36
6. Low rate/high rate - iron ore fines high	4.83	-3.87	-0.49

Source: Western Australian Treasury estimates

(a) All methods use value of production as the revenue base, except for actual per capita (Method 3).

(b) Estimates using data from the CGC's online assessment system. Some data for other States had to be imputed due to confidentiality restrictions.

Table 2.1 is based on 2011-12 data, which does not include the changes in Western Australia's iron ore fines royalty rate in 2012-13 and 2013-14. However, our projections[7] suggest that the general results from Table 2.1 will remain valid in later data years.

Table 2.1 suggests that an APC assessment (Method 3) would give essentially identical results to a three component assessment (Method 4) - which could in turn be expected to give similar results to a mineral by mineral assessment.

It is not surprising that an APC assessment would give similar results to a mineral by mineral assessment.

- Minerals for which a State dominates production would (under a mineral by mineral approach) be assessed largely according to that State's royalty rate.
- Minerals for which a State has low production are unlikely to significantly affect that State's assessment.
- Significant deviations between the two approaches would only arise for minerals where a State has significant production, but does not dominate, and that State's royalty rate differs markedly from the national average.

[7] These reflect our projections of Western Australia's mining royalties (at the time of drafting) and the projections of New South Wales' and Queensland's mining royalty in their 2013 Budgets.

Table 2.2 compares, for each State, an APC assessment (Method 3) to a three component assessment (Method 4). The relatively large difference for the Northern Territory may be due to differences between a three component assessment and a true mineral by mineral assessment.

Table 2.2: Three component and APC onshore mining assessments,[(a)(b)] 2011-12 data year

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Assessed revenue ($m)								
3 component	1,507	88	2,656	4,339	263	55	0	90
APC	1,471	61	2,767	4,330	176	49	0	144
Needs ($m)								
3 component	+1,394	+2,143	-850	-3,384	+396	+150	+148	+3
APC	+1,429	+2,170	-961	-3,374	+483	+156	+148	-51
Difference								
$m	+36	+27	-111	+9	+87	+6	0	-54
$pc	+5	+5	-25	+4	+53	+12	0	-232

Source: Western Australian Treasury estimates

(a) The three component assessment (Method 4) splits onshore minerals into the existing low rate minerals excluding iron ore, the existing high rate minerals excluding iron ore, and total iron ore. Under an APC) assessment (Method 3), each State's assessed revenue would equal its actual revenue.

(b) Estimates using data from the CGC's online assessment system. Some data had to be imputed due to confidentiality restrictions.

Grants in Lieu of North West Shelf Royalties

The Commonwealth pays grants to Western Australia equivalent to about two thirds of the royalties from the North West Shelf petroleum project. About 89% of these grants (all except our population share) are redistributed to other States through the CGC process.

We propose that this redistribution be discounted by in the order of 25%, to give belated recognition to the considerable investment by the State Government in financial subsidies and infrastructure support (not recompensed through HFE) that were crucial to the project proceeding. This project simultaneously provided Western Australia with a needed new long term energy source to sustain economic growth, and a source of export income, that have delivered benefits to all other jurisdictions through increased Commonwealth taxes and redistribution of Western Australia's fiscal 'returns' through HFE.

It would be wrong to debate whether this development could have occurred later with less government investment. From the perspective of that time, government support was needed to ensure that a global window of opportunity was not missed – timing is important.

Further details of the North West Shelf project and assistance provided are included in Appendix A.

Global Revenue Assessment

The grant design inefficiency of any stand-alone Mining Revenue assessment could be addressed by using a global revenue base to assess capacity for the sum of mining revenues and State taxes.[8] We have considered Gross State Product (GSP) as the basis for a global capacity measure.

Using a global revenue base would also be much simpler than the existing multiple revenue assessments. Each State's assessed total revenue for a particular data year would simply equal its share of the eight States total base multiplied by the eight States total actual revenue.

To test whether or not GSP is a reasonable global revenue base, we examined the relationship between the CGC's existing aggregate assessed revenues and GSP, for each State and each of the last six data years quantified for the 2013 Update.

- This does not imply endorsement of the CGC's existing assessments. However, it provides a rough guide for the purpose of this analysis.

We found that a linear relationship between GSP and total assessed revenue is generally a good fit to the data. However, we also found that the ACT and Northern Territory data varied from the fitted results much more than for the other States, with total assessed revenues being much lower than the fitted line.

We concluded that the variances for the ACT and Northern Territory were probably due to two factors.

- States have reduced capacity to extract revenue from the general government sector. This has a particularly large impact on the ACT.

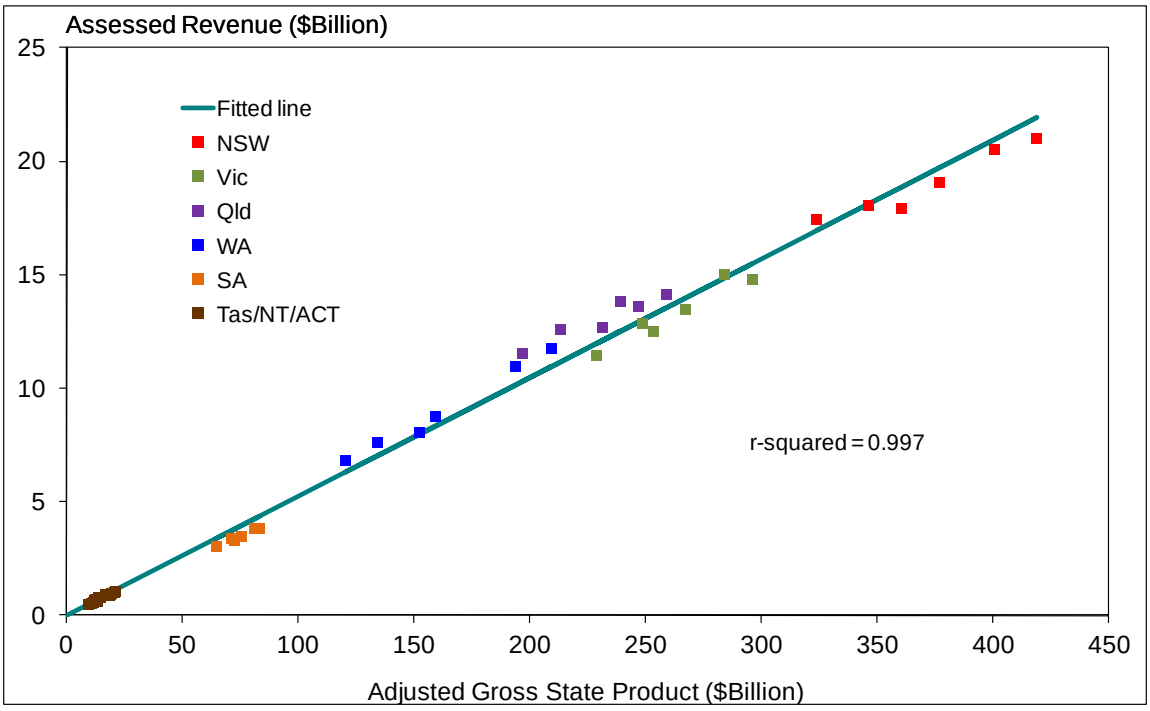
[8] User charges and other non-tax revenues would be excluded from this assessment. Other non-tax revenues include revenues derived from asset holdings and so-called 'balancing items'.

- States have reduced capacity to extract revenue from the offshore petroleum sector. This has a particularly large impact on the Northern Territory.

Therefore, we adjusted each State's GSP to remove 50% of general government final consumption expenditure[9] and to remove an estimate of gross operating surplus (GOS) and gross mixed income (GMI) attributable to offshore petroleum[10][11]. Consistent with this, we removed Western Australia's 'grants in lieu of royalties' from the assessed revenues.[12]

The following charts show the relationship between total assessed revenue and the adjusted GSP, with a line fitted through regression analysis. As can be seen, the regression line is a good fit, whether the analysis is done in dollars or dollars per capita.

Chart 2.1: Relationship of assessed revenue(a) and adjusted GSP(b)



Source: Calculated by Western Australian Treasury from ABS and CGC data.

(a) Assessed revenue for total taxes and mining royalties, excluding 'grants in lieu of petroleum royalties'.

(b) GSP excluding 50% of general government final consumption expenditure and all offshore petroleum GOS and GMI (estimated).

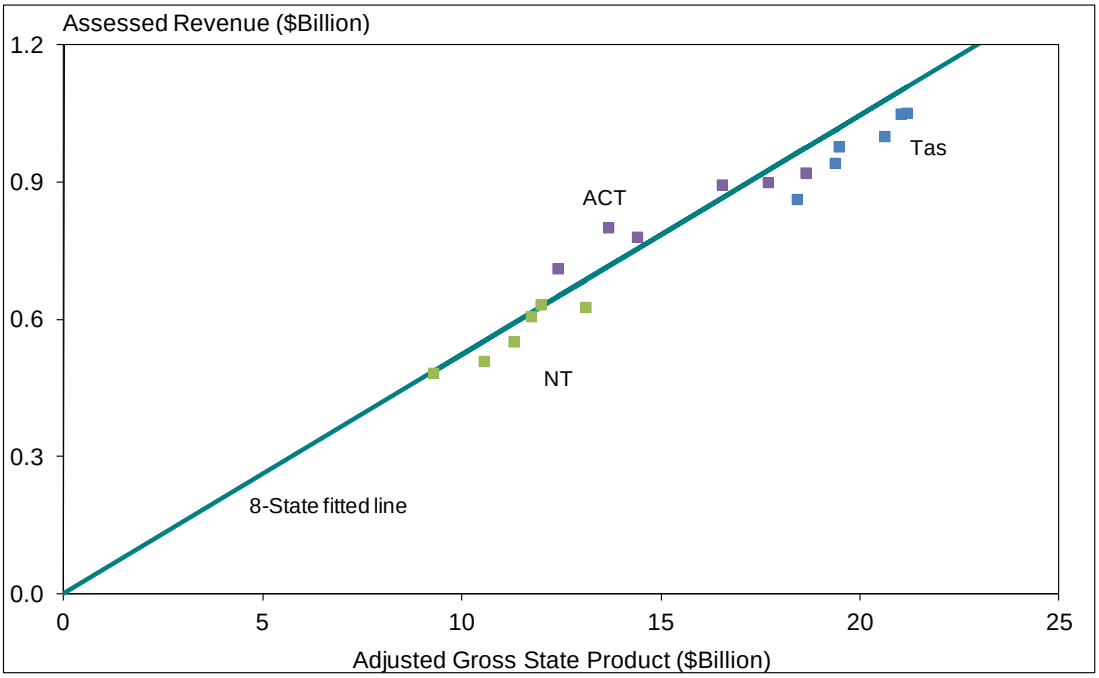
[9] For all levels of government,

[10] We estimated this for Victoria, Western Australia and the Northern Territory by dividing offshore petroleum value of production by total mining value of production (based on ABS 8155.0 supplemented by CGC data, and assuming that the 2011-12 proportion equals the 2010-11 proportion) and multiplying by total mining GOS and GMI.

[11] We did not remove compensation of employees attributable to offshore petroleum.

[12] We would also have removed Northern Territory grants in lieu of uranium royalties, but did not have the necessary data to estimate the Northern Territory uranium GOS and GMI,

Chart 2.2: Assessed revenue[(a)] and adjusted GSP[(b)] - small States

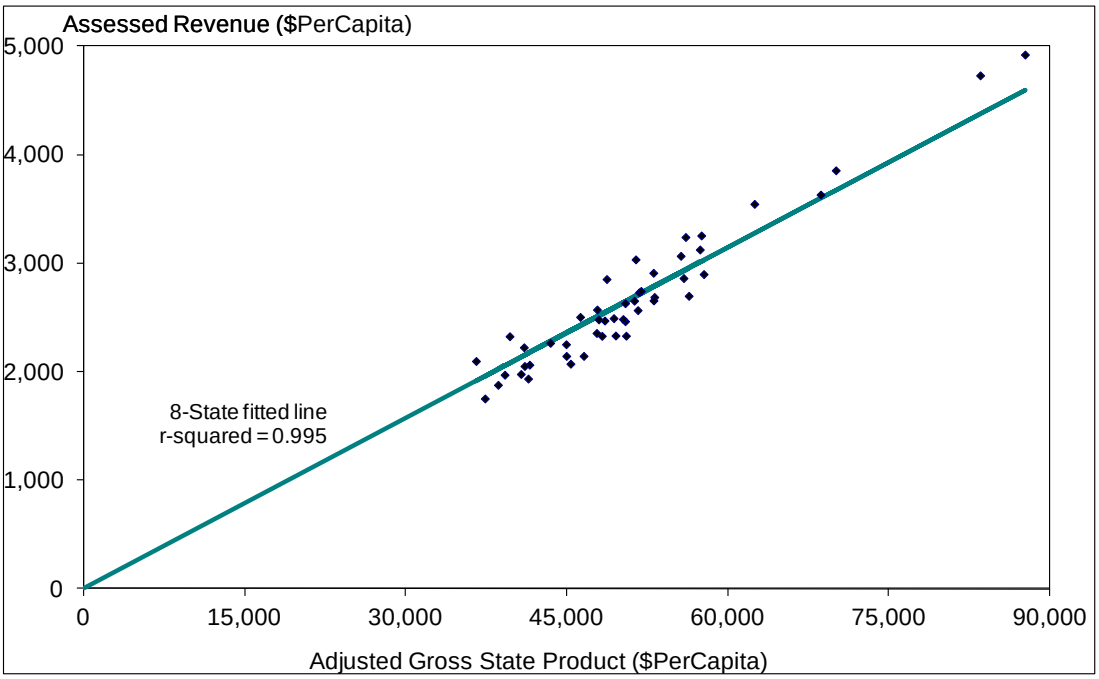


Source: Calculated by Western Australian Treasury from ABS and CGC data.

(a) Assessed revenue for total taxes and mining royalties, excluding 'grants in lieu of petroleum royalties'.

(b) GSP excluding 50% of general government final consumption expenditure and all offshore petroleum GOS and GMI (estimated).

Chart 2.3: Assessed revenue[(a)] and adjusted GSP[(b)] – per capita terms



Source: Calculated by Western Australian Treasury from ABS and CGC data.

(a) Assessed revenue for total taxes and mining royalties, excluding 'grants in lieu of petroleum royalties'.

(b) GSP excluding 50% of general government final consumption expenditure and all offshore petroleum GOS and GMI (estimated).

There are other adjustments that could be made to GSP. However, too many adjustments would:

- lose the benefit of simplicity and transparency; and
- give the assessments an unmerited assumption of accuracy.

The following table compares revenue assessments using adjusted GSP against current assessments.

Table 2.3: Global adjusted GSP[(a)] assessment vs current assessment,[(b)] $ per capita

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Average over 2006-07 to 2011-12 data-years								
Assessed revenue								
Current	2,704	2,496	3,039	3,991	2,161	1,950	2,352	2,526
GSP-based	2,772	2,582	2,821	3,760	2,436	2,088	2,294	2,640
Needs								
Current	+84	+292	-252	-1,203	+626	+837	+435	+261
GSP-based	+16	+206	-33	-973	+351	+699	+493	+147
Difference	-68	-86	+218	+230	-276	-138	+58	-114
2011-12 data-year								
Assessed revenue								
Current	2,900	2,657	3,126	4,923	2,332	2,052	2,485	2,699
GSP-based	2,983	2,742	2,965	4,530	2,610	2,121	2,595	2,911
Needs								
Current	+130	+373	-96	-1,893	+698	+978	+545	+331
GSP-based	+47	+288	+65	-1,500	+420	+909	+435	+119
Difference	-84	-85	+161	+393	-278	-69	-110	-212

Source: Western Australian Treasury estimates

(a) GSP excluding 50% of general government final consumption expenditure and all offshore petroleum GOS and GMI (estimated).

(b) Assessments cover total taxes and mining royalties, excluding 'grants in lieu of petroleum royalties'.

3 Mining Related Expenditure (and Economic Development Needs More Generally)

Key Points

- Equalising all mining related revenue but not all mining related expenditure is asymmetrical and, along with failure to adjust for the impact on mining related revenue bases of policy differences between States (including but not limited to infrastructure and other expenditure support), contributes to excessive redistribution of mining related revenue.

- We consider that specific gaps in the CGC's recognition of mining related expenditures, which the GST Distribution Review did not fully appreciate, include: common user infrastructure investments in 'frontier' development regions (that cannot realistically be fully cost-recovered); amenities for mining communities; FIFO-related costs; high remote area costs in mining regions; and more general cost pressures relating to the State-wide economic and population growth driven by mining development.

- We consider that the effective 3% discount to the mining revenue assessment recommended by the GST Distribution Review as a proxy for currently under-equalised needs of the resource States substantially under-states those needs. However, we support the approach of discounting the mining revenue assessment to capture difficult-to-assess needs.

- To address the current deficiencies in the assessments for mining related development, and economic development more generally, we propose that the CGC:

    - attempt to directly assess specific expenditure need gaps (as outlined above and in more detail in the body of this chapter);

    - discount revenue capacity (e.g. North West Shelf royalties) that is clearly linked to past State expenses (i.e. effectively State 'investment') that has not been subject to equalisation (see also Chapter 2);

    - discount taxation capacity generally to recognise policy 'contamination' (similar to discounting used often by the CGC for other forms of uncertainty), and to improve incentives and capacity for national structural adjustment and economic growth; and

    - discount mining revenue capacity (by 25% to 50%) to recognise mining related expenditure that is particularly difficult to assess; recognise intergenerational risks from future changes to HFE; and provide adequate policy neutrality.

Introduction

In its October 2012 final report, the Commonwealth Government's independent GST Distribution Review recommended that the CGC be directed (as part of its 2013 Update) to:

> *… add an amount to its expenditure assessments equivalent to a 3% discount of the mining revenue assessment in order to compensate for the fact that some mining related needs of the resource States are not fully recognised. This interim assessment should remain in place until the next methodology review is completed.*

In subsequent Standing Council (on Federal Financial Relations) and Heads of Treasuries processes (which saw the Review's recommendation subsumed into the CGC's 2015 methodology review), Western Australia welcomed this recommendation, even though it considered a discount of 3% to fall far short of adequately recognising the costs, risks and policy choices involved in supporting mining industry growth.

Our views on the way forward are outlined in this chapter.

It should be noted that although our views and evidence are presented mainly in the context of resource sector development, they are conceptually applicable to economic development more generally. Broadly, we see the way forward as a combination of better assessments of expenditure needs, discounting revenue capacity, and adjustments to revenue capacity to recognise specific State expenditures that have created economic benefits and boosted revenue capacity.

However, we consider that recognition of specific State economic development expenditures that boost revenue capacity should be limited to those that:

- are aimed at improving economic performance and revenue capacity in the long run (i.e. help to realise a comparative advantage rather than subsidising activities where there is no underlying comparative advantage); and

- have not been subject to equalisation. For example, all States have a need for high performing education systems that allow the economy to flourish while protecting genuine community interests. In such areas, there are no clear differences in need that would not already be captured, in principle, by the CGC's assessments (recognising that any technical shortcomings in these assessments should be corrected).[1]

Specific Expenditure Need Gaps

The indicative estimates that we submitted to the GST Distribution Review are summarised in Table 3.1, and set out in detail in Appendix B to this submission. We have not updated the calculations, whose main objective is to illustrate the magnitude of the gaps in Western Australia's needs assessments.

Table 3.1: Estimated Western Australian Needs Unrecognised by the Current HFE Assessments

	$m per annum
Provision of economic and social infrastructure in advance of demand	870
Support for community and local government amenities/development	500[(a)]
Using capital costs rather than the recurrent proxy	100
Fly-in fly-out workers	100
Regional/remote dispersion costs	315
Total	**1,885**
Not estimated: regulation costs of development	N/A

(a) Rounded from $543 million due to uncertainty in the calculation.

Source: Western Australia's August 2012 submission to the GST Distribution Review, incorporating a correction advised to the GST Distribution Review.

Provision of economic and social infrastructure in advance of demand

An expenditure needs factor is required to capture economies of scale in the provision of infrastructure. Other things being equal, it is expected that a facility to provide a higher quantity of service will have lower construction costs per service. As a result, States do not continuously grow infrastructure as demand grows, but build in advance of demand.

[1] Differences in States' relative performance in these cases are appropriately recognised through broad discounting of revenue capacity.

This is particularly necessary in 'frontier' (or emerging) and fast growing economic development regions (including the relatively under-populated and under-developed regions of high economic potential in Western Australia). States need to balance the opportunity cost of under-utilised infrastructure against the level of scale economies, which varies across different types of infrastructure.

In this regard, multi-user infrastructure such as power, port, rail/road, water and allied social infrastructure often needs to be provided by government because private sector components have little incentive to plan and scale the infrastructure to meet future demand growth from other users. It will not generally be economic to grow this infrastructure in small increments.

A 1998 consultancy on behalf of the Western Australian Treasury[2] estimated (assuming a 4% real discount rate) that:

- if a 1% increase in the scale of construction resulted in only a 0.75% increase in costs (reflecting scale economies), then there is an optimal 14-year period between episodes of new construction for linearly increasing demand; or

- if a 1% increase in the scale of construction resulted in only a 0.60% increase in costs (reflecting higher scale economies), then the optimal period between episodes of new construction increases to 24 years for linearly increasing demand.

While scale economies imply that it is financially cost-minimising to construct infrastructure in advance of demand, there is still an opportunity cost in constructing underutilised infrastructure.[3] In the above examples, we have estimated the opportunity costs to be respectively 26% and 38% of the total cost of construction.

Faster growing States need to fund proportionately higher levels of this opportunity cost.

While States might seek to reduce these opportunity costs by constructing infrastructure to meet only more immediate demand growth, this would actually increase their overall costs in the long run, because the infrastructure would be constructed as a sequence of smaller projects which achieve a lower level of scale economies, with resultant higher costs that more than offset the lower opportunity costs.

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2 J Petchey, P Shapiro, P Kenyon and P Koshy (1998), A Net Present Value Premium for Lumpy Public Capital.

3 By 'under-utilised' infrastructure we mean infrastructure that is used at below its practical maximum capacity (where the latter is based on the observed actual practice of States).

A related matter is the risk that (mainly growth[4]) infrastructure will be inefficiently utilised due to technological change and variance between forecast and actual demands. States with more growth face proportionately higher costs from this risk (measured in net present value terms), and the cost is disproportionately higher if higher growth is accompanied by greater economic volatility (as in Western Australia).

For equalisation purposes, we consider that both tax funded (social) and user charge funded (economic) growth infrastructure are relevant. Costs (including risks) associated with advance provision of infrastructure are generally best financed through taxes (including tax-funded community service obligations for trading enterprises) or quasi-taxes (i.e. user charges that spread the costs across a wider range of users rather than those in the growth areas, or reduced returns on trading enterprises).

Even for economic infrastructure, attempting to recover these costs from migrating labour and capital is often impractical; creates inefficiency; and where attempted, increases costs for the economy (thereby in the long term reducing tax capacity and offsetting short term budget gains from shifting costs to users). These issues are explained as follows.

- It is often not practical to fully recover these costs from the new users of expanded infrastructure, as there are often existing users of the previous infrastructure in the same service area, making it difficult to apply a different pricing regime specifically for the new users.

- Aiming to fully recover these costs from the new users of expanded infrastructure (where practical to do so) tends to create inefficiency, as:

  - discriminating between areas by fully charging new users for these costs where it is practical to do so, and otherwise not, is distortionary. For example, this could deter new users who are otherwise best served by new infrastructure where full user cost recovery is proposed, and motivate them to undertake less productive alternative activities in other areas where new users are not fully charged for these costs;[5]

[4] By 'growth infrastructure' we mean new infrastructure (or the component of new infrastructure) that caters for future, currently unrealised, demand.

[5] Alternatively, the user could undertake the originally intended activity using a higher cost work-around that may involve in-house substitutes (e.g. own-source electricity or water generation; freighting by road instead of rail) or accessing more distant infrastructure such as ports.

- distortions also arise where these costs are spread unevenly across infrastructure service catchment areas in an attempt to achieve the greatest practical cost recovery from new users. In this regard, all else being equal,[6] users in catchment areas with higher growth (i.e. higher proportions of new users) will experience higher costs than users in catchment areas with lower growth (i.e. lower proportions of new users), giving an average cost advantage to lower growth regions;[7]

- full cost recovery is most likely to be practicable in greenfields development regions, but these regions are also the most likely to offer genuine long-term scale economies in infrastructure provision, and standard economic theory accepts that a subsidy is required to motivate an efficient number of users to migrate into the region;[8] and

- capital and labour migrating interstate to higher productivity areas creates benefits for both migrants and the broader economy from the redistribution of income through tax collections[9] (including the operation of HFE), the common currency[10] and barriers to entry to Australia.[11] Consequently, allocating adjustment costs solely to migrants will deter efficient migration.

- Where States (that are factor migration destinations) attempt to recover adjustment costs from new users (or else apply the fallback more practical alternative of charging the adjustment costs to each particular infrastructure catchment area), the resultant inefficiencies noted above will increase costs for the economy in the long run by:

  - slowing the pace of migration to the highest growth areas (which are often those with the highest potential gains for State per capita income), thereby reducing the scope to exploit economies of scale from development in these areas, with resultant cost increases for the economy; and

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6 That is, where the costs per type of user (i.e. new user vs. existing user) are similar in both regions.

7 This argument can be generalised to areas with different wage and other input cost structures, but where the cost-benefit ratios per type of user are similar in both regions.

8 For example, for an efficient outcome, in-migrants should be charged for the infrastructure service on a marginal cost basis, but are instead charged on an average cost basis. Where there are scale economies, marginal costs are less than average costs. Hence an efficient level of migration requires infrastructure costs to be subsidised.

9 Noting that the tax system does not fully recognise the additional costs incurred by individuals and businesses in generating their higher incomes.

10 Higher Australian productivity increases the competitiveness of Australia overall, increasing Australia's purchasing power. The common currency spreads these benefits across States.

11 For example, capital migrating interstate tends to use more Australian labour and goods due to barriers to entry for imported labour and goods.

- result in higher costs for private sector, as it attempts to extract value from remote areas while 'under using' (relative to the efficient level) common use infrastructure in these areas and 'over using' (relative to the efficient level) infrastructure in non-remote areas (see footnote 5).

Examples of infrastructure in Western Australia catering for future economic and population growth include:

- the Mid West Energy Project, helping to open up the Mid West region's mining industry ($431 million). It involves the construction of a 190 km 330 kV transmission line from Pinjar to Eneabba, the purchase of a 70 km 330 kV transmission line from Eneabba to Three Springs, the upgrade of a number of substations between Neerabup and Pinjar, and the construction of a new 330 kV to 132 kV terminal station outside of Three Springs. It will initially support the Karara magnetite mine, and later other Mid West mining and energy developments and community power needs. The Economic Regulation Authority has assessed that the benefits the Mid West Energy Project will bring to customers outweigh the cost of the infrastructure, and project costs will be recovered from all network users;

- Gateway Perth, improving road access to Perth airport to cater for increased fly-in fly-out (FIFO) passenger traffic and increased mining-related air freight and related warehousing and road freight transport ($318 million State and $686 million Commonwealth);

- a $370 million asset investment program for Fremantle Ports (2012-13 to 2016-17). Under consideration are a $280 million general cargo facility at Lumsden Point (Port Hedland) and a $443 million Dampier Marine Services Facility. Reflecting their trade facilitation objective, State ports generally earn well below-commercial rates of return; and

- a gas pipeline from Bunbury to Albany (currently estimated to cost $135 million), with the State Government to contribute to the capital cost. An ongoing subsidy is also likely to be required. The pipeline will be built with capacity for expansion to accommodate links to other regional centres, such as Katanning. The provision of competitively priced gas is expected to drive investment in areas such as viticulture, agriculture, mineral processing and timber.

Examples of potentially sub optimal infrastructure investment to date in Western Australia, which can be sheeted home at least partly to State budgetary constraints (including as a result of inadequate recognition of economic development needs in the GST distribution process) and/or lack of direct Commonwealth funding support to offset GST shortfalls, include:

- energy investment in the Pilbara, which has been mainly by large individual companies self-supplying, with mixed public and private ownership of different parts of the transmission network and many off-grid self generators.

  The quality of energy supply is variable (and a reason why large companies wish to retain control of their supply systems). The incremental approach to capacity growth and under-investment in network development has resulted in higher costs, including for expanding the system for further growth.

  While there may be efficiency and energy security benefits from building an integrated grid, the cost would be substantial (a proposed transmission line in the Pilbara would cost $650 million), with full cost-recovery unrealistic for a system designed to facilitate future expansion;

- the absence in the Mid West of a deepwater port (and supporting rail infrastructure) that is capable of handling larger Cape-sized vessels, which would deliver scale economies needed to help facilitate the further development of the iron ore industry in that region.

  In this regard, the Mid West iron ore industry is characterised by a number of smaller operators; and

- in Port Hedland, the recent relatively small Utah Point development ($305 million) quickly reached capacity, while the mooted multi-user outer harbour development has not proceeded after BHP Billiton opted for a more modest expansion of its existing facilities due to economic uncertainties. It was also recently reported that a proposed Pilbara Fabrication & Services Common Use Facility (costing around $1.5 billion) will be unlikely to attract private funding. The timing and scale of capacity enhancements should optimise economic development rather than the interests of any individual user.

Western Australia makes significant efforts to facilitate the funding of new infrastructure by the private sector where possible. For example, the State is currently running a tender process with a view to appointing a private sector provider to build and run expanded iron ore export facilities and Esperance Port. However, feedback from industry is that, while it may be more economically efficient, it is very difficult if not impossible to attract investment based on future growth in demand, and only existing demand can be relied upon in making investment decisions.

The business community in Western Australia has commented that the focus of the State (due to funding constraints) on designing infrastructure projects with an eye to (where possible) maximum cost recovery or being undertaken by the private sector on a fully commercial basis, is not necessarily in the longer term public interest:

> *"Our biggest concern is that it's starting to develop into death by a thousand cuts by all the government agencies saying 'well we want to recoup any service we provide for the industry'", Association of Mining and Exploration Companies chief executive officer Simon Bennison said.*
>
> *"We're saying, well there is an inherent public good in what you're providing to a particular industry, whether it's mining, whether it's agriculture, fishing, manufacturing or whatever.*
>
> *"That's what we pay taxes for. It's not just for health, schools, police, etcetera." (reported in MiningNewsPremium.net, 3 July 2012)*

The calculation (detailed in Appendix B) of an $870 million disability allowance for Western Australia reflects various assumptions, such as Western Australia's optimal population growth rate being two percentage points above the national average, and Western Australia's inefficient utilisation risk being twice the national average (based on an assumed relationship between this risk and population growth variability).

While our calculation is in terms of forecast demand growth, an alternative 'historical' approach (i.e. assessing a standardised level of in-advance provision in existing infrastructure) may be possible.

The GST Distribution Review final report noted (on p114) that while State governments have a major role in providing economic and social infrastructure in mining regions, the Commonwealth has indicated a willingness to play an increasing role, having recommitted in its 2012-13 Budget to:

> *... spend $6 billion over 11 years to 2020-21 on regional infrastructure investment to support Australia's economic development through investment in resource and export capacity, and address potential capacity constraints arising from export production and resource projects.*

However, while this acknowledgement of the need for public funding of economic development needs is welcome, the Commonwealth slashed the above commitment in its 2013-14 Budget. Furthermore, as noted in Chapter 1 of this submission, a former Commonwealth Finance Minister has admitted that 'pork barrelling' distorts the efficient allocation of Commonwealth funding support.

The GST Distribution Review final report also states (on pp117-118) that

> *The panel examined a number of examples provided by Western Australia of multi-user infrastructure projects but concluded that for the most part these projects do not directly impact the State Budget;*
>
> *... in the long term these projects should be fully cost recovered and are likely to generate profits (and additional fiscal capacity) for the resource sector;*
>
> [re our calculation of opportunity cost and risk] *While the panel appreciates the conceptual argument put forward by Western Australia, the estimate of these costs is highly contestable, especially in the absence of any evidence to support the* [2% per year above the national average] *population target;* and
>
> *The Panel understands that changes to the assessment of capital in the* [CGC's] *2010 Review were designed to ensure that the needs of States experiencing rapid population growth ... are recognised as population growth occurs. The Panel does not agree that further changes are needed to create capacity for States in advance of actual population growth.*

It is difficult to respond to these statements, given the lack of supporting documentation in the GST Distribution Review final report. However, we submit that these findings appear to reflect a lack of understanding of:

- the nature of economic development needs in high growth-potential regions;

- how these needs apply to both tax-funded and user charge funded infrastructure;
- how Western Australia has provided support to growth areas (albeit constrained by a declining GST share);
- the limitations of the CGC's new capital assessments (albeit these are still a big advance); and
- how, by their nature, not all of the under-recognised costs are directly observable in State budgets (e.g. opportunity costs of under-utilised general government infrastructure; costs borne through lower returns on trading enterprises; or costs recovered from non-direct beneficiaries through higher user charges on the general population).

We look forward to engaging further with the CGC as part of its 2015 Review process on the identification and of these costs.

Support for community and local government amenities/development '

All State governments provide support for community amenities, in most regions. Western Australia's high profile 'Royalties for Regions' program includes a substantial component of this type of spending.

A major driver for such spending appears to be to support the growth of balanced communities (e.g. communities with representative demographic structures and personal development opportunities for a range of occupations and incomes) that are needed for sustainable and efficient economic growth in areas of long-term development potential. Evidence suggests that mining companies only make limited and ad hoc contributions supporting this objective.

For example, an objective of the (Royalties for Regions-funded) Pilbara Cities Initiative is to transform Karratha and Port Hedland into regional cities, and develop a network of sustainable, attractive and affordable towns.

As noted in Western Australia's Pilbara Workforce Development Plan 2013-2016 (Executive Summary, p12):

> *The Pilbara Cities' vision is to transform key Pilbara towns into major urban centres and encourage settlement on a permanent basis.*

A core theme of the vision, as well as ensuring growth plans for Karratha and the Town of Port Hedland, is to transform the Pilbara from a region of cyclical economic activity linked to energy and natural resource investments to a more balanced and sustainable economy and community. Key commonalities in both growth plans [i.e. Pilbara Cities Initiative and Pilbara Workforce Development Plan] *include:*

- *economic diversification;*
- *housing diversity and affordability; and*
- *provision of a high level of social and community services to standards comparable to other metropolitan areas.*

It is important to recognise that the above three domains are inter-linked.

Economic diversification can only occur if appropriate skills are available. Appropriate skills for economic diversification cannot be attracted or retained without the availability of sufficient housing at affordable prices and without the provision of adequate community services. Similarly, provision of high quality community services and sufficient affordable housing, will require an appropriately skilled labour force.

Through the $200 million 'Housing our Workers' program (and a $355.5 million extension), the State Government aims to deliver increased affordable housing opportunities for key workers in regional Western Australia.

A few specific examples of amenities support for Pilbara communities are as follows.

- The State Government's announcement on 30 July 2012 that it will contribute $112 million for the Spoilbank Marina Precinct development in Port Hedland. The Town of Port Hedland will also contribute $40 million to this project. This will make Port Hedland more attractive to both permanent residents and visitors, and to businesses. It will form the basis for revitalising the surrounding precinct, which will incorporate 367 short stay apartments, a caravan park, public recreation space, restaurants and 3,900 square metres of commercial and retail space.

- The Karratha Service Workers Accommodation project, cited as a case study by the February 2013 House of Representatives Standing Committee on Regional Australia report *Cancer of the bush or salvation for our cities?* (p83). This project was supported by $30.4 million of Royalties for Regions funding to deliver 100 affordable rental accommodation units,[12] with the facility to house up to 250 eligible people (termed 'key workers' or 'service workers') in the Warrambie Estate in Karratha. To be eligible for a Karratha Service Workers Accommodation lease, a key worker must:

  - be employed in a job designated as providing an essential service to the community. This may be in:

    * a not-for-profit, non-government organisation;

    * a local, State or federal government department that directly services the local community; or

    * a business enterprise providing services within the shire;

  - due to income constraints, require assistance in finding suitably priced accommodation (and may be still eligible for governmental rental assistance); and

  - provide services to the broader community rather than directly or largely to resource sector clients.

- The 293 unit Osprey Key Workers Village in South Hedland, supported by $20.5 million of Royalties for Regions funding, which will provide permanent, attractive and affordable accommodation for more than 350 key workers (with rents to be set at about 40% below market value).

- The Hedland 125 House Service Worker Intervention Package, supported by $93 million in Royalties for Regions funding, which will deliver 125 homes for service workers in Hedland.

While there is a dearth of hard data on the needs of local governments, the *Cancer of the bush* report noted one specific aspect of these needs, relating to FIFO workers (p58):

> *Many councils affirmed that they were carrying the economic burden of FIFO workers on provision of local government services and infrastructure without adequate compensation for these costs. Councils reported infrastructure shortages of:*
>
> ■ *community infrastructure and services;*

[12] The proposed weekly rents are: $300 per week for a one bedroom home; $400 per week for a two bedroom home and $500 per week for a three bedroom home.

- *rail and road infrastructure;*
- *town services, including water, road and sewerage;*
- *airport, including airstrip, infrastructure; and*
- *telecommunications infrastructure.*

In terms of the CGC's standard budget, a large proportion of Services to Communities spending, potentially some Welfare and Housing spending, and some Other Expenses spending, is considered to be relevant amenities spending.

Our indicative calculation of under-recognised costs (detailed in Appendix B) of around $500 million per year in Western Australia is based on two broad assumptions:

- one half of amenities spending is based on population size (this is essentially the CGC's current assumption) and the other half on population growth weighted for regional/remoteness costs and economic development risks (which reduces private sector willingness to invest); and
- risks are disproportionately experienced in regional/remote areas (due to the communities' narrower economic base) and are greater in Western Australia's regional and (particularly) remote areas due to the greater volatility of economic activity in these areas.

Using capital costs rather than the recurrent proxy

The CGC's current assessments of infrastructure costs incorporate recurrent cost wages and dispersion disability factors. We believe that this approach understates the infrastructure cost differential between Western Australia and the national average.

Our indicative calculation of under-recognised costs (detailed in Appendix B) of around $100 million per year in Western Australia is based on data from the Rawlinsons Australian Construction Handbook (2012).

FIFO workers

As repeatedly noted in the *Cancer of the bush* report, there is a lack of good data on the extent of FIFO working arrangements,[13] the impact of these arrangements on workers, their families and affected communities, and the associated costs for State governments.

Nevertheless, there is anecdotal evidence, cited in Appendix B and also in *Cancer of the bush*,[14] about adverse impacts on law and order services; health; worker, family and child welfare; and education. There is some debate about whether costs in this area are specific to FIFO workers, or apply to workers in the mining industry more generally (e.g. see footnote 5 in Appendix B).

Our indicative calculation of under-recognised costs (detailed in Appendix B) of around $100 million per year in Western Australia is based on the following broad approach:

- an estimate of around 55,000 FIFO workers in Western Australia and 150,000 nationally (the national estimate was our guess from the sparse available data, but seems generally consistent with *Skills Australia* operations workforce data shown on page 26 of the *Cancer of the bush* report); and

- an assumption that, based on their income, the present CGC assessments would generally regard FIFO workers as having medium/high income or socio-economic status (SES), whereas their demands on State government services are more akin to low income or SES workers.

  This assumption allows the use of detailed CGC data to undertake assessments of additional costs faced by State governments in relation to FIFO workers.

The under-recognised costs would be even higher if the adverse impacts noted above relate to workers in the mining industry more generally (because of the larger affected workforce).

[13] Drive-in drive-out (DIDO) arrangements are treated together with FIFO arrangements in this chapter, although there are some differences in the detail of the issues.

[14] In the *Cancer of the bush* report, see pages 94-106.

The GST Distribution Review final report (p116 and p118) incorrectly assumed that the additional cost and demand pressures associated with FIFO working arrangements are limited to mining communities. We have not attempted to provide cost estimates for 'doubling up' of services between FIFO source and destination areas, as the cost impacts are presently too uncertain.

Regional/remote dispersion costs

The CGC's assessments of dispersion are based on an assumption of equal additional costs in Australian regions of equal remoteness (defined by the CGC's SARIA index). This does not reflect the reality, given the exceptionally high costs in Western Australia's remote areas (see our chapter on Dispersion).

Using data supplied to the CGC in the 2010 Review for the cost of education in different regions of Western Australia, we have constructed a WA-specific dispersion cost profile that is directly comparable with the CGC's education cost profile for dispersion (derived from the data supplied by all States).

The Western Australian data shows, as expected, much higher costs in regional and remote areas (largely reflecting the impact of strong resource sector activity). When extrapolated to all categories, we find that the CGC has underestimated Western Australia's dispersion costs by $315 million per annum.

Regulation Costs of Development

These costs are spread across several CGC categories, including Services to Industry, Services to Communities and Other Expenditure.

Major regulation cost drivers in Western Australia do not appear to be reflected in the CGC's assessments, including: environmental and urban development issues relating to high economic and population growth; and multiple issues around our large mining sector (environment, workforce safety, royalty regime, etc). There is currently no mining sector or economic/population growth factor in the CGC's various regulation-related assessments.

Compounding these problems, we consider that the CGC's Services to Industry assessment lacks transparency, based on the following deficiencies.

- Firstly, a distinction is made between 'regulation' and 'business development' expenses (the latter not being assessed by the CGC) that allows substantial scope for different interpretations.

  Business development expenses are intended to promote, attract and grow business activity and are generally delivered direct to businesses (2010 Review report, volume 2, p399)

  Regulatory expenses cover a range of activities that have broadly similar policy objectives: managing and controlling aspects of business activity … Some regulatory services are provided direct to businesses … Others are provided indirectly to business or provided direct to consumers (ibid, p 402)

  However, many public good activities have dual roles (e.g. in the case of mining, acquiring and disseminating geological information contributes to effective exploration and at the same time assists the government and community to manage future economic activity). It would seem more transparent to assess all activities with a significant public good element.

- Secondly, data to support the assessment consists of State opinions (gathered through a survey) about the proportions of 'regulation' and 'business development' in each of their activities, and whether the driver of expenses is 'sector size', 'number of firms' or 'other factors'.

  However, apart from 'moral hazard' issues, States may genuinely take different views on the drivers, depending on whether they have a short-run micro perspective that considers the details of individual programs (which favours 'number of firms' and 'other factors'), or a long-run broader perspective that considers underlying drivers (which favours 'sector size').

While we have not been able to estimate the extent of under-estimation of Western Australia's needs, we consider that the CGC needs to develop a sounder methodology in this area.

Current revenue capacity linked to past unequalised State expenditures

In these instances (subject to the caveats noted in the *Introduction* above) we consider that the CGC should discount the increased revenue capacity. A key example is the North West Shelf project royalty-related payments to Western Australia, which in part reflect previous State Government investment that helped the project to proceed (see Chapter 2 and Appendix A).

Policy contamination of revenue capacity assessments generally

We accept that it is difficult to quantify the impact on revenue capacity of State expenditures and policies. Nevertheless, many State responsibilities are crucial to the functioning of a State economy:

- reliable and efficient provision of key social and economic services and infrastructure (either directly or through the private sector);
- appropriate regulatory frameworks, including environmental impact assessment processes, community consultation and infrastructure planning; and
- correction of market failures.

In fact much of 'what States do' could be described as 'economic development' spending. While the CGC equalises most of this spending to an average policy 'standard', revenue capacity is based on the actual performance of each State economy, with no regard to the impact of each State's actual policies (which may depart significantly from average policy).

A Financial Review article (*Dim future for gas supply*, 27 May 2013) noted State by State issues in relation to domestic gas supply.

> *… Victoria has other potential gas resources, particularly onshore, but the Government's ban on fracking has made further exploration problematic.*
>
> *In contrast, the outlook for the Cooper Basin is good. … Significant volumes of unconventional gas-shale gas and basin centred gas are probably five years away but could become important from the end of the decade, offsetting natural decline in conventional gas.*
>
> *…*
>
> *There is also longer term potential to increase domestic gas supply in Queensland. There is considerable exploration acreage outside the current LNG projects, particularly in the north Bowen Basin. There is also continuing exploration in the Galilee Basin. If successfully appraised, some of this gas may go to LNG but is also likely to supply domestic markets. …*
>
> *The biggest question mark on the supply side remains NSW, where the main issues are political rather than geological.*

> *NSW currently produces 5 PJ of gas a year. Technically we estimate that it could produce up to 140 PJ a year by early next decade. There is no doubt that the state has an enormous gas resource at its disposal. In our projections, we expect that NSW will increase its gas production by much less than its potential. Under current government policies, the state might be able to produce around 600 PJ of gas over the next 20 years. This is six times its production over the past 20 years but well short of its total reserves and resources of over 14,000 PJ, which is largely locked up.*

The point of this quote is not to rank jurisdictions in terms of their development focus (which would be an extensive task), but to highlight the importance of policy settings to State development.

While the impact of policy settings on resource exploitation is relatively visible, many other policy settings are also very important, such as those that shape the ability of urban areas to function efficiently; the focus (or lack of it) on areas of comparative advantage and labour productivity; the location, mix and level of infrastructure; and the quality of planning and implementation of long-term stable development paths that appropriately balance community and economic interests. Moreover, even those States with arguably 'better' policy settings may have done even better if provided with more capacity and incentive to do so.

Consequently, revenue needs based on observed economic circumstances of States are not equitably assessed, and there are reduced incentives to improve the performance of State economies. As indicated in Chapter 1, we consider that the GST Distribution Review did not fully come to grips with the long-term disincentives created by HFE, nor the barrier posed by HFE to market-led economic structural adjustment.

On this basis, we consider that a broadly applied discount to revenue capacity would be appropriate.

Difficult to quantify mining-specific economic development needs

Mining-related economic development warrants special consideration because of its unique characteristics. These characteristics create a risk that the (inevitably) imperfect application of HFE will lead to under-development relative to the social optimum.

- Unlike other natural endowments, mineral endowments can only be exploited by depleting the resource. In the absence of HFE, revenues could be held in a 'future fund' to assist with economic adjustment and support future generations. However, HFE equalises away these revenues and therefore creates a future economic adjustment risk for resource States, as there is no guarantee that the future form of HFE would appropriately support States whose resources have been depleted. In principle, this risk should be recognised by HFE, as it is relevant to ensuring equalisation over time on a risk-weighted basis.

- Minerals are subject to significant and unpredictable price movements, and are sometimes located in remote high cost areas where opportunities to diversify to other economic activities in the event of a downturn may be limited. This creates high costs and risks for State investment that, in the absence of HFE, would be balanced by tax/royalty revenue benefits.

  Given the existence of HFE, these risks could be addressed by fully recognising the costs and risks faced by States (along the lines suggested in this submission). However, due to lack of data and the CGC's usual conservative approach, we are concerned that these needs will continue to not be adequately recognised.

- As royalties are largely equalised away, States have less incentive to develop contentious projects or use their regulatory and other policies to help lower costs for mining developments. In principle, this is a policy neutrality issue, and HFE should recognise the impact of State policies on the size of the mining industry. While these disincentive issues apply to all industries, they are more acute in the mining industry (which generates rent as well as taxes).

To address these issues, we propose a significant discount to the mining assessment (25% to address policy neutrality and intergenerational risk, rising to 50% if mining related expenditures are particularly difficult to assess).

4 Capital

Key Points

- We support the CGC's current 'direct capital' assessment.
  - Importantly, this recognises the impact of population dilution on both physical and financial assets.
  - This assessment is much simpler, less data intensive and more reliable than the debt charges approach that it replaced.
- An alternative 'holding cost' approach would also be acceptable, provided the CGC could determine a reasonable holding cost rate.
- The Net Lending assessment, while less material than the Investment assessment, is an integral part of the overall assessment of the 'population dilution' disability (and indeed could be merged with the Investment assessment into a single broader assessment of Net Worth) and therefore should not be removed due to materiality.
- The CGC should stop discounting the Net Lending assessment, as the fundamental approach is reliable and there is no basis for assuming that higher population growth States can raise a higher rate of return on their financial assets, or that financial assets are overvalued.

GST Distribution Review

Recommendation 6.3 of the GST Distribution Review was that the CGC "should consider the merits of adopting a simplified and integrated assessment framework", which has been conveyed to the CGC through clause 2(e) of the 2015 Review terms of reference.

From reading the discussion in the GST Distribution Review Final Report regarding this recommendation, it appears to us that this means the CGC should consider the merits of using a 'holding cost' assessment, including a population dilution assessment of net worth.

- If so, as noted below, we retain an open mind on this approach.
- However, the wording of this recommendation is obscure.

2010 Review Capital Assessment Framework

We support the 'direct capital' framework of the 2010 Review capital assessments.

This framework is quite simple and conceptually robust, as follows.

- To provide the average standard of services, each State requires the same per capita quantity of physical assets (measured by real value), adjusted for use disabilities.
  - The change in this level of assets from the start of the year to the end of the year gives the quantity of new physical assets that a State must purchase that year. Expenditures are also proportional to cost disabilities.
    - This is assessed in the CGC's *Investment* category.
  - A State will also have depreciation expenses proportional to its stock of physical assets and its cost disabilities.
    - This is assessed in the CGC's *Depreciation* category.
- To achieve the average per capita net revenue from interest and dividends, each State requires the same per capita value of financial assets.
  - The change in this value of assets from the start of the year to the end of the year (excluding revaluations) gives the amount of additional financial assets that a State must acquire that year.
    - This is assessed in the CGC's *Net Lending* category.[1]

Major features of the capital assessments are that:

- they recognise that States with higher population growth will have to purchase more physical assets to maintain service standards and will require more financial assets to generate the same per capita financial returns;
- they recognise use disabilities (that affect the relative per capita amount of physical assets required) and cost disabilities (that affect the relative cost of purchasing a unit of capital). The judgements to be made in assessing these disabilities are no different in principle from judgements to be made in assessing non-capital disabilities;

[1] Interest revenue and dividend revenue is then assessed equal per capita in the Other Revenue category, and interest on debt is assessed equal per capita in the Other Expenses category.

- it is not necessary for the CGC to make any judgements about the relative impact of population growth versus capital deepening versus use/cost disabilities. This is automatically determined by the assessment formulae; and

- States with higher population growth are not compensated for the full value of new physical assets that they need to purchase, but rather for a depreciated value that reflects the average age of these assets across States. The difference between new value and depreciated value is a cost met by the higher growth State. In this way, lower growth States with older assets are not disadvantaged.[2]

We also do not agree with past arguments that the 'direct capital' approach is undesirable because it equalises net lending rather than operating surpluses. HFE is not about equalising operating surpluses or any other specific aggregate, but about capacity to provide average standards of service. Government accounts are merely tools to provide the information required to achieve this.

Alternative Capital Assessment Frameworks

Debt charges

Prior to the 2010 Review, the CGC used a debt charges approach to assessing capital requirements.

Under this approach, rather than giving States equal capacity to purchase assets each year, the CGC sought to give States equal capacity to service the debt accumulated on past asset purchases.

In a submission to the 2004 Review, we demonstrated algebraically that needs calculated from a valid debt charges assessment would over time be equal in net present value terms to needs calculated from a valid 'direct capital' assessment.

However, the data requirements for a debt charges approach are so extensive that a reliable debt charges approach is not feasible.

- A pure debt charges approach requires an assessment of accumulated debt for each State under average policy for all past years.

[2] Higher growth States must pay more for new assets (without compensation through HFE), but this is offset by the benefits they receive from having newer assets.

- By the time of the 2010 Review, the CGC's debt charges assessment had clearly ceased to give meaningful results, due to data and methodology problems.

The 'direct capital' assessment introduced in the 2010 Review is much simpler, less data intensive and more reliable than the debt charges assessment that it replaced. It was one of the major achievements of the simplification agenda of that Review.

Holding cost

Another approach that was considered in the 2010 Review was a 'holding cost' assessment.

This would equalise the opportunity cost of holding physical assets (including depreciation), while also recognising population dilution on net worth.

In our October 2007 submission (to the 2010 Review) on capital assessments, we demonstrated algebraically that needs calculated from a valid 'holding cost' assessment would over time be equal in net present value terms to needs calculated from a valid 'direct capital' assessment.

In the 2010 Review, our view was that both the 'direct capital 'and 'holding cost' approaches would be acceptable, if implemented correctly. Our only reservation about a 'holding cost' approach (albeit a significant one) was that the CGC would have to determine a holding cost rate, which does not directly appear in States' accounts (it is an implicit component of total interest charges).

Issues with Net Lending Assessment

Materiality

Clause 2(a) of the 2015 Review terms of reference asks the CGC to consider quadrupling its materiality thresholds (as per Recommendation 3.1 of the GST Distribution Review).

In advice to the Commonwealth Treasury (presented to States on 22 February 2013), the CGC advised that quadrupling the materiality thresholds to the current methods would result in the removal of the Net Lending assessment, as it would not meet the $120 per capita threshold for category redistribution.

As discussed in Chapter 1: *Equalisation Principles*, we do not believe that this 'removal of moving parts' approach to materiality thresholds is appropriate.

In addition, the Net Lending and Investment categories both contain part of the assessment of the 'population dilution' disability, which is highly material, so that under the CGC's guidelines the overall factor would need to be assessed even if the Net Lending category ceased to exist as a separate entity. In any case, the Net Lending and Investment categories could be amalgamated into a unified Net Worth assessment.

Alternatively, if a 'holding cost' approach were adopted, there would necessarily be a single population dilution assessment of total net worth.

Discounting

In the 2010 Review, the CGC decided to discount the Net Lending assessment by 25% due to uncertainty that all non-policy influences had been assessed and concerns about data quality.

To the extent that this concern relates to the rates of return that States can achieve on their net financial assets, a discount is equivalent to assuming that financial assets (or liabilities) held by States with higher population growth can achieve a higher rate of return (or involve higher interest costs) than assets (or liabilities) held by States with lower population growth.

- This is clearly not the case for cash deposits and bonds, and unlikely to be material for debt holdings.

- While the returns on equity in public trading enterprises may vary among States, there is no evidence or conceptual case that public trading enterprises in high population growth States will give a higher rate of return on a fairly valued base. (Low growth States may receive lower returns if they have invested on the basis of unrealistic growth forecasts.)

  - If the CGC wishes to examine rates of return for public trading enterprises, it should model the expenses, revenue and capital investments of these enterprises, just as it does for general government entities.

The CGC may be concerned that States have valued their equity in public trading enterprises incorrectly. However, incorrect valuations could just as easily be too low as too high.

For the above reasons, we believe that the CGC should cease discounting the Net Lending assessment.

5 Location Costs

Key Points

- Western Australia has strong concerns with the proposition of equalising interstate costs on a 'spend gradient' basis:
  - a rigorous definition of a 'spend gradient' would need to include both price and income effects (noting for example that government services in Perth are low cost relative to community and State government own-source incomes);
  - the income effect would reflect a combination of community income-driven expectations and State government incomes, but the latter is strongly influenced by the GST distribution, creating circularity and lack of clarity in how a 'spend gradient' concept could be implemented;
  - there are flaws in the arguments that have been put forward to support an interstate 'spend gradient' (it is not inefficient to provide more costly services where this is offset by greater factor productivity; and the 'analogy' with the CGC's intrastate cost assessments does not hold up); and
  - an interstate 'spend gradient' principle is fundamentally incongruous with the concept of HFE (it would make the idea of 'an equal standard of services' meaningless and would support a largely equal per capita distribution of the GST).
- The CGC's dispersion assessments should take into account State-by-State differences in housing accommodation costs in areas of similar remoteness.
- The CGC should reinstate the interstate office accommodation assessment, given the demonstrable variances in costs between the States that appear highly material.

Equalisation of interstate costs on a 'spend gradient' basis

Western Australia has strong concerns with recommendation 6.4 of the GST Distribution Review report (reflected in clause 2(f) of the 2015 Review terms of reference):

> *That the CGC investigate whether it is appropriate and feasible to equalise interstate costs on a 'spend gradient' basis. This investigation should occur in the context of the assessment of other cost disability factors including costs of remote locations, and administrative scale.*

The concept of a 'spend gradient' was not rigorously defined. The underlying premise, however, appears to be that if services are more expensive, that a lower quantity (or quality) of these services should (and would) be purchased from an efficiency standpoint.

Equalising interstate cost differentials on this basis has been justified in the GST Distribution Review report on the basis of promoting more efficient settlement patterns (i.e. people living in high cost areas should move to lower cost areas). However we have a number of concerns with this approach, as follows.

- A price-only view of the 'spend gradient' is fundamentally flawed when comparing costs of services. Income effects must also be considered. Relative to community and pre-HFE government incomes, services in Western Australia are cheap. On a full 'spend gradient' approach, Western Australia should therefore be purchasing a higher quality / quantity of these services.
  - In this regard, the cost of services in Western Australia naturally reflects the higher wages that must be paid in a high wage State. Paying these higher wages is not really a cost disability for State Governments. HFE has created the cost disability by equalising the tax capacity that flows from high incomes.
- The income effect is strongly influenced by the GST distribution, creating circularity and lack of clarity in how a 'spend gradient' concept could be implemented.
- The often claimed inefficiency of equalising cost differences neglects the fact that Australian HFE equalises nominal revenue capacity. It is efficient for the nation to have people living and working in high cost areas (and provided with government services to facilitate this) if their productivity is high (e.g. mining areas). Indeed, to reduce barriers to structural adjustment, Western Australia considers there is a strong case for less than full equalisation of associated revenues.

- The modelling put forward by South Australia in the GST Distribution Review had substantial technical problems, some of which related specifically to the assertion that it was inefficient to fully equalise costs. Western Australia provided details of these problems to the GST Distribution Review Panel in its August 2012 submission and subsequent correspondence. This can be made available to the CGC on request.

- The interstate 'spend gradient' approach was partly supported by analogy with the existing intrastate cost assessments.
  - However, the intrastate cost assessments are a poor comparison, given that they have major flaws, and are not based on a 'spend gradient' principle. Rather, the intrastate assessments reflect average service costs (without dissection into price and demand components) in regions solely defined by distance from population centres. They do not reflect actual service prices (which are strongly influenced by local economic circumstances such as in the Pilbara), or incomes, or the strategic necessity to provide services to maintain economic development in critical areas.
  - Even if the intrastate assessments were to be considered as some kind of average 'spend gradient' approach, the analogy does not stack up, as substitutes for services are not readily available in capital cities. While it may be possible for high service costs in regions to be minimised via procurement of services from cheaper locales (e.g. tele-medicine, tele-education, transport to cheaper locations, etc), this is not a feasible option for capital cities. For example, it might reduce costs to fly a complex patient from Broome to be treated in Perth, but it is not acceptable other than in very limited circumstances to fly a patient from Perth to be treated in Sydney).

- The idea of a spend gradient seems fundamentally incongruous with that of horizontal fiscal equalisation.
  - How can this be reconciled to the principle of equalising to a similar standard of services, and what meaning would that principle have?
  - If the CGC recognises the higher demand for services in States with relatively cheaper services (i.e. where income is high compared to the cost of services), this seems to support a closer to equal per capita distribution of the GST.

Other Location Assessment Issues

Regional staff accommodation rental costs

There is strong evidence to suggest that regional rents in areas of similar remoteness (as defined by the CGC) vary markedly across the states. In particular, many regional areas of Western Australia have rents far exceeding the national average. Port Hedland in the Pilbara region is a notable example with a weekly rent of $2,100 as at February/March 2013.[1] Exorbitant rents in the Pilbara region (and indeed other very remote regions in WA) have been reported in the media, including recently on 21 June 2013 where it was identified that "*The cost of living ... in the Pilbara is the most expensive in Australia – and maybe the world"*.[2] Private rents in the region were cited as 435% higher than Perth.

These differences are not currently picked up in the CGC assessment. Hence States that face higher costs in housing employees in regional areas are currently being penalised, in so far as the costs in that region exceed the national average costs for provided housing in similarly remote regions.

Preliminary research by the Western Australian Treasury has indicated that comprehensive regional rental data exists for all the States.[3] It would therefore be possible to compile average rental cost data for a specified category of remoteness on a State basis rather than a national average. Early analysis of the data received by the Western Australian Treasury shows stark differences in the average of the median rents across the States[4] - this can be seen in Table 4.1 below.

Table 4.1: Rental Costs in Remote Areas

Average of Median Rents by Remoteness		
	Remote	*Very remote*
NSW	220	225
NT	512	414
Qld	376	238
WA	**330**	**801**
Average	**360**	**420**

Source: Western Australian Treasury analysis of Real Estate Institutes' data.

1 For a 3 bedroom, 1 bathroom, brick and tile house. Data sourced from the Department of Regional Development and Lands.

2 *"Pilbara costs the highest*", 21 June 2013, available at http://au.news.yahoo.com/thewest/a/-/wa/17688677/pilbara-costs-the-highest/

3 Available from the respective Real Estate Institutes for each State.

4 Not all States have been included in this analysis due to the WA Treasury not receiving the data from the missing States in time

Western Australia recommends that the CGC's dispersion assessments be amended to reflect regional accommodation costs on a State by State basis, rather than a national average.

Interstate office accommodation assessment

Prior to the 2010 Review, the CGC assessed differences among the States in the cost of leasing office accommodation in the capital cities. In the 2004 Review working papers, the decision for including this assessment was listed as follows:

> *The Commission accepted that a conceptual case had been established for assessing accommodation cost disabilities. The conceptual case was supported by data which the Commission considered to be sufficiently indicative to show that States faced differences in the per capita costs of accommodation. The evidence indicated that these differences had an impact on State budgets which the Commission considered to be material. Therefore, the Commission decided to assess accommodation costs disabilities and to base them on rental data provided by the AVO.*

In the 1999 Review, the expense weighting of this assessment was increased from 1 to 2 per cent of category expense to reflect '*the increasing tendency of State governments to lease property rather than own it*'.

Since the 2010 Review however, this assessment has been removed. The 2010 Review Final Report notes that differences in office accommodation may exist, but suggests that the differences are likely to be small and offset other possible interstate differences in other costs. The Report states that:

> *Given the extent of judgment involved in the assessment, we are not confident equalisation would be improved by including allowances for any such extra costs.*

Western Australia disagrees with this conclusion and believes that the reasons for initially implementing the accommodation assessment remain valid. Recent data from Jones Lang Lasalle[5] shows that there are substantial differences in office leasing costs between the capital cities and that in fact, these differences are more material than those initially identified by the CGC in the 2004 Review.

[5] "*Canberra is the most affordable CBD location for a government department to locate"*, Jones Lang Lasalle website, 29 May 2013.

Table 4.2: Average Prime Gross Effective Rent (Q1, 2013)

Sydney	$621.10
Melbourne	$399.06
Brisbane	$486.08
Perth	$794.53
Canberra	$332.82

Source: See footnote 5.

It is noteworthy that Western Australia is now the most expensive place to lease office accommodation, while at the time of the 2004 Review, it had the cheapest Prime and Secondary CBD lease costs per square metre.

Such structural change is not being picked up in the current assessment. In fact, in the years when the assessment was in place, Western Australia was effectively penalised for its lower cost pressures with no recompense in the current environment where the costs to the State are now the highest.

Preliminary calculations by the Western Australian Treasury suggest that equalising commercial leasing costs in the capital cities would result in an increase in assessed expenses for Western Australia in the order of $200 million (or $85 per capita) per year. This is well in excess of the existing materiality thresholds.

Western Australia therefore strongly recommends that the CGC reinstate this assessment.

6 Land Tax

Key Points

- Land tax is very unpopular and, as a consequence, State governments are very conscious of capacity to pay and regularly adjust effective tax rates to offset increases in property values. This is 'what States do'.
  - This is seen in evidence that States with higher land values tend to have lower land tax rates, and in land tax revenue growth tending to be 'capped' at below overall growth in land values.
- Land values do not necessarily provide a good indicator of capacity to pay in the short term as they are influenced by speculative factors and government policy, rather than just the income generation capacity of the land.
- The current methodology also acts as a disincentive for increasing land tax compliance, by potentially redistributing more money than is raised.
- The relationship between land tax and economic activity is strong and stable, indicating that an economic activity indicator would provide a reasonable guide to States' land tax capacities.
  - This would have the added virtues of being simple and transparent, avoiding the reliability and comparability concerns associated with the other approaches, and abstracting from policy influences on land values.
  - We propose using household income as the land tax capacity indicator.
  - Alternative indicators could include Gross State Product, adjusted to exclude the gross operating surplus of industries where there are substantial impacts from cross-border income flows (e.g. mining), or employment.

Land Tax Base

It has generally been assumed that land values give the best indication of the States' capacity to generate land tax revenue.

We contest this view.

Land values do not necessarily provide a good indicator of capacity to pay, as they are heavily influenced by speculative factors. The market at any one time may be a poor indicator of the underlying value of real estate in terms of its future income generating capacity.

Land tax is also a deeply unpopular tax.

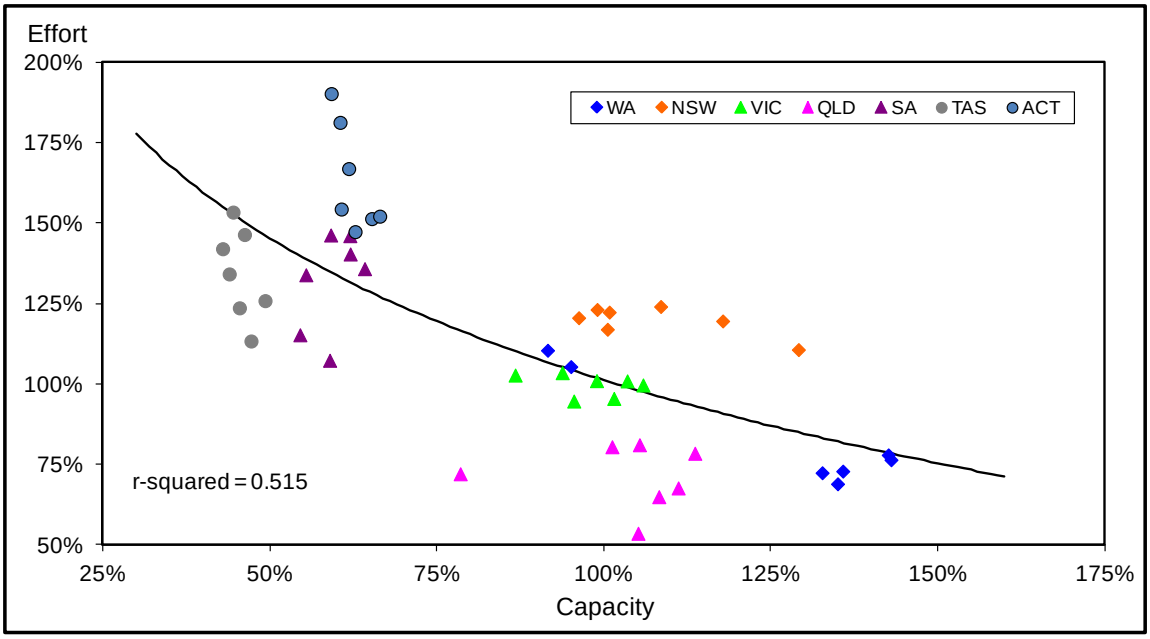
- Land tax is highly visible, with around 112,000 taxpayers in Western Australia directly receiving a lump-sum assessment on an annual basis (2011-12 data).

Reflecting taxpayer discontent with sudden increases in land tax bills, State governments across Australia frequently adjust tax rates and/or thresholds to offset (at least in part) growth in land values.

In particular, rapid increases in underlying land tax collections (e.g. a 50% jump between 2007-08 and 2008-09 in Western Australia) put governments under enormous pressure to reduce the rates (in the just-mentioned instance, capping the revenue increase at 35%).

Conversely, jurisdictions with relatively low land values have relatively high land tax rates. The inverse relationship between land tax effort and capacity is illustrated in Chart 6.1 below.

Chart 6.1: Land tax capacity versus effort, 2005-06 to 2011-12 (a)



Source: CGC 2012 and 2013 Updates results, with WA Treasury fitted line.

(a) Relative to the national average. Each data point for a given State represents a different assessment year. Excludes the Northern Territory, which does not levy land tax (and has an imputed capacity that may not be reliable).

Furthermore, some States (including Western Australia) have policies to reduce the year-to-year variations, such as by capping the growth in land values for land tax purposes, or using multi-year averages for land values. If capping or averaging were applied under a uniform national tax scale, the relationship between land tax revenue and land values would be weakened.

Between 2002 and 2009 the land tax exemption threshold in Western Australia was changed seven times, from $10,000 in 2002-03 to $300,000 in 2008-09. The rates were also significantly reduced, reflecting strong growth in land values and the State Government's desire to keep land tax growth low in response to taxpayer complaints.

Across Australia during the same time period, every jurisdiction that levies land tax increased its tax thresholds and/or cut their land tax rates, to the extent that a property anywhere in the country with an unimproved value of less than $3,450,000 would be liable for less land tax in 2008-09 than in 2002-03. In fact, even accounting for rate increases and threshold cuts between 2008-09 and 2012-13, land tax payable in 2012-13 is still less than in 2002-03 in all jurisdictions for land with an unimproved value of less than $950,000.

Table 6.1: Land tax payable in 2002-2003

Land Value	WA	NSW	VIC	QLD	SA	TAS	ACT	Average
$	$	$	$	$	$	$	$	$
20,000	0	0	0	0	0	53	200	36
50,000	75	0	0	0	0	218	500	113
100,000	150	0	0	0	175	493	1,000	260
150,000	275	0	150	0	350	1,118	1,875	538
200,000	420	0	200	0	525	1,743	2,500	770
500,000	2,383	4,163	800	2,631	4,175	8,493	7,500	4,306
1,000,000	8,783	12,663	6,230	9,031	12,425	20,993	15,000	12,161
5,000,000	96,783	80,663	169,880	76,500	160,425	120,993	75,000	111,463

Table 6.2: Land tax payable in 2008-09

Land Value	WA	NSW	VIC	QLD	SA	TAS	ACT	Average
$	$	$	$	$	$	$	$	$
20,000	0	0	0	0	0	0	120	17
50,000	0	0	0	0	0	188	300	70
100,000	0	0	0	0	0	463	673	162
150,000	0	0	0	0	0	738	975	245
200,000	0	0	0	0	270	1,013	1,693	425
500,000	180	2,212	775	0	1,770	4,838	5,706	2,212
1,000,000	630	10,212	2,975	4,500	11,420	16,088	12,706	8,362
5,000,000	40,430	85,212	69,975	62,500	159,420	116,088	68,706	86,047

Table 6.3: Land tax payable in 2012-13

Land Value	WA	NSW	VIC	QLD	SA	TAS	ACT	Average
$	$	$	$	$	$	$	$	$
20,000	0	0	0	0	0	0	120	17
50,000	0	0	0	0	0	188	300	70
100,000	0	0	0	0	0	463	625	155
150,000	0	0	0	0	0	738	975	245
200,000	0	0	0	0	0	1,013	1,420	348
500,000	180	1,764	775	0	920	4,088	6,138	1,981
1,000,000	630	9,764	2,975	4,500	9,447	11,588	15,138	7,720
5,000,000	40,430	84,080	69,975	62,500	156,771	71,588	87,138	81,783

Taxpayers' complaints about their capacity to pay dictate that the downward adjustment of effective land tax rates is an almost inevitable outcome in strongly rising property markets. In short, this is 'what States do.'

Disincentives to increase land tax compliance

The current methodology also acts as a disincentive to increasing land tax compliance. At present, the CGC measures a State's relative land tax revenue raising capacity on the basis of State revenue offices' data on taxable land values. Consequently, the amount of compliance done by the offices affects the size of the land tax base in each jurisdiction.

In Western Australia, an increase in land tax compliance will result in a GST redistribution loss greater than the revenue gain from the increased taxation for all properties worth less than $7.9 million. Situations such as this act as a disincentive for States to further improve their revenue collection efforts (including in the interests of taxpayer equity).

As an extreme example, Western Australia would lose over $5 for every $1 in additional land tax revenue collected on land valued in the $0.8 million to $1 million range. This creates a perverse incentive for the State to reduce its compliance effort in order to reduce its tax base, and therefore increase its share of the GST distribution.

For example, suppose a property investor owns two properties with unimproved values of $1,250,000 and $2,750,000 and the State revenue office does not detect the common ownership. The two properties would be assessed separately, and the investor would pay land tax of $1,805 and $12,980 respectively, for a total of $14,785 (in Western Australia). If the Office of State Revenue identified that these properties should be aggregated, the investor would instead calculate land tax on the aggregated unimproved value of $4,000,000. At this value, the investor would pay $28,230 in land tax, an increase of $13,445. However, Western Australia would suffer a GST redistribution loss of $17,224, leaving it $3,779 worse off overall (despite introducing measures which have increased tax revenue[1]).

Table 6.4: GST redistribution losses from increased land tax compliance

	Actual land tax collected	GST redistributed from property of this value	Difference
Current revenue	$14,785	-$23,720	-$8,935
Aggregated	$28,230	-$40,944	-$12,714
Net revenue	$13,445	-$17,224	**-$3,779**

Western Australia is not the only State to suffer a disproportionate GST redistribution loss as the result of increases in land tax collections. Using 2011-12 data, New South Wales, Victoria, Queensland and South Australia have the potential to lose more than 90% of the new revenue collected through redistribution at certain land value points.

Government policy can affect land values

Land values (and hence the assessed capacity to raise land tax) can be affected by government policy outside of tax policy.

Local councils (that are ultimately under State Governments' authority) have the ability to alter land values without directly targeting the land tax base. As an example, an inner city council could impose housing density restrictions for all new buildings, making it difficult to develop high density apartment buildings in the area, potentially reducing the unimproved value of the land (as it is now less attractive to developers).

[1] Full calculations are available on request.

The ability of governments to influence land values has also been acknowledged in calls for the Western Australian Government to, for example, dispose of its land holdings to take the pressure off land values and thereby improve housing affordability.[2] Similarly, the Commonwealth Treasury has explained that the 2008 First Home Owners Boost "was designed to encourage people who had already been saving for a home to bring forward their purchase and prevent the collapse of the housing market."[3]

As land values can be influenced by economic policy, and some States have a disincentive to improve their land tax collections (i.e. where the CGC is unable to correct for the compliance effort or policy difference), the use of land values as the base for assessing taxpayers' ability to pay is flawed.

The preferred method for assessing land tax capacity

We suggest that household income is a superior measure by which to assess capacity to pay land tax. It has two large benefits over a land value measure: it is consistently measured by an independent third party, the ABS, and it is immune to policy contamination in the property market.

In Western Australia, successive policy changes have effectively capped growth in land tax to rates similar to growth in economic activity. Indeed, the ratio of land tax to household income, Gross State Product (GSP) or employment is relatively stable over the period 1989-90 to 2012-13.

- Charts 6.2 to 6.5 show Western Australia's land tax collections as a percentage of household income, GSP, GSP (without mining), and on a per worker basis, compared to all of Australia. For comparison purposes, Victoria has been included in the chart due to its large size and relatively stable collections over the period (charts for all States have been included in Appendix C). As can be seen from the charts, the level and year-to-year variation of land tax relative to these economic indicators is similar in all instances (except for GSP for Western Australia, which is discussed later).

- The marked decline in Western Australia's implied effort across all of the metrics in recent years reflects the significant cut in land tax rates introduced as a result of the 35% increase in land tax revenue between 2007-08 and 2008-09.

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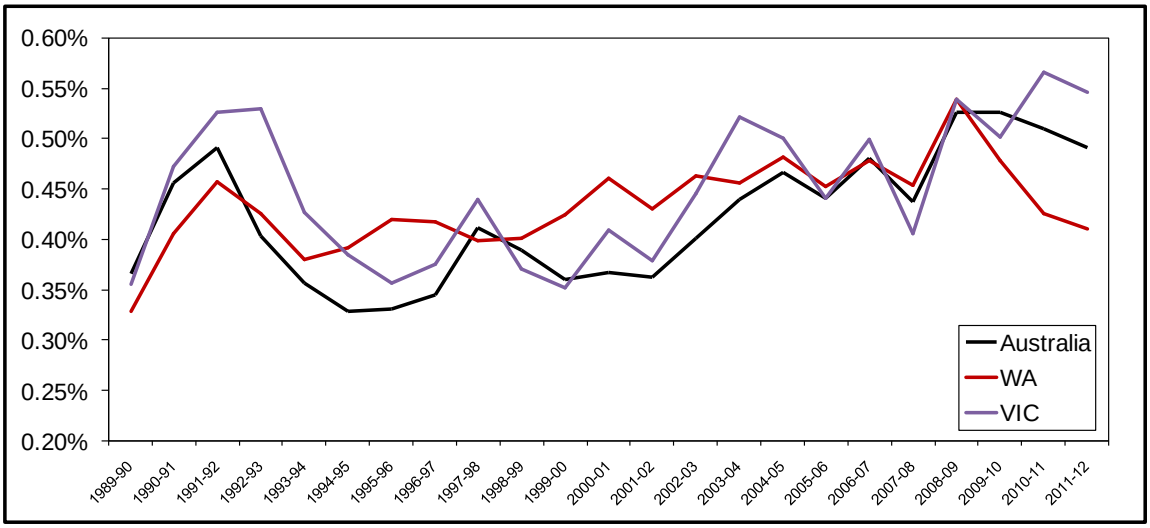
2 See comments attributed to the Western Australian Minister for Housing quoted in "Land plan to cut house prices," *The West Australian*, 9 April 2013. Accessed 16 July 2013. http://goo.gl/HO1fH

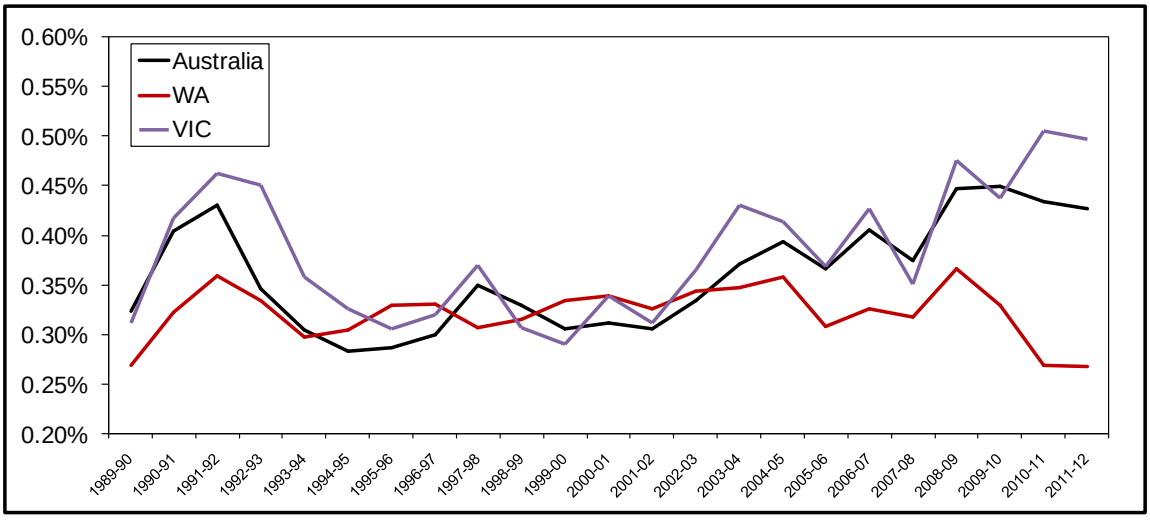
3 Commonwealth Treasury Executive Minute of 26 February 2010. Released under FOI.

Chart 6.2: Land tax collections as a percentage of household income



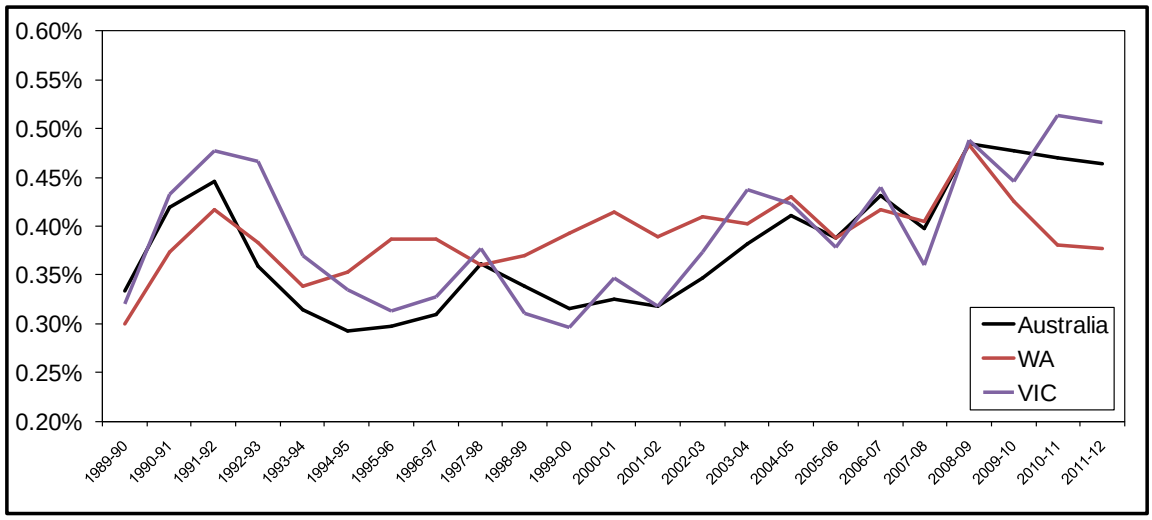
Source: WA Treasury estimates based on ABS Cat 5220.0 and CGC data.

Chart 6.3: Land tax collections as a percentage of Gross State Product.



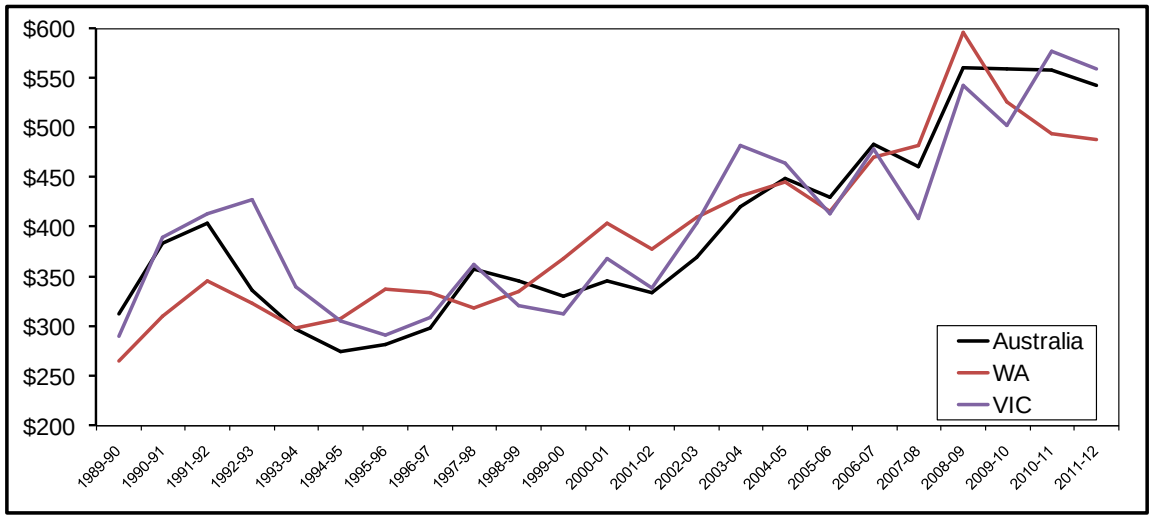
Source: WA Treasury estimates based on ABS Cat 5220.0 and CGC data.

Chart 6.4: Land tax collections as a percentage of Gross State Product (with the mining component excluded)



Source: WA Treasury estimates based on ABS Cat 5220.0 and CGC data.

Chart 6.5 Land tax collections (real) per worker (seasonally adjusted)

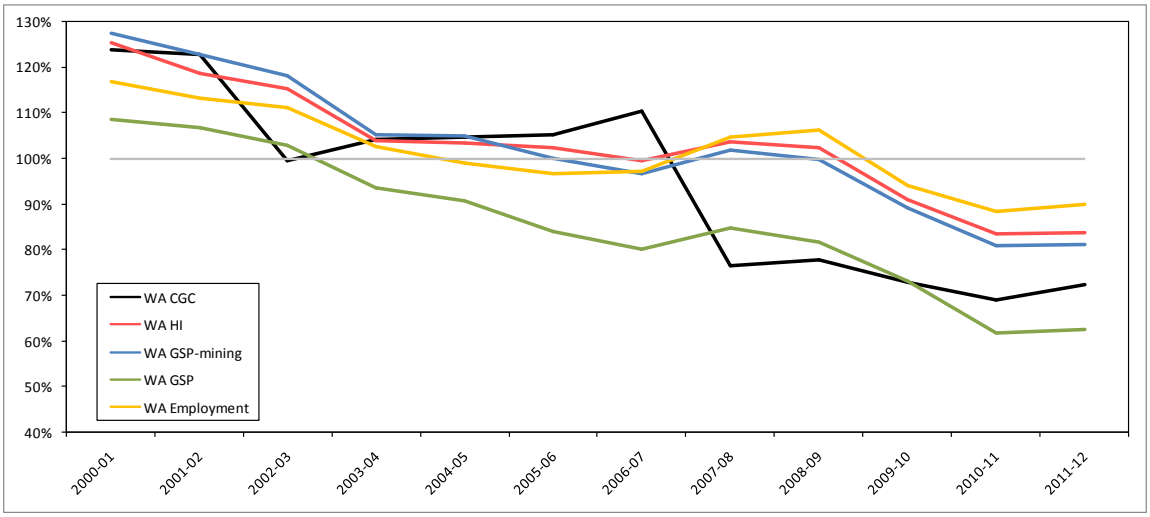


Source: WA Treasury estimates based on ABS Cat 6202.0, 6401.0 and CGC data.

It is also instructive to compare Western Australia's relative land tax effort (i.e. relative to the average of all States) as assessed by the CGC against what it would have been using the above economic indicators as the revenue base.

- As shown in Chart 6.6 below, Western Australia's land tax effort is less volatile over time using the household income measure, and does not exhibit a decline of the same extent over the past 11 years as implied by the CGC's land value measure.

Chart 6.6: Summary of different measurements of land tax effort for Western Australia compared to the most recent CGC estimates.



Source: WA Treasury estimates based on ABS Cat 6202.0, 5220.0, 6401.0 and CGC data.

Note:

1. Relative to the national average. Excludes the Northern Territory, which does not levy land tax.
2. Data to 2003-04 is not directly comparable with data from 2004-05 onwards due to changes arising from the 2010 CGC methodology review. Pre 2004-05 data also includes tax revenue raised from government entities in South Australia which is excluded from later years.

Extending the use of household income to all States and Territories shows that in all cases (except Victoria and Queensland) the standard deviation of implied relative land tax effort ratios is much lower than the corresponding CGC effort ratios.

Table 6.5: Comparison of standard deviations of land tax effort for years 2000-01 to 2011-12

	WA	NSW	VIC	QLD	SA	TAS	ACT
CGC	20.17%	11.73%	6.64%	8.01%	35.56%	63.95%	18.98%
HI	12.83%	7.49%	7.50%	12.41%	11.06%	10.14%	3.47%
GSP	15.58%	8.67%	7.39%	13.01%	12.95%	12.77%	4.73%
GSP-Mining	14.87%	8.21%	6.95%	12.82%	12.09%	11.39%	3.60%
Employment[(a)]	9.07%	8.80%	7.54%	12.76%	11.27%	10.72%	N/A[(b)]

Source: WA Treasury estimates based on ABS Cat 6202.0, 5220.0, 6401.0 and CGC data

(a) Seasonally adjusted employment data

(b) The ABS does not report seasonally adjusted employment data for the Australian Capital Territory or the Northern Territory.

The conclusion to be drawn from this analysis is that a general measure of economic activity is a much more plausible measure of land tax capacity than land values.

Using household income results in much less extreme differences in revenue capacity across States.

- For example, for 2011-12, the CGC's 2013 Update assessed Western Australia's per capita revenue capacity as 169% higher than that of Tasmania. However, Western Australia's per capita household income is only 37% higher than Tasmania's.

- In the same year, Western Australia's per capita revenue capacity is assessed as being 107% higher than South Australia. Yet Western Australia's per capita household income is only 22% higher than South Australia's.

Notably, the general conclusions drawn do not depend on which indicator of economic activity is used. However, we consider household income to be a better indicator of taxable capacity than GSP or employment, as GSP includes income that is paid out of the State through dividends, while employment can be high despite limited capacity to pay (i.e. if a State has a low paid workforce).

- The GSP issue is important in the mining sector, which generates relatively little land tax directly (compared to the size of mining factor income), and instead generates most land tax indirectly through the impact on the economy of mining income retained in the State.

- This issue is most important in Western Australia due to the size of the mining industry compared to other States.

- To illustrate, Western Australia's GSP in 2011-12, was $236.3 billion, compared with household income of $153.8 billion. By contrast, Tasmania's GSP was $24.3 billion, compared to a household income of $24.1 billion. Excluding the mining component of GSP in both instances gives a value of $167.9 billion in Western Australia, and $24.1 billion in Tasmania respectively.

In summary, we believe there is a strong case for the CGC to use an appropriate general indicator of economic activity as the land tax base measure.

- Household income is considered an appropriate indicator. An alternative could be Gross State Product if the gross operating surplus of industries is excluded where there are substantial impacts from cross-border income flows, such as mining.

- Unlike the current approach, a general economic indicator has the advantage of being simple and transparent, and is updated annually – consistent with key objectives of the 2015 Review.
- This approach would also remove the disincentive for State governments to increase their land tax collection efforts.

7 Indigeneity

Key Points

- The CGC currently uses SEIFA[1] indexes to measure socio-economic status (SES), which means that it generally assumes that Indigenous SES in an area matches the non-Indigenous SES of that area.
  - This has a significant impact on the CGC's assessments because of the impact on service costs of Indigenous SES.
- We have analysed an Indigenous specific measure of SES and found that:
  - whereas non-Indigenous SES generally improves with remoteness, the opposite is the case for Indigenous SES;
  - overall there is no relationship between Indigenous and non-Indigenous SES;
  - in remote regions, there is an inverse relationship between Indigenous and non-Indigenous SES; and
  - although Western Australia has relatively good non-Indigenous SES, it has one of the worst Indigenous SES.
- We consider that we can address the CGC staff concerns about using Indigenous specific SES measures:
  - the low number of Indigenous people in some areas would not be a problem, as they would have little impact on any assessments; and
  - domination of low SES Indigenous statistics by the Northern Territory is not considered a problem, as it would in practice be difficult for the Northern Territory to manipulate its grant share, and the concentration of Indigenous persons with relatively low SES in the Northern Territory is all the more reason to properly reflect it in the assessment of the Territory's fiscal capacity.
- Western Australia believes that the CGC should (and can) adopt an Indigenous specific SES measure for its assessments.

The CGC currently measures socio-economic status (SES) using the ABS' SEIFA indexes. These indexes are calculated for areas, using a range of SES indicators. The CGC assumes that all persons in a particular area have the same SES, as measured by the SEIFA.

[1] Socio Economic Indices For Areas.

In most areas, the non-Indigenous population will dominate. This means that the assumed SES of the Indigenous population in an area will be effectively the average SES of the non-Indigenous population in that area. Where the Indigenous populations dominate, it is further assumed that the measured Indigenous SES will not be significantly influenced by the non-Indigenous minority.

However, as discussed below, we believe that these assumptions are invalid.

We believe that this is important for the CGC's assessments. For example, we have found that SES of Indigenous people interacts differently with health costs than does the SES of non-Indigenous people.[2] In particular:

- the level of hospital use is more closely related to SES for Indigenous people than for non-Indigenous people; and
- the average level of SES for Indigenous people tends to be lower in the more remote areas (where providing services is more expensive).

Given Western Australia's concerns about the relationships between health costs, remoteness, SES and indigeneity, we welcome the CGC's continued interest in measuring Indigenous SES.

The CGC released two papers, on *Measuring Socio-Economic Status*[3] and *Relative Indigenous Disadvantage*,[4] for the 30 August 2012 Data Working Party meeting.

The first paper affirmed the CGC's preference for using SEIFA to measure the SES status of individuals (albeit discussing a number of concerns about its use).

The second paper further discussed ways of measuring the relative SES of Indigenous people across States. While valuable, this discussion did not settle the search for a general measure of Indigenous advantage.

Relationship Between Indigenous and Non-Indigenous SES

We have examined the relationship between Indigenous and non-Indigenous SES in the same region, by using data from the Centre for Aboriginal Economic Policy Research (CAEPR).

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2 Western Australian April 2009 Submission: *Indigenous Heterogeneity and Drivers of Health – Including Measurement of Hospital Service Impacts for Indigenous and Non-Indigenous Persons.*

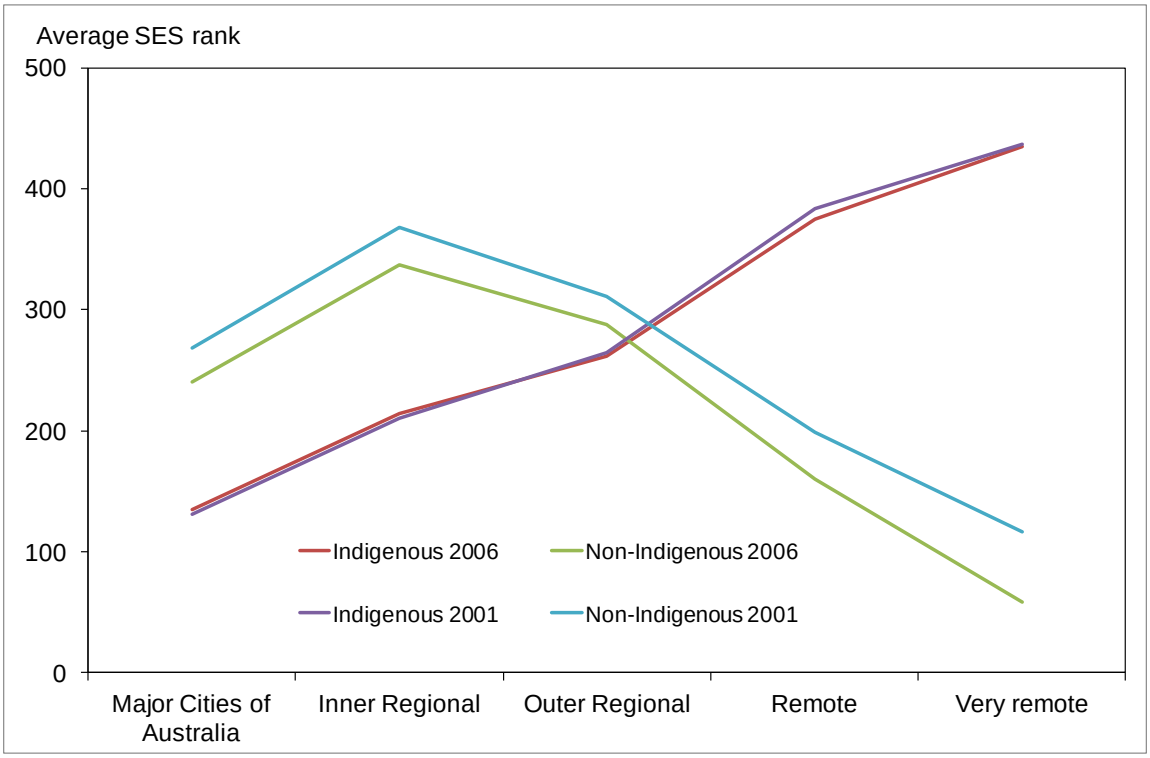
3 Staff Discussion Paper 2012-03.

4 Staff Discussion Paper 2012-04.

CAEPR has developed an SES measure based on a range of population characteristics from the Censuses.[5] This ranked the ABS Indigenous Areas[6] according to the SES of each of their Indigenous and non-Indigenous populations (for each of the 2001 Census and 2006 Census).

Using this data, the relationship between the SES of Indigenous and non-Indigenous people by remoteness region is illustrated by Chart 7.1. This chart shows the average rank for each of Indigenous and non-Indigenous persons (a higher rank on the vertical axis represents greater disadvantage) for remoteness region according to ARIA.[7]

Chart 7.1: Australian Indigenous Areas by SES Rank (a) and Remoteness (b) Indigenous and Non-Indigenous 2001 and 2006



Source: Data provided by CAEPR and ABS

(a) Areas with higher SES ranks are more disadvantaged. Areas for which no non-Indigenous SES was calculated have been excluded.

(b) Remoteness measured by ARIA.

[5] N Biddle, *Ranking Regions: Revisiting an Index of Relative Indigenous Socioeconomic Outcomes*, Centre for Aboriginal Economic Policy Research at the ANU College of Arts & Social Sciences. Concordance of Indigenous Areas with ARIA provided directly by the ABS.

[6] Indigenous Areas are a component of the ABS Australian Statistical Geography Standard.

[7] Accessibility/Remoteness Index of Australia. This has been used for convenience and does not imply endorsement of ARIA for the CGC's purposes.

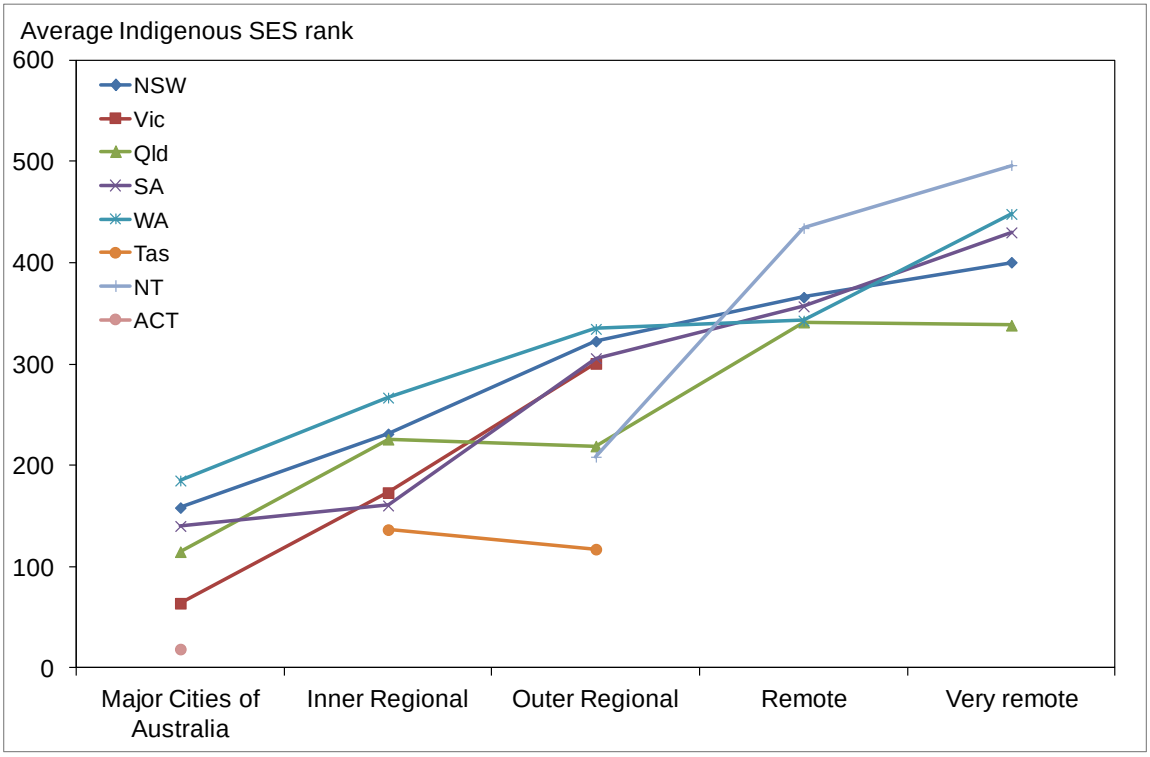
The high point for non-Indigenous disadvantage is inner regional Australia while the high point for Indigenous disadvantage is very remote Australia. Crucially, remote Australia has the second lowest non-Indigenous disadvantage and the second highest Indigenous disadvantage, while very remote Australia has the lowest non-Indigenous disadvantage and the highest Indigenous disadvantage.

This pattern is not surprising, as remote areas of Australia may contain some of the most disadvantaged Indigenous people, but will tend to attract some non-Indigenous people only if they receive a premium on their income.

That this is not driven by any one State is indicated by Chart 7.2 below, which shows a roughly parallel slope for all but two jurisdictions (which include the ACT with a single data point).

Notably, this chart also shows that Indigenous disadvantage is generally high in Western Australia.

Chart 7.2: State Indigenous Areas by SES Rank [(a)] and Remoteness [(b)] Indigenous 2006



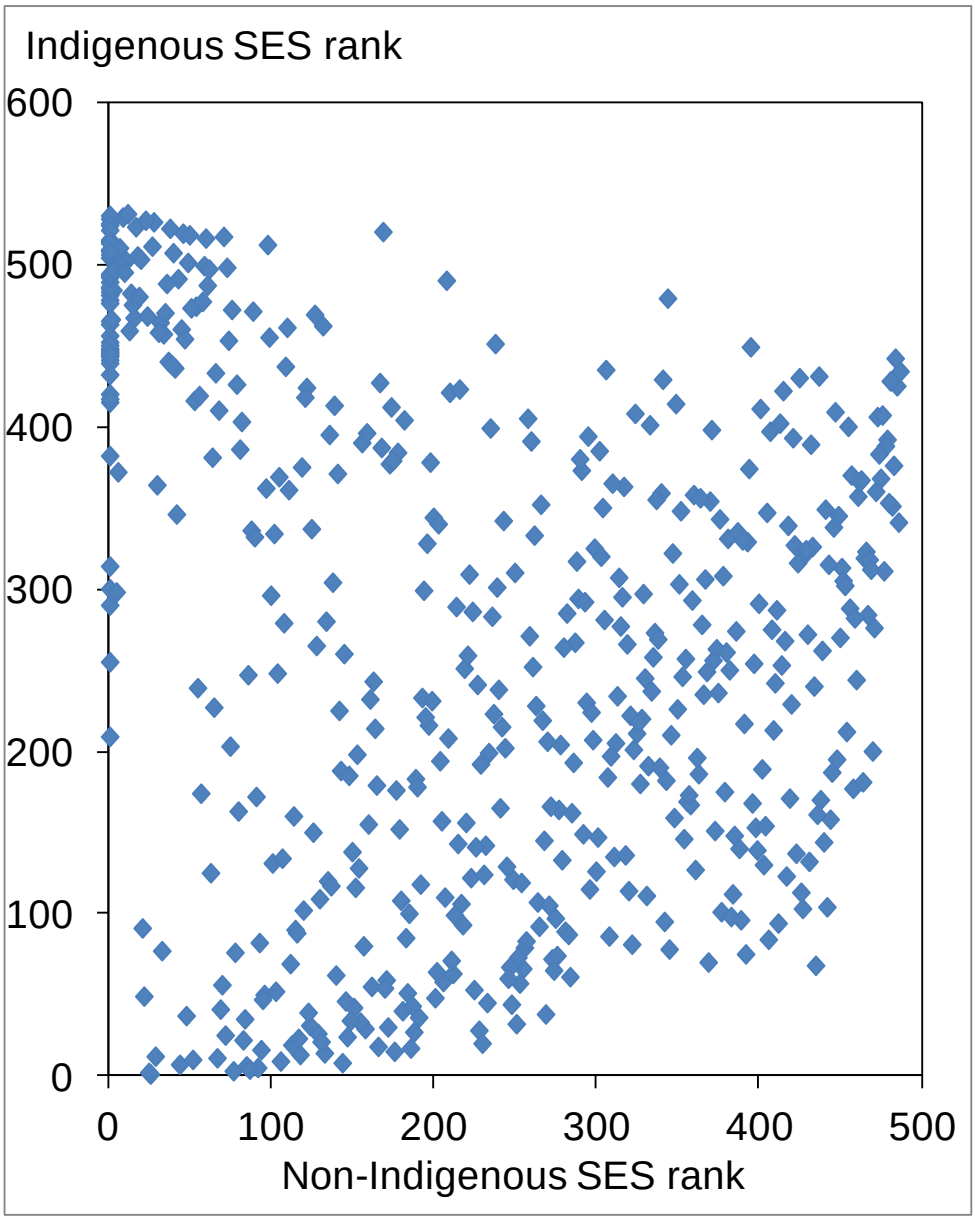
Source: Data provided by CAEPR and ABS.

(a) Areas with higher SES ranks are more disadvantaged. Areas for which no non-Indigenous SES was calculated have been excluded.

(b) Remoteness measured by ARIA.

At a more disaggregated level, Chart 7.3 below plots SES rank for Indigenous persons against SES rank of non-Indigenous persons for each ABS Indigenous Area.

Chart 7.3: Australian Indigenous Areas by Indigenous and Non-Indigenous SES rank 2006 (a)



Source: Data provided by CAEPR and ABS.

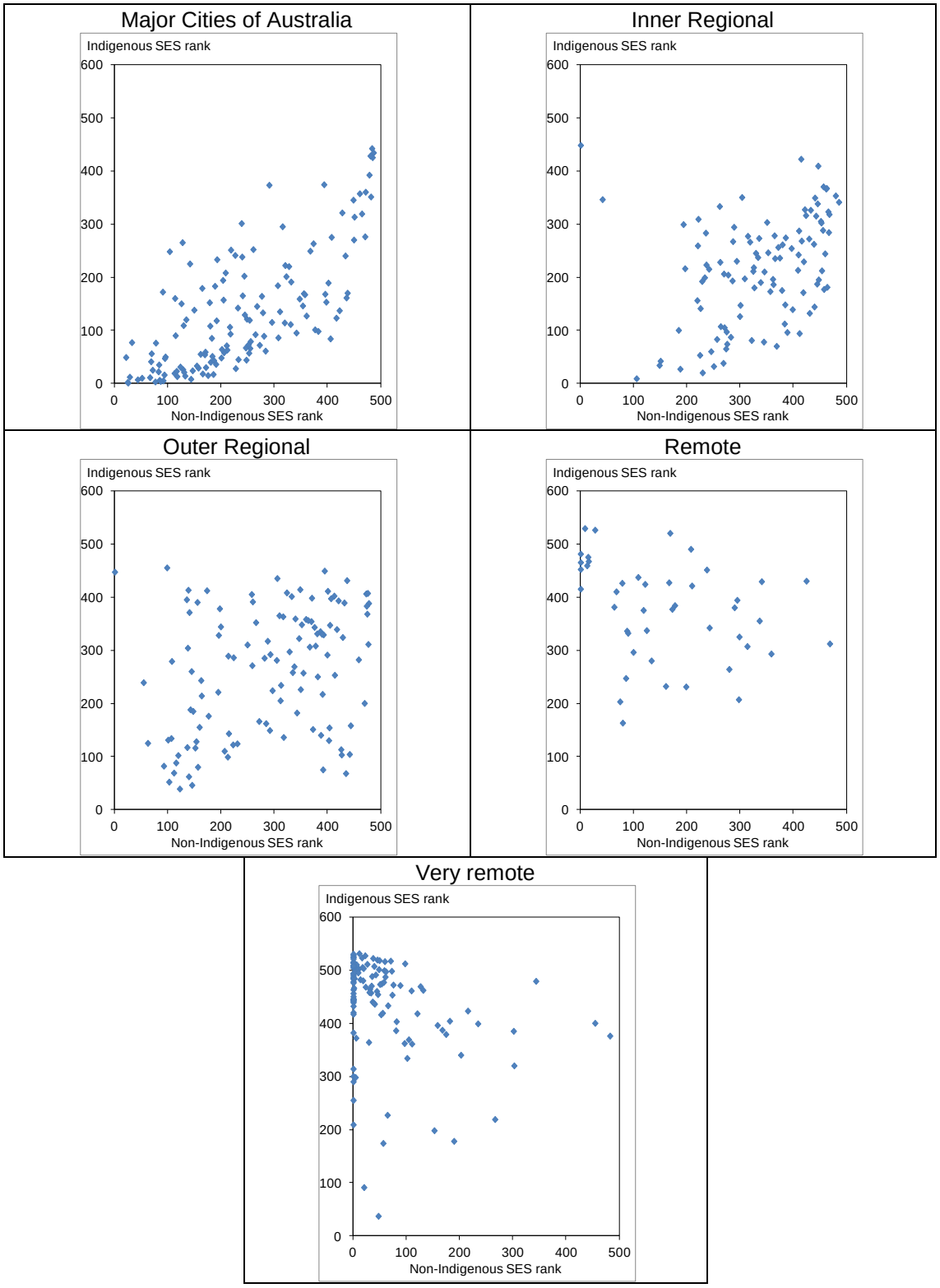
(a) Areas with higher SES ranks are more disadvantaged. Areas for which no non-Indigenous SES was calculated have been excluded (which is why the maximum rank for Indigenous populations is higher than the maximum for non-Indigenous populations).

Chart 7.3 illustrates that there is no clear correlation across Australia between the SES of Indigenous and non-Indigenous people in the same area. Because this may seem counter-intuitive, this information is reproduced in Chart 7.4 below for each individual remoteness classification.

Chart 7.4 shows different relationships between Indigenous and non-Indigenous SES in different remoteness classifications:

- Major Cities of Australia – there is a positive correlation between SES of the two groups in each area. This is likely driven by cost of living, reinforced by State public housing policies.
- Inner Regional – shows a weaker positive correlation.
- Outer Regional – does not appear to show any pattern.
- Remote – shows a weak negative correlation.
- Very Remote – shows a strong negative correlation, driven by a cluster of areas with quite low Indigenous SES and high non-Indigenous SES.

Chart 7.4: Australian Indigenous Areas by Indigenous and Non-Indigenous SES rank 2006 (a) for each remoteness region (b)



Source: Data provided by CAEPR and ABS.

(a) Areas with higher SES ranks are more disadvantaged. Areas for which no non-Indigenous SES was calculated have been excluded (which is why the maximum rank for Indigenous populations is higher than the maximum for non-Indigenous populations).

(b) Remoteness measured by ARIA.

The significance of differences in Indigenous SES ranking between States is clear from Table 7.1 below.

Table 7.1: Average SES rankings by State 2006 [(a)]

	Indigenous	Non-Indigenous
NSW	229	305
Vic	129	278
Qld	241	214
WA	343	148
SA	245	310
Tas	128	379
NT	421	69
ACT	19	88

Source: CAEPR and ABS.

(a) Areas with higher SES ranks are more disadvantaged. Areas for which no non-Indigenous SES was calculated have been excluded.

It is clear from the table that differences between States are significant.

Western Australia has the second highest average rank for Indigenous SES disadvantage, compared with the third lowest average non-Indigenous rank.[8]

In one-on-one discussions, CGC staff have raised with Western Australia the following concerns about Indigenous specific SES measures.

- Some geographic areas have quite small Indigenous population.
  - Small Indigenous populations will have little impact on the CGC's analysis, so their statistical reliability is not a major issue. If necessary, areas could be amalgamated - the relationships between SES and remoteness in the above charts suggests that this would cause less distortion than amalgamating Indigenous and non-Indigenous persons (as is done presently by the CGC).

[8] Noting that the Indigenous and non-Indigenous ranks are not directly comparable.

- The Northern Territory dominates the statistics, with 68% of Indigenous people in the lowest SES quintile living in the Northern Territory.
  - However, it would not be easy for the Northern Territory to adjust its spending on such a large part of its population to affect national standard expenditure. Also, there is greater, not less, reason to accurately assess Indigenous SES when low SES Indigenous people are unevenly distributed across the States.

The Way Forward

The above analysis demonstrates that the CGC should not be using SEIFA to measure Indigenous SES.

The simple solution is for the CGC to adopt an Indigenous specific SES measure.

There are a number of options, including the following:

- the Indigenous specific measure derived by CAEPR, used in the above analysis;
- the individual based SES index (SEIFI),[9] developed by researchers at the ABS, which could be averaged across groups of persons to produce Indigenous specific area based indexes; and
- it would presumably also be possible to contract the ABS to produce Indigenous specific equivalents to SEIFA.

[9] Socio-Economic Index for Individuals, see *Socio-Economic Index for Areas: Getting a Handle on Individual Diversity Within Areas*, ABS 1351.0.55.036.

8 Welfare and Housing

Key Points

- Western Australia recommends discontinuing the beneficiary method as:
  - there is no evidence that there is a constant relationship, across States, between Commonwealth beneficiaries and use of State services;
  - the implied share of disability service recipients in Western Australia does not match alternative data from the Productivity Commission;
  - State service recipients are only a small proportion of Commonwealth beneficiary recipients;
  - different eligibility criteria are used for Commonwealth benefits and State services; and
  - the calculation for child protection services is based on thin data.
- A clear example of a difference between States is cost of living.
  - Increased cost of living impacts negatively on the standard of living of people who do not directly benefit from an economic boom.
  - Cost of living differences in different areas are explicitly taken into account in the provision of public housing in Western Australia.
- Once the National Disability Insurance Scheme (NDIS) is fully implemented, the CGC:
  - may still have to assess residual service delivery; and
  - should not redistribute the Disability Services specific purpose payment (SPP) received by any non-participating States.
- We recommend that the CGC facilitate a shared understanding of the ongoing service delivery role for States (for both non-NDIS clients, and NDIS clients over and above what is funded by the NDIS).
  - This will help guide the appropriate treatment of disability services (e.g. whether to separately assess NDIS clients and non-NDIS clients).

Use of Commonwealth Beneficiary Data

The CGC's methodology in this category assumes that the propensity of Commonwealth beneficiaries (of various types), and non-beneficiaries, to receive State services is constant across all States. Western Australia is not aware of any evidence to support this assumption.

Not only is there a lack of evidence, but in an area where the assumption can be tested it proves dubious. For example, the CGC attributed 8.41% of Australia's disability service recipients to Western Australia in 2008-09, falling to 8.15% in 2011-12.[1] This is driven largely by Western Australia's proportion of disability service pension recipients. The Productivity Commission's estimates for 2009 of the Western Australian proportion of people with decreasing levels of disability are:

- 8.72% of those with profound/severe core activity limitation – which will potentially be the basis for the NDIS;[2]
- 9.45% of those with moderate core activity limitation;
- 10.14% of those with mild core activity limitation; and
- 10.52% of those with schooling or employment restriction (not including above limitations).

As only a small proportion of Commonwealth beneficiaries receive State services, inter-State variations in that proportion would have significant impacts on States.

One source of variation in the proportion of Commonwealth beneficiaries receiving State benefits is the different criteria for support from the different levels of government. For example, Western Australia's Disability Services Commission has advised that Commonwealth benefits are means tested whereas State provided services are not, and the State provides services to people with temporary disabilities.

As discussed below, another source of variation in the proportion of Commonwealth beneficiaries receiving State benefits is differences in cost of living pressures.

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1 Weighted by component expenses. Derived from 2013 Update online assessment system.

2 Noting that advice from the Disability Services Commission of Western Australia is that it takes a national per capita approach when it calculates the estimated number of Western Australian clients under the NDIS.

Finally, the allocation of main sources of income for family and child services is based on limited data from Victoria and South Australia.

Needs Related to High Cost of Living

A readily identifiable example of different circumstances across States which create different patterns or types of need is the problems caused by economic growth.

The CGC's methodology does not recognise that economic growth could increase the need for welfare services of those who do not benefit from it. The Western Australian Council of Social Service has stated "The mining and resources boom sustained a long period of economic growth, which while beneficial to some, drove up the cost of living rapidly and had negative impacts on many vulnerable West Australians who were not able to share in the state's prosperity".[3]

Standard of living is determined by both income and cost of living. The importance of cost of living as a driver of need is illustrated by the income classifications used by Western Australia's Department of Housing to determine public housing eligibility.

Table 8.1: Public Housing Eligibility – No Disability Income Classifications

Number of People in Household	Metro and Country		North West and Remote Areas	
	Single Income $ week	Double Income $ week	Single Income $ week	Double Income $ week
1	430	na	610	na
2	580	670	820	940
3	695	790	980	1,120
4	815	930	1,150	1,320

Source: Western Australian Department of Housing

[3] *The Rising Cost of Living in WA*, August 2010, WACOSS, p 7.

Table 8.2: Public Housing Eligibility - Disability Income Classifications

Number of People in Household	Metro and Country		North West and Remote Areas	
	Single Income $ week	Double Income $ week	Single Income $ week	Double Income $ week
1	540	na	760	na
2	725	830	1,025	1,180
3	870	1,000	1,225	1,400
4	1,020	1,160	1,440	1,650

Source: Western Australian Department of Housing

The weight for income eligibility for north west and remote areas is never less than 40% higher than the metropolitan and country areas. This illustrates both that the need for housing services is generated by cost of living as much as nominal income, and that this need is (in Western Australia at least) reflected in "what States do".

As a Department of Housing employee advised Treasury, if you are going to be unemployed it is better to be in Tasmania than Western Australia.

The different composition of need in Western Australia from that assessed by the CGC is further illustrated by Table 8.3, which compares assessed and actual sources of income of public housing tenants. Not all sources of income are cited to ensure that the figures are consistent across the sources (CGC and Housing Authority Annual Reports).

The 'other' category is much higher in Western Australia, reflecting, we suggest, the impact of high cost of living in Western Australia.

Table 8.3: Main Sources of Income of Public Housing Tenants

	National %	Assessed WA %	Actual WA %
2006-07			
Age Pension	31.6	32.7	23.5
Disability Support Pension	33.9	33.7	20.8
Service Pension	2.7	3.0	1.7
Parenting Payment (Single)	13.4	15.0	13.8
Newstart Allowance	10.1	7.9	6.0
Other	8.2	7.8	34.2
2007-08			
Age Pension	31.9	33.1	24.6
Disability Support Pension	34.6	33.9	21.9
Service Pension	2.5	2.8	1.6
Parenting Payment (Single)	11.8	13.4	12.6
Newstart Allowance	10.3	8.5	6.7
Other	8.9	8.3	32.6
2008-09			
Age Pension	32.0	33.9	24.2
Disability Support Pension	35.2	34.4	22.0
Service Pension	2.6	2.9	1.4
Parenting Payment (Single)	11.0	12.8	11.8
Newstart Allowance	10.0	9.7	7.4
Other	9.2	6.3	33.2
2009-10			
Age Pension	31.3	32.1	24.0
Disability Support Pension	36.2	34.2	22.6
Service Pension	2.4	2.7	1.3
Parenting Payment (Single)	10.9	12.4	11.4
Newstart Allowance	10.4	9.9	7.9
Other	8.9	8.7	32.8
2010-11			
Age Pension	31.1	32.7	23.9
Disability Support Pension	37.4	35.6	23.2
Service Pension	2.2	2.5	1.2
Parenting Payment (Single)	9.1	10.7	9.2
Newstart Allowance	10.8	10.1	7.1
Other	9.5	8.3	35.4
2011-12			
Age Pension	30.8	32.2	25.2
Disability Support Pension	38.8	36.1	24.9
Service Pension	2.0	2.3	1.2
Parenting Payment (Single)	9.0	10.6	11.8
Newstart Allowance	10.6	9.7	8.6
Other	8.8	9.0	28.3

Source: CGC 2013 Update online assessment system and Housing Authority Annual Reports

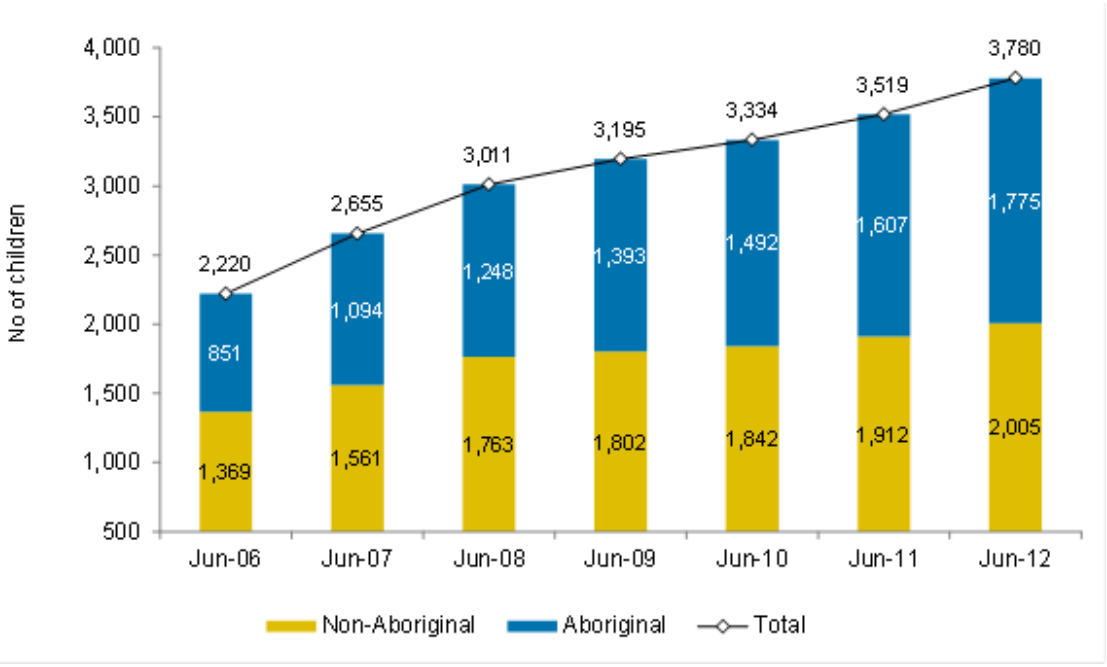
Other Needs that are not well represented by Commonwealth beneficiary numbers in a strong economy

The CGC's assessment approach might suggest that States with strong economies should have lower needs for family and child services (noting that needs are based, among other things, on the number of parenting and Newstart payments).

However, the strength of Western Australia's economy has not seen a decline in demand for child protection services. The 2011-12 Annual Report of the Department for Child Protection and Family Support discloses a 70% increase in child protection notifications since 2008-09, representing a 64% increase in child protection cases. The report also indicates that the 3,780 children in the care of the Department is a 7% increase on the previous year.

The following chart shows the rise in the number of children in the Department's care from June 2006. Notably, the 109% growth in Indigenous children under care has been substantially greater that the 46% growth in non-Indigenous children.

Chart 8.1: Number of Children in Care of the WA Department for Child Protection and Family Support



The National Disability Insurance Scheme (NDIS)

CGC staff have suggested that the existing disability services assessment may be entirely replaced once the NDIS is fully implemented.

However, there is a risk that the NDIS will not subsume all State services, so a 'residual' assessment may be required.

For example, the Western Australian Department of Disability Services provides services to people with temporary disabilities, who would not be covered by the NDIS. Also, State experience is that national schemes often do not adequately address the needs of persons in more remote regions.

We recommend that the CGC facilitate a shared understanding of the ongoing service delivery role for States (for both non NDIS clients, and NDIS clients over and above what is funded by the NDIS).

- This will help guide the appropriate treatment of disability services (e.g. whether to separately assess NDIS clients and non-NDIS clients).

CGC staff have also suggested that, if there are non-participating States,[4] the Disability Services SPP that they receive should be redistributed across all States. This appears to be based on a misunderstanding – equalisation according to standard policy requires that non-participating States be assumed to no longer be receiving the SPP.

[4] We do not envisage this as being a likely outcome. Although Western Australia has not yet signed the NDIS, the Western Australian Premier has stated publicly that he expects to sign once governance issues have been negotiated.

9 Justice Services

Key Points

- Western Australia acknowledges that a proportion of police expenses is not driven by offender population groups, but considers that on average at least 75% of all States' police activity is crime related.
- The Western Australia Police is currently reforming the way it does business, by centralising its operations to have as many officers in the frontline as possible, deploying mobile policing facilities to areas where crime is taking place.
- In addition, Western Australia Police is targeting offender population groups with prevention and mitigation strategies. This is appropriately treated as crime-related activity.
- Western Australia understands that the Australian Institute of Criminology is developing a new methodology to gather custody data, based on aggregated whole-of-year data rather than a one-month census period.
- Western Australia disputes the discounting of police custody data to take into account issues such as the mix of crimes with differing complexities.
    - Discounting on the basis of uncertainty introduces bias, and the large volume of prevention and mitigation police work that does not show in the data (mainly relevant to more minor offences) would offset the extra effort required for more complex cases.

Nature of Police Services

The CGC currently applies disabilities to only 50% of police expenses, assuming that this is the proportion of police services that are driven by crime-related activity, with the remaining 50% being for community services, driven by population and assessed on an equal per capita basis. (The effective discount rises to 62.5%, when the discounts to police custody weights are taken into account – these are discussed below.)

- Western Australia acknowledges that a proportion of police expenses is not driven by offender population groups, but detailed analysis undertaken for our September 2009 submission (to the 2010 Review) showed that on average at least 75% of all States' police activity was crime related.

- However, the CGC concluded, by showing that police-to-population ratios are relatively consistent across States, that regardless of the time spent responding to crime, this did not translate to higher police ratios for States with larger proportions of high-use demographic groups.[1]

- Western Australia does not agree with this conclusion. Different States will have different policies and efficiencies in delivering police services. The results could be reflecting this reality and not the nature of police services.

The Western Australia Police is currently reforming the way it does business. The Commissioner for Police, Karl O'Callaghan has signalled a policy to de-localise the force, by centralising its operations. His focus is on employing modern technology to free up administration roles and have as many officers in the frontline as possible. He says that officers "should be patrolling the neighbourhood, not sitting in the Police Station".[2]

- This moves away from relying on localised police stations performing community policing, to mobile policing facilities that can respond, and be deployed, to areas where crime is taking place.

- The result is a modern policing method that further shifts effort to targeting high-offender groups rather than general policing.

In addition, Western Australia Police is targeting offender population groups with prevention and mitigation strategies. Commissioner O'Callaghan refers to this as a 'vaccination' approach; an attempt to move away from "always treating the symptoms rather than the cause".[3]

- It is focussing on areas with higher proportions of high-offending groups (with a focus on high-risk juveniles), enlisting the community to help, and investing effort in areas such as parenting, health, education, housing, social disadvantage, substance abuse and emotional development.

- This activity may seem on the surface to be 'community policing', provided to the whole population, but is in fact targeted to offender groups.

- Such effort will not show up in the custody data being used by the CGC; indeed the measure of success will be a reduction in the prevalence of these groups in custody data by reducing their rates of offending.

1 2010 Review Report, Volume 2, Table 16-4 and Para. 29-30, p.319
2 'Policing in Armadale', www.police.wa.gov.au; in 'What Really Matters'
3 'Justice Reinvestment', www.police.wa.gov.au, in 'What Really Matters'.

Data from the National Police Custody Survey

Verbal advice from the Australian Institute of Criminology (AIC) (also see the AIC Annual Report[4]) is that the National Police Custody Survey has not been conducted since August 2007. The survey was to be undertaken again in 2012. However, the AIC concluded following a review in 2011, in consultation with all jurisdictions, that there were too many problems with the survey methodology to obtain reliable data, which was also not comparable across jurisdictions.[5]

- It is not certain when a new methodology would be agreed, but the aim is to produce a robust dataset based on aggregated whole-of-year data rather than a one-month census period, and to increase the frequency from five yearly to biennial or annual collections.

Discounting Police Custody Use Weights

Western Australia considers that discounting a disability factor is appropriate when some form of data indicates that this would improve equalisation. However, as noted in Chapter 1, discounting where there is uncertainty about data (with no information about how to improve certainty) is not generally appropriate.

- Such discounting assumes that the data overstates reality and thereby introduces bias.

The CGC's reasons for discounting police custody use weights by 25% stem from concern for their quality, the fact that not all police activities result in people being taken into custody, and the mix in nature of crimes and therefore the complexity of the police investigation (greater complexity implies greater expense).

- However, as noted above, we believe discounting to be inappropriate. In addition, the minor offences in the data would arguably have greater prevention and mitigation effort (for example, police do not generally enter into prevention schemes for homicide, abduction or fraud), and hence their inclusion on a par with more serious offences will appropriately reflect the balance of complexity and non-custodial activity.

4 Australian Institute of Criminology Annual Report 2011–12, p. 18

5 The AIC advised Western Australia that the methodology suffered various problems, including from unclear definitions that were interpreted differently by States.

  - Traffic offences are a case in point. These are over represented in the young male demographic, involve much police prevention and mitigation effort, and yet would rarely lead to custody. Our police have previously advised that Indigenous people in regional and remote areas are also over represented in traffic offence data.

- These considerations indicate that it is not necessary to discount the data.

10 Schools Education

Key Points

- We recommend that the CGC apply its normal fiscal equalisation principles for School Education to the greatest extent possible (noting that the existing assessment needs improvement), consistent with the instructions in the terms of reference (i.e. to not 'unwind' the recognition of educational disadvantage in the NERA; and to ensure no 'windfall gain' for non-participants).
- Whether or not Western Australia is a participating State, we consider that the CGC needs to compensate Western Australia for its low NERA offer to ensure Western Australia is not disadvantaged by its relatively high existing funding for education.
- The Commission's calculation of government school student cost weights for Indigenous and low socio-economic status (SES) students, and for remoteness, in the 2010 Review was based on data provided by States.
- Western Australia is concerned about the reliability of factors based on such data.
- We see merit in using large datasets of spending on public schools (such as 'My School' data, subject to quality assurance) to quantify disability factors through statistical analysis.
- Analysis of Western Australia's 'My School' data highlights the dominant influence of indigeneity, remoteness and students from non-English speaking backgrounds.

National Education Reform Agreement (NERA)

The CGC has been given two instructions with regard to NERA in Clause 6 of its terms of reference, as follows:

> *The Commission will ensure that the GST distribution process will not have the effect of unwinding the recognition of educational disadvantage embedded in the National Education Reform Agreement (NERA) funding arrangements. The Commission will also ensure that no State or Territory receives a windfall gain through the GST distribution from non-participation in NERA funding arrangements.*

Not unwinding NERA recognition of educational disadvantage

The NERA has a number of loadings for educational disadvantage, recognising indigeneity, socio-economic status and remoteness.

These loadings are highly complex and non-transparent, and have not been subject to any independent review or quality assurance.

The States have sought advice from the Commonwealth as to what is actually meant by this instruction, but have received no clarification.

We conclude that the CGC has maximum discretion. We believe that the CGC should use that discretion to apply its normal fiscal equalisation approach for School Education to the greatest extent possible (noting that the existing assessment needs improvement, as discussed below).

This would involve the CGC making its own assessment of disability factors, covering both the influences covered by the NERA disadvantage loadings and other influences (such as interstate wage differentials).

To apply the instruction, a State would receive an adjustment to its GST grant (funded equal per capita by other States) if:

- it could be demonstrated that the application of CGC disability factors that relate to the NERA disadvantage loadings results in an adverse redistribution of the Commonwealth funding provided under NERA; and

- the State is in practice reflecting the NERA loadings in its distribution of Commonwealth funding provided under NERA to its schools (in the absence of this, the State would have already unwound the NERA loadings, so the CGC assessments could not be considered to have done so).

We also note that the NERA:

- has (at the time of writing) been signed by only four of the eight States, and so still has an uncertain future; and

- is intended to be phased in over many years.

As discussed in Chapter 1 *Equalisation Principles and Architecture*, we do not support backcasting of new arrangements, including the NERA.

No windfall gains to non-participating States

The States have also sought advice from the Commonwealth as to what is actually meant by this instruction, but have received no clarification.

Our interpretation is that the CGC should not compensate non-participating States for the difference between national average funding under the NERA and national average funding under the existing funding arrangements.

That means that, if the CGC considers the NERA to be average policy, then it should make its assessments as if all States (including non-participating States) are on the NERA.

- A non-participating State would not then be compensated for national NERA funding being greater than national pre-NERA funding (as it could achieve this gain by choosing to participate in the NERA).

- However, regardless of whether or not Western Australia is a participating State, it would be compensated for its low NERA offer relative to the national average.

  - This would ensure that Western Australia is not disadvantaged by its relatively high existing State funding for education (which has been reflected in a low NERA offer). Anything else would not be policy neutral.

Calculation of Factors Affecting the Cost of Services

We agree with the Commission's 2010 Review that it is more costly for States to provide school services to some student groups. These groups include Indigenous students; students with low English fluency; students from a low SES background; and students living in remote areas. In the 2010 Review, the Commission sought data from the States on the costs of providing services to these groups.

Western Australia considers that this approach lacks reliability, as most school spending is not provided through specific programs for different types of students, and it can be difficult to determine the relative contributions of different drivers of spending.

Western Australia believes that large reliable datasets of spending on public schools (e.g. spending on individual schools, or total spending cross-classified by relevant factors) offer the best chance for quantifying disability factors, through statistical analysis.

In our September 2009 submission to the 2010 Review, we performed regression and box analysis on cross-classified spending data obtained from the Western Australian Department of Education. The data highlighted the dominant influence of indigeneity and remoteness, and the modest impact of SES.

For this submission, we performed regression analysis, at the individual school level, on Western Australian 'My Schools' data from the Australian Curriculum, Assessment and Reporting Authority (ACARA). The analysis (see Tables 10.1 and 10.2) generally supports our previous findings, again highlighting the dominant influence of indigeneity and remoteness (as well as students from non-English speaking backgrounds).

Table 10.1: Regression analysis results of WA primary government schools, using 'My Schools' data

	Co-efficients	Standard Error	*t* Stat
Intercept	12,373	1,225	10.1
Indigenous students (%)	6,661	2,184	3.0
Remoteness			
Provincial	4,635	764	6.1
Remote	15,382	1,003	15.3
Very Remote	17,567	1,727	10.2
LBOTE [(a)] (%)	14,008	4,749	2.9
Low SES – quartile data			
Q1 (%)	-3,565	1,688	-2.1
Q2 (%)	-389	2,235	-0.2
Q3 (%)	-1,912	2,474	-0.8

Source: Western Australian Treasury calculation.

(a) Language background other than English.

Table 10.2: Regression analysis results of WA secondary (including combined) government schools, using 'My Schools' data

	Co-efficients	Standard Error	*t* Stat
Intercept	12,423	4,147	3.0
Indigenous students (%)	9,057	3,544	2.6
Remoteness			
Provincial	3,506	1,737	2.0
Remote	6,955	2,266	3.1
Very Remote	15,077	3,068	4.9
LBOTE [(a)] (%)	11,619	7,059	1.6
Low SES – quartile data			
Q1 (%)	5,233	4,729	1.1
Q2 (%)	1,063	5,291	0.2
Q3 (%)	2,283	6,368	-0.4

Source: Western Australian Treasury calculation.

(a) Language background other than English.

Western Australia sees merit in using the 'My Schools' data, provided that the quality of the data across all jurisdictions can be assured.

11 Services to Communities

Key Points

- We consider that a more comprehensive assessment is required to capture the need to improve community amenities to facilitate sustainable economic development.
- We recommend that the CGC augment the water subsidy assessment for pipeline lengths, instead of discounting its existing assessment.
- The electricity component is substantially sound, but could be refined by increasing the weighting for very remote populations relative to remote populations.
- We would be open to a combined assessment of the water and electricity components of the Services to Communities category using general indicators (e.g. water availability, State area), provided it gave due weight to remoteness and explained differences in actual expenses across the States.

Economic Development and Community Amenities

The current assessment of Services to Communities does not consider demands on States to improve community amenity and sustainability to facilitate efficient long term economic development. We consider that a more comprehensive assessment is required, and this is addressed in Chapter 3, *Mining Related Expenditure*.

Water Subsidy

Western Australia acknowledges that this area is a complex one, which does not lend itself to complete and precise assessment. Nevertheless, there is a clear disadvantage faced by the drier States, which is likely to be understated by the current methods.

- Therefore, the CGC's existing 25% discount is likely to be moving the assessment in the wrong direction.

The CGC has been concerned about data incompleteness, but this is partly due to data not being provided by those States which are assessed as having negative needs by the CGC (New South Wales, Victoria, Tasmania and the ACT).

Regression analysis undertaken by Western Australia for the 2010 Review found that cost was influenced by each of

- distance from water source to community;
- population size; and
- remoteness.

These considerations mean that the drier States, which did provide data, are likely to have their costs underestimated.

We appreciate that the CGC has had difficulty in obtaining data, such as pipeline length, which would enable a more accurate assessment. Data may be obtainable from an expert body, for example by commissioning the Australian Pipeline Industry Association.[1]

Electricity subsidy

Western Australia broadly agrees with the CGC's approach of basing the electricity subsidy assessment on the proportion of remote and very remote populations. The assessment could, however, be further refined by increasing the weight of very remote populations relative to remote populations. This would reflect the observation in the CGC's 2010 Review Report that some States generally subsidised very remote populations.[2]

General indicator

Western Australia would be open to the water and electricity components of the Services to Communities category being combined and assessed with general indicators (e.g. water availability, State area), provided the assessment gave due recognition to the effects of remoteness and explained differences in actual expenditures across the States.

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1 Western Australian Treasury was not able to obtain a map of the Goldfields and Agricultural Region Water Supply network (supplied to the CGC during the Data Working Party work in June 2012) until it contacted the relevant engineering area.

2 *2010 Review Report, Volume 2*, page 298.

12 Transport Services

Key Points

We recommend the following.

- There should be no discount to the impact on relativities of Commonwealth payments for rail or other transport projects, other than as part of a more general discount to revenue capacity.
  - Determining which projects are nationally significant would be arbitrary and contentious.
  - HFE is likely to be distorted as it is unlikely that the allocation of Commonwealth payments for 'nationally significant' projects would genuinely reflect States' relative needs for such funding.
  - While we prefer no discount, a second best solution would be to discount all Commonwealth infrastructure payments equally.
- The CGC's urban transport assessment is unreliable and should be replaced with a close to equal per capita assessment, recognising that the relationship between per capita subsidy and city population which the Commission has calculated reflects:
  - data that are not comparable across States;
  - a limited number of outlying data-points; and
  - lack of recognition of population density and urban form;
- The CGC should assess non-urban transport using land area, or some other measure of the distances serviced.

Concessional Treatment of Payments for Nationally Significant Infrastructure Projects

The GST Distribution Review recommended that Commonwealth payments relating to national network road infrastructure and rail based infrastructure should affect the relativities with a 50 per cent discount.[1] Subsequently, the CGC's terms of reference for the 2015 Review provided that a new transport infrastructure assessment be developed which includes, "if appropriate", only partial influence on the relativities of payments for nationally significant transport infrastructure projects.

Western Australia opposes the use of selective discounts unless there is a strong HFE rationale for doing so.

As noted in Chapter 1, the allocation of Commonwealth government infrastructure assistance is unlikely to properly reflect national interest considerations, due to political pressures, and a centralised infrastructure approach is unlikely to be able to reliably identify relative needs for 'national interest' infrastructure.

The extent to which States (relative to the nation) benefit from capital projects will vary by degree. As such relative benefits would be difficult to quantify, they would be highly contentious.

It is also not clear why capital funding for transport is necessarily more nationally significant than for other infrastructure.

Consequently, we consider that no Commonwealth infrastructure payments should be discounted.

If they are discounted, then they should all be discounted equally, although even this would create incentives for States to seek funding in capital, rather than recurrent, form.

Urban Subsidy Assessment

The CGC's urban subsidy assessment is based on its regression of per capita subsidies against city population size.

[1] GST Distribution Review Final Report, October 2012, Recommendation 6.1.

We have three major concerns with this analysis.

- The data on urban subsidies is not consistent across States.
  - These have been based on cash subsidies, which are highly policy influenced, rather than economic cost subsidies. For example, the cash subsidies are affected by policies on dividends, whether debt is held by the transport authorities or the government and the timing of capital replacement and expansion decisions.
- The relationship is determined by a few data-points for the large cities.
  - These data-points will be policy influenced. For example, there is no data showing what the larger population States would spend on a city the size of Perth, or what Western Australia would spend on a city the size of Sydney.
  - The relationship is further dominated by the outlying data-points. The per capita operating subsidy in the CGC's analysis[2] is similar for most of the capital cities (i.e. Melbourne, Perth, Adelaide, Canberra and Darwin), covering almost the entire range of population sizes. The per capita operating subsidy only differs significantly for Hobart (where it is lower) and for Sydney and Brisbane (which are higher). These differences could reflect policy and, in the case of Brisbane and Sydney, inclusion of costs that perhaps should be allocated to Gold Coast and Newcastle.
- It is simplistic to assume that only city population size affects per capita subsidies, as population density[3] and urban form also have an impact.
  - Servicing the same population over a longer route length would increase costs.
  - Lower density does not necessarily reduce the risk of congestion, which is also affected by urban form. In the case of Perth, for example, the central business district is adjacent to the river which restricts access to it from the South and East, while the South West is blocked by the Mount Eliza escarpment. It is not surprising, therefore, that Perth has been found to be the second most congested city in Australia and New Zealand after Sydney[4] (of the 9 cities surveyed).

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2 CGC 2010 Review Report, Volume 2, Figure 18.5, page 381.

3 On 4 August 2011 Western Australia provided the CGC with a list of journal articles on influences on urban transport costs, some of which examined density. Available on request.

4 *TomTom Australia and New Zealand Congestion Index*, 2013, p 4, TomTom International BV.

Non-Urban Subsidy Assessment

The non-urban subsidy assessment covers inter urban transport, but does not assess the distances between population centres.[5]

The Commission should adjust this factor for such distances.

An examination of the Transwa coach and train service found at https://www.transwa.wa.gov.au/Default.aspx?tabid=102 is instructive. The part of the State covered by this service roughly corresponds to the ABS remoteness areas of major cities, inner regional, outer regional and remote, but does not include very remote.

An analysis of maps provided by Victoria,[6] Tasmania[7] and the Northern Territory[8] indicates that publicly supported coach lines at least extend to remote populations.

Analysis of Queensland[9] destinations shows that its coach network extends to very remote locations.

Another observation is that the area Western Australia covers, in providing this service to all but its very remote population, is comparable to that of Victoria and Tasmania combined. Excluding very remote residents, the combined Victorian and Tasmanian population is 2.7 times that of Western Australia in approximately the same land area. This prevents the State from obtaining operational economies of scale.

5 CGC 2010 Review Report, Volume 2, page 388.
6 http://www.vline.com.au/pdf/networkmaps/simplemap.pdf
7 http://www.tassielink.com.au/
8 http://www.transport.nt.gov.au/__data/assets/pdf_file/0018/18522/NT_Regional_Transport_October_2011.pdf
9 http://www.tmr.qld.gov.au/Travel-and-transport/qconnect/Long-distance-coaches.aspx

13 Assessments that can be Left Alone

Key Points

- In the context of the present structure of categories and disability factors, we support the following assessments:
  - direct capital assessment approach (including assessment of population growth dilution of asset values, but the Net Lending assessment should not be discounted, and we are open to a holding cost approach if a reliable assessment can be developed);
  - Community and Other Health Services category (particularly, the subtraction approach);
  - actual per capita assessment of the native title and land rights factor;
  - service delivery scale factor (but it should not be discounted, and could be applied more broadly); and
  - equal per capita assessment of the Other Revenue category.
- There are a range of other assessments which, while we do not endorse them, are not considered a priority for this Review (unless impacted by broader reform):
  - Payroll Tax (noting concerns about whether offshore workers are appropriately included in States' revenue bases, and the quality of data underpinning the small business threshold adjustment); Stamp Duty on Conveyances (noting concern about State policy influences on land values); Insurance and Motor Taxes; Post Secondary Education; Admitted Patients (apart from the issue of measuring the socio economic status of Indigenous persons, as covered in Chapter 7 *Indigeneity*); Roads; Other Expenses; administrative scale factor; national capital allowances factor; and cross-border costs factor.
- As noted in Chapter 2 *Mining Revenue*, we support consideration of a global revenue assessment.

At the CGC work plan teleconference, the CGC staff requested advice on which assessments States believe can be left alone in the 2015 Review.

Assessments that Western Australia Supports

Direct capital assessment

A fundamental improvement in the 2010 Review was the introduction of the direct capital assessment approach.

- This is much simpler, less data intensive and more reliable than the previous debt charges assessment.

Particularly important is the assessment of population growth dilution of asset values, that is addressed through the Investment and Net Lending categories.

Although, as noted in Chapter 4 *Capital*, we do not agree with the discounting of the Net Lending assessment, we support the overall approach to the assessment of capital needs.

That chapter also discusses an alternative holding cost approach. We are not opposed to this being explored, noting that it has yet to be demonstrated that this approach can match the reliability of the current approach.

Community and Other Health Services category

The 2010 Review had an emphasis on simplification. Generally, this was implemented by just doing the same sort of assessments in a bit less detail. However, in two instances, the CGC achieved fundamental simplification, by finding a new approach to the assessment, and in the process better achieved fiscal equalisation.

One of these instances was the above-mentioned capital assessments. The other was the Community and Other Health Services category.

The subtraction approach used in this category to assess the impact of non-State services is simpler, more reliable and more transparent than the previous economic environment factor.

We support the CGC continuing to use the subtraction method.

Native title and land rights factor

This is an important factor, which is assessed on an actual per capita basis, as the CGC considers "that State spending is due to Commonwealth legislation and States have adopted uniform policies in response to their individual circumstances" (CGC 2010 Review Report, Volume 2, page 554).

We support this factor continuing to be assessed actual per capita.

Service delivery scale factor

The service delivery scale factor developed in the 2010 Review has the advantage of being broadly applicable to a number of categories, and captures an important disability.

We support this assessment continuing, although without the current 12.5% discount (as discussed in Chapter 1 *Equalisation Principles*). We would also support the broader application of this factor to more expense categories.

Other Revenue category

The Other Revenue category is currently assessed equal per capita.

We support a continued equal per capita assessment for each component of this category, as follows:

- interest revenue, dividends and contributions from trading enterprises - these are indirectly assessed through the Net Lending assessment;
- gambling tax - gambling can be inversely related to per capita income, and no reliable measure of taxable capacity has been developed;
- other user charges - if differential assessments are to be introduced for these user charges, it should be through the expense assessments, as occurs for existing user charge assessments;
- other taxes and revenue, and assets acquired below fair value - the miscellaneous and ad hoc nature of these suggests that there is unlikely to be a meaningful differential assessment; and
- balancing item - this covers items that are assessed elsewhere.

Assessments that Western Australia Does Not See as a Priority

The short timeframe for the 2015 Review presents practical limitations on the review process. In that context, we have identified assessments which we do not currently see as priorities for this Review. This does not imply endorsement of these assessments.

These low priority categories and factors are:

- Payroll Tax (noting that we have some concerns with this assessment: we are currently consulting with the ABS over the treatment of offshore workers in the data used for this assessment; and the quality of data underpinning the small business threshold adjustment is understood to be low);
- Stamp Duty on Conveyances (noting that we are concerned that transaction values are affected by State policies that affect land value, as discussed in Chapter 6 *Land Tax*);
- Insurance Tax;
- Motor Taxes;
- Post Secondary Education;
- Admitted Patients (apart from the issue of measuring the socio-economic status of Indigenous persons, as covered in Chapter 7 *Indigeneity*)
- Roads;
- Other Expenses;
- administrative scale factor;
- national capital allowances factor; and
- cross-border costs factor.

Global Revenue Assessment

As discussed in Chapter 2 *Mining Revenue*, we support consideration of a global revenue assessment (using a broad revenue base such as GSP) that covers mining revenues and all tax revenues. This would include the taxation component of the Other Revenue category.

A global revenue assessment would resolve policy neutrality issues with tax categories that rely on State data to measure the revenue bases. For example, under the present assessments, additional compliance effort can result in substantial GST losses, sometimes exceeding the additional tax revenue raised (as discussed in Chapter 6 *Land Tax*), and some revenue bases can be affected by State policies that affect land values.

Appendix A: The North West Shelf Project and Assistance Provided

In the 1970s and 1980s the State played a pivotal role in securing the development of the North West Shelf project through agreements, financial assistance and infrastructure provision. This project helped to provide the energy needed to develop other State resources and established Western Australia as a prospective location for natural gas development in the face of significant global competition.

In 2010 net present value (NPV) terms, the estimated cost of Western Australia's commitments to assist the North West Shelf project (e.g. payment of subsidies to the State's power utility to help cover the losses it initially incurred under crucial 'take or pay' gas contracts) is estimated to be around $8 billion.

- However, due to fiscal equalisation, the net return to Western Australia is currently about $100 million per annum. Other States (who shared none of the costs or risks) receive around $900 million per annum (courtesy of equalisation).

At the time that the North West Shelf project was established, the current system of equalisation was in its infancy, and its consequences potentially not fully appreciated by State governments (whereas today they are more likely to have a significant bearing on decision making).

We believe that equity requires some discounting (around 25%) of the assessment of North West Shelf royalties to recognise the costs incurred by Western Australia in establishing this project. If the State had not incurred these costs, the project would not have succeeded then, and there may be no royalty revenues to equalise.

Development of the North West Shelf project

The development of the North West Shelf project proceeded in two major stages:

- the domestic phase (North Rankin A offshore production platform and related infrastructure), which mainly involved the production of natural gas purchased by the (then) State Electricity Commission of Western Australia (SECWA) from 1985; and

- the subsequent export phase, mainly involving the export of liquefied natural gas (LNG) to Japan from 1989. The export phase initially involved construction of LNG infrastructure to use North Rankin A gas production. The export phase has continued to expand (starting with the new Goodwyn A platform in 1994).

The domestic phase was underpinned by 20 year 'take or pay' contracts, signed in September 1980, between the Project Joint Venturers and SECWA for the supply of 414 terajoules per day of natural gas (commencing 1985) – the entire gas output from the domestic phase.

The 'take or pay' contracts reflected the Western Australian Government's determination to secure a substantial gas supply for the State's economic future, and ensure the go-ahead of the North West Shelf project. The Joint Venturers had viewed local sales as uneconomic and secondary to exports, and more as politically necessary than as attractive in their own right – while the first stage (with the take or pay contracts in place) was viable on its own account, it would not make money for the Joint Venturers (reality proved otherwise - as discussed below).[1]

Nevertheless, the domestic contracts with SECWA became the basis for getting the first production platform in place, and was a key factor in helping Woodside Petroleum (a 50% partner in the project) raise a US $1,350 million limited recourse loan facility to finance over 90% of its share of the development cost.

[1] Harman L, 1983. *History and Politics of the North West Shelf Project*, Discussion Paper 5/83. Issues in Energy Policy in Western Australia, Murdoch University, p32 and p44.

While the Joint Venturers may have expected that export contracts were not far away,[2] history proved otherwise. A Memorandum of Interest was signed with eight Japanese electricity and gas utilities in June 1981 (for supply of LNG from 1986), but there were substantial delays in signing a formal sales contract, probably reflecting a number of factors, including: the complexity of LNG contracts; a fall in Japanese demand for LNG (with falling oil prices and more competition to supply LNG); and difficulties encountered by Woodside in financing its share of the export phase after the rescheduling of LNG deliveries.[3]

Export contracts were finally signed with the Japanese utilities in August 1985, for LNG deliveries from October 1989. Woodside financed its share of the development costs largely by selling down its share of the export phase to 16.7% and using revenues from the domestic phase.[4] SECWA's 'take or pay' contracts "were crucial in getting both Phase I and Phase II underway".[5]

The Western Australian government's assistance on the North West Shelf project comprised the following.

- SECWA's 20 year 'take or pay' contracts with the Joint Venturers, referred to above. SECWA was contracted to pay for at least 95% of the volume of gas stipulated in the contract (which was in effect the total volume of gas produced by the North West Shelf project in its initial years). The cost of this assistance is discussed below.

- The construction (completed in 1985) by SECWA of the Dampier to Bunbury gas pipeline at a cost of around $1.1 billion, to enable SECWA to deliver gas to the major markets in the South West. In March 1998, the Dampier Bunbury pipeline was sold to Epic Energy for $2.407 billion, which was below the depreciated 'risk free' present value in 1998 terms of the construction cost.

- Expenditures on town site development, schools, hospitals, community facilities, roads, etc. These costs have never been officially aggregated (and are not included in the $8 billion NPV assistance value).

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2 Ibid, p44.

3 Ibid, pp46-50.

4 Clements K and Greig R, 1991. *The Economic Impact of Australia's North West Shelf Project, Discussion Papers 91.15 and 91.16*. Economic Research Centre, Department of Economics, The University of Western Australia, September, p115.

5 Ibid, p10.

Even before the signing of the 'take or pay' contracts in 1980, it was apparent that the forecasts of gas demand in the Pilbara and South West on which the contracted amounts were based were overstated. In the following years, it became clear that contractual arrangements would need to be modified to avoid a financial collapse by SECWA and a stalling of the development of the North West Shelf project.

In March 1985, under an Agreed Statement of Principles, the Commonwealth and State Governments and the Joint Venturers agreed to "share the pain" which was forecast to be borne by SECWA as a result of the contract.

- In return for SECWA agreeing to set aside price redetermination rights for five years, the Joint Venturers agreed to certain modifications of the pricing arrangements in the South-West and to assist in marketing gas to the Pilbara region. These arrangements resulted in a forecast benefit for SECWA of $305 million in 1985 NPV terms.

- The Commonwealth agreed to waive in favour of Western Australia (for on passing to SECWA) its share of royalties payable on the domestic gas phase of the project, estimated as having a value of $70 million (1985 NPV terms) over the 20 year life of the agreement. The Commonwealth Grants Commission has excluded these revenues from its assessments.

- The State Government agreed to provide an estimated $245 million (1985 NPV terms) assistance to SECWA, comprising domestic gas phase royalties with an estimated value of $145 million (1985 NPV terms) and a further $100 million (1985 NPV terms) from its existing levy on SECWA gas operations.

The overall benefit to SECWA was estimated to be $620 million (1985 NPV terms). Despite this, SECWA was still forecast to incur annual deficits of around $50 million over the period 1985-86 to 1997-98 on its North West Shelf gas operations, before hitting break even in 1998-99.

Altogether, the forecast State losses (from the $245 million assistance package, and SECWA deficits on gas operations), plus the net impact of the gas pipeline, total around $8 billion in 2010-11 NPV terms.

Appendix B: GST Distribution Review – WA Calculation of Unassessed Needs

This appendix provides the calculations underlying the indicative estimates that we submitted to the GST Distribution Review.[1] We have not updated the calculations, whose main objective is to illustrate the magnitude of the gaps in Western Australia's needs assessments. Many of our calculations could be readily developed into methods that could be applied in the 2015 Review, although some would require change.

- For example, our calculation (see Section 3 below) of unrecognised costs relating to high labour demand and accommodation shortages in Western Australia's regional/remote areas is based on Western Australia's service cost profile relative to the national average. A more policy neutral methodology could be developed by, for example, reflecting private sector housing cost differences in the remote areas defined by the CGC using its SARIA index.

1. Provision of infrastructure in advance of demand (incorporating inefficient utilisation risk premium)

This calculation includes both user charged economic infrastructure and tax funded (social and economic) infrastructure. The inclusion of user charged infrastructure reflects that the costs considered here cannot normally be practically or efficiently recovered from users, as discussed in Chapter 3.

There are two sources of unutilised (or underutilised) capital:

- provision of capital in advance of demand, to take advantage of economies of scale; and

- inefficient utilisation, due to technological change, population movements and variance between economic forecasts and outcomes. [This captures the 'risk premium' noted on page 44 of our August 2012 submission, which "measures the likelihood of unavoidable inefficient utilisation of capital over time (with costs discounted back to when the capital was built) due to uncertainty and shifts over time in the location, scale and technology of economic activity."]

[1] The fine details are contained in spreadsheets that can be supplied on request.

We have assumed that a 1% increase in the scale of construction results in only a 0.75% increase in costs (reflecting scale economies), which yields an optimal 14 year period between episodes of new construction for linearly increasing demand, and an opportunity cost in constructing underutilised infrastructure of 25.5% of the total cost of construction. The details of this calculation are contained in a spreadsheet that can be supplied on request.

As noted in Chapter 3, attempting to avoid opportunity costs of advance provision through building more frequently actually increases net costs, as opportunity cost savings are more than offset by declines in scale economies.

We assume (we believe conservatively) that nationally 5% of capital is effectively lost through inefficient utilisation over time (this loss is measured in net present value terms, relative to when the capital is built). This inefficient utilisation would be one factor contributing to the relatively low rate of return on public corporations.

We have assumed that 10% of capital in Western Australia is lost through inefficient utilisation, or twice the national average.

- Qualitatively, this reflects Western Australia's greater exposure to shifts in market conditions, due to the mining-intensive nature of the State's economy.

- For a quantitative measure, we have compared the variability over 30 years of population growth in Western Australia to that of Australia (where variability is measured as the standard deviation of the population growth series divided by the mean population growth). Western Australia's population growth variability on this basis is twice the national average, which is assumed to result in twice the national level of inefficient capital utilisation.

In broad terms, our calculation proceeds by applying the above-given percentage cost premiums to estimates of population-growth driven State capital accumulation, which are in turn estimated by applying population growth estimates to the estimated national per capita replacement value of State public sector capital stock (excluding land).

- The per capita demand for capital in Western Australia is assumed equal to the national per capita average, but an adjustment is made to reflect its above-average construction costs due to higher wages and dispersion costs (as estimated by the Grants Commission).

This approach entails a number of implicit technical assumptions, including that: aggregate demand is driven by population size and level of service; there are no scale/risk disabilities for Western Australia (compared to the national average) in relation to 'replacement' infrastructure; Western Australia's 'demand growth' infrastructure has the same average size, real cost and scale efficiencies as national projects (including no differential efficiencies arising from combining 'demand growth' with 'replacement' projects); and there is linear future demand growth for these projects. These assumptions are considered to be reasonable (and in some cases conservative) in assessing Western Australia's relative needs.[2]

A further assumption is that the costs and risks of advance provision of user charge funded (economic) infrastructure is fully covered by tax funded CSOs or quasi taxes (as defined in Chapter 3), rather than charges on direct beneficiaries. As already noted, this may not always be the case due to fiscal constraints, including those attributable to inadequate recognition of needs in the GST distribution. Nevertheless, the assumption is considered reasonable on the following grounds.

- As noted in Chapter 3, attempted cost recovery from beneficiaries will result in a higher cost structure and hence lower tax capacity in the long run.

- This is an area where the standard policy is disproportionately affected by the GST distribution. Where GST funding provides inadequate recognition of these costs, then services and taxes/charges impacting on the general community are likely to be more protected from adverse change than spending to support advance infrastructure provision in high growth States, which becomes the 'balancing item'.

  - In this regard, we do not expect that the ensuing reduction in spending to support advance infrastructure provision in high growth States would be offset by higher spending to support advance infrastructure provision in low growth States (as they have no need to spend excessively on advance infrastructure). Hence the net outcome will be a reduction in the standard level of spending to support advance infrastructure provision, which is directly attributable to issues with the implementation of HFE.

[2] Sensitivity analysis undertaken on the relative size of projects indicated similar outcomes for two alternative scenarios – the relative size of projects across States is proportional to State population increases (i.e. growth in number of persons), or proportional to State population sizes.

- In this case, it is reasonable to use a 'corrected' standard policy, reflecting what States could efficiently do if they were appropriately funded.

Our calculation is summarised in the table at the end of this section. The following paragraphs guide the reader through the calculation.

The first step is to determine the estimated national per capita value of State public sector capital stock (excluding land).

From States' Budget Papers, we identified the total non-financial public sector non-financial asset value at the end of 2012-13 as $603 billion across all States. However, this includes land, which comprises 38% of the total value for Western Australia (little information was available for other States). Assuming that this proportion holds across all States, gives us an asset value excluding land of $373 billion or $26,420 per capita.

However, this is a depreciated value, whereas new capital purchases will be undepreciated. We estimated that depreciated values are about 59% of undepreciated values.[3] Dividing the $26,420 per capita depreciated asset value by 59% gives **$44,484 per capita**.

We assumed national population growth of 1.3% (the average over the last 30 years) and a population growth rate for Western Australia of 3.3% if HFE constraints were removed and population were allowed to migrate at an optimal rate (2 percentage points above the national average, consistent with the assumption in our October 2011 submission).

Based on a 2012-13 population for Western Australia of 2,439,138 persons, growth at the national average rate would add 31,709 persons in Western Australia, and 2% additional growth would add 48,783 persons in Western Australia (totalling 80,492 persons).

[3] Based on a year-by-year depreciation analysis over a long period (i.e. since settlement), assuming a 30 year asset life and assuming increases in nationwide State sector real capital stock per capita of 2.8% per annum over this period. Long-term estimates of State sector real capital stock are not available. The 2.8% per capita growth figure reflects actual growth over the eight years preceding the global financial crisis (to avoid fiscal stimulus distortions).

All States have provision of capital in advance of demand, but this is boosted for Western Australia by its extra population growth. To calculate this impact, we:

- take the $44,484 per capita asset value;
- remove 5% national wastage (i.e. inefficient utilisation) assumed to be in this amount;
- multiply by the 25.5% additional cost of advance provision; and
- multiply by the additional population growth of 48,783 persons.

This gives additional cost for Western Australia of **$526 million**.

Likewise, all States have inefficiently utilised capital, but Western Australia has more because it:

- has additional population growth of 48,783 persons, which when multiplied by the national wastage of 5% of $44,484 per capita asset value gives **$109 million**; and
- has additional wastage of 5% of $44,484 per capita asset value, which when multiplied by total population growth of 80,492 persons gives **$179 million**.

The sum of the three above amounts is **$813 million** (i.e. 526+109+179 = 813).

However, the CGC assesses higher costs for Western Australia due to population dispersion and interstate wage differentials, which adds 4.8% to the $813 million additional cost, or **$39 million** (i.e. 4.8% x 813 = 39).

In addition, this 4.8% cost difference adds to the costs which Western Australia incurs in line with national growth. These costs are the equivalent of the $526 million advance capital cost and the $109 million national capital wastage cost, but calculated using the national population growth rate of 31,709 persons, rather than the additional growth of 48,783 persons. This makes these costs equal to $342 million and $71 million respectively. The additional cost to Western Australia is 4.8% of these amounts, or **$20 million** (i.e. 4.8% x {342+71} = 20).

As a result, the total additional cost for Western Australia is **$872 million** (i.e. 813+39+20 = 872).

The above calculations are summarised as follows:

$44,484pc national asset value x 95% to remove national wastage x 25.5% cost of advance provision x 48,783 additional WA population growth		=	$526m
$44,484pc national asset value x 5% national wastage x 48,783 additional WA population growth		=	$109m
$44,484pc national asset value x 5% additional WA wastage x 80,492 total WA population growth		=	$179m
			$813m
	$813m	x 4.8% =	**$39m**
$44,484pc national asset value x 95% to remove national wastage x 25.5% cost of advance provision x 31,709 national growth rate for WA population			
	equals $342m		
$44,484pc national asset value X 5% national wastage x 31,709 national growth rate for WA population			
	equals $71m		
	($342m + $71m)	x 4.8% =	**$20m**
Total			**$872m**

2. Using Actual Capital Costs rather than a Recurrent Proxy

The CGC uses recurrent cost factors to assess capital costs. However, alternative capital-specific data are available from Rawlinsons.[4]

The recurrent cost factors for Western Australia comprise a 5.8% interstate wages factor (projected 2011-12 value), which equates to 3.5% across all expenses (as wages are about 60% of total costs)[5] plus a 1.3% intrastate population dispersion factor (CGC 2010-11 assessment, assumed stable in future years), totalling 4.8% additional costs.

[4] Rawlinsons Australian Construction Handbook 2012.

[5] There is an interstate non-wage factor, but this is negligible for Western Australia.

A comparison of capital city construction costs from Rawlinsons gives an interstate cost factor for Western Australia of 5.3% (this covers both wage and non-wage costs). This was calculated by comparing average construction costs per square metre for Perth to the population weighted average for the five capital cities that are provided by Rawlinsons (i.e. Sydney, Melbourne, Brisbane, Perth and Adelaide). The average construction costs per square metre for each capital city were derived as an average of the upper and lower limit costs for 20 types of buildings that States would typically construct (i.e. offices, hospitals, schools, police stations, courts, etc).

Examining how intrastate construction costs vary with remoteness in the Rawlinsons data gives an increase in Western Australia's dispersion factor of 0.6% compared to the CGC's assessment, yielding a revised dispersion factor of 1.9% for Western Australia. The 0.6% increase was estimated as follows.

- deriving a national cost profile for increasing levels of remoteness (defined using the CGC's SARIA-based measure) from the Rawlinsons regional cost indexes (for simplicity we assumed that the Western Australian and national cost profiles were similar, as does the CGC).
  - As the indexes measure costs relative to the capital city in each State, highly accessible areas always have an index value of 1.
  - By visual inspection of the Rawlinsons regional index maps, compared to the CGC SARIA remoteness map, we determined by judgement that accessible and moderately areas have cost loadings of 5% and 10% respectively.
  - As costs in more remote areas become large and highly variable, we did a more systematic analysis using data for Western Australia (to keep the resource cost of the calculation manageable). Cost indexes in remote and very remote areas were estimated as a population weighted average of the available cost indexes for these areas in Western Australia.

- The resultant Rawlinsons regional cost profile is summarised in the table below, and compared with the three cost profiles used by the CGC for assessing dispersion costs (these were used for both recurrent and capital costs).

Region (defined by the CGC's SARIA measure)	Rawlinsons	Education	Justice	Other spending
Highly Accessible	1.000	1.000	1.000	1.000
Accessible	1.050	1.000	1.050	1.025
Moderately Accessible	1.100	1.000	1.130	1.065
Remote	1.365	1.070	1.300	1.185
Very Remote	1.569	1.200	1.530	1.365

- The three dispersion factors that the CGC had derived from its three cost profiles were recalculated by applying the same "relevant populations" as the CGC had used to the Rawlinsons cost profile.
- For Western Australia, the difference was taken between the three recalculated factors and the three factors used by the CGC.
- These differences were applied to the proportions of national capital spending (both depreciation and investment) that the CGC had applied its three dispersion factors to, and the results were summed.

The above calculations of Western Australia's capital cost disability (i.e. 5.3% based on capital city costs plus 1.9% for higher costs in regional areas) yields 7.2% above average capital costs for Western Australia.

Applying 7.2% instead of the 4.8% assessed by the CGC to the national per capita expenditure for the CGC's existing Investment and Depreciation categories (escalated to 2012-13 values) increases Western Australia's assessment by $68 million.

In addition, applying 7.2% instead of 4.8% in the above calculation of capital costs associated with provision of infrastructure in advance of demand (incorporating inefficient utilisation risk premium) adds an additional $30 million to that assessment for Western Australia.

These total $98 million (i.e. $68 million plus $30 million).

3. High Labour Demand and Accommodation Shortages in Western Australia's Regional/Remote Areas

The CGC 2010 Review methodology calculates how much greater costs are in regional areas, compared to metropolitan areas, based on national cost data for education and police. This is used to calculate the costs of population dispersion across most expenditure areas.

However, these national 'cost gradients' understate the additional costs in regional areas in Western Australia.

Using the Western Australian data collated by the CGC for education in the 2010 Review, we calculated the cost gradients for Western Australia. A comparison is as follows:

Region (defined by the CGC's SARIA measure)	WA	Aust
Highly Accessible	1.0000	1.0000
Accessible	1.0655	1.0236
Moderately Accessible	1.1430	1.0698
Remote	1.2800	1.1820
Very Remote	1.4705	1.3675

As the Western Australian data for police was not readily available in the required regional format, we assumed that the ***absolute*** differences between the Western Australian and national cost gradients for education also apply to police (if we had assumed similar ***percentage*** differences, the CGC's underestimation of Western Australia's dispersion costs would have been even greater).

The result is to increase assessed additional cost of population dispersion for Western Australia by 0.16 percentage points. The formula (expressed in its most simple form) is:

> *Population-weighted average of the differences between WA and national cost gradients (using the WA populations in each of the five remoteness regions)*
>
> *divided by*
>
> *Population-weighted average of the national cost gradients (using the national populations in each of the five remoteness regions).*

Applying this 0.16 percentage point increase to the total expense (excluding depreciation) to which the CGC applies dispersion factors (escalated to 2012-13 values) gives an increase in the assessment of $315 million.

This was incorrectly listed as about $40 million in Western Australia's final submission, due to an error in the calculation.

4. Support for Local Governments and Community Amenities

The CGC does not recognise the need for Western Australia to fund community amenities that is driven by economic and population growth and the uncertainty of this growth (which makes the private sector less willing to invest).

We have estimated a comprehensive community amenities standard (i.e. national) expense at $150 per capita, covering the CGC's expenses on "community development", "community amenities" and "protection of the environment" within its Services to Communities category and part of expenses on national parks and wildlife within the CGC's Other Expenses category.

We have assessed half of this standard the same as the CGC's current assessment – applying an interstate wages factor (as per the CGC), an intrastate or population dispersion factor (using the national and WA-specific cost gradients presented in the previous section), and an indigeneity factor (as per the CGC, with appropriate scaling back, to reflect that the CGC only applies this factor to the "community development" part of its Services to Communities category).

The other half we have assumed is "activity"-based. We have assessed these expenses as being proportional to population growth (using the same growth assumptions as in section 1 above); and have applied a reworked dispersion factor for Western Australia, calculated by:

- using national and Western Australian specific cost gradients (as discussed in the previous section);

- applying the following weights to the cost gradients (see below for explanation):

Region (defined by the CGC's SARIA measure)	WA	Aust
Highly Accessible	0.25	0.25
Accessible	1.00	0.67
Moderately Accessible	1.00	0.67
Remote	4.00	2.00
Very Remote	4.00	2.00

- calculating the disability factor for Western Australia as follows:

  Population growth–weighted average of the weighted WA cost gradient (using WA population growth over four years in each of the five remoteness regions)

  divided by

  Population growth–weighted average of the national cost gradient (using national population growth over four years in each of the five remoteness regions)

The weights applied to the cost gradients were determined as follows:

- given data limitations, it was decided to recognise three (rather than five) different levels of demand for State government spending, by assuming similar demand in accessible/moderately accessible areas, and remote/very remote areas;

- a weighting of 1 in Western Australia's accessible and moderately accessible areas was taken as the *numeraire*;

- a weighting of 4 in Western Australia's remote/very remote areas was derived from the regional spending profile of the Royalties for Region program for 2010-11 and 2011-12 (rounded from a precise weight of 4.2);

- a weighting of 2 (i.e. half of 4) was applied in remote/very remote areas for Australia as a whole, having regard to our assessment (see section 1) that Western Australia's faces double the national risk premium due to volatility in population/economic growth, and much of this risk would be borne in remote/very remote areas (with progressively less being borne in less remote areas);

- a weighting of 0.67 (i.e. two-thirds of 1) was applied in accessible/moderately accessible areas for Australia as a whole, again having regard to Western Australia's higher risk premium, but the additional risk premium for Western Australia is discounted by judgement from 100% (in remote/very remote areas) to 50% (in accessible/moderately accessible areas). Hence in accessible/moderately accessible areas Western Australia's risk premium is assumed to be 1.5 times the national level, and the national weight is 1/1.5 = 0.67; and

- a relatively low weighting of 0.25 was selected for highly accessible areas (and it was decided to apply no risk premium for Western Australia in these areas), to reflect our judgement of State government spending in Western Australia's highly accessible area compared to the accessible/moderately accessible areas. We comment below on the sensitivity of the final result to this assumption.

Having calculated what we consider to be Western Australia's needs in this area, we subtract the CGC's assessment (but modify the CGC's assessment to reflect the WA-specific cost gradient in section 3, in order to prevent double-counting between our calculation of costs unassessed by the CGC in section 3 and this section).

The structure of the above calculation (resulting in a net $543 million) is as follows:

		Existing CGC Assessment	**Proposed Assessment** Non-Activity Component	Activity Component	Total
Standard expense ($pc)	[A]	150	75	75	150
Disability factors					
Interstate wages	[B]	1.035	1.035	1.035	
Dispersion [(a)]	[C]	1.025	1.025	1.597	
Indigeneity [(b)]	[D]	1.068	1.068	1.000	
Population growth [(c)]	[E]	1.000	1.000	2.481	
Total ([B]x[C]x[D]x[E])	[F]	1.133	1.133	4.102	
Assessed expense ($pc) ([A]x[F])	[G]	170	85	308	393
Needs ($pc) ([G]-[A])		+20			+243
Needs ($m)		**+49**			**+592**
Difference in needs ($m)					**+543**

(a) Using the reworked dispersion factors to incorporate the WA-specific cost profile as discussed in section 3. This is also done for the "existing" CGC assessment.

(b) CGC factor of 1.11, discounted by 38% to reflect "community development" comprising only 62% of the $150 per capita standard.

(c) Ratio of Western Australian desired population growth rate of 3.3% to Australian population growth rate of 1.3% (average over last 30 years).

If a weight of 0.5 rather than 0.25 is applied to highly accessible areas, the result of the calculation falls to $466 million. While a weight of 0.5 seems implausibly high, in view of the uncertainties we have used a figure of $500 million in our August 2012 submission.

5. Fly-in fly-out Workers

Our assessment of unrecognised costs by the CGC in this area is based on the general concept that the CGC process would generally regard these workers as having medium/high income or socio-economic status (SES), whereas their demands on State government services could be more akin to low income or SES workers.

There is some debate about whether costs in this area are specific to fly-in fly-out workers, or apply to workers in the mining industry more generally.[6] In the latter case, unrecognised costs are likely to be even higher than we have assessed them to be in this section.

We have not attempted to assess any costs for 'doubling up' of services, as there is not enough information available.

The elements of our assessment of Western Australia's above average costs are as follows:

- costs assessed in 2012-13 terms (CGC cost data for 2010-11 has accordingly been escalated);
- an estimate of 55,150 fly-in fly-out workers in Western Australia and 150,000 nationally (noting that there is only thin evidence for national totals). In per capita terms, Western Australia is therefore assumed to have 3.4 times the national number of such workers;

[6] See for example Anne Sibbel's submission to the Commonwealth House of Representatives House Standing Committee on Regional Australia Inquiry into the use of FIFO workforce practices in regional Australia.

- excluding interstate wage and regional cost differentials, the additional cost facing State governments for each fly-in fly-out worker is $2,144 (rounded to $2,000 in our submission), comprising:

  - justice costs ($538) calculated as the difference between CGC assessed costs for mid and low SES non-Indigenous males aged 15 to 34. Evidence of the impact on justice costs is provided in submissions to the Commonwealth House of Representatives House Standing Committee on Regional Australia Inquiry into the use of FIFO workforce practices in regional Australia. The Youth Affairs Council of Western Australia (YACWA) submission notes that 'A concern particularly for young Western Australians, is the trend for young, almost exclusively male workers returning to their residential communities in Perth with inflated wages, a superabundance of spare time and a significant degree of pent up stress to relieve. This often culminates in drug and alcohol abuse …' and 'Certain mining towns have experienced an up to 250% increase in violent crime since the introduction of FIFO workers'. The AMA (WA) submission notes that 'A number of experts have also indicated concerns about the disrupting nature of FIFO employment, an impact demonstrated by an increased use of alcohol and illegal drugs such as Kronic.';

  - welfare services costs ($404) proxied from national average spending by State governments on Newstart recipients (per client) of $808 in 2012-13 terms, discounted 50% to reflect the uncertainty of this proxy. A report in the West Australian, 12 September 2012, page 3, noted the substantial demand on welfare services arising from the relationship difficulties of fly-in fly-out worker families, including domestic violence/abuse). The AMA (WA) submission cited above noted that 'We also understand that the FIFO lifestyle and the strains imposed on workers sometimes have a negative impact on personal and family relationships.' The YACWA submission cited above notes that 'The common understanding that FIFO work practices place undue strain on marriages and familial relationships is supported by a plethora of research that indicates working inflexible and irregular hours makes maintaining healthy parental or marital relationships increasingly difficult.' The FIFO families submission notes that 'The main impacts on the non-FIFO partner are feeling isolated, lonely, highly stressed and at times exhausted from being the sole carer for children whilst the FIFO parent is working away. There can be a feeling of disconnect between the FIFO worker and partner at home and also between the FIFO worker and children. This disconnect has the potential to seed family breakdown.';

- hospital costs for the worker and estimated dependents[7] ($441) calculated (for adults) as the difference between CGC assessed costs for mid and low SES non-Indigenous persons aged 20 to 49 in highly accessible areas (this difference was doubled for the worker, reflecting the high risks of his profession) and in a similar fashion for children (see the following point for evidence on FIFO health impacts);

- community and other health costs for the worker and partner ($252) calculated as the difference between CGC assessed costs for 'low use SES' and 'high use SES' non-Indigenous persons in non-remote areas, for males and females respectively (this difference was doubled for the worker, reflecting the high lifestyle risks) [there is no significant cost impact in relation to children from the CGC data]. The AMA(WA) submission cited above notes 'significant health concerns around FIFO workers, ranging from diabetes, obesity, mental and heart disease … increased use of alcohol and illegal drugs … the issue of infectious diseases and FIFO workers and problems created by their regular travel from home/work/holidays and the possibility of carrying and transferring such diseases.' The FIFO Families submission notes that 'the rate of suicide of male miners is 4 times greater than that of the general male population.'; and

- child education costs ($509) calculated using the CGC's low SES cost allowance of 12% applied to the average cost per student ($12,128 in 2010-11). This allowance reflects concern about the impact on children of the FIFO lifestyle. A report in the West Australian, 26 October 2012, page 1, noted that 'the FIFO lifestyle was leading to a "growing father deficiency"' and that 'For boys whose fathers worked away, there was a risk they would "get connected with other young males who are not going to school, engaging in antisocial behaviour, drinking too much, using cannabis …"';

- Western Australia's costs of providing services assumed to be 3.5% above the national average (reflecting a 5.8% wage premium discounted to 60% to reflect the wage component of costs); and

[7] Estimated as 1 partner for every 2 workers and 1 child for every 3 workers.

- calculation of regional dispersion costs for Western Australia and other States, based on the assumption that 20% of selected total service costs for these workers (i.e. not just the additional service costs noted above) is incurred in remote/very remote areas, but not assessed by the CGC as these workers are generally resident in highly accessible/accessible areas.
  - The selected service costs include justice and health costs for the worker (but not his dependents, who are assumed to reside in highly accessible/accessible areas). Education and welfare services are assumed to be fully provided in highly accessible/accessible areas.
  - In the calculation of regional dispersion costs, the national and WA-specific cost gradient values shown in section 3 for remote/very remote areas were used (a population weighted average value was derived for WA using the populations in these areas in WA, and a similar procedure was used to derive a population weighted average national value).

The outcome of the calculation outlined above was an unassessed above average cost of $102 million for Western Australia, this being the difference between:

- the additional cost of fly-in fly-out workers for Western Australia; and
- Western Australia's per capita share of the additional cost of fly-in fly-out workers for State governments across the nation.

The overall calculation is summarised in the tables below.

National average additional cost per FIFO worker

	Higher cost group 2010-11 $	Lower cost group 2010-11 $	Cost difference 2010-11 $	Cost escalation to 2012-13	Use weight	Net cost $
Justice	1,827	1,315	512	1.05	1	538
Welfare services	-	-	384	1.05	1	404
Hospital costs worker	727	571	156	1.075	2	335
Hospital costs partner	727	571	156	1.075	0.5	84
Hospital costs child	348	288	60	1.075	0.333	22
Hospital costs total						441
Other health worker	778	676	101	1.05	2	202
Other health partner	777	677	100	1.05	0.5	50
Other health total						252
Education	13,583	12,128	1,455	1.05	0.333	509
Total all services						**2,144**

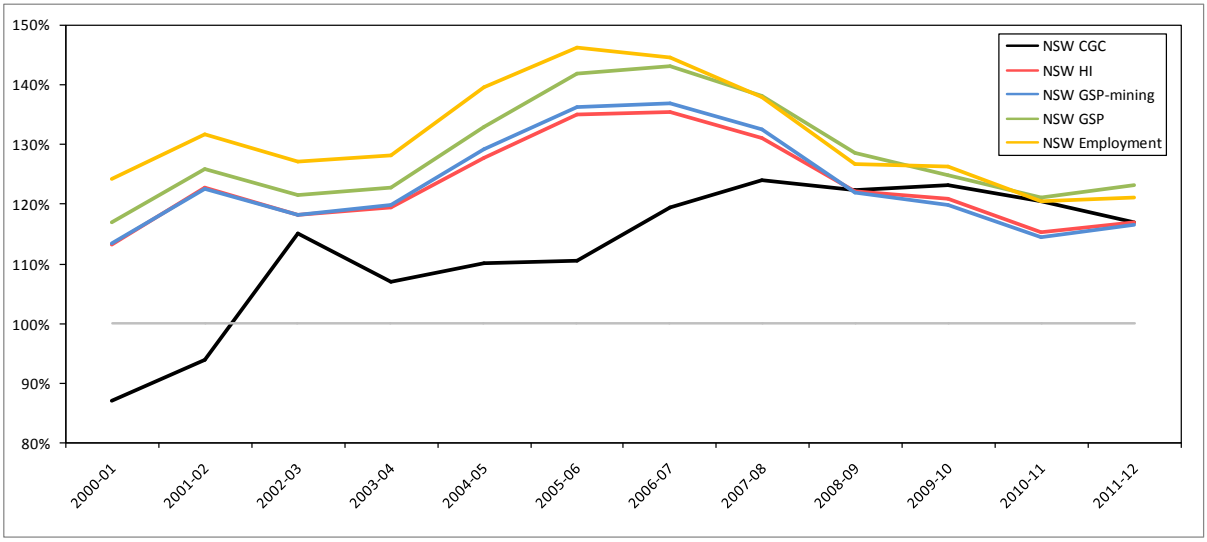
Calculation of additional State expenditure on FIFO workers

		WA	Aust
Additional cost per worker before location factors ($)	[A]	2,144	2,144
Selected total costs per worker before location factors (i.e. those that are assumed to be partly affected by regional dispersion costs) ($) [(a)]	[B]	3,589	3,589
Wage factor	[C]	1.0348	1.000
Dispersion factor (assumed to apply to 20% of selected total costs)	[D]	1.4163	1.2682
Additional cost per worker adjusted for location factors ($) ([A] x [C] + 20% x [B] x [C] x {[D] – 1})	[E]	2,528	2,336
Number of FIFO workers	[F]	55,150	150,000
State population	[G]	2,439,138	22,811,401
Per capita additional State expenditure on FIFO workers ($) ([E] x [F] divided by [G])	[H]	57.2	15.4
Needs (i.e. above average cost) for WA ($m) (population of WA multiplied by per capita cost difference, i.e. 2,439,138 x [57.2 – 15.4])		102	-

(a) Derived by summing selected figures in the second and fourth columns of the table above showing service components of the national average cost per FIFO worker. Costs relating to partners, children, education and welfare are excluded (as they are assumed to incur no regional dispersion costs). The summation comprises justice ($1,827), hospital costs ($727 plus $156) and other health ($778 plus $101). By way of explanation of the health costs, the higher health costs shown in column 2 of the table do not fully reflect total costs for FIFO workers, because the additional costs for FIFO workers have been weighted by a factor of two (whereas the costs in column 1 reflect a weight of one). To achieve a weight of two for the additional costs, the additional costs in column 4 have to be added to the costs in column 2. The cost of escalation from 2010-11 terms to 2012-13 terms has been ignored.

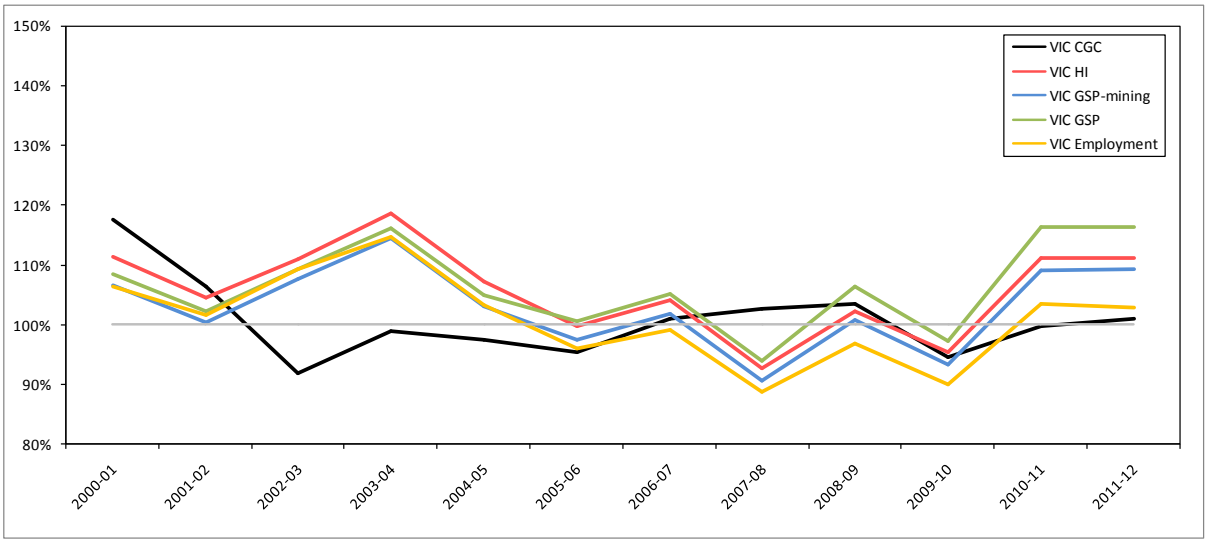
Appendix C: Summary of different measurements of land tax effort for each jurisdiction compared to the most recent CGC estimates[1]

New South Wales

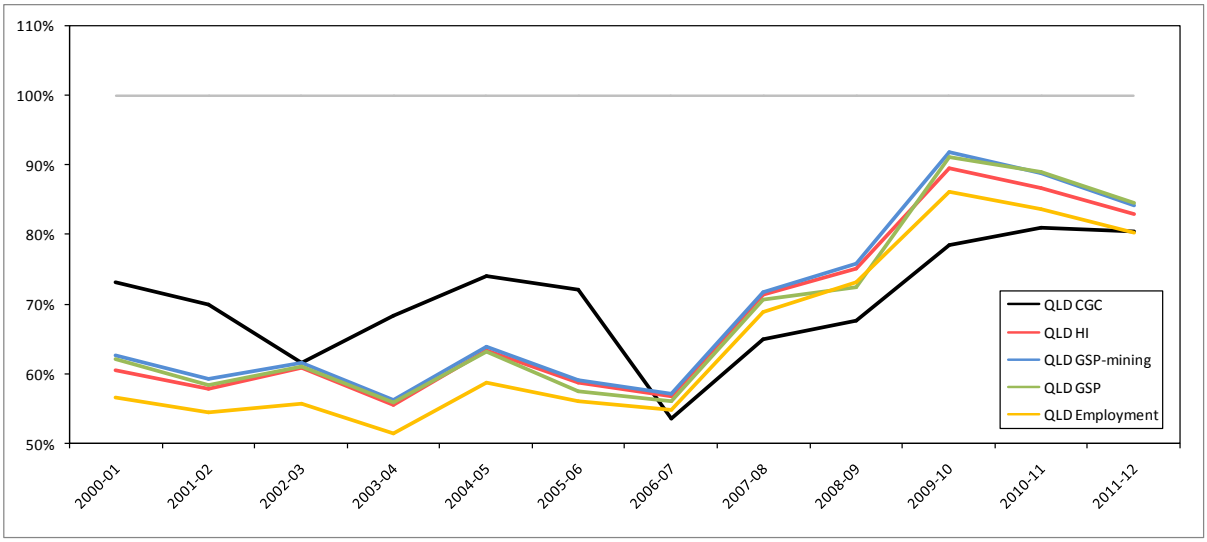


[1] Data to 2003-04 is not directly comparable with data from 2004-05 onwards due to changes arising from the 2010 CGC methodology review. Pre 2004-05 data also includes tax revenue raised from government entities in South Australia which is excluded from later years.

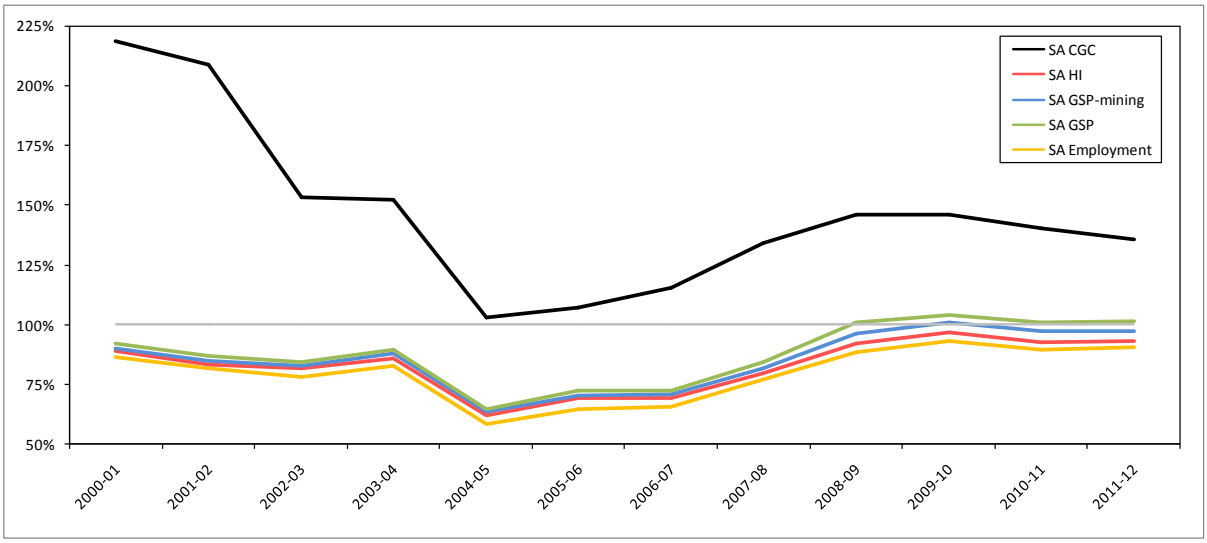
Victoria



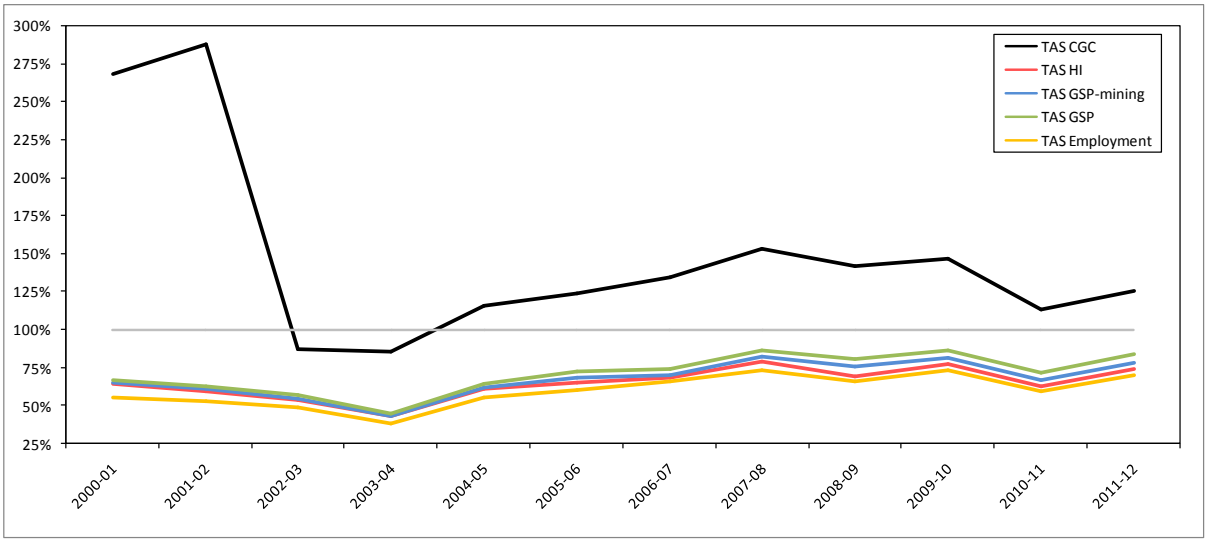
Queensland



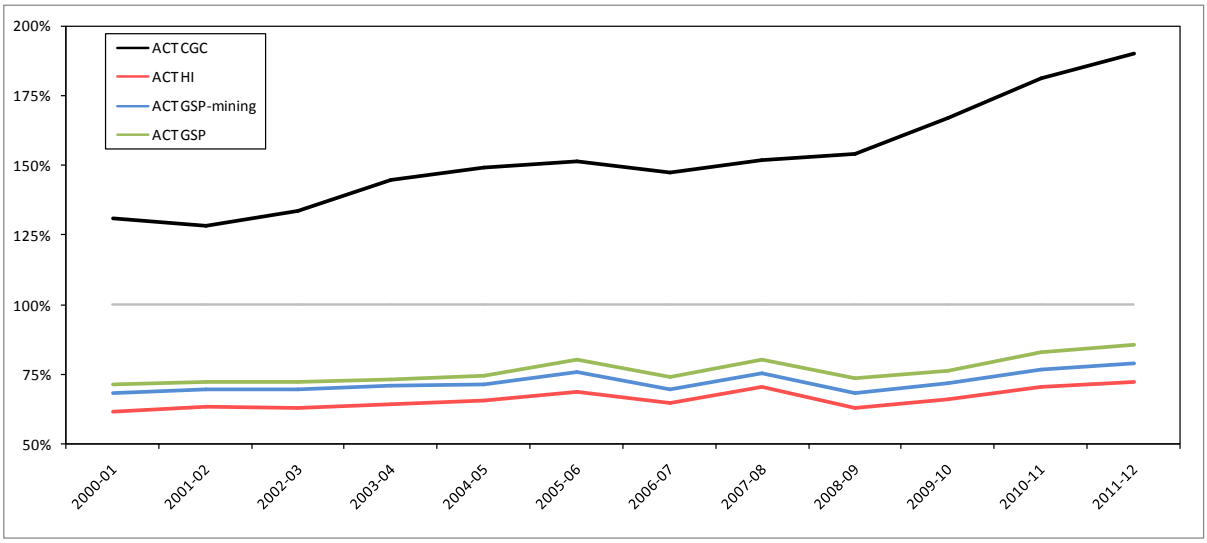
South Australia



Tasmania



Australian Capital Territory[2]



[2] The ABS does not report seasonally adjusted employment data for the Australian Capital Territory or the Northern Territory.