ABSTRACT

Horizontal Fiscal Equalisation (HFE) is inevitable in any federation. What is not necessarily inevitable is that it should be a disincentive to accountability, impair transparency or lead to the adoption of State policies which are not in the national interest. The problem is however, that highlighting the possible disincentive effects of HFE are not easily demonstrated. This is because the debate around HFE is typically made complex because it is mixed with the broader debate about how a federation should be funded in general. In this paper a simple visual framework is developed to bring transparency to the issues involved in funding subnational governments in the presence of Vertical Fiscal Gap (VFG) and Horizontal Fiscal Gap (HFG). If we begin by assuming tax assignment and expenditure responsibilities are predetermined, then the funding of subnational governments through grants can be viewed as involving 3-stages, each involving different issues. The Stage 1 grant would be focussed on ensuring that in aggregate, across subnational governments, VFG is zero and this could be achieved with an equal-per-capita grant. The Stage 2 grant would address evidence of HFG through the application of HFE principles. The Stage 3 grant would be designed to achieve federally determined national objectives through supplementary grants which are quarantined from the Stage 2 grant distribution process. Using a visual framework to outline each grant’s role in funding subnational governments, it is possible to simply highlight that the focus on HFE in Stage 2 grants should be firstly on the measure on which to base equalisation and secondly, on the degree of redistribution through grants, to apply using that measure. The paper will show visually how Australia, Germany and Canada have designed their 3-Stage grants including the measure used and the degree of redistribution underpinning their response to HFE in Stage 2 grants. Use of this framework should facilitate a more transparent dialling in of incentives into Stage 2 grant design and with this a better understanding of how subnational governments are funded in practice and approaches which could improve accountability and incentives across a federation.
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1 WHAT IS THE PROBLEM?

In all federations, there will inevitably be a mismatch between revenue and responsibility both between and across levels of government. A vertical fiscal gap (VFG) can arise between different levels of government when revenue raising capacity and expenditure needs are mismatched and a horizontal fiscal gap (HFG) where there are differences across the same level of government. However, it is essential for any well-functioning politically stable harmonious federation that the federation has in place vertical fiscal equalisation (VFE) arrangements designed to distribute fiscal resources between levels of government, from national to subnational governments, and horizontal fiscal equalisation (HFE) arrangements, which facilitates the distribution of fiscal resources across the same level of government.

In the Australian federation, in 2015-16 States funded from own-revenue sources just 41% of all State and Territory1 expenditure which has made States and Territories highly dependent on grants (or transfers) from the Commonwealth to address VFG. For the Commonwealth in 2017-18, this transfer to States is estimated to be $119b from a Commonwealth Budget of $464b – or 26% of all Commonwealth outlays2. Not surprisingly, the fiscally challenged Commonwealth is reviewing this level of transfer and how VFG may be addressed outside of intergovernmental grants such that states fund more of their expenditure responsibility from own-revenue sources3.

A not unexpected response of States has been for them to not only criticise the Commonwealth for curtailing grants but for individual States to then argue that they should receive a greater share of the now diminishing grant pool. For any one State, what is of concern is therefore the arrangements for responding both to evidence of both VFG and HFG. Critical to HFG is the HFE arrangements adopted when distributing grants across sub-national levels of government. Unsurprisingly, since HFE involves in effect a zero-sum game4, debate over HFE arrangements adopted can result in acrimony and divisive behaviour in the federation both between and across levels of government.

In the Australian federation, some states have become high profile and vocal critiques of HFE, especially Western Australia (WA) where despite the end of the commodity price boom, the HFE arrangement is still factoring in the high revenues received during the boom. A typical response historically by the Commonwealth to appease such criticism has been to make one-off grants (as to WA and to Tasmania in the recent past) but as the criticism has become more strident of HFE arrangements by WA in recent years, the Commonwealth agreed to review its approach to HFE and announced a Productivity Commission review designed “to consider the influence the current system of HFE has on productivity, efficiency and economic growth”5.

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1 Hereafter ‘States’ shall refer to ‘States and Territories.
2 Commonwealth Budget Paper No 1, p 4-8 and Budget Paper No 3 p6, (www.budget.com.au)
3 See Eccleston and Warren (2015) for a discussion of some of the options available to States.
4 This is because if there is a fixed grant needed to address the aggregate arising from VFG, then what one state gains another must loose.
While it is not uncommon for federal governments to express concern about the incentive effects of fiscal equalisation\(^6\) or for research to show that equalisation can result in adverse behaviour by States\(^7\), it is much harder to agree on what HFE is preferable and acceptable in the federation. The German Federal Ministry of Finance\(^8\) observed that ‘In the interest of the fiscal autonomy and sovereignty of the Länder, the differences in receipts among the Länder are only partially reduced by the financial equalisation’. Ferede(2014) noted for Canada that ‘The incentive for grant-receiving governments to ‘game’ the formula, even unconsciously, is apparent; … analysis shows that indeed it is occurring, and to a measurable degree’\(^1\).

Australia is not immune from debate on the perverse incentives of its HFE arrangements. Warren(2010b) argued that current arrangements mean there was little incentive for States to undertake reforms to their taxes after modelling the impact of AFTS(2009) State tax reform proposals on the grant pool distribution between States. However, there is as observed by Ferede(2014, p1) for Canada, ‘the perverse incentives that motivate “have-not” provinces to raise taxes.’ This is because HFE can give small States an incentive to increase their taxes above the national average knowing that this will impact less on their grant entitlements than would be the case for a larger State\(^9\) taking the same action.

The challenge for any debate about VFE and HFE arrangements is how, in a politically charged environment involving a zero-sum game, to distil fact from fiction and thereby bring some transparency to the debate and accountability by all the participants, whether national or sub-national. It is the contention of this paper that only by partitioning of the arguments associated with addressing VFG and HFG into its constituent parts, will it be possible to move the discussion forward about sub-national funding and HFE in particular. Historically, what has most inhibited HFE reform is a lack of transparency as to what is and how HFE operates in practice not only in one country but also as adopted in other countries.

This paper argues that a simple ‘visualisation’ framework can be developed which brings transparency to current (and proposed changes to) VFE and HFE arrangements in any federation. After all, if the critical issue inhibiting responsible debate over HFE reform is a lack of transparency around current arrangements and the meaning of any reform options being proposed, a transparent framework for assessing reform options would enable engagement in what could otherwise be a complex and esoteric debate amongst the initiated. Importantly, a key attribute of the framework is that it is non-judgemental about current arrangements.

Section 2 begins by developing this simple ‘visualisation’ framework using measures already well understood (and estimated) based on the three types of grants effectively underpinning any

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\(^8\) ibid p3

\(^9\) In the case of taxes, this is because the national average assessed revenue per capital estimate is impacted less by a small States actions than a large State so a small State would be able to retain the increased ‘actual’ revenue per capital above the national average assessed revenue per capital estimate.
intergovernmental grant regime designed to address VFG and HFG – assuming tax and expenditure assignment is predetermined. Such a framework will say nothing about ‘what ought to be’, only ‘what is’. Section 3 will then use this framework to detail how VFE and HFE operate in practice in the federations in Australia, Canada and Germany. Section 4 then applies this visualisation approach to outlining and communicating the HFE design options available to Australia in any review of its current HFE arrangements.

The contribution of this paper is that just maybe, such a ‘visualisation’ framework might enable a broader audience to be engaged on an issue of national importance which hitherto has been largely impenetrable to the uninitiated.

2 FISCAL EQUALISATION VISUALISATION FRAMEWORK

Taking the assignment of expenditure functions and taxing powers within the federation as given, it is almost inevitable that both VFG and HFG will be evident. Just how this should be responded to in practice is inevitably unique to that federation with the outcome being related to both institutional and political considerations. However, despite each outcome being unique, there are common factors which need consideration and resolution in all deliberations on what intergovernmental grant arrangements will address evidence of VFG and HFG.

It is the contention of this paper that in all cases, regardless of institutional and political considerations, all intergovernmental grant arrangements can ultimately be visualised as structured around a 3-Stage grant design where Stage 1 addresses VFG issues, Stage 2 HFG and Stage 3 special purposes external to the equalisation process.

To enable a simplified visualisation of how VFG and HFG effectively impacts in practice in federations, the three stages in grant allocation can be defined as where:

Stage 1 is a grant focused only on VFE arrangements designed to address VFG in aggregate;
Stage 2 is the grant arising from the HFE design which addresses HFG issues when distributing grants arising from ensuring VFG=0 in Stage 1; and
Stage 3 grants are independent of, and quarantined from impacting, Stages 1 and 2 grants as the objective of these intergovernmental grants is unrelated to VFG or HFG.

In practice, grant design and equalisation arrangements can be complex with grants which are earmarked or not, mandatory or discretionary, matching or non-matching, capital or current, and general purpose or block grants. However, at the core of most grant designs is a substantial general purpose grant as in Stage 2 and even where conditions are applied to grants, these can be accommodated through how HFE is applied in Stage 2 and the assignment of grants to Stage 3. However, it is not the purpose of this paper to engage with the specifics of each possible mix of grant designs, only to developing an approach to visualising how grants can be broadly categorised when being designed to address VFG and HFG in any federation.

By reducing all intergovernmental grant allocations down to a simple 3-stage process centred on addressing sequentially, VFG, HFG and specific purposes, it has the advantage of enabling a clear separation of the different arguments which apply to grant design in each case. At its simplest, Stage 1 can be reduced to the simple objective of reassigning national revenue to subnational governments to ensure in aggregate, that Vertical Fiscal Gap is zero such that total expenditure equals total revenue

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10 For a discussion of grant typology, see p6-8 in Bergvall, Charbit, Kraan and Merk (2006)
(inclusive of any federal equalisation transfer) across all States. By not adequately distinguishing between the level of vertical redistribution in Stage 1 and the degree of horizontal equalisation in Stage 2, the debate over State funding is typically made too complex and opaque resulting in both a loss in transparency and the ability to communicate the intend and operation of HFE which will adversely impact State and Federal accountability for the process and its outcomes. At all times, Stage 3 grants are kept independent of Stage 1 and 2 grants as they have a different purpose.

Since the primary objective of this paper is the practical one of developing a framework for the visual communication of how intergovernmental grants are allocated in practice in any federation, practical content needs to be given to how the need for grants are assessed in practice for subnational governments.

2.1 Stage 1: Vertical fiscal equalisation

If the objective of Stage 1 grants is to address VFG through VFE designed to ensure in aggregate – but not individually – that subnational governments have all the revenue required to fund their expenditure, then vertical fiscal equalisation in Stage 1 could simply be interpreted as occurring through a general purpose grant\(^{11}\) such that:

\[
G^* = \sum E^*_i - \sum T^*_i
\]

where \(T^*_i\) and \(E^*_i\) are aggregate taxes and expenditure in State \(i\) and total revenue for all States across the federation \(R^*\) is the sum of \(\sum T^*_i\) and \(G^*\).

Since our interest is in isolating and identifying the incentive effects of any HFE design, the distribution of Stage 1 grant \(G^*\) between States \(i\) should be made in a way which is neutral in its impact on State behaviour. To achieve this, \(G^*\) should be distributed on an equal-per-capita basis with each State receiving \(G^{\text{epc}}\) per capita where:

\[
G^{\text{epc}} = \frac{G^*}{N}
\]

and \(N\) is the national population. For any State \(i\), its total revenue \(R^*_i\) is therefore:

\[
R^*_i = T^*_i + G^{\text{epc}}.N_i
\]

where \(N_i\) is the population in State \(i\) and \(N=\sum N_i\)

While Stage 1 grant \(G^*\) addresses VFG, it does not address HFG.

2.2 Stage 2: Horizontal fiscal equalisation

How then can Stage 2 be configured to facilitate transparency and ease of communication of any incentive effects arising from the ‘degree’ of horizontal fiscal equalisation chosen in practice to address HFG? After all, clarity on the degree of equalisation adopted can facilitate a more transparent and informed debate about the degree of equalisation and the related incentive effects for individual States.

Since what is contentious about HFE is the resulting redistribution between States, the first challenge is to develop an approach which allows States to be directly compared. The two most important differences which need to be controlled for are the relative size of the State and the relative effort by

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\(^{11}\) How the general purpose EPC grant is funded is not materially significant to this process and could be funded through States sharing federal tax revenue (eg GST or Personal Income Tax), federally administered state taxes on shared bases or through general purpose grants funded from federal general revenue.
each individual State. Relative size can be accommodated through the use of per capita measures, and effort through assuming an effort equal to the national average. However, estimating capacity by adjusting for effort is not uncontroversial. Central to the debate is how comprehensive should be any assessment of subnational fiscal capacity with two measures being adopted in practice\(^\text{12}\) – one based on revenue and the other on the difference between revenue and expenditure. The degree of equalisation adopted is then applied using this base to determine Stage 2 grants. As will be shown below, whichever base is adopted, what is important is distinguishing it from the degree of equalisation applied in practice.

**a. Tax and capacity**

If taxation is adopted as the measure on which to base HFE, then any measure designed to reflect a State’s relative capacity to raise revenue requires an adjustment to remove differential tax effort\(^\text{13}\) – reflecting what they could do as against what they actually do – and an adjustment for differences in the size of the State – achieved through using per capita measures, not aggregate measures. Using per capita tax revenue raising capacity would therefore allow a direct comparison between States in relation to potential tax revenue. Estimating such a measure is relatively straightforward.

If \(T_i\) and \(E_i\) are per capita tax and expenditure, then:

\[
T_i = \frac{T_i}{N_i} \quad (4) \\
E_i = \frac{E_i}{N_i} \quad (5) \\
R_i = \frac{R_i}{N_i} \quad (6)
\]

where \(N_i\) is the population in State \(i\). Assuming for simplicity that only one tax is imposed in each State, that the base per capita in State \(i\) is \(Y_i\) and that the average tax rate on that base is \(t_i\), then the actual tax per capita \(T_i\) in State \(i\) is:

\[
T_i = t_i \cdot Y_i \quad (7)
\]

However, while \(T_i\) controls for population size, it does not control for differences in tax capacity across States. What is required is some adjustment for the relative tax effort by each State. This can be made by assessing how each State’s tax rate (which reflects a State’s individual effort) differs from the national average tax rate \(t\). By applying \(t\) to each State’s tax base, what is derived is a measure of the distribution of the tax base across States as it estimates the tax revenue each State would raise per capita after making the same tax effort. In Canada this is referred to as a representative tax system\(^\text{14}\) and in Australia, is the basis for estimating assessed tax for each State\(^\text{15}\) such that for State \(i\), assessed tax per capita (\(AT_i\)) can be estimated as:

\[
AT_i = t \cdot Y_i \quad (8)
\]

This measure can be contrasted with the national average tax per capita (\(T\)) defined as:

\[
T = t \cdot Y \quad (9)
\]

\(^\text{12}\) In practice, how revenue and expenditure are defined in each of these measures differs across countries as will be seen from the discussion in Section 3 in relation to the practices in Australia, Canada and Germany.

\(^\text{13}\) Tax effort and capacity for Australian States is shown in Table 6 and discussed further in Section 3.3


\(^\text{15}\) See discussion in Section 3.3.
where $t$ is the national average tax rate ($t=\frac{\sum T_i}{\sum Y_i N_i}$) and $Y$ is the national average per capita base ($Y=\frac{\sum Y_i N_i}{N}$)

What $AT_i$ therefore provides is a measure of a State’s relative tax capacity by focusing on its access to the tax base $Y$ independent of its own tax rate $t_i$ or population $N_i$. Contrasting $AT_i$ in (8) with $T$ in (9) indicates tax capacity in State $i$ relative to the national average and therefore relative capacity; and contrasting $AT_i$ to $T_i$ reveals the tax rate in State $i$ as compared to the average national tax rate and therefore indicates relative tax effort given a State’s access to the national base of this tax.

Since $AT_i$ measures a State’s relative tax-raising capacity, it provides a basis on which to rank individuals in a state from the lowest to the highest, according to their State’s tax capacity as shown in Figure 1 resulting in the line QR. The real benefit of Figure 1 is that it depicts visually and simply, the challenge of funding subnational governments when VFG and HFG are present. Moreover, what is important in Figure 1 is that it is not concerned with States per se but with the individuals in those States, ranking them by their respective State’s $AT_i$.

Figure 1 can also be used to simply illustrate how Stage 1 equal per capita grant $G^{pce}$ designed to address VFG elicits no subsequent behavioural response – impacting equally across all individuals in all States. In Figure 1, PM represents $G^{pce}$ with its total cost of $G^*$ shown by the area PMNL. For each individual in State $i$ there is now a measure of their assessed revenue per capita $AR_i$ which can be defined as:

$$AR_i = AT_i + G^{pce}$$  \hspace{1cm} (10)

which is shown in Figure 1 by the line ACD. Using either $AT_i$ or $AR_i$ to rank individuals in States does not change their ranking. Also, since VFG is zero across all States as a result of Stage 1 $G^{pce}$ grant then in Figure 1, ABC=CDE. The issue for Stage 2 grants with their focus on HFG is whether the distribution shown by ACD is acceptable. However, what Figure 1 does not do is inform on the degree of HFE to apply, only the basis on which inter-State capacity assessments can be visualised and HFG across the federation revealed.

**Figure 1** State Revenue ($AR_i$) with VFG=0 and no HFE
Figure 2  HFE based on State Assessed Revenue (Stage 2)

A. No HFE

B. Full HFE

C. Partial HFE

D. Partial HFE
What Figure 1 can do though, is provide a tool capable of visually illustrating the basic issues which need resolution when responding to the HFG challenge in Stage 2 grant design. This is important because not only is the horizontal fiscal equalisation debate in federations often confusing because of a failure to separate VFG and HFG issues, but complicated by the discussion on HFG not distinguishing between (a) the method of assessment (using ARi); and (b) the degree of HFE to apply in practice.\(^\text{16}\)

Figure 2 adapts Figure 1 to enable a visualisation of various HFE design options available in a federation. If AR\(_i\) is the assessed revenue per capita after HFE achieve through Stage 2 grants, then in Figure 2A, assessed revenue per capita (AR\(_i\) as the red-dashed line) remains unchanged as no HFE is applied – despite clear HFG issues between States as shown by ACD. In contrast, Figure 2B assumes full HFE such that those individuals living in States where assessed revenue AR\(_i\) is greater than the national average assessed revenue AR, have distributed away from them, an amount equal to CDE which is transferred to those individuals in States where AR\(_i\)<AR such that ABC=CDE.

In contrast, Figure 2C distributes G\(^{p\%}\) away from those individuals above C while for those below C, their AT\(_i\) is topped-up such that for the Stage 2 grants, ABC=CDEF. In Figure 2D, the approach to HFE tops-up those where AR\(_i\)<AR but not fully to AR while those where AR\(_i\)>AR, there is some reduction to their AR\(_i\) but again not to AR.

The benefit of the visual representation of the federation funding challenge in Figures 1 and 2 is the transparency it brings to the approach to VFE and HFE designed to address VFG and HFG respectively.

b. Budget balance and capacity

While Figures 1 and 2 focus on the revenue-side of State budgets (AR\(_i\)) it is common (as in Australia) for the focus of HFE to be on a combination of (all or some) revenue and expenditure. For simplicity we will include all expenditure and revenue (inclusive of Stage 1 grants) for a State. Again, to enable States to be compared, an adjustment must be made for size and effort. In the case of taxation, this is achieved by again estimating assessed revenue AR\(_i\) while with expenditure, it requires an adjustment to reflect state size and use and cost disabilities\(^\text{17}\) when providing the average national level of service. If this average national level of service per capita is Q and C\(_i\) is relative use and cost disabilities with supply in State i, then assessed expenditure for State i can be measured:

\[
AE_i = C_i \cdot Q
\]  

(11)

If it is again assumed that grants are designed in Stage 1 to ensure VFG=0, then across all States there is in aggregate, neither a deficit nor surplus, such that the assessed budget (AB\(_i\)) outcome in State i can be defined as:

\[
AB_i = AE_i - AR_i \quad \text{with } \sum AB_i = 0
\]  

(12)

In ranking individuals by their States’ respective AB\(_i\) we can represent simply in Figure 3, the financial advantage individuals in those States with AB\(_i\)>0 have (equal in total to CDE), over those States where AB\(_i\)<0 (ABC) such that ABC=CDE. The parallels between Figures 3 and 1 are clear, the

\[^{16}\text{This paper also leaves aside the further complication arising from the specific design of grants as noted in footnote 10.}\]

\[^{17}\text{For a description of these terms in practice in Australia, see https://cgc.gov.au/index.php?option=com_content&view=article&id=36:the-commission-s-methods&catid=29&Itemid=130}\]
essential difference only being the addition of $AE_i$ in the measure used to rank individuals, such that $AB_i$ now is the foundation upon which equalisation is based rather than $AR_i$ in Figures 1 and 2.

Figure 3  State Assessed Budget ($AE_i-AR_i$) with VFG=0 and no HFE

Just as different HFE regimes were applied to Figure 1 in Figure 2, they can be applied based on $AB_i$ in Figure 3 as shown in Figure 4. In particular, Figure 4A begins with the no-HFE case and 4B present the assessed budget per capita for individuals in State i (or $AB'_i$) in the case of full equalisation in the red-dashed line. Here, post the Stage 1 and 2 grants, there is a grant from those individuals with $AB_i>0$ of $CDE$ to those with $AB_i<0$ equals to $ABC$ such that $ABC=CDE$. In Figure 4C something other than full equalisation is applied using a formulae based approach but still with the result that $ABC=CDE$. 

![Graph showing state assessed budget](image-url)
Figure 4  HFE based on State Assessed Budget (Stage 2)

A. No HFE

B. Full HFE

C. Partial HFE

Individuals ranked by own State Assessed Budget (AB_i)
2.3 **Stage 3: Supplementary federal grants**

In practice though, many federations make grants directly to States which are quarantined from the HFE process in Stage 2. Such supplementary grants are designed to address issues beyond VFE and HFE such as federal national priorities. Such grants would need to be kept separate from Stage 1 and 2 grants as this would potentially undermine their objective and any related performance agreements or sharing of fiscal dividends. Such Supplementary Stage 3 grants can be simply illustrated using Figures 3 as shown in Figure 5 for the case shown in Figure 4C where only Stage 1 and 2 grants were received.

**Figure 5 Formulae-based Supplementary Grants (Stage 3)**

Quarantining Supplementary Grants from the Stage 2 equalisation process would require that AR\_i excludes supplementary grants and that AE\_i also exclude related expenditure so AB\_i only reflects a State budget position exclusive of Stage 3 grants. What quarantining Stage 3 grants does in Figure 5 is effectively remove BCF from both the revenue and expenditure side of State budgets used in assessing Stage 2 grants. In Figure 5, this would mean Stage 2 grants are determined on the basis of ACD and not take into account how BCF of Stage 3 grants is actually distributed. What line FCD illustrates only is the revenue after Stages 1, 2 and 3 grants and expenditure after Stages 1 and 2. Adding back in the actual expenditure related to Stage 3 would result in the same curve as before Stage 3 grants, BCE. Likewise, adding the actual revenue and subtracting the actual expenditure related to Stage 3 grants to ACD would not alter the position of this curve and therefore not impact Stage 2 grants as reflected in BCE – effectively quarantining Stage 3 grants from the determination of Stage 2 grants.

The visual approach to intergovernmental grants outlined in Figure 5 should be seen as a method by which some transparency about options can be bought to the discussion over the appropriate designing of intergovernmental grant arrangements – but it cannot and does not offer a solution or guidance on actual design issues such as the degree of HFE (as in the red-dashed lines in Figure 2, 4 and 5).

Instead, in any debate about intergovernmental grant design, it:
1. facilitates simple visual communication of grant design and therefore enhances transparency and accountability;
2. facilitates understanding of grant design based around purpose (Stage 1 VFG=0; Stage 2 HFE; Stage 3 special purpose grants independent of HFE in Stage 2).
3. simply illustrates alternative Stage 2 HFE grants design possibilities including their:
   (a) scope (AR, or AB);
   (b) degree of horizontal fiscal equalisation: full (from CDE to ABC in Figure 4B) or partial (from CDE to ABC in Figure 4C); and the
   (c) incentive effects arising from equalisation formulae effectively applied (arising from changes in the slope of BCE in Figure 5 for example).

In the following section, this visual framework will be used to transparently demonstrate how Australia, Canada and Germany have adopted quite different approaches to intergovernmental grant design by partitioning their grant process into the 3-stages above. Section 4 will then examine how this visual framework could be used to highlight intergovernmental grant redesign options for the Australian federation.

3 VISUALISATION OF FISCAL EQUALISATION IN 3 FEDERATIONS

The various approaches to fiscal equalisation outlined in the figures above have direct parallels in practice and the visual approach can be utilised to transparently and simply outline their fundamental differences and highlight how Canada adopts a conceptually similar approach to that in Figure 2C, Germany to Figure 2D, and Australia to Figure 4B (and Figure 4C pre-1981).

However, as shown in Table 1, the level of VFG and the level of inter-governmental grant as a percentage of total revenue for each level of government varies widely (Column 4) between Germany (14.6%), Canada (18.4%) and Australia (43.1%). While the visualisation approach detailed in Section 3 can highlight the basis on which grants are made, it does not comment on revenue assignment or revenue sharing – issues which we have assumed as predetermined – our interest only being revealing the process and outcomes resulting from the grant allocation and related equalisation process in each of these federations.

Table 1 Fiscal Decentralisation in Australia, Canada and Germany

<table>
<thead>
<tr>
<th></th>
<th>Tax revenue as percentage of total general government tax revenue (1)</th>
<th>Consolidated government revenue as percentage of total general government revenue (2)</th>
<th>Consolidated government expenditure as percentage of total general government expenditure (3)</th>
<th>Inter-governmental grant revenue as percentage of total revenue for each level of government (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>79.6</td>
<td>54.8</td>
<td>39.5</td>
<td>43.1</td>
</tr>
<tr>
<td>2015-16 State</td>
<td>17.0</td>
<td>35.9</td>
<td>5.7</td>
<td>8.4</td>
</tr>
<tr>
<td>Local</td>
<td>3.6</td>
<td>5.7</td>
<td>1.2</td>
<td>2.4</td>
</tr>
<tr>
<td>Canada</td>
<td>50.8</td>
<td>44.5</td>
<td>31.5</td>
<td>0.3</td>
</tr>
<tr>
<td>2015 State</td>
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<td>43.3</td>
<td>47.5</td>
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<tr>
<td>Local</td>
<td>10.4</td>
<td>12.2</td>
<td>21.1</td>
<td>42.0</td>
</tr>
<tr>
<td>Germany</td>
<td>69.2</td>
<td>63.8</td>
<td>60.4</td>
<td>0.7</td>
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<tr>
<td>2015 State</td>
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<td>8.3</td>
<td>11.1</td>
<td>16.9</td>
<td>37.5</td>
</tr>
</tbody>
</table>

Note: Data for Australia is derived from ABS 5512 and that for other countries from OECD. In the case of intergovernmental grants, data for Australia is Current Grants relative to Total Revenue

Source:

18 In Table 1, contrast Columns 1 and 2 with Column 3.
3.1 Canada

Canada’s approach to equalisation can be readily partitioned into a 3-Stage process as shown in Table 2. Stage 1 involves a two part EPC grant, one part being Canada Health Transfer and the other, Canada Social Transfer but aggregated are simply an EPC grant. The Stage 2 grants are focussed only on Assessed Revenue (AR) with the principle applied being to ‘pull-up’ provinces below the ‘10 province standard’ for revenue capacity (excluding 50% of mining taxes) and for those above it, they are not ‘pulled-down’ as shown in Figure 6. Stage 3 grants enter as ‘Territorial Formula Financing’ as also shown in Table 1 and are supplements for disadvantaged territories.

<table>
<thead>
<tr>
<th>Table 2 Federal Support to Canadian Provinces and Territories: 2017-18</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Stage 1: Health and Social Federal Transfers $ per capita</td>
</tr>
<tr>
<td>Stage 2: Equalization $ per capita</td>
</tr>
<tr>
<td>Stage 3: Territorial Formula Financing $ per capita</td>
</tr>
<tr>
<td>Population (000s)</td>
</tr>
</tbody>
</table>

Source: https://www.fin.gc.ca/fedprov/mtp-eng.asp

Figure 6 Canada HFE 2017-18 (Stage 2)

Source: https://www.fin.gc.ca/fedprov/mtp-eng.asp
3.2 Germany

In Germany, a 4 phase approach is applied in its Federal Financial Equalisation System where:\(^{19}\):

1. First, the entire tax revenue is distributed to the two levels of government – namely the Federation and all the Länder – and the local authorities receive a supplementary grant of revenue (vertical distribution).
2. Next, the total Länder portion of tax revenue is assigned among the various Länder (horizontal distribution).
3. In a third stage, there is equalisation between poor Länder and rich Länder (financial equalisation among the Länder).
4. In addition, poor Länder also receive funds from the Federation (supplementary federal grants).

Figure 7 Germany Fiscal Equalisation (Stages 1, 2 and 3)

Source: https://www.bundesfinanzministerium.de/Monatsberichte/2017/03/Inhalte/Kapitel-3-Analysen/3-4-Ergebnisse-des-Laenderfinanzausgleichs-2016.html

Phases 1 and 2 are in effect Stage 1 in Section 3, and Phase 3 Stage 2 (equalisation grants) and Phase 4 the Stage 3 supplementary grants. In relation to phase 3\(^{20}\) (Stage 2) grants in Germany:

the starting point for the financial equalisation among the Länder is the financial capacity per inhabitant of the various Länder. The financial capacity of a Land is the sum of its receipts and (64 \%) of the sum of receipts of its local authorities (p3) where:

The exact size of the adjustment payments to a poor, fiscally weak Land depends on the amount by which its financial capacity per (fictitious) inhabitant falls below the average financial capacity per inhabitant. A linear-progressive topping-up schedule is used to calculate by how much the difference from the average is partially topped-up.

\(^{19}\) p3 in The Federal Financial Equalisation System in Germany, Bundesministerium der Finanzen, Germany

(https://www.bundesfinanzministerium.de/Content/DE/Standardartikel/Themen/Offentliche_Finanzen/Feoderae_Finanbezehungen/Laenderfinanzausgleich/Eng-Der-Bundesstaatliche-FAG.pdf?_blob=publicationFile&v=1)

\(^{20}\) ibid
Similarly, the size of the adjustment amounts which a rich, fiscally strong Land has to pay depends on the amount by which its per capita financial capacity exceeds the average fiscal capacity per inhabitant. The difference from the average is skimmed off partially. A linear-progressive skimming-off schedule is used, which is symmetrical to the topping-up schedule.

To ensure the sum of the adjustment amounts correspond with the sum of the adjustment payments, the adjustment amounts are either increased or decreased by a corresponding percentage. The regulations are designed to ensure that the order of the Länder, in terms of financial capacity per inhabitant, does not change as a result of the financial equalisation among the Länder. (p3-4)

Figure 7 details the redistribution between Länder arising from Stages 1 and 2 grants in Germany using the visual approach outlined in Section 3 (and Figure 2D in particular) and Figure 8, the associated ‘linear-progressive topping-up’ and ‘skimming-off schedule’.

Figure 8  Germany HFE (Stage 2)


3.3 Australia

Each year, the Federal Treasurer in a letter to the Commonwealth Grants Commission (CGC), requests it prepare advice on what should be the per capita relativity for GST for the 8 States and Territories in Australia. This relativity is then used to weight that State or Territory’s population when determining their share of the GST. Table 3 details the approach to fiscal equalisation adopted by the CGC in Australia and the estimates for 2015-16. The relativities applied to the GST in the 2017-18 Budget are based on the unweighted average for the most recent 3 years which in the case of Budget 2017-18, was the average per capita relativity for GST for 2013-14, 2014-15 and 2015-16.

In contrast to Canada and Germany where Stage 2 equalisation is primarily focussed on ARi, in Australia the focus is on a comparator to ABi in Figures 3 and 4. The focus of the CGC when estimating per capital relativities is on the distribution of GST. However, since as shown in Table 3, Commonwealth Specific Purpose Payments (SPP) received prior to the GST share are simply subtracted from a State’s Total Requirement For Assistance (TRA), in effect the pool of GST+SPP is
being distributed through the HFE process and for this purpose, the per capita relativity for TRA shown in Table 3 could equally be used to distribute GST+SPP, the Stage 2 grant in Australia.

### Table 3 Per capita relativities: Australia 2015-16

<table>
<thead>
<tr>
<th></th>
<th>NSW</th>
<th>Vic</th>
<th>Qld</th>
<th>WA</th>
<th>SA</th>
<th>Tas</th>
<th>ACT</th>
<th>NT</th>
<th>Ave</th>
<th>ALL</th>
<th>HFE Redistribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$pc</td>
<td>$pc</td>
<td>$pc</td>
<td>$pc</td>
<td>$pc</td>
<td>$pc</td>
<td>$pc</td>
<td>$pc</td>
<td>$pc</td>
<td>$pc</td>
<td>$b</td>
</tr>
<tr>
<td>Assessed</td>
<td>9,089</td>
<td>8,689</td>
<td>9,666</td>
<td>10,014</td>
<td>9,599</td>
<td>10,386</td>
<td>9,050</td>
<td>19,248</td>
<td>9,372</td>
<td>224,345</td>
<td>8,019</td>
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<tr>
<td>plus: Assessed investment</td>
<td>356</td>
<td>451</td>
<td>278</td>
<td>306</td>
<td>181</td>
<td>94</td>
<td>261</td>
<td>61</td>
<td>335</td>
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<td>38</td>
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<tr>
<td>Assessed</td>
<td>9,445</td>
<td>9,140</td>
<td>9,944</td>
<td>10,320</td>
<td>9,780</td>
<td>10,480</td>
<td>9,311</td>
<td>19,187</td>
<td>9,707</td>
<td>232,364</td>
<td>8,354</td>
</tr>
<tr>
<td>less: Assessed net borrowing (a)</td>
<td>350</td>
<td>368</td>
<td>345</td>
<td>342</td>
<td>320</td>
<td>308</td>
<td>349</td>
<td>308</td>
<td>349</td>
<td>0</td>
<td>47</td>
</tr>
<tr>
<td>less: Assessed revenue(b)</td>
<td>5,381</td>
<td>4,914</td>
<td>5,014</td>
<td>6,855</td>
<td>4,234</td>
<td>3,977</td>
<td>4,483</td>
<td>5,174</td>
<td>5,226</td>
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<td>3,715</td>
<td>3,857</td>
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<td>3,122</td>
<td>5,167</td>
<td>6,194</td>
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<td>13,705</td>
<td>4,132</td>
<td>23,938</td>
<td>57,355</td>
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<tr>
<td>Redistribution (Diff from EPC)</td>
<td>-417</td>
<td>-275</td>
<td>453</td>
<td>-1010</td>
<td>1035</td>
<td>2062</td>
<td>346</td>
<td>9573</td>
<td>0</td>
<td>41,556</td>
<td>1040</td>
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<td>Per capita relativity for TRA (d)</td>
<td>0.899</td>
<td>0.933</td>
<td>1.110</td>
<td>0.756</td>
<td>1.250</td>
<td>1.499</td>
<td>1.084</td>
<td>3.317</td>
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<td>less: Commonwealth payments (SPP)</td>
<td>1,713</td>
<td>1,625</td>
<td>1,857</td>
<td>1,689</td>
<td>1,721</td>
<td>1,813</td>
<td>1,610</td>
<td>3,454</td>
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<td>1040</td>
</tr>
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<td>Redistribution (Diff from EPC)</td>
<td>-23</td>
<td>-111</td>
<td>121</td>
<td>-47</td>
<td>-15</td>
<td>77</td>
<td>-126</td>
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<td>Per capita relativity for SPP(c)</td>
<td>0.987</td>
<td>0.936</td>
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<td>0.991</td>
<td>1.044</td>
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<td>2,727</td>
<td>1433</td>
<td>3,446</td>
<td>4,382</td>
<td>2,868</td>
<td>10,251</td>
<td>2,396</td>
<td>57,355</td>
<td>6,513</td>
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<tr>
<td>Redistribution (Diff from EPC)</td>
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<td>-164</td>
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<td>-963</td>
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<td>1,986</td>
<td>472</td>
<td>7,855</td>
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<td>0</td>
<td>0</td>
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<tr>
<td>Per capita relativity for GST(c)</td>
<td>0.836</td>
<td>0.932</td>
<td>1,138</td>
<td>0.598</td>
<td>1,438</td>
<td>1,829</td>
<td>1,197</td>
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<tr>
<td>Population(000s)</td>
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<td>5,998</td>
<td>4,808</td>
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<td>1,703</td>
<td>517</td>
<td>393</td>
<td>244</td>
<td>23,938</td>
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### Stages 1 and 2 Distribution based on AB

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<th>Qld</th>
<th>WA</th>
<th>SA</th>
<th>Tas</th>
<th>ACT</th>
<th>NT</th>
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<th>HFE Redistribution</th>
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<tbody>
<tr>
<td></td>
<td>$pc</td>
<td>$pc</td>
<td>$pc</td>
<td>$pc</td>
<td>$pc</td>
<td>$pc</td>
<td>$pc</td>
<td>$pc</td>
<td>$pc</td>
<td>$b</td>
<td>$b</td>
</tr>
<tr>
<td>Assessed</td>
<td>9,445</td>
<td>9,140</td>
<td>9,944</td>
<td>10,320</td>
<td>9,780</td>
<td>10,480</td>
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<td>19,187</td>
<td>9,707</td>
<td>232,369</td>
<td>8,019</td>
</tr>
<tr>
<td>Assessed own-revenue and net borrowings (AT)</td>
<td>5,731</td>
<td>5,282</td>
<td>5,359</td>
<td>7,197</td>
<td>4,614</td>
<td>4,285</td>
<td>4,832</td>
<td>5,482</td>
<td>5,575</td>
<td>133,458</td>
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<tr>
<td>Stage 1 EPC (GST+SPP)</td>
<td>4,132</td>
<td>4,132</td>
<td>4,132</td>
<td>4,132</td>
<td>4,132</td>
<td>4,132</td>
<td>4,132</td>
<td>4,132</td>
<td>4,132</td>
<td>98,911</td>
<td>0</td>
</tr>
<tr>
<td>Assessed Budget AB=AT+GSGT(SPP)+AB</td>
<td>-417</td>
<td>-275</td>
<td>453</td>
<td>-1,010</td>
<td>1,035</td>
<td>2,062</td>
<td>347</td>
<td>9,573</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Stage 2 HFE Grant (Diff from EPC)</td>
<td>-417</td>
<td>-275</td>
<td>453</td>
<td>-1,010</td>
<td>1,035</td>
<td>2,062</td>
<td>347</td>
<td>9,573</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Redistribuition</td>
<td>-3,207</td>
<td>-1,643</td>
<td>2,178</td>
<td>-2,627</td>
<td>1,761</td>
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<td>136</td>
<td>2,335</td>
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<tr>
<td>Stage 3 Supplementary Grant</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Notes

(a) Net borrowing is shown without a minus sign. It is an alternative source of funds to meet a State’s expenditure requirement.
(b) Assessed revenue includes the balancing item.
(c) Per capita relativities are equal to each State’s GST requirement per capita divided by the average GST requirement per capita.
(d) Per capita relativities are equal to each State’s Total Requirement for Assistance per capita divided by the average Total Requirement for Assistance per capita.


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22 In relation to taxes, the CGC estimated AT: for payroll, land tax, insurance motor and mining taxes and to stamp duties. All other taxes are allocated on an EPC basis. As the CGC notes ‘State’s assessed revenue for a category is an estimate of how much it could raise from its own revenue base if it applied the average revenue raising effort’ p10 or put differently ‘Once each State’s revenue base is measured, the average revenue raising effort (or the Australian average effective rate of tax) is applied to it to calculate the State’s assessed revenue. This is equivalent to sharing the total revenue raised in all States among them in proportion to their share of the tax base.’ on p22 from [https://cgc.gov.au/index.php?option=com_docman&view=document&Itemid=514&layout=default&alias=884-cgc-the-gst-distribution-model-pdf&category_slug=update-processes](https://cgc.gov.au/index.php?option=com_docman&view=document&Itemid=514&layout=default&alias=884-cgc-the-gst-distribution-model-pdf&category_slug=update-processes)
The results in Table 3 can be reconfigured into Stages 1, 2 and 3 grants as also shown in the second half of Table 3. A benefit of this staged approach is that it highlights how there are in effect, no Stage 3 grants in Australia unlike Canada and Germany. This would not be perceived by observers who might initially think that the Commonwealth payments (SPP) which are determined separate from the GST design and focussed on addressing issues like health and education, were in some way Stage 3 grants. They are not and if their intent was to have a purpose akin to a Stage 3 grant, then they are undermined (and therefore fail) in this purpose because of the operation of HFE in Australia.

What Table 3 also highlights is that despite States being allocated $57.4b in GST and SPP grants of $41.6b in 2015-16, Stage 2 HFE arrangements redistributed only between states23 $6.5b (or 11.4%) of the GST and $1.0b (or 2.5%) of the SPP or after combining GST+SPP, of the $98.9b distributed, $7.5b (or 7.6%) in 2015-16 would have been redistributed. More telling however, is the effective absence of Stage 3 grants as a result of applying HFE to SPP which in other federations is typically a Stage 3 grant quarantined from the Stage 2 HFE process.

**Figure 9  Australian HFE (Stage 2)**

The results in Table 3 can also be applied to the visual representation where ABi is the basis for equalisation as shown in Figure 3. What results is Figure 9 which is conceptually similar to Figure 4A. Another advantage of the visualisation of fiscal grants and fiscal equalisation is the scope it
provides for distinguishing between the level of grants and degree of equalisation. What is not able to be simply observed from the top of Table 3 is that there are three distinct policy actions underpinning the results:

(a) The overall level of grants (GST+SPP in Table 3)
(b) The degree of equalisation (CDE distributed to ABC in Figure 9); and
(c) The effective non-existence of Stage 3 Grants (Table 3).

The benefit of this approach is the transparency it brings to each of these issues – something which would considerably benefit any discussion about the level and design of fiscal federalism arrangements in Australia.

Moreover, through the estimation of ATi, ARi, AEi and ABi, an insight can be gained into not only those factors contributing to how equalisation impacts on States (through capacity and disability measures), but how each State performs in practice relative to other States given their tax capacity and expenditure disabilities. Table 4 details how tax capacity and effort measures can be estimated using ATi, Ti, and T while Table 6 uses data on ARi, Ri, R, ATi, Ti, T, AEi, Ei, and E to estimates for tax effort and capacity and expenditure disability and effort across States and Territories in the Australian federation in 2015-16. Since ARi and AEi are derived on the basis of ‘what states do’ and not ‘what they ought to do’ (such as make an effort to approach the level of service or taxation they are being assessed on through equalisation), there can be and often is a divergence between efforts across States. If closer alignment of efforts was the original intent of SPP grants, then the absence of these grants being quarantined (as with a Stage 3 grant) from the HFE process would see this lost through its inclusion in the Stage 2 HFE process.

In contrast to Germany, Australia does not make allowance for local government when making Stage 2 grants to States and Territories despite the divergent experience of local government in States as shown in Table 5. Rather, the Commonwealth assigns grants to local government through States, using quite different equalisation arrangements (Warren 2012a) which provides States with some scope to encourage local government to assume a greater role in funding their own and possibly what might otherwise be, State expenditure.

### Table 4 Methodology for estimating tax capacity and tax effort

<table>
<thead>
<tr>
<th>Description of per capita term</th>
<th>Stylised Definition (as defined in equations (7), (8) and (9))</th>
<th>Inter-State Measure</th>
<th>eg NSW Land Tax 2015-16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value of base per capita in State i</td>
<td>Yi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual tax revenue in State i</td>
<td>Ti</td>
<td>t . Yi</td>
<td>(7)</td>
</tr>
<tr>
<td>Average national tax revenue</td>
<td>T</td>
<td>t . Y</td>
<td>(9)</td>
</tr>
<tr>
<td>Assessed tax revenue for State i</td>
<td>ATi</td>
<td>t . Yi</td>
<td>(8)</td>
</tr>
<tr>
<td>Tax-raising CAPACITY</td>
<td>ATi/T</td>
<td>(t . Yi)/(t . Y)</td>
<td>Relative BASE</td>
</tr>
<tr>
<td>Tax-raising EFFORT</td>
<td>T/ATi</td>
<td>(t . Y)/(t . Yi)</td>
<td>Relative RATE</td>
</tr>
</tbody>
</table>


### Table 5 Per capita Revenue excluding Current Grants by local government by State: 2014-15.

<table>
<thead>
<tr>
<th>St</th>
</tr>
</thead>
<tbody>
<tr>
<td>New South Wales</td>
</tr>
<tr>
<td>Victoria</td>
</tr>
<tr>
<td>Queensland</td>
</tr>
<tr>
<td>South Australia</td>
</tr>
<tr>
<td>Western Australia</td>
</tr>
<tr>
<td>Tasmania</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2015-16</th>
<th>2016-17</th>
<th>2017-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>New South Wales</td>
<td>0.944</td>
<td>0.986</td>
<td>1.066</td>
</tr>
<tr>
<td>Queensland</td>
<td>1.045</td>
<td>1.096</td>
<td>1.197</td>
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<tr>
<td>Western Australia</td>
<td>1.149</td>
<td>1.197</td>
<td>1.260</td>
</tr>
<tr>
<td>South Australia</td>
<td>1.021</td>
<td>1.077</td>
<td>1.176</td>
</tr>
<tr>
<td>Tasmania</td>
<td>0.907</td>
<td>1.044</td>
<td>1.097</td>
</tr>
<tr>
<td>Australian Capital Territory</td>
<td>1.034</td>
<td>1.108</td>
<td>1.163</td>
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</tbody>
</table>

It is also important to note that the current full HFE approach applied by the CGC has not always been the case\(^\text{24}\) with the current arrangement only being in place since 1981. While the current ‘relative’ approach to HFE is framed around the requirement that for States ‘each would have the fiscal capacity to provide services and the associated infrastructure at the same standard’\(^\text{25}\), for most years since Federation in 1901, an ‘absolute’ measure based around some ‘minimum’ need has been adopted.

A particular criticism of the ‘relative’ approach has been that any differences between States are compounded by the level of overall grant (and therefore equalisation) and not independent of the size of the need, which leads to distributions which are distorted around relative needs\(^\text{26}\). This was not an issue prior to 1981 when Australia adopted ‘absolute’ measures where grants were designed to more directly address need through a formula based type of approach, ensuring some ‘minimum’ financial needs are met, sometimes accompanied with penalties and rewards (as in Canada). The approach adopted prior to 1981 therefore has some conceptual similarities to the partial HFE formulae based approaches in Canada and Germany and shown in Figure 4C in the case of budget based equalisation measures.

Another mostly unacknowledged consequence of the ‘relative’ approach to fiscal equalisation in Australia is the central and pivotal role the CGC has in the equalisation process, an agency without a direct and immediate financial interest in the outcome, only an interest in the principles applied as a result of their interpretation in consultation with the Commonwealth and States, of the relevant legislation. For States, this removes their direct involvement in the process of deliberations with the Commonwealth, introducing a third party, the CGC, which can act to remove State and Commonwealth accountability (and ownership) from the grant allocation process. For the Commonwealth, the Treasury also has no direct role (in contrast to pre 1981) with the Commonwealth Treasurer’s role limited to writing a letter to the CGC requesting its advice on the 8 per capita relativities to apply when distributing the GST amongst the 8 States and Territories\(^\text{27}\).

### 4 VISUALISING DESIGN SHOULD FACILITATE REFORM

What the 3-Stage process developed in Section 2 and applied to Australia, Canada and Germany in Section 3 does is bring transparency to the approaches taken when framed around the basic objectives of equalisation and specific purpose grants. With this transparency not only comes scope to improve accountability by grant recipients but also a greater ease in communicating any issues which equalisation arrangements might raise. What was evident in Section 3 is that the response in Canada and Germany has been to explicitly acknowledge the incentive effects of full equalisation.

Having a debate in Australia about the degree of equalisation has not been helped by the lack of transparency as to process evident in the top half of Table 3 which contrasts with the approach represented by the 3-Stage process in the second half of that table. If the Australian community

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\(^\text{27}\) The Treasurer in the letter can be quite prescriptive in the advice provided but typically is not, leaving most decisions on actual methodology to the CGC.
recognised what full HFE meant (as illustrated in Figure 9) and that Commonwealth specific purpose payments were undermined totally by the Stage 2 process, they might view the current arrangements differently and also appreciate that there must inevitably be disincentive effects from the operation of such a system.

What the visual approach developed in Section 2 therefore does is highlight how incentives can be ‘dialled’ into the equalisation process through a formulae based approach to equalisation as is the case in Canada, Germany and in Australia prior to 1981. However, a transparent equalisation process requires more than an equalisation formula which can be readily observed and communicated – it also must be accompanied by open-access to all data inputs and outcome measures which are meaningful such as those for effort and capacity. It should also be equally ‘owned’ and engaged with by all levels of government in the federation and the broader community should be transparently engaged with deliberations on the degree of equalisation.

The important contribution of this paper is the transparency it brings to the debate around the above issues through:

1. development of a simple visual framework focused on individuals within States, not States themselves;
2. segmenting grants to States by purpose so that grant design can be simply communicated as involving 3-stages: Stage 1 grants ensures all states have the revenue they need to meet expenditure needs (VFG=0 through Gpc); Stage 2 grants address HFG using measures of tax capacity and expenditure disability; and Stage 3 responds to special needs and national priorities through quarantined supplementary grants;
3. highlighting how Stage 2 HFE grants designs require separate decisions on the:
   (a) alternative measures for ranking individuals in each State (ARi and ABi or only part of such measures);
   (b) degree of horizontal fiscal equalisation (full or partial); and the
   (c) incentive effects arising from the equalisation formulae and its associated ‘topping-up’ and ‘skimming-off’ schedule; and
4. the importance of quarantining Stage 3 grants from the HFE process when determining Stage 2 grants.

Where this paper cannot contribute is to ‘what ought to be’ the degree of horizontal fiscal equalization or how it should be undertaken in practice. Ultimately, political and institutional factors will determine their resolution. However, the above approach enables the issues involved to be simply understood and appreciated.

Funding federations is clearly fraught with tensions and transparency and accountability are often casualties. However, through the use of the approach outlined in this paper, key issues can be readily identified and responded to in ways which can be readily communicated and thereby help reduce tensions and improve transparency and accountability across any federation.

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28 For further discussion of these issues and those raised below in the Australian case see Warren (2010a, 2010b, 2012a, 2012b, 2012c and 2012d).
5 BIBLIOGRAPHY


