

# Horizontal Fiscal Equalization in Australia: Peering Inside the Black Box

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## *References*

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# Horizontal Fiscal Equalization in Australia: Peering Inside the Black Box

## EXECUTIVE SUMMARY

The Australian Horizontal Fiscal Equalization (HFE) program is widely recognized as a unique and a shining example of excellence in academic rigor in dealing with horizontal fiscal disparities in a federal system of multi-order governance. Several developing countries including China, Indonesia and Ethiopia have, in recent years, attempted to emulate the system to deal with the same issue in their own context. The ever-growing program complexity of the program in pursuit of “full and precise justice” in equalization, nevertheless invites controversy and debate and some critics argue that better equalization outcomes may be possible with simpler, transparent and objective programs. Its adverse economic efficiency implications are also of some concern.

This paper reviews conceptual underpinning of equalization transfers and their potential impact on fiscal equity and fiscal efficiency and the growth of regional and national economies. It takes a closer look at the Australian HFE program and provides a comparative perspective on the key features of similar programs in Canada, Germany and Switzerland. The paper distills lessons from the conceptual literature and international experience to guide the review and reform of the Australian system.

### *Conceptual guidance on equalization transfers*

Public sector interventions that impede the free flow of factors within the nation have adverse consequences for the efficiency of the national economy. Most equalization programs in vogue are, however, intended to promote such mobility of factors by ensuring reasonably comparable levels of public services at comparable burdens of taxation. Such a level playing field facilitates movement of factors in response to economic stimuli but retard their movements in response to fiscal considerations alone. Therefore, such programs, if properly designed, enhance fiscal equity (citizens are treated equally by the public sector regardless of their place of residence) and fiscal efficiency (by discouraging fiscally induced migration - mobility of factors in response to differential net fiscal benefits across the nation). They can potentially play a positive role in strengthening internal common market and common economic, social and political union. For these reasons, equalization is often seen as “the glue that holds a federation together”. Care therefore must be exercised in the design of such program that they do not inadvertently contribute perverse incentives that may lead to a misallocation of resources and thereby retarding the growth of the regional and national economies.

### *Comparative perspectives on equalization*

Stated constitutional–legal principles and objectives for equalization transfers do not vary much across the sample OECD countries. In practice, however, the Australian program is an outlier in several respects. First, comparator OECD countries place a higher premium on simplicity, objectivity, transparency and predictability of the equalization system. Australia, on the other hand, places a greater emphasis on academic rigor and excellence and reveals relatively less concern about the objectivity, complexity and transparency of the system. Second, comparator countries also see greater wisdom in subjecting such programs to more intense public scrutiny and political discourse and developing a durable political compact through open discourse as well as behind closed doors federal bargaining and deal making. The institutions of legislative and executive federalism reign supreme in decision making on these transfers in comparator countries. Australia, in contrast, considers the design and the degree of equalization primarily a technical question best entrusted to an independent agency devoid of politics and let the institutions of legislative and executive federalism simply rubber stamp the decisions of the technical experts.

This reliance on expert judgments relatively unconstrained by politics has contributed to ever rising standard of equalization, ever expanding coverage, persistent changes in methodology and ever increasing complexity of the Australian HFE program. In comparator countries, political institutions have ensured a greater measure of simplicity, objectivity and stability in program design and coverage.

### *Lessons from International Practice*

Better practices in equalization suggest that for sustainability of the program, there must be broader political and societal consensus on the degree of equalization and the means to finance these transfers. An explicit equalization standard must determine both the pool and allocations. An arbitrary pool given by a revenue sharing program is not desirable. Simplicity, transparency, objectivity and predictability of design should take precedence over precision and sophistication or academic excellence.

Fiscal capacity equalization using a Representative Tax System (RTS) approach for major tax bases with an explicit standard of equalization is desirable and do-able in most countries. Fiscal need equalization is desirable, but in its ideal form, is much more complex and difficult to implement. However a Demand for Public Services Approach (DPS) that uses service/client population (involving no allowances for cost of service delivery variations) as a criteria for allocation offers a great promise for a simple, strategy free yet objective approach to expenditure need equalization. It provides positive incentives for cost saving and innovation and reduces perverse incentive for states to demonstrate that “they need more to do less”. Alternatively output based transfers for merit services offers an attractive alternative for expenditure need equalization while strengthening results based accountability to state residents.

Other options include the introduction of ceilings and floors using some macro indicators to ensure stability and predictability in grant funds alongwith periodic formal reviews. It is desirable to have the grant program reviewed periodically say every five years and then renewed. In the intervening years, there should not be any changes in the program including methods of assessments to provide certainty in budgetary programming for all governments.

All fiscal systems reforms create winners and losers and potential losers attempt to block such reforms. To overcome this opposition, it is important to have *hold harmless* (no one is adversely affected by the change) or grandfathering provisions by which all recipient governments are assured to receive at least what they received as general purpose transfer in the pre-reform period. Over time with growth in the economy, such a provision would not delay the phase in of the full package of reforms.

There is no single model of institutional arrangements that is superior to others but it is important that all stakeholders are heard and an appropriate political compact on equalization principles and the standard of equalization is struck. Politics must be internalized in these institutional arrangements. Arms-length institutions such as independent grant commissions, as decision makers, are not helpful as they do not allow for political input and therefore show a tendency to opt for complex and non-transparent solutions. The informal role of the latter institutions, however, in an advisory and oversight capacity to monitor and evaluate fiscal equalization transfers can be valuable in educating citizens and policy makers and advancing informed and principled decision making on these matters.

### *The Australian HFE*

The Australian approach to fiscal equalization is unique among federal countries in terms of its stated comprehensiveness, its pursuit of idealism, in its endeavor to replicate unitary governance under a federal structure and in terms of its academic rigor. The approach, nevertheless, falls short on comprehensiveness, transparency, simplicity, objectivity, equity, policy neutrality and efficiency criteria and its outcomes may be no better than the outcomes achieved with simpler, transparent and more pragmatic approaches to

equalization followed in say Canada and Germany. Practical difficulties also arise from measurement of expenditure needs and inherent cost disability factors.

Fiscal capacity equalization methodology of CGC, in principle, is defensible but much is lost in its application. Various methods and judgments used lead a significant proportion of own source revenues not having any differential impact on equalization entitlements. As these revenue proportions that are treated on an equal per capita basis vary by state, they lead to unintended negative consequences for some states while creating some windfall gains for other states and contributing to overall fiscal inequity of the program. Very detailed and refined calculations and adjustments to various tax bases may not be adding much value to the goal of having “precise” justice as attempted by the CGC but instead contribute to a lack of transparency and added complexity. Each of the eight resource revenues that are equalized on a tax by tax basis are highly concentrated in a couple of states and their bases are difficult to define due to differences across states in quality of the resource and the cost of extraction. In the event this difficulty can be overcome, the application of a Representative Tax System (RTS) methodology by the CGC would still be questionable as dominant state can influence the national tax rate and national average fiscal capacity for that resource. Further such equalization creates significant adverse incentives for expansion in tax base and/or tax rate by the dominant base states as equalization offsets confiscate most of additional revenues from such expansion.

Fiscal need equalization methodology is highly complex yet open to conceptual and empirical limitations as it does not isolate the effect of fiscal capacity differentials on policies and preferences and factors and their relative weights in the absence of such adjustment may lack empirical validity. The program equalizes all state services whereas a federally financed program should conceptually focus on meritorious distributive services such as education, health and welfare. Equalization of capital expenditure and financing need could not be appropriately addressed by an annual program.

Equalization of financial net worth is problematic due to measurement difficulties with contingent liabilities. It is doubtful that the CGC could obtain reliable comparative state data to make such comparisons valid, reliable and meaningful. The CGC approach to equalization of infrastructure needs results in a Christmas tree approach where all jurisdictions receive some but insufficient financing and the capital grant financing is not targeted to areas with identified infrastructure deficiencies from national minimum standards, thereby perpetuating infrastructure deficiencies.

### **Guiding principles in exploring equalization alternatives**

In exploring alternatives, it is important to reach a consensus on the principles to guide this search. The purpose of equalization is to enable state order of governments to provide approximately comparable levels of public services at comparable tax rates. A suitable equalization system should have the following features:

- *Consistency of design with the constitutional principles and specific objectives stated in the federal legislation.*
- *Equity and fairness.* The program should be fair. Allocated funds should vary directly with fiscal need factors (demand for service factors) and inversely with tax capacity of each jurisdiction. This is a universally accepted principle of grant design and observed by most OECD equalization grant programs.
- *State autonomy.* The program should be non-intrusive. State governments should have complete autonomy, independence and flexibility in exercise of their taxing, spending and regulatory powers.
- *Objectivity.* The program should be formula based and be based upon readily measurable objective factors that are beyond the control of state governments.

- *Simplicity and Transparency.* The formula should be reasonably easy to understand and use data that are objective and certified for accuracy by the Australian Bureau of Statistics and widely disseminated. Any interested stakeholder or observer should be able to replicate the formula allocation with ease. Expectations for accuracy and comprehensives should not be used to add excessive complexity to the program or to justify the need for having/creating an independent agency simply to carry out such complex calculations.
- *Strategy.* The program should be immune to strategic behavior by recipients.
- *Revenue Adequacy and responsiveness.* Subnational Governments should have adequate revenues to discharge designated responsibilities. This is more meaningfully evaluated using actual values than relativities. The program should be robust enough to respond to the financial situations of subnational units in a timely manner.
- *Affordability.* The federal government should in consultations with the subnational units decide on the equalization standard and ensure that the program is affordable and sustainable over time. Note that the current use of a dynamic and growing tax base (GST revenues) meets this test.
- *Predictability and stability.* The allocation criteria must be fixed for a five-year period and subject to revision only at renewal for a subsequent period. The grant formula should specify ways of alleviating yearly fluctuations, such as the use of moving averages, floors and ceilings. Any major changes in the formula at subsequent renewal should be accompanied by hold harmless or grandfathering provisions.
- *Neutrality.* The grant design should be neutral with respect to subnational governments' choices of financing, resource allocation and natural resource development.
- *Accountability.* The federal government should be accountable for ensuring that the program promotes fiscal equity and fiscal efficiency objectives to further social and economic union goals and subnational governments should be accountable to own residents for the use of equalization funds. This is the approach followed in the equalization system adopted in Canada.
- *Sunset clause and mandatory provision for parliamentary review for renewal.* The program should be subject to a sunset clause after 5 years unless formally reviewed and renewed by the Commonwealth Parliament.

## Reforming the Existing Australian HFE

The following reform options are proposed to make the existing system simple, transparent, objective, predictable, fairer yet more efficient.

### Option A

Under this option, fiscal capacity and fiscal need calculations is attempted to be simplified, adverse incentives impeding efficient allocation of resources to be removed and a newer role for the CGC is proposed. Also, relativities may be discarded in favor of actual value calculations. This option is easier to implement and embodies the original intent of the equalization program to enable each state to have service standards and tax burdens “not appreciably different” from other states. The proposal would yield a simple, fair, transparent, efficient, easily comprehensible and replicable, independently monitor-able and mostly strategy proof system of equalization.

**(i) Fiscal capacity Equalization using a Simplified Representative Tax System Approach:** Empirical evidence and the CGC calculations show significant differentials in Australian states and territories in terms of their revenue capacities. In view of this, tax capacity equalization may be retained with significant simplification as proposed below. It is proposed to equalize revenue capacity for all state and local taxes and partial equalization (any fraction on which the states can reach a consensus) of actual revenues from mining as follows:

- *Payroll taxes* based on taxable payroll of all employees
- *Land and property taxes* based upon aggregate value of all land and properties (commercial, industrial, residential (including principal residences) and linear properties, if currently taxed, such as power, cable and telephone lines and pipelines.
- *Stamp duty* based upon total value of property transferred.
- *Insurance taxes*: total value of insured property or insurance premiums
- *Motor vehicle registrations*: Number of vehicles of various classes registered.
- *Mining royalty revenues*: percentage (based upon intergovernmental agreement) of actual revenues received
- *Other revenues* based upon State GSP or factor incomes accruing to State residents, if available.

In the interest of simplicity, transparency and objectivity, no adjustments for progressivity, exemptions or threshold, are to be made to broad tax bases outlined above.

## **(ii) Fiscal/Expenditure Need Equalization:**

Several alternative options are proposed to address expenditure need equalization.

### ***Fiscal Need Option A – No Fiscal Need Equalization but Addressing Special Burdens***

Given that fiscal capacity equalization to a national average standard would enable most states to offer level of public services not appreciably different from other states following the examples of Canada and Germany, expenditure need equalization may be abandoned and NT could be compensated by a special grant from the federal government. Equalization of capital expenditures and financing needs and equalization of net worth are neither conceptually nor practically desirable through an annual fiscal equalization program and therefore could also be dropped. Concerns regarding national minimum standards could be addressed by output based federal transfers (with no conditions on what and how money is to be spent but clear and agreed upon service delivery performance objectives for quality and access to be achieved) for redistributive merit goods such as education and health. Residual GST pool could then be distributed on an equal per capita basis.

### ***Fiscal Need Option B – Equalization of Core Redistributive Services only using the DPS Approach***

To facilitate factor mobility in response to economic stimuli and to create a common economic, political and social citizenship, federal support for the establishment of national minimum standards of redistributive services such as education, health and welfare is highly desirable in a federal system of governance. Interstate equalization of these services would be best done by the DPS approach to equalization. For education, health and welfare, the following allocation basis for available federal financing (GST pool minus fiscal capacity equalization) among states is proposed.

- *School education*: school age population (ages 5-17)
- *Post-Secondary Education*: College/university age population (ages 18-24)
- *Welfare*: Single mothers plus number of unemployed below poverty line individuals. Weights of these factors based upon all States expenditure average from the past three years.

### ***Fiscal Need Option C - Equalization of all State Services using the DPS Approach***

However, if the above options were not politically acceptable then operating expenditure need equalization could be carried out for major state services as follows with no special or arbitrary adjustments to the need factors outlined below to preserve simplicity, objectivity and to prevent employment of strategy for gaming the system. Note that each service will receive the same weight as indicated by aggregate all states expenditures on that service historically (say previous 3- year moving average). Total pool for expenditure

need equalization would be residual funds from GST revenues after compensating for fiscal capacity equalization.

*State and Local Services to be equalized and allocation basis:*

- *School education:* school age population (ages 5-17)
- *Post-Secondary Education:* College/university age population (ages 18-24)
- *Health:* Weighted population with higher weights for ages 0-5 (2.0 weight) and ages 70+ (1.5 weight)
- *Housing:* Population below poverty line
- *Welfare:* Single mothers plus number of unemployed below poverty line individuals. Weights of these factors based upon all States expenditure average from the past three years.
- *Police:* Property values (50%) and population (50%)
- *Justice:* population
- *Roads:* Length of roads of various types such as paved, graveled and dirt roads in lane KMs. Relative weights for various road types based upon relative aggregate per KM state expenditures for various types.
- *Public Transportation:* Urban population (For large urban areas only)
- *All other services:* Area (33.3%) and Population (66.6%) or alternately these weights could be based upon relative importance of rural versus urban services in other services category.

(iii) **Infrastructure Fund.** An Infrastructure Fund may be created to deal with state infrastructure deficiencies that have a bearing on either the efficiency of internal common market for the nation or stand in the way of meeting infrastructure-specific federally-specified national minimum standards for various types of state-local infrastructure. This fund may be financed by the federal government but managed jointly by the federal and state governments through the Council of the Australian Governments (COAG) or one of its entities say the Council on Federal Financial Relations (CFFR). The Infrastructure Australia could serve as the secretariat as well as the advisory body to identify priority projects and recommend use a mix of instruments (matching capital grants with matching rate that varies inversely with fiscal capacity, loans and bonds) to finance these investments depending upon the type of investment (income producing or social) and by fiscal capacity of the local jurisdiction undertaking the investment. Switzerland compensates for infrastructure deficiencies through a Cohesion Fund whereas Germany provides federal capital grant assistance to fiscally disadvantaged states with large infrastructure deficiencies.

(iv) **Supplementary federal special needs grant for NT** for indigeneity, especially for having the big gap in health and wellbeing outcomes for the Indigenous in the NT from the general Australian population, and dispersion. One possible basis for such grant may be the number of indigenous people living in remote areas of NT. NT could be considered for a federal special/supplementary grant equal to Australian per capita GST amount multiplied by the number of indigenous people resident in remote areas.

(vi) **Proposed New Role of the CGC:** Since the above calculations are simple and can be easily done using an Excel sheet by a single staff member (as done in Canada for the Canadian HFE), responsibility for calculating equalization payments may be reassigned to a special federal-state fiscal relations unit in the Federal Treasury. All decision making on the equalization program would rest with the CFFR. The CFFR in its decisions and deal making would no longer be hamstrung by the Commission's views but instead will focus on a political compact to strengthen political, economic and social union. The CGC role may be redefined to serve as a federally financed think tank on federal-state/territorial fiscal relations monitoring fiscal health and service delivery performance and providing an early warning system for fiscal distress and assessing need for federal intervention and assistance. Alternately, the CGC could be merged with the

Productivity Commission to play a more coordinated role in monitoring fiscal health and service delivery performance of all orders of government.

### **Alternative Options**

Alternative options could include: (a) GST distribution predominantly (say 75%) on an equal per capita basis and residual (say 25%) as supplementary assistance on an equal per capita basis to fiscally disadvantaged states only as done in Germany; (b) having a separate equalization programs for states and territories as done in Canada; (c) equalization of resource revenues under a separate interstate (solidarity/fraternal) resource revenue equalization system; (d) partnership agreement between NSW and ACT for cross-border use compensation as done in Finland; (e) replacing fiscal need equalization by output based national minimum standards grants for operating expenditures for merit services only as done in Canada for health and post-secondary education financing and capital grants and loan assistance to overcome identified critical infrastructure deficiencies from national minimum standards. A special grant to NT and proposed new role of CGC remains invariant under various options.

### ***Concluding Remarks***

The Australian equalization program, over the years, unbridled in its pursuit of the holy grail of equalization for “full justice” has drifted away from its original objectives and morphed into a black box only a handful of Australian experts could fully comprehend. Various reform options outlined in this paper are intended to bring the equalization system in Australia in conformity with the original Commonwealth equalization objectives of enabling all states to have service standards and tax burdens “not appreciably different” from other states. In doing so, an attempt is also made to simplify the existing HFE in Australia and make it fairer, efficient, fully transparent, predictable and reasonably objective system of equalization to have an informed political and civil society discourse on the degree of equalization that is desirable and affordable by the nation. These suggestions do not aim at scientific precision or perfection or to excel in academic rigor. Instead these rough and ready rudimentary ideas embodying “rough justice” principle are simply intended to present policy options to all relevant stakeholders that are easily comprehensible and calculations are replicable with ease by any interested observer so as to facilitate an informed dialogue on this issue to strike a right balance on equity and efficiency objectives of equalization transfers and forge a national consensus on the standard of equalization that may meet wider acceptance and help develop a durable political compact on the system of equalization in Australia.



# **Horizontal Fiscal Equalization in Australia: Peering Inside the Black Box**

## **1.0 Introduction**

Fiscal equalization transfers are frequently advocated on fiscal efficiency and regional fiscal equity grounds as these transfers equalize the potential for states to provide comparable services at comparable tax rates without compelling them to do so. Such transfers facilitate diversity of preferences by allowing states to pursue their own preferred policies by enabling them with equal potential fiscal abilities. Political imperatives to have a shared sense of political, social and economic union, paves the way for instituting such transfers in most large especially federal countries. There is also a common consensus among proponents that conceptually such transfers should equalize to a specified standard both the fiscal capacities (the ability of governmental units to raise revenues from their own sources using national average tax effort) and fiscal needs (differential needs and inherent cost disadvantages that give rise to different net fiscal benefits). However, for inherent cost disadvantages, such as between urban, rural and remote areas, the equity advantage of more equal provision must be weighed against the efficiency costs (Boadway, 2004).

These programs, however, have generated much controversy and debate both in theory and in practice. Critics, of such programs, argue that equalization payments to correct fiscal inequities induce inefficiency in the inter-regional allocation of resources and have adverse impact on growth and development of both the fiscally rich and the fiscally poor regions by retarding the mobility of factors in response to economic stimuli. Such arguments proved politically persuasive recently in Germany and contributed to the termination of its horizontal inter-state equalization program effective 2020. In practice, implementing such a comprehensive system of equalization transfers also represents a formidable challenge especially in view of the difficulties posed by the objective measurement of expenditure needs.

This paper reviews the conceptual and practical challenges as well as lessons from worldwide experiences in implementing fiscal equalization transfers with a view to developing guidance for a reform of the Australian Horizontal Fiscal Equalization program. The paper is organized into several parts. Part I provides a synthesis of the conceptual debate. Part II reflects upon comparative international practices in mature federations and draws lessons of interest to other nations. Part III presents a review of the Australian Horizontal Fiscal Equalization (HFE) system and advances alternative design options to further its equity and efficiency objectives while striving for a simpler and more transparent system.

## **Part I. Conceptual Underpinnings of Fiscal Equalization Transfers**

### **1.1 The Case for Bridging the Fiscal Divide through Fiscal Equalization Transfers**

Fiscal equalization transfers are advocated to deal with regional fiscal equity and fiscal efficiency concerns. These transfers are justified on political and economic considerations.

Large regional fiscal disparities can be politically divisive and may even create threats of secession (Shankar and Shah 2003). This threat is quite real: since 1975 about 40 new countries have been created by the break-up of existing political unions. Fiscal equalization transfers could forestall such threats and create a sense of political participation, as demonstrated by the impact of such transfers on the separatist movement in Quebec, Canada (see Ragan, 2014).

Decentralized decision-making results in differential net fiscal benefits (imputed benefits from public spending minus tax burden) for citizens depending on the fiscal capacities of their place of residence. This

leads to both fiscal inequity and fiscal inefficiency in resource allocation (see Boadway and Flatters, 1982, Boadway, 2004, 2007). Fiscal inequity arises as citizens with identical incomes are treated differently depending on their place of residence. Fiscal inefficiency in resource allocation results from people in their relocation decisions comparing gross income (private income plus net public sector benefits minus cost of moving) at new locations; economic efficiency considerations warrant comparing private income minus moving costs only without any regard to public sector benefits. Consideration of gross income in mobility decisions motivates fiscally induced migration. As a noted Canadian economist, John Heliwell noted that "... the tax bonus accruing to Alberta residents just because they live next to oil wells. would provide a spur to migration even if there is nothing to do in Alberta except clip coupons" (Quoted in Sewell and Slater, 1982, p.22).

An efficiency basis of equalization transfers is also established in regional development theories. Francois Perroux (1955), Gunnar Myrdal (1957) and Williamson (1963) are the main exponents of the case that the free working of the market mechanism promotes an imbalance in regional resource use. Myrdal argues that initial economic growth in a region creates "spread effects;" i.e. capital and labor are attracted to the developed region. This development causes "backwash effects" in less developed region. The result is "virtuous" upward growth spiral for the factor receiving areas and a "vicious" downward growth spiral for the factor donor areas. Perroux has also emphasized that the spatial distribution of economic activity does not fluctuate around a long-term equilibrium norm but tends to promote the concentration of growth in some areas at the expense of others.

A nation that values horizontal equity (the equal treatment of all citizens nationwide) and fiscal efficiency needs to correct the fiscal inequity and inefficiency that naturally arise in a decentralized government. Grants from the central government to states and/or local governments can eliminate these differences in net fiscal benefits if the transfers depend on the tax capacity of each state relative to others and on the relative need for and cost of providing public services. The more decentralized the tax system is, the greater is the need for equalizing transfers. This is because under a decentralized tax system, expenditures are mostly self-financed to foster matching of local public goods with local preferences and to have greater fiscal accountability. Since resources and economic activity are geographically unequally distributed richer jurisdictions would have greater ability to offer higher quality public services at lower tax burdens as compared to fiscally poor jurisdictions. Also, they would have significant ability to export tax burdens to other jurisdictions. This situation accentuates fiscal inequity and fiscal inefficiency in a federation and therefore role of equalization transfers to create a sense of common political, economic and social union and as a glue to hold the federation together, is significantly enhanced.

The elimination of net fiscal benefits requires a comprehensive fiscal equalization program that equalizes fiscal capacity (the ability to raise revenues from own basis using national average tax rates) to a national average standard and provides compensation for differential expenditure needs and costs due to inherent cost disabilities rather than differences that reflect different policies.

In principle, a properly designed fiscal equalization transfers program corrects distortions that may cause fiscally induced migration by equalizing net fiscal benefits across states. A reasonable estimate of the costs and benefits of providing public services in various states is essential to measure net fiscal benefits. Measures of differential revenue-raising abilities and the needs and costs of providing public services in different states must be developed. Equalization of net fiscal benefits could then be attempted by adopting a standard of equalization and establishing the means of financing the needed transfers.

## **1.2 The Case Against Fiscal Equalization Transfers**

Scott (1952) and Courchene (1970, 1978, 1984, 2008) have argued that equalization payments to correct fiscal inequities induce inefficiency in the inter-regional allocation of resources. This happens because the grants discourage the outmigration of labor to high income regions where it would be more productive.

Courchene stated that equalization payments, to the extent that they do maintain horizontal balance or equity among Canadian citizens based on province of residence, may produce through their impacts on provincial tax rates and public service levels, a more decentralized location of population than would be the case if the federal government did not attempt to equalize provincial fiscal capacities. This he said, introduces economic inefficiency and hence reduce per capita income in the nation by inducing people to remain in or move to poorer areas of the country where their marginal productivity is less than it would be in the wealthier regions. The literature on economic geography also support this view by arguing that equalization could limit the ability of the regional economy to obtain agglomeration benefits by reducing migration.

In the Canadian context, Courchene went so far as to suggest the equalization and “associated transfer” programs are at least partly responsible for the fact that per capita income in the Atlantic provinces remains persistently below the national average. From the relatively lower per capita incomes in the Atlantic region, Courchene inferred that marginal productivities of workers in that region must be below that of in Central Canada. He concluded that nation would benefit from outmigration of people from Eastern Canada to Central and Western Canada. Such a migration would equalize the marginal value product of labor across regions. He further argued that equalization payments make it more financially feasible for poor provinces to enact legislation e.g. minimum wage laws, detrimental to the long run growth of earned incomes in those provinces. This results in a situation where some provinces become “wards of the state”. He alleged that the transfer system reduced the political cost of provincial legislation that tends to maintain regional disparities. Empirical work by Watson (1986) using one year migration flows also found that efficiency gains from equalization by retarding fiscally induced migration were small (two cents on a dollar) compared to the costs – “a case of cure being worse than the assumed disease”. Recent empirical work by Wilson (2003) on the efficiency impact of the equalization program in reducing fiscally induced migration using a 15-year period on interprovincial migration flows contradicts this view and finds that the efficiency gains of the program outweigh its costs (about \$1.66 to a dollar). He argues that in the absence of equalization payments changes, an inefficient flow of migration to fiscally richer jurisdictions would have grown overtime until full population adjustment was complete. They argue that one year impact captures only small benefits as full population adjustment takes a long time. Wilson estimates are however sensitive to the assumptions on the period of adjustment, choice of discount rate and the assumption on the deadweight loss associated with revenue raising to finance equalization. Using a 50 years’ period of adjustment and using a discount rate of 5%, he finds a benefit- cost ratio of less than one (0.49) of efficiency gains from equalization payments. While Wilson has demonstrated that efficiency gains from equalization are non-trivial, yet empirical evidence remains inconclusive as to the net benefit-cost ratio of efficiency gains of equalization payments.

Albouy (2012) argues that theoretically on efficiency grounds, federal transfers should ignore local cost differences and simply subsidize positive externalities, and offset differences in federal tax payments and local taxes levied on non-residents, but not local tax revenues from residents. He further argues that on equity grounds, these transfers should target areas with individuals of low earning potential or low real incomes. He concludes that federal transfers could be both efficient and equitable if redistributed portion is targeted and spent on households according to their location-independent characteristics, e.g., they are made to lower paid people, not lower paying areas. In view of this, Albouy concludes that traditional fiscal equalization transfers as practiced are neither equitable nor efficient. Albouy’s model no doubt provides support for targeting households, however, its implications for traditional equalization transfers are open to debate given very strong conceptual rationale for location based transfers on fiscal efficiency and fiscal equity grounds provided by Boadway and Flatters (1982) and Boadway (2007) as discussed in the previous section. In a federal system, both types of transfers would be desirable to address interpersonal and interjurisdictional equity issues.

Some economists argue that if public sector tax burdens and service benefits are fully capitalized in property values, the case for fiscal equalization transfers is weaker, as residents in rich states pay more for private services and less for public services and vice versa in poorer states<sup>2</sup>. According to this view, as argued by Oates (1972), fiscal equalization is a matter of political taste. This view has gained currency at the federal level in the United States and explains why there is no federal fiscal equalization program there. In contrast, local fiscal equalization drives most state assistance to local governments in the USA, especially school finance. This is because equalizing opportunity trumps any efficiency costs for most US state and local policy makers in education finance. Conceptually, full capitalization requires a small open area with costless mobility. Most federations and even states in large countries do not fulfill this condition. As a result, criticism of fiscal equalization using the capitalization argument may have only weak empirical support (Shah, 1988).

### **1.3 Conclusions from the theoretical literature**

Public sector interventions that impede the free flow of factors within the nation have adverse consequences for the efficiency of the national economy. Most equalization programs in vogue are, however, intended to promote such mobility of factors by ensuring reasonably comparable levels of public services at comparable burdens of taxation. Such a level playing field facilitates movement of factors in response to economic stimuli but retard their movements in response to fiscal considerations alone. Therefore, such programs, if properly designed, can potentially play a positive role in strengthening internal common market and common economic, social and political union. Care therefore must be exercised in the design of such program that they do not inadvertently contribute to misallocation of resources and thereby retarding the growth of the national economy.

## **Part II. Comparative International Practices**

This section presents a comparative overview of horizontal fiscal equalization transfers as practiced in Australia, Canada, Germany and Switzerland with a view to developing lessons from these practices.

### **2.1 Constitutional-Legal Status and the Objectives of the Programs in Sample Countries**

Programs vary by their constitutional/legal foundations and their objectives across sample countries.

#### ***Australia***

The objectives of the Australian Horizontal Fiscal Equalization were originally spelled out in the States (Personal Income Sharing) Amendment Act, 1978, Section 13(3) as follows:

“..... the respective payments to which the states are entitled under this act should enable each state to provide, without imposing taxes and charges at levels appreciably different from the levels of taxes and charges imposed by the other states, government services at standards not appreciably different from the standards of government services provided by the other states”.

As part of the introduction of Goods and Services Act in 2000, the Council of Australian Governments (COAG) negotiated a new intergovernmental agreement, signed in July 2011, that provided for GST revenues to be distributed among the States in accordance with the “principle of horizontal fiscal equalisation”, with the Commonwealth Grants Commission recommending to the Treasurer the allocation

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<sup>2</sup> A Canadian study by McMillan and Dogan (2011) finds significant capitalization of natural resource revenues with positive impact on house prices in the boom and negative in the bust cycles but no capitalization of equalization transfers. McMillan and Dogan study therefore suggests only partial capitalization of public sector net benefits.

across states on this basis. The Agreement, however, did not define the “principle of horizontal fiscal equalization” leaving it open to its interpretation by the CGC on its own accord.

While the role of the CGC was simply to operationalize the stated objectives in federal legislation, it redefined the objectives and expanded the scope of equalization to include infrastructure capital and by interpreting “not appreciably different” to “the same” and adding “same operational efficiency”<sup>3</sup>. It stated that:

“State governments should receive funding from the pool of GST 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” (CGC (2017) How HFE Works. [www.cgc.gov.au](http://www.cgc.gov.au))

The CGC further expanded on the above objectives in 2015 by adding:

*“for States to have the capacity to have an equal holding of financial worth per capita”* (CGC (2017), p.1)

The Commonwealth Government on the other hand, takes a narrower view of the objectives of equalization as follows:

“Horizontal fiscal equalization provides the necessary budget support so that all States have the capacity to provide services at a comparable standard while ensuring that the interstate transfers are not so large that they would significantly distort economic behaviour and reduce productivity growth” (Budget 2012-13 Paper no.3, p.123).

The CGC interpretation of HFE – the “broad view” or “precise justice” is therefore at odds with the Federal Government perspective – the “narrow view” or “rough justice” and the two differing perspectives would yield somewhat different design of the program.

#### *Design implications of the two alternate perspectives*

A program of fiscal capacity equalization alone as done in Canada with almost identical objectives – “*not appreciably different*” in Australia versus “*reasonably comparable levels*” in Canada, would be consistent with the Commonwealth Government perspective on the objective of the program. Any extraordinary burdens faced by a jurisdiction that stand in the way of achieving “*not appreciably different*” levels of services and taxation, could be dealt with by a special federal grant to that jurisdiction alone as done in Germany.

The CGC perspective of exact comparability, on the other hand, would call for a comprehensive approach to equalization of fiscal capacity, fiscal need and net worth (financial assets minus liabilities) per capita. In pursuing this comprehensive approach, one must ensure policy neutrality, safeguarding against strategic behavior and isolating the influence of fiscal capacity difference from the all states’ average and management paradigm in fiscal need determination. On the capital expenditure and net worth side, this is an insurmountable task empirically. As demonstrated in a latter section, the CGC approach with all its complexity and rigor fails to achieve the “full justice” it aims for due to data, conceptual and empirical limitations. In fact, the final equalizations outcomes associated with this approach appear to be worse than

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<sup>3</sup> An Australian expert disagrees with this interpretation. He notes: “The Terms of Reference for the 1999 Review given to the Commission by the Commonwealth Government effectively include both ‘the same’ (for both expenditures and revenues and ‘same operational efficiency’. It should also be noted that an implicit assumption of the ‘same level of operational efficiency was always assumed implicitly in the calculations of the CGC and it was simply being drawn out explicitly the respecification of the HFE principle. For a discussion of the evolution of the HFE definition - see Commonwealth Grants Commission - The last 25 years, pages 33-34.”

what could be achieved by simpler, transparent objective yet less precise approaches outlined in latter part of this paper.

### ***Canada***

Fiscal equalization is a federal program initiated in 1957 of annual unconditional payments to provinces with a substandard capacity to finance public services for their citizens. Successive governments have stated that the purpose of equalization payments is to make it possible for all provinces to provide reasonably comparable levels of public services at reasonably comparable burdens of taxation. A commitment to a federal program with this goal is set out in the Canadian Constitution. Specifically, subsection 36(2) of the Constitution Act of 1982 states:

“Parliament and the Government of Canada are committed to the principle of making equalization payments to ensure that provincial governments have sufficient revenues to provide reasonably comparable levels of public services at reasonably comparable levels of taxation.”

The fiscal capacity equalization program enacted by the Federal Parliament to fulfill the above mandate until 2006 equalized all 33 provincial-local tax bases. The program was simplified in 2007 upon recommendations of the Expert Panel on Equalization (see Finance Canada, 2006). To enhance simplicity and transparency of the system, the Panel recommended that fiscal capacity determination be done for only five major provincial-local tax bases, namely, personal income tax, corporate income tax, consumption taxes, property taxes, and resource revenues. The first four of these revenue sources have well defined and reliable tax bases. For resource revenues, it recommended inclusion of only 50% of actual revenues in this determination. It further argued against expenditure need/cost equalization to preserve simplicity and objectivity of the equalization system. The Panel argued that fiscal capacity equalization for major provincial-local revenue sources alone will be sufficient to achieve the constitutional objective of equalization. This implies that the Canadian program implicitly assumes that per capita expenditure needs are roughly equal across provinces. In any case, the Federal Government equalizes expenditure needs for education, health and welfare through equal per capita federal specific purpose block transfers, with no conditions on inputs but having service access conditionality, to all provinces and territories.

### ***Germany***

Equalization principles are enshrined in the German Constitution (The Basic Law 1949), article 107(2) as follows:

“it has to be ensured by statute that a reasonable equalization between financially strong and financially weak States (Länder) is achieved; due consideration being given to financial capacity and financial requirements of communes or association of communes. Such statute must specify the conditions governing equalization claims of States (Länder) entitled to equalization payments and equalization liabilities of States (Länder) owing equalization payments as well as the criteria for determining the amounts of equalization payments. Such statute may also provide for grants to be made by the Federation from federal funds to financially weak States (Länder) to complement the coverage of their financial requirements (complementary grants).”

### ***Switzerland***

The 1999 Swiss Constitution has spelled out the equalization objectives as follows:

*“Article 135: Equalization of financial resources and burdens*

1. The Confederation shall issue regulations on the equitable equalization of financial resources and burdens between the Confederation and the Cantons as well as among the Cantons.
2. The equalization of financial resources and burdens is intended to:
  - a. reduce the differences in financial capacity among the Cantons;

- b. guarantee the Cantons a minimum level of financial resources;
  - c. compensate for excessive financial burdens on individual Cantons due to geo-topographical or socio-demographic factors;
  - d. encourage inter-cantonal cooperation on burden equalization; and
  - e. maintain the tax competitiveness of the Cantons by national and international comparison.
3. The funds for the equalization of financial resources shall be provided by those Cantons with a higher level of resources and by the Confederation. The payments made by those Cantons with a higher level of resources shall amount to a minimum of two thirds and a maximum of 80 per cent of the payments made by the Confederation.”

## 2.2 Key Features of the Fiscal Equalization Programs in Selected Countries

A brief overview of the key features of the fiscal equalization programs in selected countries, is presented in Table 1.

**Table 1. Salient Features of the Fiscal Equalization Program: A Comparative Perspective**

<i>Fiscal Equalization Program</i>	<i>Australia</i>	<i>Canada</i>	<i>Germany</i>	<i>Switzerland</i>
Objective	Augment capacity to provide services at same standard with same revenue effort at same level of operational efficiency.	Achieve reasonably comparable level of public services at reasonably comparable levels of taxation across provinces.	Equalize differences in financial capacity of states.	Provide minimum acceptable levels of certain public services without much heavier tax burdens in some cantons than others.
Objectives defined by	Commonwealth Grants Commission	Constitution	Constitution	Constitution
Framework	Commonwealth Grants Commission	Federal Law	Federal Law	Federal Law
Paternal or Solidarity or Robin Hood	Paternal with Robin Hood features	Paternal	Solidarity/Fraternal	Mixed
Gross or net equalization	Net	Mixed (Federal equalization program is on gross basis but federal health, welfare and education transfers work to equalize on a net basis).	Net	Mixed
Total pool determination	Formula with a cap provided by the amount of revenues collected by the GST	Formula with 3-year moving average GDP growth rate cap.	Formula	Ad hoc
Allocation	Formula	Formula	Formula	Formula
Fiscal capacity equalization	Yes, potential revenues using RTS for all 32 state sub-tax bases and net financial worth	Yes, potential revenues using RTS for 5 major provincial-local tax bases only	Yes, actual state and local revenues due to uniformity of bases and rates	Yes, major macro tax bases (taxable factor incomes)

Fiscal Need/Cost Equalization	Yes. Comprehensively for all operating and capital expenditures based both upon use and cost factors.	No for provincial equalization. Considered in a separate program for territorial equalization. Expenditure need equalization through health, welfare and education equal per capita transfers.	No. Only population size and density recognized. Expenditure needs addressed through federal specific purpose transfers.	Some. Eight cost factors (mostly demographic) considered in aggregate. Infrastructure deficiencies addressed through Cohesion Fund.
Program Complexity	Super High	Low	Low	Low/Medium
Political consensus	No	Yes (?)	Yes (?)	Yes
Sunset clause	No but regular periodic reviews	Yes (every 5 years)	To be terminated for good after 2019	No but regular periodic reviews
Who recommends	Independent agency (CGC)	Intergovernmental Committee. In recent years, federal unilateralism has prevailed.	Solidarity Pact II. Strong role for Bundesrat (upper house of the Parliament).	Federal Government
Dispute resolution	Council of Australian Governments (COAG)	Supreme Court	Constitutional Court	Supreme Court

RTS: representative tax system – explained later

Source: Author's perspectives

## Framework

National Parliaments in selected countries with the sole exception of Australia legislate the framework and the Federal Ministry of Finance issues related regulations. In Australia, these tasks are left to the discretion of an independent agency.

## Nature of Program: Paternal/Solidarity/Robin Hood

Three stylized programs of equalization and various hybrid versions of these are practiced in various countries. A paternal program indicates a vertical program designed, administered and financed by higher order government. Solidarity or fraternal are horizontal voluntary programs where richer jurisdictions on their own initiative contribute to an equalization fund for the welfare of other jurisdictions at the same order of government. In practice, these programs typically lack truly genuine voluntary character as Federal Government uses its persuasive power or veiled threat of coercive federalist intervention to ensure redistribution. For example, in the German Solidarity Pact I, the Federal Government used its power of persuasion to facilitate agreement on a pact which later by challenged by richer states in the Constitutional Court. Robin Hood equalization programs represent involuntary payments by richer jurisdictions, usually coerced by the Federal/Central Government, to benefit fiscally poor jurisdictions at the same order. Table 2 highlights pros and cons of alternate equalization systems. The table shows that a solidarity based program would be an ideal program but such a program requires a high degree of altruism and is not feasible in most countries due to ethnic and linguistic divisions.



**Table 2. Pros and Cons of Alternate Equalization Systems**

<b>Program</b>	<b>PROS</b>	<b>CONS</b>
Paternal (vertical)	<ul style="list-style-type: none"> <li>• Easier to finance and administer</li> <li>• Supports federal/state objectives in creating a common economic and social union</li> <li>• Glue for holding the country together</li> </ul>	<ul style="list-style-type: none"> <li>• Undermines state accountability to residents;</li> <li>• Usually complex especially if expenditure needs are equalized and if an independent agency responsible for design;</li> <li>• Strategic behavior by recipients</li> <li>• Incentives for lobbying, inefficiencies in spending and disincentive for improving tax base and local economic development;</li> <li>• Non-transparent;</li> <li>• Federal discretion;</li> <li>• In some federations, there may be a lack of an explicit national compact on equalization.</li> </ul>
Solidarity/Fraternal (Horizontal)	<ul style="list-style-type: none"> <li>• Ideal system. Simple and transparent;</li> <li>• Pool subject to discipline of an explicit compact and potential for right balance in equalization</li> </ul>	<ul style="list-style-type: none"> <li>• Political bargain possible only in relatively homogenous societies with no ethnic or linguistic divides</li> <li>• Compact problematic for cost/need equalization</li> </ul>
Robin Hood (Horizontal)	<ul style="list-style-type: none"> <li>• Transparent</li> <li>• But Forced compact</li> </ul>	<ul style="list-style-type: none"> <li>• Excessive marginal tax rates; could create disharmony and conflict if revenue capacity differences were large and highly concentrated in a few states;</li> <li>• False prices for public goods;</li> <li>• Disincentive for local economic development</li> </ul>

Australia has a paternal (federal) program but has indirect Robin Hood effects as states have limited taxing powers and federal program has strong horizontal redistributive implications. In most federations, states have unfettered access to income and sales taxes whereas such access is not readily available to the Australian states. From a constitutional perspective, it is possible for the Australian states to levy income taxes however this is largely unfeasible due to the high level federal taxation effort in this area and unlike Canada, the Commonwealth Government in Australia has not been open to tax abatement to allow the Australian states to (re-) co-occupy this field. In fact, in the past, the Commonwealth has threatened the States that moving into this area would see other Commonwealth funding reduced. The German main equalization program is a solidarity program where rich states agree to contribute in progressive steps (45-72.5%) with a top marginal contribution rate of 72.5% applicable to states with more than 10% above average fiscal capacity to the welfare of the poorer states. This interstate program has strong positive equalization impacts. *Because of 2016 Bundesrat review that raised concerns about adverse impacts on efficiency and economic growth, this program will, however, not be renewed upon expiration in 2019* (see Box 1 for a brief overview of the German program. See also Bundesrat D. 111/17 dated 02/02/2017; Bundesrat D.769/16 dated 10/02/2017; Bundesrat D. 814/1/16 dated 31/01/2017; Bundesrat D. 814/7/16 dated 09/02/2017 and Bundesrat D. 814/16 dated 30/12/2016). The German federal program for distributing 75% of States' share of VAT funds on equal per capita basis among all states and the remainder 25% of the VAT distribution on equal per capita basis only to the fiscally poorer states with positive equalization impact, will be maintained. In addition, the federal government will continue to provide special grants to fiscally disadvantaged states for infrastructure improvements and regional development. Canada has a

paternal program and Switzerland has a paternal component of 70.7% and a Robin Hood component of forced Canton contributions of about 29.3%.

### Gross or Net Equalization?

A gross equalization program provides federal funding to bring fiscally poor states to a national average or some other standard while leaving the fiscal capacity of the richer states untouched as done in Canada. A net equalization program upgrades the fiscal capacity of the poorer states by taking resources away from richer states as done under the solidarity program through voluntary contributions in Germany and the Robin Hood program with federally mandated involuntary Canton contributions in Switzerland. In Australia as States' taxing powers are highly constrained, the federal policy of centralizing taxing powers while redistributing GST revenues through equalization works in practice as a net program as it leads to reduced claims on GST allocations by richer states.

### Equalization Standard

Australia has the most demanding standard - emphasizes strict uniformity in taxation and service standards whereas the Canadian program aims at rough comparability in potential tax burden and public services across provinces through equalization of per capita fiscal capacity only to the average of all provinces and through a separate program for territories that considers both actual expenditures and potential revenues. Territories in Canada are under a separate equalization program (see Box 1) for several reasons. The three territories encompass very large areas mostly frozen tundra with under-exploited natural resources with sparse population with lower life expectancy, higher infant mortality and suicide rates, higher unemployment rates and higher incidence of crime and have either majority or large aboriginal and Inuit populations. Federal-territorial relations are still evolving as First Nations' Final Agreements were signed only in 1993 and province type devolution was granted to Yukon in 2003 and to the Northwest Territories in the year 2014 and negotiation for similar agreement with Nunavut are still ongoing. Germany aims to equalize actual per capita fiscal capacity (based upon actual revenues) alone and the Swiss program stresses minimum service standards across the nation.

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### **Box 1. How Territorial Formula Financing (TTF) Works in Canada**

Territorial Formula Financing (TTF). A federal equalization program to enable territorial governments to provide their residents a range of public services comparable to those offered by provincial governments, at comparable levels of taxation. The TTF is a five-year formula based program by federal legislation and subject to renewal every five years after a review by the Parliament of Canada. Note that in addition to TTF, Government of Canada also provides equal per capita transfers for health and social purposes (post-secondary education and welfare) to the territories just as to all provinces.

- $TFF = \text{Expenditure Needs} - \text{Revenue Means}$
- $\text{Expenditure needs} = \text{Gross expenditure Base (GEB)} = \text{Previous year territorial expenditure updated by annual escalator (PAGE)}$
- PAGE is the product of index of provincial and local spending growth in Canada; and the relative population growth between each territory and Canada.
- $\text{Revenue Capacity} = \text{By applying national average tax rate to tax bases of major taxes (excluding resource revenues) plus escalating by 2\% annually the revenue block of 11 minor taxes.}$
- $\text{Revenue means} = 70\% \text{ of revenue capacity}$
- Floor: 3-year moving average of TTF entitlements.

Source: Shah (2017).

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## Total Pool Determination

Conceptually equalization standard if clearly defined as done in Australia, Canada and Germany would determine the total pool of resources as well as allocations to federating units. The Australian program, however, provides a cap on the total pool by GST revenues. In the early years of implementation, this cap was binding and a yearly varying fraction of the equalization standard was achieved. In more recent years due to rapid growth of GST revenues, equalization cap is no longer binding and the equalization standard determines the pool required for equalization and the residual GST revenues are distributed on equal per capita basis<sup>4</sup>. This situation may reverse itself in future years if the GST revenue growth slows down relative to overall states' expenditure growth. This reversal may already be happening as recent trends in consumption spending in Australia suggest a shift away from GST taxable goods to non-taxable items including education, health and financial services. This implies that the Australian program is primarily tax sharing system following equalization criteria. Such a system is less desirable than a system that is solely based on achieving a defined equalization standard that ensures that all residents regardless of their place of residence have access to reasonably comparable level of public services at comparable burdens of taxation. A defined equalization standard program especially that aims to eliminate differential net public sector benefits enhances fiscal efficiency and fiscal equity in the nation. The Canadian program limits annual increases in overall equalization payments based on 3-years moving average of GDP growth rate. Switzerland is an exception where total pool is determined by the federal government subject to consultations with Cantonal governments without reference to a defined equalization standard.

## Approaches to Equalization

Overall approach: The method of equalization also differs across programs. Canada and Germany primarily equalize fiscal capacity with Germany providing adjustment for population size, density and whether a city is a harbor. Switzerland in addition devotes 19% of equalization pool to cost equalization and Australia take a comprehensive view of both fiscal capacity and expenditure/cost equalization. In addition, the Australian program is the only program among mature federations that also equalizes for capital expenditure needs and associated capital financing. This is the least desirable feature for an annual equalization program as it results in a Christmas tree approach to infrastructure financing rather than a more targeted approach that defines national minimum infrastructure standards across the federation and develops a multi-year, multiple financing instruments approach to overcome identified deficiencies from the defined standard over the finite planning horizon. A Christmas tree approach provides insufficient capital finance to all jurisdictions and thereby perpetuates existing infrastructure deficiencies. Switzerland compensates for infrastructure deficiencies through a supplementary Cohesion Fund.

Fiscal Capacity Equalization: Australia and Canada equalize per capita fiscal capacity using the representative tax system for all state (Australia) and local revenues (Canada only). Under the representative tax system (RTS), equalization entitlements are determined by measuring states' ability to raise revenues from own tax bases using national average tax rate for each base – known as its “fiscal capacity”. A state's per capita equalization entitlement from a specific tax base is equal to the amount by which its per capita fiscal capacity is below the average per capita capacity of all states. Positive and negative entitlements are summed up from five major bases to determine overall equalization entitlement for a state/province in

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<sup>4</sup> An Australian expert disagrees with this interpretation. He notes: “The GST arrangements in Australia have always been a zero sum game with the proportion of funds devoted to equalization varying. In the early years there were top up payments to some States linked to the guaranteed minimum amounts from the GST reform package.”

Canada. Australia instead calculates relativities for each tax base which equals one if a state's per capita fiscal capacity from a tax base equals the all states average. Germany equalizes per capita revenue capacity for Lander and municipal revenues. In Germany, actual rather than potential revenues are used in these calculations, as both actual and potential revenues are the same due to uniformity of state tax bases and tax rates through federal legislation. Switzerland uses macro tax bases (factor incomes) for fiscal capacity equalization.

Expenditure Need/Cost Equalization. Both Canada and Germany have opted for fiscal capacity equalization only and attempt expenditure need compensation through federal specific purpose programs. Switzerland uses eight factors for cost equalization of aggregate state operating expenditures: population size, area, population density, population older than 80, number of large cities, number of foreign adults resident for more than 10 years, unemployment and the number of people requesting social assistance from the canton. In addition, it has established a Cohesion Fund with 66.6% financing by the Federal Government and remaining 33.3% financed by cantons on equal per capita basis. The Cohesion Fund is intended as a *hold harmless* transitory instrument to expire in 28 years to ensure that financially weak cantons were not made worse off in transition to the new equalization system introduced in 2008/9 and to provide additional financing for infrastructure deficiencies. The Australian program uses a representative expenditure system to equalize expenditure needs/costs for all state operating and capital expenditures. The Australian approach to expenditure equalization nevertheless is complex and controversial. In view of the importance of this issue in the present context, alternative approaches to expenditure needs are highlighted in a subsequent section.

#### The Treatment of Capital Expenditures and Capital Financing in Equalization

Australia is the only country that equalization capital expenditures and capital financing needs through an annual equalization program. This is problematic for several reasons. Infrastructure deficiencies that impede the efficient functioning of an internal common market and free flow of goods services and factors across the nation requires systematic identification and a plan to overcome these over a finite well defined time horizon. Also, based on the federal affordability considerations, minimum standards that can be achieved across the nation must be defined. Further infrastructure financing depends on the type of infrastructure – revenue producing or social investment and by the initial fiscal situation of the deficient jurisdiction – fiscally rich or fiscally poor. The solution to deal with infrastructure deficiencies from defined minimum standards would entail a mix of financing from cash reserves, grants, loans and bonds and public-private partnerships. In the case of federal grants, considerations also need to be given to matching rate by recipient jurisdictions that vary inversely with local capacity and ensuring availability of funds for future upkeep. Matching and upkeep maintenance funds requirements are valuable to ensure local fiscal accountability and to secure long term sustainability. In case of borrowing, one needs to have a regulatory framework for fiscally responsible borrowing and bankruptcy and insolvency provisions if things go horribly wrong. For public-private partnership, one needs to ensure that critical public assets are not subject to undue risk and public sector is not taken in for a ride by the private sector. The above considerations warrant that capital expenditures and financing to overcome infrastructure deficiencies are better handled outside the fiscal equalization program. This idea is firmly embraced by Canada, Germany, Switzerland and the European Union and the CGC approach is Australia represent an important exception. This approach is especially worrisome as Australia, among mature federations, has one of best developed institutions of executive and legislative federalism. Germany in the past followed joint decision-making by federal-lander and municipal governments on infrastructure investments and created various task-oriented institutions for coordinated inter-governmental decision-making.

#### Complexity and Transparency

The German program is the simplest and most transparent. The use of representative tax system introduces some complexity in the Canadian system but it has been kept to a minimum by adopting only 5 broad tax bases. The Swiss system is simplest on the fiscal capacity equalization side but introduces some complexity in determining weights for cost equalization. The Australian program is the most comprehensive yet most complex program due to complex procedures used for equalization of operating and capital expenditure needs.

### Political Consensus

All the sample countries have well developed institutions of political and policy discourse. These institutions of legislative and executive federalism play a critical role in developing a political compact on equalization (see Shah, 2014 for institutional details) and make complex federal systems work to advance public interest. In Australia's case the lack of political consensus on the standard of equalization may have resulted from the fact the Australian institutions of legislative and executive federalism seem to have taken a hands-off approach from "technical issues" on equalization by delegating most of the decision making on these matters to the CGC.

### Sunset Clause

The Canadian and German program legislation embody sunset clauses. In Canada's case the program is subject to expiry every five years unless renewed with or without any revisions after a formal review by the Parliament of Canada. As the equalization principle is enshrined in the Canadian Constitution, the permanency of the program is, however, assured. The German program is legislated to expire after 2019 and the Bundesrat has passed legislation early in the year 2017 to terminate the horizontal equalization program upon expiry but shift the responsibility of equalization to federal GST revenue sharing and specific purpose programs. The Swiss and Australian programs have no legislated expiry dates. However, the Australian program is formally reviewed by the Commonwealth Grants Commission every five years and a special review is being conducted by the Australian Productivity Commission in 2017.

### Dispute Resolution

In Canada and Switzerland, the authority for judicial resolution of the intergovernmental disputes rests with the Supreme Court – the highest court in the nation. In Germany, such authority is vested in the Constitutional Court. This constitutional avenue, however, is rarely pursued. In Germany, richer states in the past had attempted to lower the top marginal contribution rate through a recourse to the Constitutional Court but without success.

### Concluding Observations on the Comparative Practices of Equalization

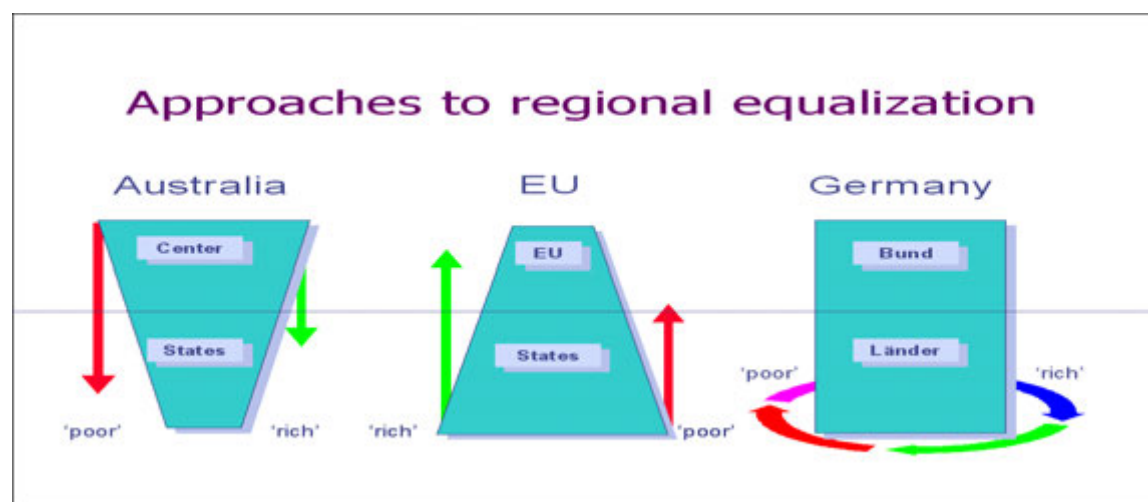
In the above, we have simply presented notable features of the selected fiscal equalization systems for comparability without evaluating any of the systems described. This comparative perspective is useful for drawing broader lessons of interest and relevance to the Australian program. Three important noteworthy features of these systems are the differential approaches to expenditure need equalization taken by selected countries; the degree of complexity that is politically acceptable and the relative roles and the authority of political versus non-political institutions in decision making on equalization transfers. Australia is an outlier in all three aspects noted above: comprehensiveness of its approach to equalization, its infinite appetite for complexity of the program and its treatment of equalization as a subject of scientific pursuit best left to academic scholars rather than a vital question of political economy worthy of political debate and federal bargaining. Australia has continuously refined its program to add greater layers of complexity over time

whereas other sample countries have focused on keeping the system objective and relatively much simpler and transparent. In view of the importance of the expenditure need equalization and the institutional arrangements for outcomes of equalization, these subjects are treated in greater depth in the following sections on comparative reflections.

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### **Box 1. Riding into the Sunset – The Vanishing Act of the German Interstate Equalization (Finanzausgleich) Program**

German interstate equalization program has often been cited as a unique example of a generous fraternal (solidarity) program of fiscal equalization (see Figure 1).



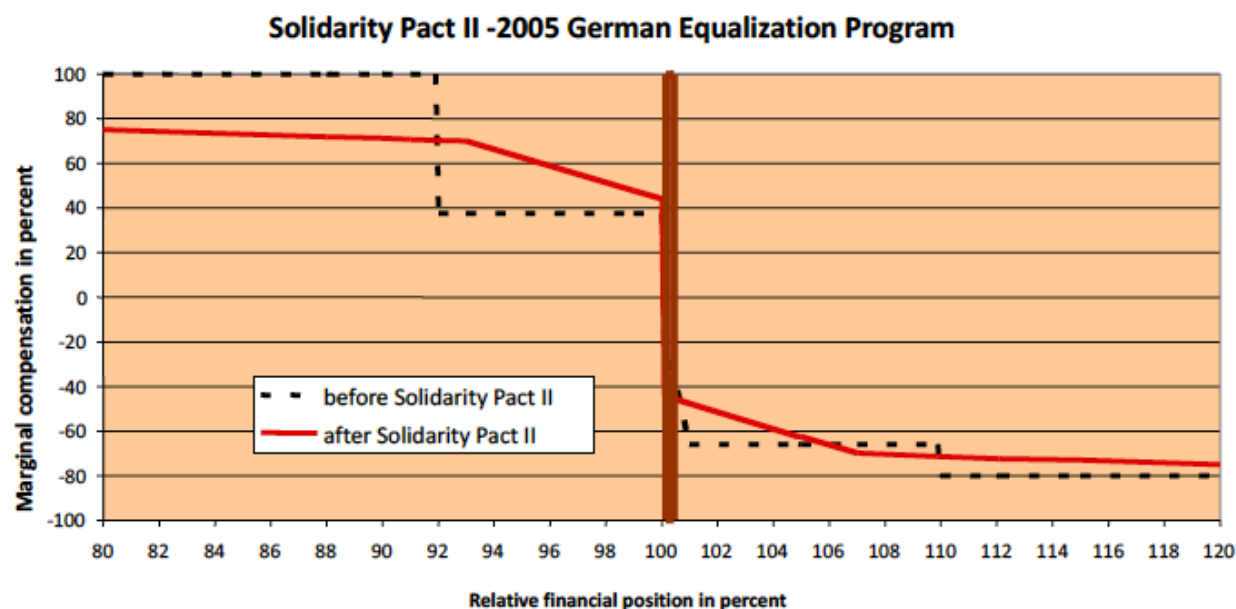
**Figure 1. Alternate Approaches to Horizontal Fiscal Equalization**

Source: Spahn and Werner 2004, p.11

This program is of interest in the Australian context as it is being allowed to expire as originally scheduled in 2019 and will not be renewed as decided by the German Parliament in January 2017.

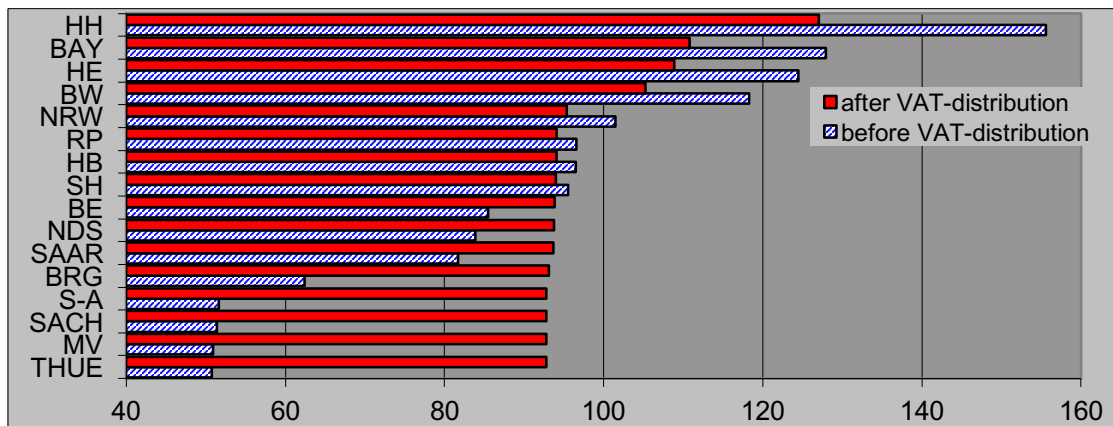
This program was mandated by the article 107 of the German Constitution (Grundgesetz) and the program design was established by the Solidarity Pact I and ratified by the Parliament in 1955. According to the Solidarity Pact I, all states that had below average fiscal capacity were to be brought up to the at least 95% of the national all states' average fiscal capacity. The process starts with measurement of fiscal capacity of all landers which was roughly the sum of state tax revenues (100% in the pool) corrected for special burdens (such as port expenses) and local/municipal tax revenues (50% in the pool) adjusted for population density and the degree of urbanization. Each states' per capita fiscal capacity was then compared to all states' average per capita fiscal capacity. States with above average fiscal capacity were required to make contributions to the equalization pool in graduated steps with 62.5% contribution rate for fiscal capacity that is more than the national average and 80% contribution rate for fiscal capacity in excess of 10% of national average fiscal capacity. States with below average fiscal capacity received transfers from the pool in with graduate subsidy rates- 100% of subsidy for fiscal capacity deficiency below 92.5% and 39% subsidy for the remaining fiscal capacity deficiency up to the 100% of national average.

**Figure 2. Graduated and Progressive Contributions and Subsidy Rate Structure under Solidarity Pact I and II**



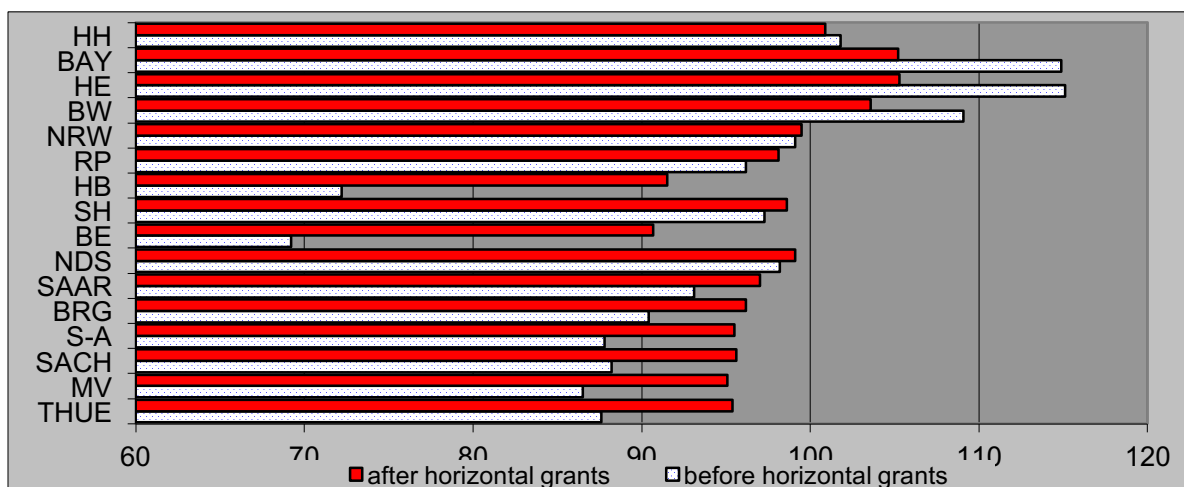
The equalization fund worked as a clearance mechanism so that payments made by fiscally richer states was always equal to the sum of transfers received by the fiscally poorer states. The program was strongly equalizing but burden for financing was mostly shouldered by the two richest states: Baden-Wuerttemberg, and Hesse. This created significant tensions especially that these states could only retain only 20% of incremental revenues at the margin for own use. These states sought relief from the Constitutional Court and were successful in seeking renegotiation of the federal compact on equalization. However, they achieved only minor accommodation through Solidarity Pact II (signed on June 23, 2001 and came into force from 2005-2019), which changed the progressive contribution rates to a range of 45% to 75% and similar progressive subsidy for the poorer states from the pool. Also, the new pact limited the rich states contributions such that a rich state must retain at least 100% of national average capacity. Fiscal capacity yardstick was redefined as national average of all states (100% of the revenues in the pool) and local/municipal (64% in the pool) per capita revenues with state population inflated by a factor of 1.35 for city (densely populated) states and by a factor of 1.05 for thinly populated states. The *Finanzausgleich* remained a purely horizontal clearing mechanism to raise poorer states with fiscal capacities 50-95% of the national average being raised to 86%-98% of national average.

**Figure 3. The Equalizing Impact of Distribution of Federal VAT revenues in 2011**



Source: Werner (2014)

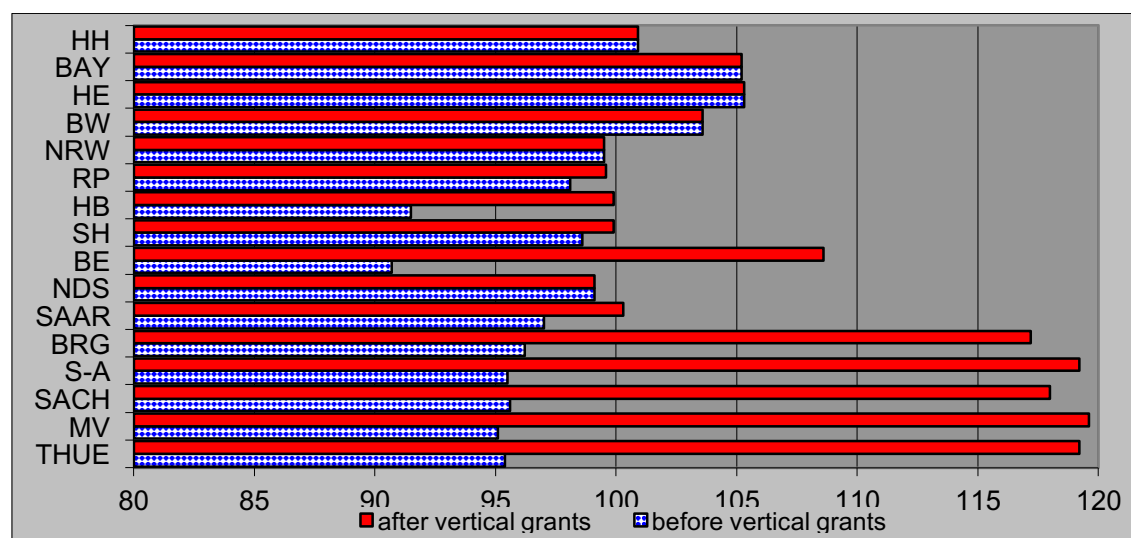
**Figure 4. The Equalization Impact of Interstate Solidarity Program – Finanzausgleich in 2011**



Source: Werner (2014)



**Figure 5. The Impact of Federal Specific Purpose Grants on States' Fiscal Capacity in 2011**



Source: Werner (2014).

While the interstate equalization brings each state to at least 95% of national average, federal specific purpose grants raise their per capita fiscal capacity to above national average standard (see Figure 5)

### *Epilogue*

The German interstate equalization program had a remarkable success in reducing state fiscal disparities. But it had a negative impact on tax efforts by donor states. In view of the confiscatory contributions rates imposed on the donor states, political support for the program over time waned. Also, Germany's ambitions to carve an international competitive advantage also created support for competitive federalism and an enhanced focus on growth and economic efficiency considerations and greater mobility of factors within the nation to overcome regional income disparities. These considerations over time led to an erosion of political and civil society support and culminated in Parliament's decision in January 2017 to allow existing program to expire as originally scheduled in 2019 and not to renew it in an amended form. This decision may be worth examining by other advanced countries contemplating a reform of their fiscal system to promote international competitiveness and growth and sustainable subnational fiscal management.

## **2.3 Comparative Perspectives on Alternate Approaches to Expenditure Need Equalization<sup>5</sup>**

Expenditure needs equalization is necessarily more complicated because, unlike revenue which has a monetary value, expenditures provide heterogeneous public services whose quality is difficult to compare across local governments. The analogue to the RTS would be a Representative Expenditure System (RES), which would require calculating a set of representative expenditures across states and localities. This would be difficult. In practice, there are various approaches to expenditure needs equalization, including (for a comprehensive survey of approaches to expenditure need equalization, see Shah, 2012) with some countries e.g. Australia using a hybrid of these approaches:

### *Traditional Approaches to Expenditure Need Equalization*

<sup>5</sup> This section is based upon Boadway and Shah (2014)

Method 1. Ignoring expenditure equalization, which would be equivalent to assuming that a dollar of expenditure buys the same amount of public services in each state;

Method 2. Cherry picking (ad hoc determination of a few need or inherent cost disability factors as done in for example Germany: population size and population density, China: number of public employees; India: backwardness; Switzerland: demographics, area, unemployment, large cities, social assistance recipients, foreigners;

Method 3. Imputation methods and/or econometric approaches that estimate empirically the determinants of expenditures by category based on different needs or cost disability factors (e.g., population, geography, demographic factors, socio-economic factors, ethnic factors), like that used in Netherlands, Denmark, Norway Indonesia, China and Australia;

Method 4. Costing the provision of major public services, as practiced in Sweden, Ethiopia and as proposed in South Africa by the Financial and Fiscal Commission (the costed norms approach);

Method 5. Constructing relative needs/cost disability indexes across states/ municipalities using needs factors as above under both determinants and/or costs based approaches as done in Australia.

The first approach of ignoring needs differences is highly unsatisfactory when equalizing across local governments where needs can differ considerably. Needs are more often ignored in equalizing at the provincial/state/canton/lender level where heterogeneous needs of localities partially cancel out. Method 2 is completely subjective and highly controversial. Method 3 is very complicated, difficult to understand and not particularly reliable in the absence of very good data or for economies undergoing rapid transformation. It is also prone to causing disagreement among stakeholders and fails the transparency test. The costed norms approach (Method 4) is also demanding empirically and cannot easily be applied to a broad set of expenditures. It embodies a straightjacket paradigm of state and local governance and negates the essence of local governance i.e. competition and innovation in delivering better quality services at lower costs. Method 5 is used in both the above approaches but begs the question of what the indexes should be and whether such indexes have the potential of perverse incentives e.g., infrastructure deficit indexes can create incentives to perpetuate infrastructure deficiencies.

### ***A Simple and Transparent Alternative: The Demand for Public Services (DPS) Approach to Expenditure Need Equalization***

There is an alternate approach — Demand for Public Services Approach (DPS) — that is very simple and understandable, and that relies mainly on readily available data. It uses demand side indicators for individual public services, say school age population for schooling and lane kilometers of various types of roads for road expenditures etc. that are beyond the control of individual state and local governments. Total pool for expenditure need equalization would be available funds after fiscal capacity equalization. Relative weights for major services will be derived from actual all states' aggregate expenditures for three previous years. Demand side factors then determine each state share of available funds for expenditure need equalization. Table 3 provides illustrative indicators and calculations assuming relative importance of various expenditures in all states budgets, demand factors shares in various states, and an arbitrarily expenditure need equalization pool of \$100 million is to be distributed among two states - A and B. For a real-world application, these data are readily available for all countries and therefore no assumption would be required. Row explains how calculations for column values were done.

**Table 3. Hypothetical Operating Expenditure Needs for Major State Services: An Illustration Using Demand for Public Services Approach**

State service	Critical Demand for Public Service Approach factors (client/service population)	Relative importance (share) of the service in all states aggregate expenditures (average for the past three years)	Available funds from total pool (assume \$100 million) for expenditure needs equalization (million \$)	State A Share of all states demand factors	State B Share of all states demand factors	State A entitlement (million \$)	State B entitlement (million \$)
(1)	(2)	(3)	(4) = \$100m x col (3)	(5)	(6)	(7) = col. (4) x col. (5)	(8) = col. (4) x col. (6)
Education	School age population	0.20	\$20	0.6	0.4	\$12	\$8
Health	Weighted population with higher weights for ages 0-4 (2.0) and 65+ (1.5)	0.20	\$20	0.55	0.45	\$11	\$9
Social protection and welfare	Number of unemployed	0.05	\$5	0.3	0.7	\$1.50	\$3.50
Transportation-roads	Paved roads in lane KMs	0.20	\$20	0.4	0.6	\$8	\$12
Transportation-urban public transit	Urban population	0.10	\$10	0.8	0.2	\$8	\$2
Police/Security	Population (50%), property values (50%)	0.10	\$10	0.55	0.45	\$5.50	\$4.50
Public Housing	Population below poverty line	0.05	\$5	0.2	0.8	\$1.0	\$4.0
Rural services	area	0.05	\$5	0.3	0.7	\$1.50	\$3.50
General administration	Population (66.6%); area (33%)	0.05	\$5	0.5	0.5	\$2.50	\$2.50
All Services		1.00	\$100			\$51	\$49

Source: Author's illustration

It is conceptually much sounder than the approaches listed above as it does not relate to a fixed public management paradigm of state and local governance and is neutral to how resources are used by various states and localities — a major drawback of representative system expenditure (RES) type approaches. It approximates the RES approach in spirit by using the relative importance given to each public service by state and local governments but is much easier to apply. Like the RES, it relies on what local governments do in the aggregate. At the same time, it pays no attention to the supply side (activity costing and a fixed mode of delivery) emphasized by the RES type approaches but is simply based on demand side factors over

which individual local governments have no control. Undoubtedly, it is not 100 percent accurate, but neither is any other method. Once such a method is in place, it can be further refined in the future as knowledge and data evolve. The DPS approach has yet to be applied in practice, but has been recommended and illustrated for Indonesia and Ethiopia to replace less satisfactory and complex systems of equalization (see Shah et al, 2012, 2015).

### *Treatment of Federal Transfers under the DPS Approach*

A simpler approach would be to consider all federal transfers in fiscal capacity equalization only. A more sophisticated approach would look at the type of transfers to decide whether to consider in revenue capacity or expenditure need determination. For example, federal general purpose transfers and federal conditional input based (with conditions on spending on specific inputs) transfers would be included in assessing fiscal capacity equalization grants and would not be considered in expenditure need determination under DPS. Federal general purpose transfers are to be excluded from DPS as they simply augment revenue capacity and therefore considered in fiscal capacity equalization. Federal conditional input based transfers also augment revenue capacity but at the same time undermine states' expenditure autonomy and flexibility. Therefore, again there is a case for considering these in fiscal capacity equalization but not in the expenditure need equalization. Federal block transfers for individual state services can be considered in either fiscal capacity or fiscal need determination but not both. If they are not considered in fiscal capacity determination, then they could be a suitable candidate for consideration in expenditure need determination as they lessen the need for additional financing of the stated expenditure category while preserving states' flexibility in spending on the specific service.

Equalization using the DPS approach has some notable features.

- 1) The system provides allocations based on service population (demand side factors) beyond the control of individual state and local government units and thereby avoid perverse incentives provided by cost based approaches.
- 2) Assuming the RTS is calculated for all revenue sources, the combination of revenue and needs equalization equalizes 100 percent of the differences among states and localities. In principle, total entitlements for high-income localities could be negative, in which case a "Robin Hood" type system would be required for full equalization. However, if the vertical gap is large enough (i.e., expenditure needs are high enough relative to revenue-raising), full equalization can be achieved by the federal program only without requiring any negative equalization.
- 3) The absolute size of the equalization program as well as the entitlements of all states and localities is endogenous to the system. The entire program is formula-based rather than discretionary, which is a good thing.
- 4) The effective marginal equalization tax is 100 percent in the sense that increases in a state or locality's tax base reduces entitlements fully if the state or locality uses the national average tax rate, and changes in a locality's need index gives rise to offsetting changes in entitlements. As long as state and localities have limited ability to influence their need indexes or their tax bases, this should not be a big issue. To the extent that incentives are a problem, it is more pronounced on the revenue than on the expenditures equalization side. In principle, this could be addressed by equalizing revenue capacity less than fully.

Expenditure needs are equalized but costs are not. Whether costs should be equalized is a matter of dispute. For example, McMillan (2017)<sup>6</sup> argues against cost equalization as high costs such as wages or rent reflects productivity differences and adjusting for them would make an offset of the factors that provide for the larger revenue generating fiscal capacities. In his view, this would be double counting in the sense of high

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<sup>6</sup> Personal communication with the author dated August 9, 2017.

fiscal capacity being offset by equalizing for higher costs that are a product of the high revenue capacity. Others have argued that costs are relevant where wage rates differ across localities. This could be addressed by adjusting entitlements by relative wage indices, although if a public-sector wage index is used that could provide an incentive to increase wage rates. On the other hand, if costs differ across states and localities, there is an equity-efficiency trade-off in equalization: one would not want to provide the same level of public services in high and low cost localities or in metropolitan areas versus remote rural municipalities. An Australian reader of this paper has argued inclusion of wage cost differentials. He argued that “these differentials reflect productivity differences in the private sector (which the public sector must compete with) which may not carry over to the public sector. Big States are already penalized for higher productivity through the CGC assessments for administrative scale, service delivery scale and dispersion. Given this, not providing for higher wage costs would double count this advantage for them”.

In conclusion, since the case for equalization of cost differences without correcting for productivity differences is weak, not much may be lost by ignoring these in expenditure need equalization.

## **2.4 Comparative Evaluation of Alternate Institutional Arrangements for Fiscal Equalization**

For equalization transfers, two stylized types of institutional arrangements are in vogue in sample countries – intergovernmental forum (Canada, Germany and Switzerland) and an independent agency model reporting to an intergovernmental forum (Australia). In the latter model, the role of intergovernmental forum is usually passive if not ceremonial.

**Intergovernmental Forums (IGF):** An intergovernmental forum provides a framework for institutionalized but restricted political bargaining. Bargaining is restricted as the constitution and the legal framework usually define the limits to such bargaining. There is, however, strong peer pressure to strike a bargain. Therefore, intergovernmental forums are usually successful in defining an explicit political compact acceptable to all parties. As such a political compact cannot be easily reached when complex criteria are put on the table, this institutional model places great premium on simplicity and “rough justice” as opposed to complex but “precise justice”. Conflicting interests are represented at these forums. In addition, these forums receive independent expert’s opinions from a wide variety of sources informally as well as formally by constituting ad hoc advisory panels. Unless the discussions of the forum are conducted in camera, political grandstanding may prevent political compromises. Durability of such compromises is usually assured as all parties stand to lose from a deal that is unraveled. Blame shifting is also not possible as the members of the forum assume full responsibility for their decisions. The forum further enables participating governments representing competing interests and varying commitments on equalization, to reach a broader national consensus.

**Independent Agency (grants commission) model (IA):** An independent agency is usually established to seek an independent, professional, transparent and rigorous view of a complex task of developing recommendations on the determination of the pool, the allocation criteria and distribution of funds among recipient governments. The presumption here is that if such a decision is divorced from politics, the resulting criteria and the associated distribution would serve the broader interests of the nation as well as its constituent units better.

These theoretical advantages are rarely achieved in practice.

First, decisions on the standard of equalization e.g. the minimum level of per capita fiscal capacity to which all jurisdictions are entitled to be brought up to, cannot and should not be divorced from politics. While technical advice can be valuable in guiding policy debates on equalization, ultimately it is the fundamental role of the executive and legislative institutions to evaluate efficiency and equity tradeoffs and mediate conflicting interests of various stakeholders to develop a national consensus and a durable national compact on the desirability and the standard of equalization that is politically acceptable and fiscally affordable.

Broader national interest dictates that such decisions must not be entrusted to a technocratic institution such as the CGC but must be subject to both an open political and closed (behind closed doors) discourse. Australia has the most advanced institutions of executive and legislative federalism of any federation (see Shah 2013 for a comparative perspective on executive federalism and their critical importance in making federalism work) and only those institutions are the appropriate venue to reach agreements on the appropriate degree of equalization i.e. the political compact on the equalization standard.

Secondly, such an institutional arrangement creates several agency problems as discussed below.

*Mission creep:* To secure its long-term existence and enlarge its spheres of influence, an independent agency faces continuous imperatives reinterpreting its terms of reference to enlarge the scope of its activities. Such a mission creep goes unchecked as the politician do not want to be seen curtailing the search of such agencies for a holy grail – the ultimate formula for equitable distribution of federal funds.

*Incentives for complexity:* Notwithstanding the particular case of the CGC, conceptually an independent agency faces powerful incentives to seek ever more complex solutions to simple questions that do not have precise answers i.e. answers unlikely to be universally accepted or to be 100% accurate. This is because complexity and associated expertise fuels demand in the external market for professionals serving these agencies. The greater the complexity of formulae and associated calculations, greater is the premium placed by the market on professional possessing those skills. Interested parties' submissions make it politically imperative to accommodate ever growing complexity. Outside academic experts typically clamor for further complexity to achieve more precise justice. There is no escape from this circle as part time or term employment of members of the commission limits the oversight provided by them. It takes some time for term members to grasp the complexity of the allocation rules and by the time they can form their own judgment on their relative merits, it is usually time for them to say good bye. In any case, the staff would be resistant to any simplification and those recipient governments who benefit from the complexity and associated inequities of the system will likely block any reforms. Independent think tanks and researchers may even call for greater complexity to bring practice in conformity with the theory. In conclusion, constraining influences to keep the system simple and easily comprehensible are stunted by the very existence of an independent agency.

*Fire alarm oversight impractical and costly:* Fire alarms here refers to serious concerns identified by independent observers regarding the work of an independent agency. Citizen oversight of such independent agencies becomes infeasible for several reasons. First, more complex the distribution criteria suggested by the agency, the more difficult it is for individual citizens and civil society groups to make informed comments. Further conflicting representation by various citizen groups trying to secure local interests strengthens broad discretion granted to such agencies in the interest of a scientific a-political approach. Even “fire alarm” oversight sought by legislatures becomes too costly and impractical as unhappy constituents make conflicting demands on their representatives.

### ***Tentative conclusions on a comparative evaluation of intergovernmental forum vs. independent agency model***

The above discussion suggests that the ultimate decision on relative merits of each institutional arrangements must be guided by an analysis of the incentive regime created by each institutional set-up and associated agency costs and their success in achieving simple, equitable and durable outcomes. Table 4 presents a comparative New Institutional Economics (NIE) perspective on these arrangements. The NIE framework predicts that overall transactions costs are expected to be higher and potential outcomes less desirable under an independent agency model as compared to an intergovernmental forum (see Shah, 2007 for NIE references). These results stem from the fact that independence and autonomy offered to grant commissions weaken citizen oversight. Their drive for optimal (ideal) systems invites complexity and undermine transparency and accountability. Thus, participation and monitoring costs as well as agency

costs rise. Intergovernmental forums on the other hand look for simple and feasible alternatives to strike a political bargain and thereby reduce transactions costs for the nation as whole. Higher transactions costs under independent grants commission nevertheless are not expected to secure better outcomes (see Kirchner, 2013, Warren, 2008). On the other hand, grants commission processes do not necessarily encourage consensus building that is achieved by forging a political compact on equalization standard. In the absence of a political compact on the equalization standard both the pool and allocation among constituent units are determined quite independently of that equalization standard. Stability of allocation criteria is also not assured by a grants commission as the desire for perfection may lead to frequent changes in the methodology. In summary, the independent grant commission is a poor substitute for an intergovernmental forum. Its usefulness as a complementary institution to an intergovernmental forum is also quite limited in view of high agency costs and its pre-disposition towards optimal as opposed to feasible reforms.

<b>Table 4. Comparative Conceptual Evaluation of Intergovernmental Forum (IGF) vs Independent Agency (Grant Commission)</b>		
	IGF	IA
Transactions costs (overall): <ul style="list-style-type: none"> <li>• Participation and monitoring costs</li> <li>• Legislative and executive decision making costs</li> <li>• Agency costs</li> <li>• Uncertainty costs</li> </ul>	Low to medium High Low Low	Low to high High High Medium
Potential outcomes <ul style="list-style-type: none"> <li>• Political compact on equalization standard</li> <li>• Durability of political compact</li> <li>• Pool determined by equalization standard</li> <li>• Allocation determined by equalization standard</li> <li>• Stability of allocation criteria</li> </ul>	Yes Yes Yes/No Yes Yes	No NA No No May be

Source: Author's calculations

### ***Why then are Independent Agencies (Grant Commissions) commonly recommended?***

The NIE framework suggests that independent grant commission may not represent a better institutional choice in view of the incentives regimes created by the underlying structures. These conclusions run counter to predominant view in the fiscal federalism literature that such institutions personify “best practices” in institutional arrangements. In fact, it is quite commonplace for international development agencies and leading consultants to recommend establishment of such commissions in developing and transition economies (see Searle, 2004, Boex and Martinez-Vasquez, 2004). For a NIE analyst such popularity is not surprising if one looks at the incentive structure and culture of these institutions. Independent agencies find strong support among academic scholars, think tanks and politicians by playing to the enlightened self-interest of these groups. These agencies cater to “elites” especially academic elites as they give them a forum for dissemination of their research and scholarly works. The agencies are perceived to be a-political pursuing technical excellence. Further they support the consulting industry by seeking their advice and analysis. These agencies serve as convenient tools for national and regional politicians as they are seen to be providing fair, balanced and professionally rigorous analysis. For any unpopular distribution criteria, politicians could distance themselves from the analysis and instead shift blame on the agency. Further, they can avoid taking hard decisions and simply accept the agency’s view as a “take it or leave it” proposition. No wonder one finds a growing chorus of professional and political views advocating independent agency approach to vital decisions on equalization transfers.

## From Theory to Practice: Do NIE Predictions Hold Water?

The previous section presented in abstract a comparative analytical perspective on the working of intergovernmental forums and independent grants commissions. This section explores the same concepts based upon experiences of Canada and Germany with intergovernmental forums and of Australia and India with independent grant commissions. Note that we have abstracted from the complexity in Australia that the independent grant commission is supposed to work as a complement to the intergovernmental forum (The Council of Federal Financial Relations - CFFR). This abstraction should not bias our analysis as in practice, there is no defined relationship between the CGC and the CFFR and the Commonwealth Treasurer has the sole decision-making authority with respect to the recommendations of the CGC. The recent history of the CGC in Australia demonstrates that it has enjoyed significant independence and autonomy and its recommendations have almost always been accepted *in Toto* by the Commonwealth Treasurer. The only significant historical exception has been the 1982 decision by the Premiers' Conference to set aside relativities recommended by the CGC.

Table 5 reflects upon comparative experiences using NIE framework. Briefly the following lessons can be drawn from these experiences:

*Transactions Costs:* The institutional arrangements in the four case study countries incur differential citizen participation and monitoring costs, agency costs and uncertainty costs. Intergovernmental forums typically lead to lower transactions costs for the principals (citizens) primarily due to greater transparency, simplicity and media and civil society scrutiny of programs. Agency costs are highest under the Australian program due to greater autonomy and incentives for complexity and mission creep faced by the CGC staff. The periodic grants commission in India has medium agency costs as it is constrained by its limited duration tenure. Legislative and executive decision making costs are very similar across case study countries.

<b>Table 5. Equalization Programs - Comparative Experiences with Intergovernmental Forum (IGF) vs Independent Agency (Grant Commission) (IA)</b>				
	IGF	IGF	IA	IA
	Canada	Germany	Australia	India
<b>Transactions costs (overall):</b>				
• Citizen participation and monitoring costs	Low	Medium	High	High
• Legislative costs	Low	Low	Low	Low
• Executive decision making costs	Medium	Medium	Medium	Medium
• Agency costs	Low	Low	High	Medium
• Uncertainty costs	Low	Low	Medium	Medium
<b>Potential for federal unilateralism</b>	Low/Medium	Non-existent	Non-existent	Non-existent
<b>Outcomes:</b>				
• Political consensus on equalization	Yes (Constitution)	Yes (Constitution)	Yes (Federal law)	No
• Open to federal temptations for arbitrariness	Yes	No	No (?)	No
• Durability of consensus	Yes	Yes	Yes (?)	No
• Political compact on equalization standard	Yes (Constitution)	Yes (Solidarity pact)	No? Differing perspectives in the law and the CGC interpretations.	No



• Pool and allocations determined by equalization standard	Yes	Yes	No	No
• Stability of allocation criteria	Yes	Yes	No (frequent method changes – see CGC(2015))	No
• Sunset clause	Yes	Yes	No	No
• Program Equity	Yes	Yes	May be?	May be?
• Program Complexity	Low	Low	High	Medium

Source: Author's perspectives

Overall intergovernmental forums appear to offer less costly alternatives for the principals to induce compliance from their agents.

*Outcomes:* Program outcomes are to be judged for clarity of mandate by the principals, durability of political consensus and for simplicity and equity of the equalization transfers programs. Equalization programs in Canada and Germany are enshrined in their constitutions. The Australian program is mandated by federal law and the Indian program is primarily concerned with equitable distribution of federal revenue sharing pool and has no explicit equalization objective.

#### *The Choice of Institutional Arrangement for Equalization: Lessons from International Practices*

There is a reasonable degree of political consensus on the principles of equalization in Australia, Canada, and Germany. No such consensus has yet emerged in India. What distinguishes Canadian and German programs from those of Australia and India are clarity of the equalization standard and simplicity in implementing it. Needless to say, both these programs have several shortcomings (see Shah, 2003). The Indian program lacks clarity in equalization standard whereas the equalization standard in the Australian program is subject to varying interpretations by the Federal Government and the CGC.

Australia uses a comprehensive program attempting to equalize fiscal capacity as well as fiscal needs requiring highly complex calculations. Massive amounts of data are analyzed to calculate revenue and expenditure disabilities with countless relevant determinants. The procedures used are so complex that the Australian program is considered a black box even for a serious student. The program thrust is on absolute comparability and uniformity of services standards across states and territories. This focus diverts states' energies to proving that "they need more to do less" as opposed to "doing more with less". While the overall conceptual approach to expenditure needs is sound and defensible, the pursuit of idealism by the CGC and constant refinements lead to super complexity, instability and non-transparency. For highly correlated factors disabilities are artificially magnified through double counting and multiplication. Under such a program use of judgment on factors and weights is inevitable but such judgments invite controversy and compromise the credibility of the whole program. When all is said, and done the results are often disappointing. The program, is not equitable and grant allocations vary directly with most macro fiscal capacity indicators (see Shah, 2004, for a detailed critique of the Australian Program and suggestions for simplification).

The Indian formula is less complex but uses arbitrary factors and weights. Curiously enough all recent commissions have insisted on using 1971 state population figures for calculation of grant shares. The rationale presented is that India adopted a population control policy in that year. This is not defensible as the state population has experienced major changes due to migration.

In conclusion, both in theory and in practice, the case for a truly independent grants commission with decision making powers on equalization rather than having simply an advisory role, to enhance the transparency, equity and accountability of the intergovernmental finance system, is vastly exaggerated. In the case of Australia given that CGC methodology shows that there are hardly any differences in States' expenditure needs if NT is treated as an outlier, then from a practical and pragmatic perspective a logical question to ask is: why so much effort and cost for so little, if any, potential gain? The CGC estimates such costs to be fairly significant. Canada, in contrast, spends on administration costs about 0.001% of equalization payments. In terms of the institutional arrangements for decision making on equalization the role of informal/formal advisory agencies/commissions to IGF, however, is desirable provided such agencies do not assume de-facto role in decision making on critical issues. Therefore, hybrid arrangements that capture positive elements of both the IGF and IA may be worth considering. Under such hybrid arrangements, the independent agency/commission will simply play an advisory role in monitoring and evaluating the equalization program and fiscal health of governments without having any formal role in designing and determining transfer payments programs. Such an informal role will serve to educate citizens and policy makers to promote an informed policy dialogue and will serve as a check on grandstanding or unprincipled bargaining in federal-state-local financial relations.

## **2.5 Fiscal Equalization Transfers: Lessons from International Practices**

The following important lessons can be distilled from international experiences

1. A national consensus on the standard of equalization is critical for the sustainability of the program.
2. Equalization standard must determine both the pool and allocations. The pool must be adequate to cover the equalization amount implied by the standard- and not just sharing of an inadequate pool.
3. Fiscal capacity equalization using a Representative Tax System approach for major tax bases with an explicit standard is desirable and do-able in most countries.
4. Fiscal need equalization is desirable but in its ideal form is much more complex and difficult to implement. However a DPS approach that uses service/client population as a criteria for allocation offers a great promise for a simple, strategy free yet objective approach to expenditure need equalization. It provides positive incentives for cost saving and innovation and reduces perverse incentive for states to demonstrate that "they need more to do less". Alternatively output based transfers for merit services offers an attractive alternative for expenditure need equalization while strengthening results based accountability to local residents.
5. Keep it simple and transparent. In the design of fiscal equalization transfers, rough justice may be better than full justice to keep the system simple and transparent so as to have wider acceptability and sustainability.
6. Equalization transfers must not be looked at in isolation of the broader fiscal system especially conditional transfers.
7. For local equalization, one size does not fit all. Grants to local governments must recognize population size class, area served and urban/rural nature of services and there must be separate formula allocation for each type of municipal/local government.
8. Introduce ceilings and floors using some macro indicators to ensure stability and predictability in grant funds.
9. Introduce periodic formal reviews. It is desirable to have the grant program reviewed periodically say every five years and then renewed. In the intervening years, there should not

be any changes in the program including methods of assessments to provide certainty in budgetary programming for all governments.

10. All fiscal systems reforms create winners and losers and potential losers attempt to block such reforms. To overcome this opposition, it is important to have *hold harmless* (no one is adversely affected by the change) or grandfathering provisions by which all recipient governments are assured to receive at least what they received as general purpose transfer in the pre-reform period. Over time with growth in the economy, such a provision would not delay the phase in of the full package of reforms.
11. There is no single model of institutional arrangements that is superior to others but it is important that all stakeholders are heard and an appropriate political compact on equalization principles and the standard of equalization is struck. Politics must be internalized in these institutional arrangements. Arms-length institutions such as independent grant commissions, as decision makers, are not helpful as they do not allow for political input and therefore show a tendency to opt for complex and non-transparent solutions. The informal role of the latter institutions, however, in an advisory and oversight capacity to monitor and evaluate fiscal equalization transfers can be valuable in educating citizens and policy makers and advancing informed and principled decision making on these matters.

## Part III. The Australian Horizontal Fiscal Equalization Program

### 3.1 Brief Historical Context of the Australian Program

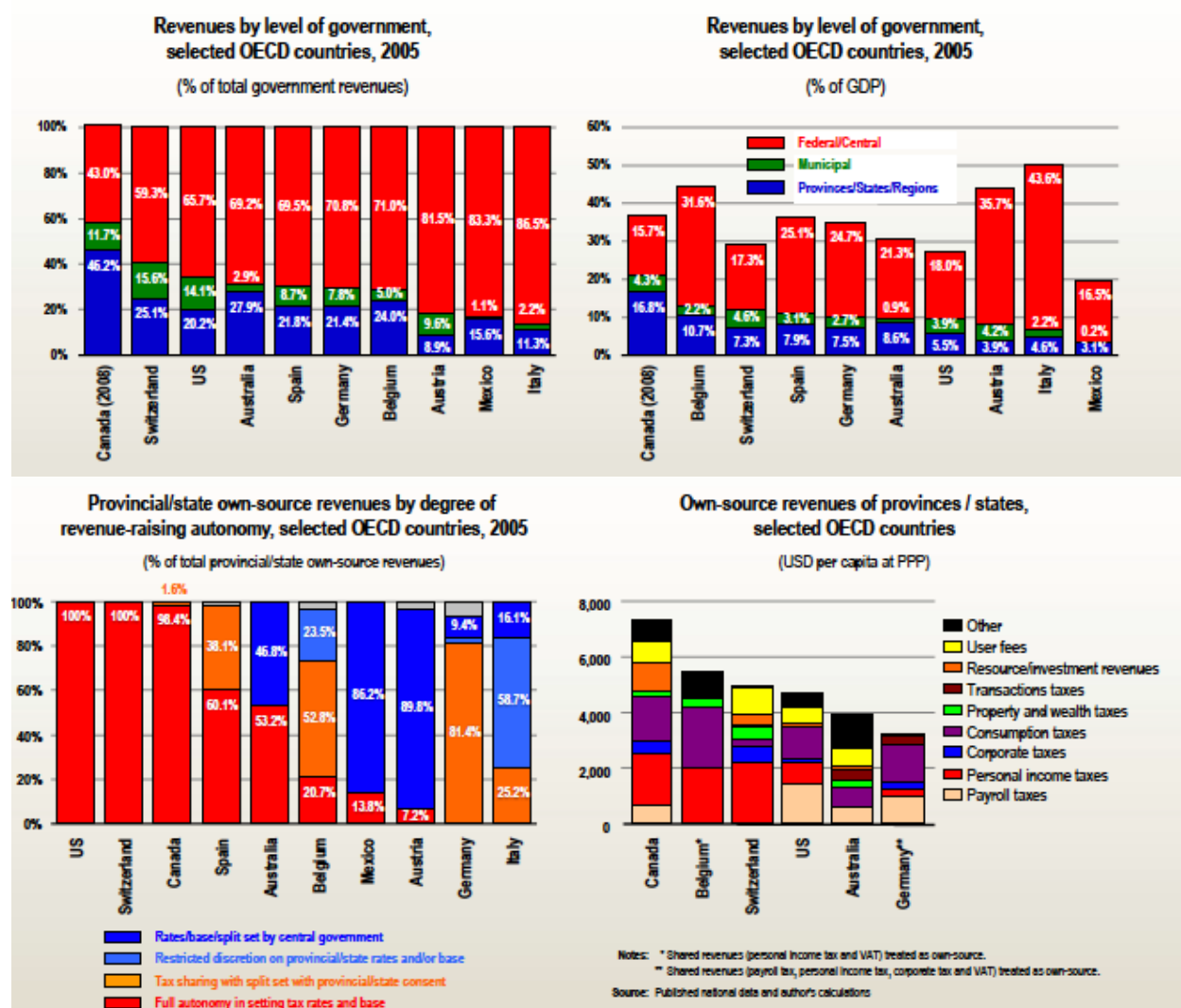
Australia is a federation of six autonomous states, a self-governing sparsely populated ‘Northern Territory’ and a federal capital area with local self-government called the ‘Australian Capital Territory’ (ACT). Taxing powers in Australia have been centralized since World War II and the federal government raises 69% of national revenues and states and local governments together raise only 31% of consolidated general revenues (see Table 6). Spending powers, on the other hand, are decentralized and states and to a much more limited extent, local governments assume a significant role in service delivery. State governments raise only 72% of revenues from own sources and receive the remainder 28% as conditional (47%) and unconditional transfers (53%) from the Federal Government. As a reference in Canada, provincial raise 90% of general revenues (current and capital) from own sources. Figure 6 provides a comparative OECD perspective on states’ own source revenues and states’ revenue autonomy. The figure shows that states in USA, Switzerland and Canada have wider taxing powers and greater tax autonomy than their counterparts in Australia.

**Table 6. Comparative Government Finances in Australia (year 2015-16) and Canada (year 2009)**

	Own Source Revenues (% of all orders of government)		Expenditures (Direct spending only) (% of all orders of government)		Own source revenues/direct spending (%)		Vertical Fiscal Gap (-) or Surplus (+) equals deficiency or surplus of self-financing (%)	
	Australia	Canada	Australia	Canada	Australia	Canada	Australia	Canada
Federal	69	42	56	32	123	131	+23	+31
States	28	46	39	51	72	90	-28	-10
Local	3	12	5	17	60	71	-40	- 29

Source: Australian and Canadian Bureaus of Statistics

Figure 6. Own Source Revenues by Order of Government and States' Revenue Autonomy in Selected OECD Countries



Source: Peloquin (2016)

Historically vertical fiscal gap in Australia was filled by general and specific purpose transfers. However, such assistance caused considerable dissatisfaction among state governments as to the adequacy of the assistance, unease with bilateral bargaining with the federal government and the potential for federal interference it caused. Further it was pointed out that the design of such assistance did not adequately consider the differences in states' fiscal capacities. No doubt per capita income disparities among Australian states are very small but states have highly constrained taxing powers. Several factors, have contributed to significant differences among the states and territories in their capacity to provide comparable government services without imposing differential taxes or charges on their residents. These include differences in the capacity to raise taxes and revenues from natural resources, differences in population size and indigenous

population, age structure and population density, and differences in the physical and economic environment.

The Commonwealth Government found the growing number of these programs increasingly difficult to administer. Thus, a need was felt to reform the existing system to provide greater flexibility, state autonomy, fiscal responsibility, accountability and equalization. The New Federalism policy introduced by the Commonwealth Government introduced a system of personal income tax sharing with the states and in 1978 the CGC was assigned the role on advising on the interstate distribution of tax sharing funds, considering operating (recurrent) expenditure needs and fiscal capacities of individual states. Upon the CGC advice, the principle of HFE has been used to distribute funds among six states since the early 1980's and in prior years this principle was applied to any individual state applying to become a claimant state. Subsequently, with the introduction of Goods and Services Tax (GST) in 2000 a political bargain was struck that was subsequently formalized into an Intergovernmental Agreement signed in July 2011 to distribute GST revenues based upon horizontal fiscal equalization principles with the CGC retaining its advisory role and the Council of Federal Financial Relations (CFFR) was established to oversee the implementation of the new agreement.

### 3.2 The Commonwealth Grants Commission's Approach to Horizontal Fiscal Equalization

The Commonwealth Grants Commission's approach to HFE has evolved over time. Initially it assessed recurrent revenues and expenditure needs only. In recent years, it is assessing both capital and operating revenues and expenditures needs including capital market finance requirements. It assesses these needs based upon a fundamental consideration of "what states actually do" in taxing and spending as follows:

#### Fiscal Capacity Equalization

The CGC uses a representative tax system approach to measure potential revenues that can be raised by each jurisdiction using national average (Australian) tax rate for each tax base. Only states' own tax bases are used and local/municipal tax bases are not included in determining state fiscal capacity. Six major tax bases with 15 sub-tax bases and an 'other revenue' category that comprises 17 miscellaneous revenue categories are examined with total of 32 sub-assessments. However, 18 (general property assessment and 17 other revenues assessments) of these sub-assessments simply assume that each state could raise equal per capita revenues thereby having no impact on GST distribution effectively implying no equalization of any differences in the revenue capacities of other revenues sources among states. Table 7 presents the tax bases used in these calculations.

**Table 7. Fiscal Capacity Equalization in Australia – CGC Assessed Revenues of All States 2013-14**

Revenue source	No. of components assessed	% of own source revenues	\$ per capita (average)	Range - \$ per capita	Tax base
Payroll tax	1	17.9	911	521-1310	The value of payrolls excluding small employers, government employees and payrolls below the tax-free threshold.
Land tax	2	6.8	343	200-419	The value of residential (excluding principal residences) commercial and industrial land adjusted for tax free threshold and progressive rates.

Stamp duty	2	16.0	813	404-952	The value of property and vehicles sold, adjusted to reflect a common range of taxable transactions and the effects of progressive rates.
Insurance taxes	1	4.1	208	164-234	Total premiums paid.
Motor vehicle registrations	1	5.6	286	2243-331	Number of vehicles registered
Mining	8	9.6	490	0-2787	Gross value of minerals produced in each state plus an adjustment for revenue received from the Commonwealth.
Other revenues	17	39.9	2029	2029-2029*	Population
Total	32	100	5080		

- Note: The CGC assumes that all states have the capacity to raise equal per capita amounts of other revenues.  
Source: CGC (2015), p.31, p. 641

### Fiscal Needs Equalization

Fiscal need equalization is done for 11 major operating expenditure categories with 49 sub-categories. Capital expenditure equalization is done for 3 major heads namely infrastructure investments in five areas, depreciation, net borrowing for a total of 7 assessments. For each category state expenditures are netted for financing by federal specific purpose transfers and user charges. For each subcategory of net expenditure, state shares by major category indicator (see table 8) are then adjusted for higher costs using disaggregated use indicators and other disability factors such as indigenous status, socioeconomic status, remoteness, age, urban/rural population, population growth, non-state sector, wage costs, regional costs, service delivery scale, national capital and cross-border use. These factors are assigned either regression based or arbitrary weights for each subcategory of expenditures. Table 8 presents a summary view of this approach.

**Table 8. Expenditure Needs Equalization in Australia**

		Disaggregated use attributes						Other disabilities assessed (b)					
Category	Indicator of State shares	Indigenous status	SES	Remoteness	Age	Urban/Rural pop	Population growth	Non-State sector	Wage costs	Regional costs	Service delivery scale	National capital	Cross-border
Schools education	Student numbers	X	X	X		X		X	X	X	X		
Post-secondary education	Population	X	X	X	X				X	X			X
Health	Population	X	X	X	X			X	X	X			X
Welfare	Population	X	X	X	X				X	X	X		X
Housing	Households	X	X	X					X	X			
Services to communities	Population	X		X					X	X	X		
Justice	Population	X	X		X				X	X	X	X	
Services to industry	Sector size, number of establishments and private sector investment								X	X			
Roads	Length and use of roads					X			X	X			
Transport (c)	Population					X			X	X			
Other expenses	Population						X		X	X		X	X
Depreciation (d)	Assessed stock												
Investment (d)	Assessed stock						X						
Net borrowing	Population						X						

- (a) Administrative scale costs and native title and land rights disabilities for all categories and natural disaster and capital grants for local government expenses are assessed in the Other expenses category.
- (b) Some disabilities only apply to a proportion of the category. For more information, please refer to each category assessment chapter.
- (c) The population living in cities of different sizes is an influence recognised in this category.
- (d) The Infrastructure assessments use relevant category specific use disabilities to calculate assessed stock. A capital cost disability is also applied. The disabilities used are described in the Infrastructure assessments chapter.

Note: “Indicator of state shares” is simply the unadjusted raw indicator that is adjusted for various disabilities to develop final indicators for use in determining state shares.

Source: CGC (2015), p.32

### Fiscal Capacity and Expenditure Need Relativities

Rather than directly calculating assessed needs for fiscal capacity and fiscal need equalization, the CGC first calculates the revenues and expenditure relativities. These relativities reflect based upon various adjustment factors used whether a state needs more ( $>1.0$ ) or less ( $<1.0$ ) than the average per capita amount for the specific category (1.0) of revenues or expenditures. Aggregate relativity



for each category reflects the combined effects of multitude of adjustment factors and judgments for each category.

#### Total Assessed Needs and Assessed Grant

The CGC multiplies category relativities to average per capita amount to arrive at revenue needs and expenditure needs (net of federal financing and own user charges) for capital and operating purposes. Assessed grant is the sum of revenue and expenditure needs.

### 3.3 The Australian Horizontal Fiscal Equalization: An Assessment

The Australian approach to fiscal equalization is unique among federal countries in terms of its stated comprehensiveness, its pursuit of idealism, in its endeavor to replicate unitary governance under a federal structure and in terms of its academic rigor. The following discussion, however, shows that the approach falls short on comprehensiveness, transparency, simplicity, objectivity, equity and efficiency criteria and its outcomes may, however, be no better than the outcomes achieved with simpler, transparent and more pragmatic approaches to equalization followed in say Canada and Germany (Note that no rigorous comparative study examining this question is available yet a review of individual case studies by various authors do substantiate this conjecture. See e.g. Kirchner (2013), Warren (2008) on Australia, Boadway (2008) on Canada and Werner (2014) on the equalization impact of the German program). Practical difficulties arise from measurement of expenditure needs and inherent cost disability factors to be discussed in later part of this section.

#### *Principle of Equalization*

The Income Tax Sharing Act emphasized goal of equalization to ensure that level and standards of services and tax burden in different states may not be “*appreciably different*”. The CGC elevated this goal to have the “*same*” standards and burdens at the “*same*” operational efficiency- an impossible goal given state differences in institutional, policy and management environment. The CGC principle is also incompatible with fiscal federalism as it aims for uniformity and absolute comparability of all public services across the states whereas fiscal federalism principles aim to encourage a competitive and innovative public sector environment and people vote with their feet to choose a menu of public services and taxes consistent with their preferences.

#### *The Standard of Equalization*

CGC approach aims to distribute GST revenues in such a way as to ensure uniform standard of *all* services across the nation at uniform burden of taxation assuming average level of operational efficiency and since 2015 “for States to have the capacity to have an equal holding of financial worth per capita” (CGC (2016), p.1). This is done by adopting a national average standard for current and capital revenues, expenditures and capital finance needs. This standard of equalization determines total pool for the equalization component so long as this component pool does not exceed the GST revenues. The residual GST revenues if any are distributed on an equal per capita basis.

The all-encompassing standard of equalization adopted by CGC poses both conceptual and practical difficulties. Conceptually, a national fiscal equalization program should be concerned with comparable standards in redistributive services e.g. education, health, welfare; services that strengthen internal common market such as infrastructure services and services with externalities such as environment, sports complexes with national events, national museums, interstate

connectors and interstate public transit. Most non-redistributive state or municipal/local services with private good characteristics e.g. water, sewer, solid waste are good candidates for user charges and not for higher order equalization assistance. Also, the CGC approach to equalization does not recognize that sources of capital investment financing should differ by type of investment and the fiscal capacity of a state/local government (see Table 9).

**Table 9. Desirable Instruments for Capital Investment Financing**

Type of capital Investment	Fiscally poor local government	Fiscally rich local government
Revenue producing investment	Loans and grants	Loans and bonds
Social Investment	Grants only	Loans and grants

Source: Peterson and Valdez (2004).

### *A Lack of Comprehensiveness of the Approach to Fiscal Equalization*

The CGC takes pride in claiming that its approach is unique in federal countries as it is the only approach that provides a comprehensive treatment of all operating and capital revenues and expenditures. A closer look at the inner working of the approach however shows that nearly 40% of state revenues and roughly about a quarter of state expenditures do not have any impact on GST distribution (see subsequent sections on fiscal capacity and fiscal need equalization for details regarding this estimate).

### *Equalization of net worth*

Since 2015, the CGC expanded its scope of equalization to include equalization of financial net worth per capita. This poses difficult measurement and quantification issues regarding contingent liabilities faced by each state. It is doubtful that the CGC could obtain reliable comparative state data to make such comparisons valid, reliable and meaningful

### *Year-to-year Instability*

While the approach to equalization does not change in the 5-year intervals between major reviews, there are significantly large yearly variations in equalization entitlements resulting from method refinements/changes (see CGC, 2015). Data and States' circumstances changes play a relatively minor role in contributing to this instability.

### *Policy Neutrality*

The CGC claims that HFE is policy neutral. This claim cannot be substantiated as both the tax bases for several revenue sources are unevenly distributed and the dominant state has the potential to influence redistribution across states by its own actions. In addition, netting out of user charges also introduces policy non-neutrality as to the choice of revenue instrument for raising revenues at the margin. Similarly, on the expenditure side, outliers can have a significant impact on the allocations by affecting average per capita expenditures for a specific category of expenditure (see also Warren, 2008).

### *Strategy*

Under the current system of HFE, the unilateral decision of one or more states in Australia can positively or negatively affect equalization entitlements and fiscal outcomes for other states. While this can be a problem in other equalization systems as well, it assumes lesser significance as

equalization is of relatively lesser significance in financing state expenditures in other mature federations.

### *Transparency and Complexity*

The CGC methodology is highly complex. The calculations for 2015 Review are presented over a thousand pages yet omit important details underlying the calculations. For example, it does not report various regression equations used to derive disability factor weights. Complexity and opaqueness of the current HFE approach impedes striking a durable political compact on equalization and does not help strengthen citizens' trust in governance.

- *Uses a complex data intensive methodology that frequently requires subjective broad judgements* in the absence of reliable, timely comparable state data. While comprehensive and possibly ideal from an academic perspective, the application of the highly complex and demanding cost/need equalization methodology chosen by the CGC contributes to confusion, controversy and conflict thereby presenting itself as an important obstacle to securing a durable national political compact on equalization. The use of judgements on factors and weights is inevitable with such a methodology but has proven controversial. For highly correlated factors, disabilities are artificially magnified through double counting and multiplication. Policy neutrality is also not assured and sophisticated strategic behavior to influence entitlements remains feasible. Fiscal capacity equalization is marred by non-comparability of tax bases and proxies with pitfalls. Expenditure need calculations are even less reliable in view of subjective selection of factors and weights. This is recognized by the Commonwealth Grants Commission (CGC) as follows:
  - *“Given the number of conceptual and empirical difficulties....and numerous judgements..., different relativities (and grant outcomes) could be just as valid as those presented”.* (CGC 2000/07, October 2000)
- *Contributes to a mistrust in state governance.* The super complexity and opaqueness of the system contributes to a citizens' mistrust in public governance as citizens feel frustrated about the lack of knowledge of how their GST tax dollars are redistributed among states. This concern is heightened by residents of net contributing states as they do not see state services consistent with the burden of taxes they bear. A World Bank study has termed the Australian HFE as a “black box even for a serious student” of fiscal federalism and demonstrated that some of its complex calculations are not defensible (see Shah, 2007, p.312). The Commission's detailed calculations cover close to thousand pages and represent a formidable task for any reader to comprehend.
- *Contributes to a significant waste of public resources.* The application of CGC methodology entails not only CGC resources but also consumes enormous time from senior policy makers and staff at all orders of government.

### *Treatment of Natural Resource Revenues*

Treatment of resource revenues is a highly contentious field and termed by a leading Canadian economist as a “theoretical and empirical minefield”. This is an overstatement as at least at the conceptual level there is a fair degree of consensus on full equalization of resource rents in a federation. There are nevertheless insurmountable difficulties at the practical and empirical levels.

At a theoretical level, full inclusion of such revenues (net of exploration and development costs) is generally accepted (see Boadway and Shah, 2009). This is because resources are unevenly distributed and states' boundaries are given by historical accidents. Ideally resources should belong

to the nation as a whole and all resource revenues be deposited in a heritage trust fund (Norwegian style) owned by all citizens equally regardless of their place of residence. The assets of this fund should be held in perpetuity and could not be drawn down but capital income will be available for distribution as dividends to citizens and for use by various orders of government. A second-best solution is centralization of resource rent taxes redistributed through a federal fiscal equalization program. However, sharing of resource wealth in a federation is subject to competing and conflicted federal goals. Economic and social union considerations require national sharing of resource wealth (full inclusion of resource revenues in an equalization program). Political cohesion and environmental protection consideration, on the other hand, require preferential access of resource revenues to producing states especially if ownership of natural resources is vested in the states. Decentralization of resource rent taxes would then require establishment of inter-state equalization pool where resource rich states contribute to the pool and resource poor states receive from the pool and the contribution/subsidy rates are determined by a political bargain (solidarity pact) struck by states among themselves. A solidarity pact is likely to yield partial equalization of resource revenues. Thus, in the presence of these competing and conflicted goals, only second best solutions are feasible in federal countries. Such solutions should aim to limit adverse incentives.

At the practical level, however, emerging consensus in Canada and elsewhere is that partial equalization of such revenues may be a second best feasible option. Canada in the past experimented with several second-best options. It first tried full inclusion of resource revenues. This created instability in equalization payments as rapid increases in oil prices resulted in ever higher equalization payments by the Federal Government. To overcome this, it introduced a 5-province standard to effectively exclude outliers especially the resource rich province of Alberta unduly affecting equalization payments. Subsequently it went back to national average standard but introduced 80% inclusion rate for resource revenues and offered the so-called “generic solution” for a province if it had more than 70% of the tax base for a natural resource. Under the generic option, an equalization receiving province could have only 70% of the resource revenues counted towards its fiscal capacity (see Courchene, 2004). To encourage resource development in fiscally poor provinces, Federal Government also made bilateral deals to exclude additional revenues from being excluded from the equalization pool. All these ad hoc tinkering with equalization system proved politically unpopular and to restore order to the equalization system, in 2006 Federal Government created an Experts’ Panel on Equalization to reform the equalization system. The Experts’ Panel on Equalization in 2006 (see Finance Canada, 2006) recommended further simplification of the fiscal equalization program to equalize 5 major province-local tax bases only as opposed to 33 in earlier years. It suggested that only 50% of resource revenues be used in fiscal capacity determination and it argued against expenditure need equalization to preserve simplicity and objectivity of the equalization system. These recommendations were accepted by the Federal Government and the fiscal system was revised amended to accommodate these suggestions.

In the Australian case, as a matter of pragmatism, there are several arguments favoring partial equalization. One is that the resources are owned by the States. Another is the incentive argument, which seems to be more important for resources since States control the rate of development. The incentive argument is however, much weaker as the quality of resources in the ground and cost of extraction matter more for resource exploitation and development than any state-run programs or geopolitical or regulatory regimes. In Australia’s case, equalization is an important yet only a secondary influence in deciding upon resource development and resource taxation policies of the state having a dominant influence on the national average capacity and effective tax rate for a resource base. Equalization, however, acts a confiscatory tax for such resource rich states. A third argument is to do with the perverse redistribution effects of equalizing under a federally financed equalization system. Since the federal government finances equalization from GST revenues,

NSW, Victoria and Western Australia disproportionately bear the burden of financing resource equalization. The Canadian situation regarding resource ownership parallels that of Australia and Canada opted for a 50% equalization of actual resource revenues rather than full equalization of the potential revenues as done for other tax bases. Actual revenues are used as resource quality variations and cost of extraction make it difficult to have reliable indicators of tax bases for various resources. An alternative would be to recognize the costs to resource rich states of resource management, development, environmental degradation and clean up/reclamation. This would nevertheless raise complex questions regarding the treatment of these costs and the relevant time horizon.

The CGC includes all resource revenues but excludes grants in lieu of resource taxes from the Federal Government and assesses revenue needs for 8 categories of mineral taxes on a tax by tax basis. This approach is not defensible as it exasperates the non-neutrality of the Australian HFE to individual state policies and acts as a confiscatory tax on resource rich states and creates perverse incentives for resource exploitation and development as only gross revenues are considered in assessing needs. Overall the CGC approach may discourage resource exploitation and development. This conceptually may be the case for Western Australia although this disincentive may be somewhat stunted as state policy makers' motivations for creating additional jobs may trump concerns about declines in equalization payments. This is probably the reason that Australian observers have not noticed negative impact of the HFE regime on WA experience in investing in resource related infrastructure, geological surveys, favorable policy and regulatory settings including environmental protection and planning.

Full inclusion of mining revenues in the equalization base, nevertheless, creates disincentives for resource exploitation as the economic and social costs of exploration and development, environmental degradation, and resource depletion are not recognized but revenue base is fully included creating the "base tax back" problem for any expansion in base. The "base tax back" problem occurs as increases in tax base for the state with dominant share of the tax base results in an increase its per capita tax base relative to the national average thereby an assessment of higher negative entitlements from the base compared to the base case scenario. Other things being equal, it can be shown that for iron ore, Western Australia would be able to retain only a small fraction additional revenues generated by any increase in its tax base due to the negative equalization offsets. This means that a major part of the additional tax base generated by Western Australia would be taxed back by equalization offsets. Once resource development costs are included, additional return to Western Australia from tax base expansion could be small and in the high cost scenario even negative. Also, Western Australia (for iron ore, gold and nickel) and NSW and Qld (for coal) may have perceptible influence on national average tax rates for specific mining bases and thereby face incentives to reduce rates to limit the "rate tax-back" problem. Rate tax back occurs as additional tax effort by the dominant state would result in higher national average effective tax rate leading to higher equalization payments to have-not states and higher negative equalization offsets against the have state that raises its own effective tax rate. For example, it can be shown that in the case of iron ore an increase in its effective tax rate by WA would result in only a very small fraction of additional revenues retained by WA. Further, if there is higher than average cost of exploitation in a recipient state, its tax capacity is overstated and if resource rent is received in a form other than revenues e.g. by higher level of "corporate social responsibility", state revenue capacity is understated. These perverse incentives suggest that partial equalization of resource rents may be a better option than full tax by tax inclusion as done by the CGC.

#### *Other Economic Impacts*

HFE fosters an enabling environment that is not conducive to states and territorial governments assuming a catalyst' role in local economic development and carving a competitive edge for the nation in international economic relations.

*Retards prospects of sustained long term economic growth in the Northern Territory (NT).*

HFE, in combination with other Commonwealth programs, is observed to slow down long run economic adjustment processes by creating "transfer dependency" in NT (see Petchy, 2004). Transfer dependency refers to the incentives created by an overly generous system of Commonwealth Government programs such as unemployment insurance and other benefits, welfare programs, direct federal expenditures and personal transfers accentuated by the HFE transfers, that are seen to counteract the natural forces of adjustment or to lead the recipient governments or individuals to undertake decisions that are not in their economic interest (but do make sense in the presence of these transfers). Casual evidence of transfer dependency is reflected by persistently high unemployment rates relative to the national average; NT employees' wages that are casually observed to be well above productivity levels and it has *persistent* trade deficit with other states. In the extreme case of dependency, regional personal incomes exceed gross state/territory domestic product but that is not the case in NT and therefore one can conclude that while NT shows symptoms of transfer dependency, this dependency has not assumed alarming proportions.

#### *States' Public Fiscal and Financial Management*

HFE has unintended adverse consequences for States/Territories' fiscal management as follows

- *May contribute to volatility in economic downturns.* With serious time lags in data, the HFE has the potential to aggravate macro instability in a year of economic recession. as past allocations and data determine current entitlements. This problem is significantly circumvented in recent years as the CGC methodology is now undertaken on a rolling three-year basis, rather than the five years previously. The CGC has also indicated that there is a scope to reduce this time lag further.
- *Rewards imprudent fiscal management and compensate states with relatively higher incidence of anti-social behaviors.* HFE encourages fiscally richer states to use tax expenditures, assumption of contingent and non-contingent liabilities and fiscally poorer states excessive use of services by the specific groups recognized for special needs. It also may influence the official reporting of and perhaps the enforcement effort to deter for vandalism, delinquent and anti-social behaviors by using these factors as evidence of higher costs in expenditure need determination. Empirical evidence on such perverse incentives is not available to substantiate or reject the impact of these disincentives on actual behaviors.
- *Creates disincentives for revenue raising and development of new tax bases.* For rich states, such effort is largely confiscated by the fiscal capacity equalization. Incentives for poorer states to make greater than average tax efforts may be blunted depending upon the relative tax capacity of the new base and if it negatively impacted on equalization entitlements. Table 10 shows relatively lower tax effort both in rich states of NSW and VIC and fiscally poorer jurisdictions of SA and ACT.

**Table 10. Macro Tax Effort Indicators – 2015/16**

State	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	All States
Own rev/Factor Incomes	0.138	0.145	0.157	0.146	0.193	0.245	0.131	0.097	0.156
Own revenues/GSP	0.123	0.129	0.142	0.130	0.179	0.220	0.124	0.090	0.142
Own revenues/ Personal incomes	0.134	0.148	0.167	0.139	0.248	0.221	0.167	0.089	0.164
Own Revenues /Personal Disposable Income	0.174	0.193	0.219	0.177	0.335	0.275	0.213	0.106	0.212

Source: author's calculations

- *Stunts incentives for benchmarking service delivery performance, competitive service provision, cost saving and innovations.* HFE is focused on preserving average level of efficiency in service provision based upon average per capita spending. It falsely assumes that costs are independent of management paradigm and use independent of incentives. Empirical evidence shows that expenditure data is not always a good indicator of service quality and access standards as the governance environment including budgetary institutions, the public service employment (life-long versus contractual employment) and public management paradigms (government monopoly versus competitive public service provision) have huge consequences for efficacy of public spending (see Rajkumar and Swaroop, 2008 for a survey of the literature).
- *Diverts states energies to proving that “they need more to do less” or “public monies do not buy much” as opposed to “doing more with less”.* This is because the higher the national average cost of provision of a specific service, the higher the expenditure needs given the formula emphasis on average operational efficiency whereas if the most efficient state was taken as a benchmark for equalization, it would result in lower equalization payments because that service. Granted that such “efficiency” calculations are by its nature complex and would be controversial, a simpler approach that recognized expenditure need based on demand for services using demographic factors would provide positive incentives for states to use monies more efficiently as all states would receive equal amounts per service population. Canadian federal financing of post-secondary education and health, financing of schooling and post-secondary education by Canadian provinces and Nordic countries follow this approach.
- *Undermines accountability in governance. This is done by creating a separation of taxing and spending decisions.* In a state or territory that is predominantly financed by federal transfers, state officials do not have the imperatives to defend their spending decisions to local electorate. Institutional arrangements for determining HFE through an independent agency such as CGC impose high transaction cost for citizen participation and monitoring and agency costs. A World Bank study (2007 – see Shah (2007) in Boadway and Shah, eds. 2007) argues that such independent commissions contribute to ever more complex and inequitable systems that raise transaction costs and erode the stability and durability of political compact as demonstrated by the experiences of Australia, India and South Africa.

#### *Fiscal equity is not assured*

Fiscal equity requires that HFE payments vary inversely with fiscal capacity and directly with fiscal need. The past HFE payments have shown to be positively correlated with macro indicators such as state GSP and state factor incomes. Table 11 shows that GST distribution per capita has high positive correlation with states' macro fiscal capacity indicators.

**Table 11. GST Distribution is Positively Correlated with States' Fiscal Capacity Indicators**

Indicator	Correlation with GST Distribution Per capita
Personal income per capita	0.88
Personal disposable income per capita	0.91
Factor incomes per capita	0.60
GSP per capita	0.60

Source: Author's calculations based on ABS and CGC data for 2013-14

Considerations noted above present a strong case for revisiting the formulae for HFE and exploring alternatives that could potentially yield a simple yet equitable and efficient system of equalization.

## Technical Issues with the CGC Approach

### *Fiscal Capacity Equalization*

The CGC uses the representative tax system approach for five major state taxes, plus six mining related revenues. It adjusts the tax base for tax free threshold and progressive rates. It assumes equal per capita yield for other minerals, and grants in lieu of royalties, a host of other revenues and interest and dividends. User charges are often used to offset earmarked expenditures. While in principle, the CGC approach is defensible, in practice, it suffers from important limitations noted below:

1. The land and property tax base does not include principal residences and for income producing properties is arbitrarily adjusted downwards by 25%
2. General property tax base with a revenue of \$1,826 million or 2% of aggregate state revenue in 2013/14 is treated on an equal per capita basis i.e. the CGC assumes that all states have the ability to receive these revenues on an equal per capita basis and therefore fiscal capacity differences in the general property tax (land tax) that exist are not equalized, when one expects that they should be (see Table 12).

**Table 12: General Property Revenues Per capita \$ - 2013-14**

Per capita \$	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Actual	0	151	83	136	81	68	117	0	78
CGC	78	78	78	78	78	78	78	78	78

Source: CGC (2015) vol.2, p.65, p.73

3. The base adjustment for progressivity (land tax) and tax free threshold for land and payroll taxes may be an overkill in precision at the cost of simplicity and transparency as overall effective tax rate embodies these effects. Second why do it at all? The tax capacity for payroll is measured by value of payrolls and land tax by land value so why should an equalization program worry how a state distributes that tax burden among its taxpayers.
4. For stamp duty, effective tax rates are calculated by value class for 16 value classes for each property and vehicle components but such detailed calculations may not be necessary as aggregate effective tax rate would capture the combined effects.
5. For mineral taxation, tax base assessment is done separately for each mineral. But most minerals are heavily concentrated in a couple of states with iron ore and nickel primarily in Western Australia. Application of a RTS approach on a mineral by mineral basis therefore is problematic as one or two states have dominant influence on the effective tax rate (see Table 13). The treatment of grants in lieu of taxes on equal per capita basis (CGC euphemism for a decision to include but



not to equalize) is also without merit as they should be treated same way as a tax on the same mineral.

**Table 13. Mineral Resources and the Dominant States**

<i>Mineral</i>	<i>Dominant states</i>	<i>Share</i>
Iron ore	WA	97%
Coal	NSW, Qld	98%
Gold	WA	70%
Copper	Qld, SA, WA, NSW	98%
Nickel	WA	100%
Other Minerals	Qld, SA, WA, NT	86%

Source: CGC (2015)

5. User charges are offset on a case by case basis rather than universally.

6. *Problematic treatment of other revenues.* Other revenues include gambling revenues, fees and fines, other user charges, education and hospital fees, housing rentals, water, sanitation and environmental charges, electricity charges, transit fees, tolls, mining industry user charges, fees and fines, property titles, student and visitor fees etc., contributions by trading enterprises, interest and dividend income account for varying per capita revenues across states and as a percent of total state revenues. These account for a low of 20% of revenues in Western Australia and a high of 61.2% of revenues in ACT. The CGC assumes that all states have the capacity to receive equal per capital revenues from these sources and therefore have no impact on GST distribution.

7. *A lack of comprehensiveness.* The CGC excludes local/municipal revenues altogether but claims to include all own revenues by the States. This claim is fine in theory and indeed all States revenues sources are included. However, in practice about 40% of state own revenues are *effectively* excluded from fiscal (revenue) capacity equalization (do not affect GST distribution) as other revenues and general property revenues are treated as if all states receive the same per capita amount and therefore these revenues are included but not equalized. The greatest beneficiary of this treatment is ACT and the biggest loser is Western Australia. NSW and Queensland gain and VIC, SA, TAS, and NT lose from this treatment (see Table 14).

**Table 14: Other Revenues Per capita \$ - 2013-14**

Per capita \$	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Actual	2066	1605	2165	1568	1700	1615	3510	1873	1903
CGC	1903	1903	1903	1903	1903	1903	1903	1903	1903
% of own source revenues	42	38	44	20	44	49	61	41	38

Source: CGC (2015), p.126

8. *Differential coverage of states' own source revenues contributing to inequity in allocation.* The CGC uses equal per capita distribution for revenue bases with unreliable data that limit interstate comparisons. This approach is indefensible as it results in wide variations in coverage of state revenues contributing to inequity of the allocation system. Table 15 shows wide variations in the RTS coverage ranging from a low of only 37% of ACT revenues and a high of 78% of WA revenues. If data quality or reliability is an issue then the use of a macro base would be more desirable than the CGC's assumption of equal per capita revenue capacity assumption.

**Table 15. Percent of States Revenues That Influence GST Distribution (Included in RTS Based Fiscal Capacity Equalization)**

Per capita \$	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
% of own source revenues included	58	58	54	78	54	49	37	49	60

Source: Author's calculations based upon CGC (2015)

### *Conclusions on Fiscal Capacity Equalization*

Overall methodology of CGC, in principle, is defensible but much is lost in application. Various methods and judgments used lead a significant proportion of own source revenues not having any differential impact on equalization entitlements. As these revenue proportions that are treated on an equal per capita basis vary by state, they lead to unintended negative consequences for some states while creating some windfall gains for other states. Very detailed and refined calculations and adjustments to various tax bases may not be adding much value to the goal of having “precise” justice as attempted by the CGC but instead contribute to a lack of transparency and added complexity.

### *Fiscal Need Equalization*

The CGC assesses operating expenditure needs for 49 subprograms and capital finance needs for infrastructure investment, depreciation and net borrowing. The following technical issues arise from a review of these calculations.

### *Issues and concerns common to all CGC assessments regarding fiscal need equalization*

#### *Conceptual Limitation of the CGC Approach*

Conceptually, expenditure need equalization should compensate for inherent cost disabilities and differential recognized need factors rather than for differences that reflect different policies and preferences. For example, state policies and preferences may vary by level of its per capita fiscal capacity. If the influence of latter factors is to be isolated, the representative expenditure system can be significantly improved. Under this refined approach, the equalization entitlement from expenditure category *i* equals the per capita potential expenditure of state A for category *i* based upon own need factors if it had national average fiscal capacity minus per capita potential expenditure of state A on expenditure category *i* if it had national average need factors and national average capacity. This means isolating the effects of differential fiscal capacity (divergence from the national average fiscal capacity) on state spending policies and preferences. This approach is more difficult to implement than the less refined approach of direct imputation methods used by the CGC, but it has the advantage of objectivity and it enables the analyst to derive measures based upon actual observed behavior rather than ad hoc value judgements which is the hallmark of the CGC approach. Furthermore, this approach yields both the total pool and the allocation of fiscal need equalization grants among recipient units. This method requires specifying determinants for each service category, including relevant fiscal capacity and public service need variables. A properly specified regression equation yields quantitative estimates of the influence that each factor has in determining spending level of a category of public service. Once this information has been analyzed to determine *what each state would have spent if it had national average fiscal capacity*

*and actual need factors*, it can then be compared to the standard expenditure for each service based on an evaluation of the same equation for determining *what each state would have spent if it had the national average fiscal capacity and national need factors*. The sum of differences of these two expressions for all expenditure categories would determine whether the state had more (if the sum was positive) or less (if the sum was negative) than the average needs (See Shah 1996, 2012 for a rationale for this approach and see Shah, 1996 for a Canadian application of this approach). This approach provides a perfect analogue to the RTS approach used by the CGC on the revenue side. The conceptual ideal however, would be very demanding in its practical application. It nevertheless casts doubt on the validity of the CGC methodology. The CGC approach is especially indefensible as it lacks consistency on revenue and expenditure sides. It calculates potential revenues for revenue equalization using the RTS approach but simply adjust state expenditures by arbitrary ad hoc factors for expenditure equalization.

#### *Why should all state services be equalized?*

The Australian HFE cover all state provided services but no local services. A federal program of equalization must focus on services of national interest that help create a common economic union and strengthen internal common market. Merit public services such as education, health and welfare would be prime candidates for such equalization as these services are better financed nationally due to their redistributive nature but better delivered locally to make program design consistent with local preferences. In addition, there would be a case for federal role in overcoming regional infrastructure deficiencies that impede the free mobility of factors and stands in the way of having a level playing field to integrate the fiscally disadvantaged states in the national market economy. Infrastructure deficiencies are better addressed through planning based capital grants and assistance for borrowing. Inclusion of all state services defeats the fundamental principle of federalism to accommodate diversity of preferences in public services and taxation. The CGC approach to equalize all state services therefore requires a re-examination.

#### *Service Delivery Scale*

The CGC assumes that for all services economies of scale rise with the increase in service delivery scale. The empirical econometric evidence for most services show an inverted U shape curve for economies of scale with the population served with most economies of scale exhausted for a population size of about 50,000 people. But past is often a poor guide to present and future. Agglomeration economies associated with compactness of the area (population density) and information revolution makes larger population sizes in a compact area more economical for service delivery but empirical corroboration is not yet available. These influences can nevertheless be construed to stretch the inverted U curve but ultimately managerial inefficiencies associated with larger size and congestion costs kick in resulting higher costs for larger scale of delivery. If this view is accepted then CGC calculations may be placing larger metropolitan areas at a disadvantage.

#### *Disability Factor Weights*

For individual sub-category of expenditures, the CGC chooses factors and their relative weights based upon a variety of approaches that include ad hoc determination, imputation methods, costing norms and regression analysis. For regression analysis, it does not reveal its models, sample size and details on independent variables. Therefore, validity of these regression results cannot be established especially given that data limitations may lead to small sample, omitted variable and collinearity biases. Given the kind of disability factors considered by CGC, there would be a priori presumptions that the SDC (socio-demographic composition) and SES (socio-economic status)

variables would be strongly co-linear (the so-called multicollinearity problem in econometrics) and therefore the CGC must first establish the lack of collinearity or defensible ways of overcoming this bias. The CGC presentations have not made a credible defense of its econometric estimations. In the absence of such a defense, one can reasonably argue that for highly correlated factors, disabilities may be artificially magnified through double counting.

#### *Instability in entitlements*

CGC continually refines its methods of assessment. This contributes to instability in yearly entitlements. It is desirable that both the overall approach and the methods used to implement be stable for a five-year period and yearly update should simply reflect changes in state circumstances.

#### *Service Population*

CGC primarily uses per capita approach in its calculations for most service categories. This lacks clarity as to how costs differ say per pupil/student or per lane mile of road. For greater clarity and benchmarking of service costs, it would be better to present results both in terms of service population and per capita.

#### *Non-neutrality*

Large state policies affect the average costs. For example, if NSW chose to spend more on services to indigenous population, it would have an impact on GST distributions based the CGC approach.

#### *Rewarding Bad Behaviors*

An unintended consequence of the current approach is that it rewards bad behaviors e.g. excessive use of public services by specific groups, and states offering tax expenditures and assuming contingent and non-contingent liabilities without consideration of fiscal risks associated with such policies. Also, it perpetuates bad policies and management practices that may be creating or permitting excessive or ineffective use of public services. Another unintended consequence of the approach is the negative incentive for innovations to improve cost efficiency in high cost states as part of the cost savings would be offset by a decline in equalization payments.

#### *A Christmas Tree Approach to Infrastructure Needs*

The CGC attempts to equalize costs to enable all jurisdictions to have average per capita capital stock. This concept has no relation to any useful measure to overcome infrastructure deficiencies over a planning horizon to improve efficiency of the internal common market for the nation or to overcome infrastructure deficiencies from defined national minimum standards for various type of public infrastructure in fiscally disadvantaged states to create a level playing field to integrate them better into the national economy. Instead it distributes insufficient amount of funds to all jurisdictions.

### **Individual category assessment concerns**

In the following, we highlight concerns with individual expenditure category assessments. Note that most of these concerns are recognized by the CGC but not addressed due to various data and other limitations. *We note these to simply show that given the data limitations and conceptual difficulties, the CGC approach for continuous refinements leads to complexity and instability*

without contributing to “precise” justice, the CGC aims for. Instead a simpler and more transparent methodology that delivers “rough” justice may be more appropriate to achieve greater fairness/equity in jurisdictional allocations.

### *School Education*

The CGC calculated extra loading over equal per capita spending and but does not relate these loadings to equal per student/pupil. Relating the calculations to per student would be useful given that the CGC does consider the share of students that make up state population. The CGC does not show regression results which forms the basis of factor weights. If universal access to quality school education is the goal then extra loading for government schools for operating expenditures requires justification.

### *Post-Secondary Education*

The CGC methodology assumes that the presence of private professional training institution does not affect level of state provision. In Victoria, almost 50% of such training is provided by non-state actors then why it is that the state would not take this into account in its decisions on public provision. The CGC calculations also ignore the impact of qualification level, course mix, industry mix and low English proficiency on the cost of professional and technical education.

The CGC further does not clarify how category factor weights are derived from various component factor disabilities. For example, in the CGC (2015) (see Table 16), overall category factor for post-secondary education is lower than the component factors for Victoria and higher for NT – why?

**Table 16. Category Factors, Post-secondary education, 2013-14**

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ave
<b>Post-secondary education (component weight = 100%)</b>									
<b>SDC</b>	1.000	0.980	1.014	0.995	1.015	1.044	0.894	1.248	1.000
<b>Cross-border</b>	0.992	1.000	1.000	1.000	1.000	1.000	1.165	1.000	1.000
<b>Location</b>	1.005	0.987	0.988	1.040	0.991	0.972	1.025	1.046	1.000
<b>Category factor</b>	0.996	0.968	1.002	1.034	1.006	1.016	1.067	1.306	1.000

Source: CGC (2015), p.165

### *Health*

Health assessment is carried out for 15 subprograms but at the same time CGC recognizes that “There is a strong similarity in the assessment approach, data sources and the services being provided in the health components. As such we consider single health assessment is warranted. Any disaggregation into separate category appears arbitrary.” (CGC 2015, p.212). To some extent the same recognition is also possible for most major services being assessed by the CGC.

### *Housing*

The age of the public housing stock and number of families requiring public housing accommodation does not enter the CGC assessments.

### *Justice*

State expenditures for community policing and civil court services are assumed to be equal per capita for all states and thereby having no influence on GST distribution. Other influences not assessed include: sex, indigenous cost weights (for English language services and culturally appropriate services), public transport policing, civil courts. The assessment method changes explain 85% of yearly variations from 2014 to 2015 assessment (CGC, 2017).

### *Roads*

The CGC assessment for roads is subject to major errors as the CGC simply does not have comparative data on lane kilometers of roads of various types. In addition, 26% of road expenditures are treated on an equal per capita basis and therefore do not influence GST distribution. CGC methodology does not distinguish types of unpaved roads (graveled, dirt) but does distinguish sealed (paved) and unsealed (unpaved) roads. In addition, it does not take into consideration: user charges, mining related expenses, density of road use (traffic volume per lane km of road – need for traffic control of safety), costs of heavy vehicle use depend on the weight and distance travelled by heavy vehicles, heavy vehicle use per lane km of road and urban road use and city size but the CGC relates to the population only. Road ownership and management may also have consequences for state expenditures and it is not clear how these are dealt with by the CGC. Method changes explains most of the variations in the annual updates.

### *Services to Industry*

An important concern with equalization of this service arises from the fact that given this category primarily deals with industry development, equalization is being used to fund government policy choices in providing (inefficient) grants and subsidies. In any case, a conceptual case for equalization of services to industry has not been made by the CGC and prima facie such case does not exist as services to industry should be financed by industry itself and there should be no cross-subsidization from other sectors or citizens at large. Even if one accepts the view that such services are worthy candidate for equalization, the CGC follows a crude approach to such equalization that does not distinguish regulatory and service burdens imposed by industry types. Further while arguing for equalization of such expenditure, the CGC treats all business development expenses constituting 61% of category expenses on an equal per capita basis and therefore excluded from equalization and having no effect on the GST distribution. Method changes explain most of the yearly variations in states' entitlements.

### *Infrastructure Assessments*

Infrastructure assessments are devoid of any physical planning view of infrastructure deficiencies that stands in the way of creating an internal common market or common, economic social and political union. Assessment are made in respect of equalizing costs for average per capita capital stock for without providing any rationale for this approach. A uniform rate of physical depreciation is applied to all capital stock without recognizing extremely large variations in economic life of physical capital say 3-5 year for information technology, 5-7 years for machinery and equipment, variable economic life for various road and transportation infrastructure, 40-70 years for structures and, of course, land does not depreciate and instead appreciates. Purchase of land constituted 19% of states expenditures in 2014 and is treated on an equal per capita basis and thereby effectively excluded. Most of the relevant factors for infrastructure capital needs are not considered. These include: backlog of critical infrastructure deficiencies not yet addressed the effects of the physical

environment: topography, rainfall, temperature, wind, soil changes, flooding, soil salinity, urban, economic development and migration influences.

### 3.4. Guiding principles in exploring equalization alternatives

In exploring alternatives, it is important to reach a consensus on the principles to guide this search. The purpose of equalization is to enable state governments to provide approximately comparable levels of public services at comparable tax rates. A suitable equalization system should have the following features:

- *Consistency of design with the constitutional principles and specific objectives stated in the federal legislation.*
- *Equity and fairness.* The program should be fair. Allocated funds should vary directly with fiscal need factors (demand for service factors) and inversely with tax capacity of each jurisdiction. This is a universally accepted principle of grant design and observed by most OECD equalization grant programs.
- *State autonomy.* The program should be non-intrusive. State governments should have complete autonomy, independence and flexibility in exercise of their taxing, spending and regulatory powers.
- *Objectivity.* The program should be formula based and be based upon readily measurable objective factors that are beyond the control of state governments.
- *Simplicity and Transparency.* The formula should be reasonably easy to understand and use data that are objective and certified for accuracy by the Australian Bureau of Statistics and widely disseminated. Any interested stakeholder or observer should be able to replicate the formula allocation with ease. Expectations for accuracy and comprehensives should not be used to add excessive complexity to the program or to justify the need for having/creating an independent agency with a large staff simply to carry out such complex calculations.
- *Strategy.* The program should be immune to strategic behavior by recipients.
- *Revenue Adequacy and responsiveness.* Subnational Governments should have adequate revenues to discharge designated responsibilities. This is more meaningfully evaluated using actual values than relativities. The program should be robust enough to respond to the financial situations of subnational units in a timely manner.
- *Affordability.* The federal government should in consultations with the subnational units decide on the equalization standard and ensure that the program is affordable and sustainable over time. Note that the current use of a dynamic and growing tax base (GST revenues) meets this test.
- *Predictability and stability.* The allocation criteria must be fixed for a five-year period and subject to revision only at renewal for a subsequent period. The grant formula should specify ways of alleviating yearly fluctuations, such as the use of moving averages, floors and ceilings. Any major changes in the formula at subsequent renewal should be accompanied by hold harmless or grandfathering provisions.
- *Neutrality.* The grant design should be neutral with respect to subnational governments' choices of financing, resource allocation and natural resource development.
- *Accountability.* The federal government should be accountable for ensuring that the program promotes fiscal equity and fiscal efficiency objectives to further social and economic union goals and subnational governments should be accountable to own residents for the use of equalization funds. This is the approach followed in the equalization system adopted in Canada.

- *Sunset clause and mandatory provision for parliamentary review for renewal.* The program should be subject to a sunset clause after 5 years unless formally reviewed and renewed by the Commonwealth Parliament.

### **3.5 Reforming the Existing Australian HFE**

This section outlines reform options to make the existing system simple, transparent, fairer yet more efficient.

#### **Option A**

Under this option, fiscal capacity and fiscal need calculations is attempted to be simplified, adverse incentives impeding efficient allocation are removed and a newer role for the CGC is proposed. Also, relativities may be discarded in favor of actual value calculations. This option is easier to implement and embodies the original intent of the equalization program to enable each state to have service standards and tax burdens “not appreciably different” from other states. The proposal would yield a simple, fair, transparent, efficient, easily comprehensible and replicable, independently monitor-able and mostly strategy proof system of equalization.

#### **(i) Fiscal capacity Equalization using a Simplified Representative Tax System Approach:**

Empirical evidence and the CGC calculations show significant differentials in Australian states and territories in terms of their revenue capacities. In view of this, tax capacity equalization may be retained with significant simplification as proposed below. It is proposed to equalize revenue capacity for all state and local taxes and partial equalization (any fraction on which the states can reach a consensus) of actual revenues from mining as follows:

- *Payroll taxes* based on taxable payroll of all employees
- *Land and property taxes* based upon aggregate value of all land and properties (commercial, industrial, residential (including principal residences) and linear properties, if currently taxed, such as power, cable and telephone lines and pipelines.
- *Stamp duty* based upon total value of property transferred.
- *Insurance taxes*: total value of insured property or insurance premiums
- *Motor vehicle registrations*: Number of vehicles of various classes registered.
- *Mining royalty revenues*: percentage (based upon intergovernmental agreement) of actual revenues received
- *Other revenues* based upon State GSP or factor incomes accruing to State residents, if available.

In the interest of simplicity, transparency and objectivity, no adjustments for progressivity, exemptions or threshold, are to be made to broad tax bases outlined above.

#### **(ii) Fiscal/Expenditure Need Equalization:**

Several alternative options are proposed to address expenditure need equalization.

#### ***Fiscal Need Option A – No Fiscal Need Equalization but Addressing Special Burdens***



Given that fiscal capacity equalization would enable most states to offer level of public services not appreciably different from other states following the examples of Canada and Germany, expenditure need equalization may be abandoned and NT could be compensated by a special grant from the federal government. Equalization of capital expenditures and financing needs and equalization of net worth are neither conceptually nor practically desirable through an annual fiscal equalization program and therefore could also be dropped. Concerns regarding national minimum standards could be addressed by output based federal transfers (with no conditions on what and how money is to be spent but clear and agreed upon service delivery performance objectives for quality and access to be achieved) for redistributive merit goods such as education and health. Residual GST pool could then be distributed on an equal per capita basis.

***Fiscal Need Option B – Equalization of Core Redistributive Services only using the DPS Approach***

To facilitate factor mobility in response to economic stimuli and to create a common economic, political and social citizenship, federal support for the establishment of national minimum standards of redistributive services such as education, health and welfare is highly desirable in a federal system of governance. Interstate equalization of these services would be best done by the DPS approach to equalization. For education, health and welfare, the following allocation basis for available federal financing (GST pool minus fiscal capacity equalization) among states is proposed.

- *School education:* school age population (ages 5-17)
- *Post-Secondary Education:* College/university age population (ages 18-24)
- *Welfare:* Single mothers plus number of unemployed below poverty line individuals. Weights of these factors based upon all States expenditure average from the past three years.

***Fiscal Need Option C - Equalization of all State Services using the DPS Approach***

However, if the above options were not politically acceptable then operating expenditure need equalization could be carried out for major state services as follows with no special or arbitrary adjustments to the need factors outlined below to preserve simplicity, objectivity and to prevent employment of strategy for gaming the system. Note that each service will receive the same weight as indicated by aggregate all states expenditures on that service historically (say previous 3- year moving average). Total pool for expenditure need equalization would be residual funds from GST revenues after compensating for fiscal capacity equalization.

*State and Local Services to be equalized and allocation basis:*

- *School education:* school age population (ages 5-17)
- *Post-Secondary Education:* College/university age population (ages 18-24)
- *Health:* Weighted population with higher weights for ages 0-5 (2.0 weight) and ages 70+ (1.5 weight)
- *Housing:* Population below poverty line
- *Welfare:* Single mothers plus number of unemployed below poverty line individuals. Weights of these factors based upon all States expenditure average from the past three years.
- *Police:* Property values (50%) and population (50%)
- *Justice:* population

- *Roads*: Length of roads of various types such as paved, graveled and dirt roads in lane KMs. Relative weights for various road types based upon relative aggregate per KM state expenditures for various types.
- *Public Transportation*: Urban population (For large urban areas only)
- *All other services*: Area (33.3%) and Population (66.6%) or alternately these weights could be based upon relative importance of rural versus urban services in other services category.

(iii) **Infrastructure Fund**. An Infrastructure Fund may be created to deal with state infrastructure deficiencies that have a bearing on either the efficiency of internal common market for the nation or stand in the way of meeting infrastructure-specific federally-specified national minimum standards for various types of state-local infrastructure. This fund may be financed by the federal government but managed jointly by the federal and state governments through the Council of the Australian Governments (COAG) or one of its entities say The Council of Federal Financial Relations(CFFR). The Infrastructure Australia could serve as the secretariat as well as the advisory body to identify priority projects and recommendations on the use an appropriate mix of instruments (matching capital grants with matching rate that varies inversely with fiscal capacity, loans and bonds) to finance these investments depending upon the type of investment (income producing or social) and by fiscal capacity of the local jurisdiction undertaking the investment. Switzerland compensates for infrastructure deficiencies through a Cohesion Fund whereas Germany provides federal capital grant assistance to fiscally disadvantaged states with large infrastructure deficiencies.

(iv) **Supplementary federal special needs grant for NT** for indigeneity and dispersion. One possible basis for such grant may be the number of indigenous people living in remote areas of NT. NT could be considered for a federal special/supplementary grant equal to Australian per capita GST amount multiplied by the number of indigenous people resident in remote areas.

(vi) **Proposed New Role of the CGC**: Since the above calculations are simple and can be easily done using an Excel sheet by a single staff member (as done in Canada for the Canadian HFE), responsibility for calculating equalization payments may be reassigned to a special federal-state fiscal relations unit in the Federal Treasury. All decision making on the equalization program would rest with the CFFR. The CFFR in its decisions and deal making would no longer be hamstrung by the Commission's views but instead will focus on a political compact to strengthen political, economic and social union. The CGC role may be redefined to serve as a federally financed think tank on federal-state/territorial fiscal relations monitoring fiscal health and service delivery performance and providing an early warning system for fiscal distress and assessing need for federal intervention and assistance. Alternately, the CGC could be merged with the Productivity Commission to play a more coordinated role in monitoring fiscal health and service delivery performance of all orders of government.

## **Alternative Options**

Alternative options could include: (a) GST distribution predominantly (say 75%) on an equal per capita basis and residual (say 25%) as supplementary assistance on an equal per capita basis to fiscally disadvantages states only as done in Germany; (b) having a separate equalization programs for states and territories as done in Canada; (c) equalization of resource revenues under a separate interstate (solidarity/fraternal) resource revenue equalization system; (d) partnership agreement

between NSW and ACT for cross-border use compensation as done in Finland; (e) replacing fiscal need equalization by output based national minimum standards grants for operating expenditures for merit services only as done in Canada for health and post-secondary education financing and capital grants and loan assistance to overcome identified critical infrastructure deficiencies from national minimum standards. A special grant to NT and proposed new role of CGC remains invariant under various options.

### ***Concluding Remarks***

The Australian equalization program, over the years, unbridled in its pursuit of the holy grail of equalization for “full justice” has drifted away from its original objectives and morphed into a black box only a few Australian experts could fully comprehend. Various reform options outlined in this paper are intended to bring the equalization system in Australia in conformity with the original Commonwealth equalization objectives of enabling all states to have service standards and tax burdens “not appreciably different” from other states. In doing so, an attempt is also made to simplify the existing HFE in Australia and make it fairer, more efficient, fully transparent, predictable and reasonably objective system of equalization to have an informed political and civil society discourse on the degree of equalization that is desirable and affordable by the nation. These suggestions do not aim at scientific precision or perfection or to excel in academic rigor. Instead these rough and ready rudimentary ideas embodying “rough justice” principle are simply intended to present policy options to all relevant stakeholders that are easily comprehensible and calculations are replicable with ease by any interested observer so as to facilitate an informed dialogue on this issue to strike a right balance on equity and efficiency objectives of equalization transfers and forge a national consensus on the standard of equalization that may meet wider acceptance and help develop a durable political compact on the system of equalization in Australia.

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