Fiscal Transfers in Australia: Review and Relevance to India

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Abstract

This paper examines the working of Australia's fiscal transfer system in the context of its long term evolution, paying particular attention to salient changes that have occurred since the introduction of a comprehensive Goods and Services Tax (GST). The GST has served to increase the vertical imbalance in the system, which was high even prior to this change, by placing more revenue resources with the commonwealth government in Australia. In spite of a high degree of expenditure centralisation, considerable emphasis is placed in Australia for achieving horizontal fiscal equalisation through an elaborate mechanism of equalisation transfers, which looks into both revenue and expenditure sides of the state budgets and calculates revenue and expenditure 'disabilities' that account for departures from a pure equal per capita distribution of the shareable amounts. This paper looks at the equity and efficiency implications of the Australian equalisation transfers and considers its relevance for the Indian system, which has many comparable features. Apart from the need for making equalising features of the Indian transfer system more transparent, there is need for emphasising some cost disabilities, particularly those that are structural and exogenous in nature.

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The working of fiscal federalism in Australia is now more than hundred years old. It was in 1901 that Australia became a federation, when six separate British colonies came together forming a commonwealth and becoming as a consequence its states. These states are Queensland, New South Wales (NSW), Southern Australia (SA), Victoria, Western Australia (WA), and Tasmania. In addition, there are two territorial administrations, *viz*., the Northern Territories (NT), and the Australian Capital Territory (ACT). Australia's federal fiscal structure is characterised by a high level of vertical imbalance, an elaborate system of horizontal fiscal equalisation, and numerous special purpose payments. The centerpiece of the Australian system of fiscal transfers is horizontal fiscal equalisation (HFE) that looks into both revenue and expenditure sides of the state budgets and calculates revenue and expenditure 'disabilities' that account for departures from a pure equal per capita distribution of the shareable amounts. Australian equalisation calculations, cast in terms of 'disabilities', and state 'relativities' rather than the more usual term of state shares, are distinct in their presentational scheme. The Australian fiscal transfers system is also unique in having developed an institutional framework for five-yearly `Reviews' and annual `Updates' of the relativities as also for having developed techniques of micro assessments, particularly on the expenditure side.

Currently, the Australian system of fiscal transfers is going through a major transition with the introduction of a comprehensive Goods and Services Tax (GST), which is in the nature of a Value Added Tax. The introduction of GST has had a far reaching influence on the vertical and horizontal sharing of resources among the commonwealth and state governments. The GST is collected by the commonwealth Government and fully passed on to the states. It by itself accounts for

almost the entire untied transfers, and since it has come in replacement of several state level taxes, its distribution significantly affects the availability of resources to the states. The commonwealth Grants Commission (CGC), which is the main institution that makes recommendations about the horizontal fiscal transfers, has come out, in its 2004 Review, with a new set of recommendations for years covering the period after 2003-04. There is an extensive contemporary debate in Australia about the relevance and implications of the manner in which the principle of horizontal fiscal equalisation has been applied, particularly after the introduction of the GST and the proliferation of the Special Purpose Payments. It is some indication of the disenchantment of some of the states that three states, *viz*., New South Wales, Victoria, and Western Australia, i.e. the so-called better off and 'donor states' jointly appointed a Review Committee comprising two eminent experts Ross Garnaut and Vince FitZerald to assess the current system of transfers in terms of economic efficiency, equity, simplicity, and transparency. The disenchantment reached such a peak that after the 2004 Review, New South Wales took out an advertisement in the newspapers asking the citizens of the state to send telegrams to the Prime Minister expressing their dissatisfaction. The commonwealth Grants Commission itself observes in its Report containing the 2004 Review that the Commission "is supportive of a far-reaching review of equalisation, including its underlying purposes and objectives" and that the Commission itself did not go into these questions because these were not part of its terms of reference. The transfers system in India is facing similar questions today.

Australia's system of horizontal fiscal equalisation and the related debates on equity and efficiency are relevant for other fiscal transfer systems including that of India. In this paper, we examine the working of the Australian system with a view to drawing comparisons with the corresponding Indian fiscal transfer system and deriving appropriate lessons. Section 1 looks at the assignment of revenues and responsibilities in Australia. Section 2 summarises the institutional arrangements in Australia that play a key role in the working of the federal fiscal arrangements. Section 3 looks at the state economies in Australia and their demographic features drawing appropriate comparisons with India. Section 4 examines the extent of vertical imbalance in Australia as well as India. Section 5 reviews the arrangements of horizontal fiscal equalisation, highlighting the use of revenue and cost disabilities in deriving states' shares in the overall

untied transfers. Section 7 provides a summary of the key features of the Australian system of fiscal transfers focusing on practices that can be adopted with benefit in the Indian context.

I. Assignment of Powers and Functions

In Australia, the functions of the commonwealth government relate to foreign affairs, foreign trade, defense, immigration, currency and banking. The states have responsibilities in respect of public safety, housing, transport, community, and social services. The state governments also have jurisdiction over local governments. Responsibilities such as maintaining the road system, recreational and cultural services and public services like water supply and sewerage have been delegated to the local governments.

The central government has the power to levy all taxes and the states have concurrent powers except in the case of customs and excise duty. At the inception of the federation, the constitution was so framed as to give exclusive powers on the customs and excise revenues to the commonwealth. Further, starting in 1908, the High Court has consistently interpreted these powers more and more in favuor of the central government by extending the definition of excises. In particular, states have not been permitted to levy sales taxes. The local bodies depend mainly on property taxes.

Prior to the taking over of the income tax by the commonwealth, states were raising more than 70 percent of the total income tax revenue collected in Australia, way back in 1938-39. Ceding access to this revenue source to the commonwealth during the war years completely reversed the relative position of the commonwealth and state governments in revenue raising powers. With the Uniform *Income Taxation Act of 1942* eliminating the role of states in raising income tax, and subsequent court rulings closing sales and excise taxation fields to the states, most of the important taxes on individuals, enterprises and non-residents stand assigned to the commonwealth. With the GST also being collected by the commonwealth as a result of the Inter-

Government Agreement (IGA) in 2000, its domination of the tax field is near-complete. The states' most important own tax revenue sources are the payroll tax that is levied on company payrolls, taxes on financial and capital transactions, taxes on gambling, on insurances and on motor vehicles. The states also employ franchise fees and taxes on excisable goods converted into service taxes for constitutional reasons. Local governments are given taxes on immovable property at the municipal rates.

The IGA, finalised in 2000, was aimed at achieving a new national tax system which is not distortionary and which also improves the financial position of the state governments. These reforms have led to the implementation of GST, which is presently set at the uniform rate of 10 percent. There is some ambiguity as to whether the GST should be considered a federal tax or a state tax. The commonwealth itself has argued that the GST should be regarded as a state tax, which the commonwealth collects on behalf of the state governments and fully returns to them. The Australian Bureau of Statistics treats the GST as a commonwealth tax. This seems appropriate because the commonwealth is not collecting the GST on behalf of the states and returning it to them on the basis of derivation. The commonwealth has itself given up the wholesale sales tax and it is using the GST revenues for distribution among states on equalisation principles. The GST revenue sharing arrangements do not have constitutional force although these are based on the IGA.

Table 1 shows that the commonwealth government collects 76 percent of all government revenues. About 20 percent is collected by the state governments and the remaining by the local governments. This high degree of centralisation in raising revenues arises primarily from the fact that more than 50 percent of all tax revenues are raised as income tax followed by the GST, which contributes about 11 percent of the total and excise and levies that contribute a little more than 8 percent, all being with the commonwealth government.

Table 1: Own Source Revenues by Governments, 2000-01

	Common Wealth government	State govern-ment	Local Govern-ment	Multi-Jurisdict-Ional
Total taxes *of which*	**76.35**	**19.73**	**3.33**	**0.59**
Income taxes	50.59	0.00	0.00	0.00
Payroll taxes	1.50	3.98	0.00	0.00
Taxes on property	0.01	5.20	2.67	0.00
Goods and services tax	10.81	0.00	0.00	0.00
Excise and levies	8.15	0.00	0.00	0.00
Taxes on international trade	1.93	0.00	0.00	0.00
Income from Government Business Enterprises	1.23	2.24	0.00	0.01

Source: Australian Bureau of Statistics, Taxation Revenue, and Government Finance statistics

Table 2 shows the extent of centralisation in expenditures, i.e. the situation after transfers. About 52 percent of expenditures are incurred by the central government in total expenditures. There are several fields that the commonwealth government co-occupies with the state governments, particularly those relating to health, housing and community amenities, and some economic sectors like fuel and energy, agriculture, forestry, and fishing, mining, manufacturing, and construction.

Table 3 shows the corresponding picture for India using 2000-01 data. Apart from defence, the centre has a share higher than that of the states in housing, industries, and transport. In most of the social and economic services, it is the states that have the larger shares of expenditures.

Table 2: Australia: Inter-jurisdictional Shares in Expenditures, 2000-01(percent)

	Common wealth govern-ment	State govern ment	Local govern ment	Multi-jurisdic tional*	Total all-govern-ment expendi-ture ($million)
General public services	51	40	9	1	19046
Defense	100	0	0	0	11327
Public order and safety	14	82	3	0	10745
Education	5	69	0	26	35777
Health	46	53	1	0	41179
Social security and welfare	91	8	1	0	72059
Housing and community Amenities	28	46	26	0	10583
Recreation and culture	31	41	29	0	6592
Fuel and energy	70	30	0	0	3760
Agriculture, forestry, and fishing	45	55	0	0	3857
Mining, manuf. and construction	55	33	12	0	1876
Transport and communications	15	67	18	0	15549
Other economic affairs	46	50	3	0	6586
Total	52	39	5	4	238936

* This category includes only Universities
Source: Australian Bureau of Statistics as quoted in Madden (2202)

Table 3: Relative Share of Centre and States in India: Selected Heads(2000-01)

	Share of		Combined
	Centre (percent)	States (percent)	(Amount in Rs. crore)
Defence services	100.0	0.0	49622
Fiscal services	46.0	54.0	9015
Administrative services	35.2	64.8	34897
Organs of State	37.6	62.4	4261
Pension & other retirement benefits	36.6	63.4	38819
Education, art & culture	11.1	88.9	63756
Medical & public health, water supply & sanitation	11.5	88.5	24360
Family welfare	23.5	76.5	2826
Housing	56.6	43.4	4156

Table 3: Relative Share of Centre and States in India: Selected Heads(2000-01)

	Share of		Combined
	Centre (percent)	States (percent)	(Amount in Rs. crore)
Agriculture & allied services	32.4	67.6	35140
Industry & minerals less DCUs	57.8	42.2	6762
Power, irrigation & flood control	11.8	88.2	33799
Transport & communications	51.3	48.7	24492
Public works	17.6	82.4	4007
Total	44.6	55.4	553533

Source: Indian Public Finance Statistics
Note: Centre's expenditures are derived by deducting State expenditures from the combined amounts.

II. Institutional Arrangements of Fiscal Coordination

The framework of institutions dealing with financial and other matters between the centre and the sub-national governments is critical for the successful functioning of central-state financial relations. In India, apart from the constitutional provision for a Finance Commission, there are other institutions like the Planning Commission, the Inter-State Council and the National Development Council. In Australia, there are five bodies that play a key role in the management of the federal fiscal system. These are described below.

A. Council of Australian Governments

This council consists of the Prime Minister, State Premiers and Chief Ministers of the Territories. This council has superseded the Premiers' Conference that earlier decided about the vertical transfers. Since now there is an agreement to transfer the full amount of GST to the states, the volume of untied transfers to that extent gets determined automatically.

B. *Ministerial Council for Commonwealth-State Financial Relations*

This council, which is also known as the Treasurers' Conference, provides a platform for an annual meeting of the Treasurers (Finance Ministers) of the states and Territories to discuss grant allocations to the states (until recently this was done at the Premiers' Conference).

C. *Special Purpose Ministerial Councils*

These councils consist of the commonwealth and State Ministers of a particular portfolio. These councils look after a wide range of special purpose payments.

D. *Commonwealth Grants Commission*

The main body entrusted with the task of making recommendations regarding the horizontal transfers of sharable resources in Australia is the commonwealth Grants Commission (CGC). The CGC is an advisory body that responds to its terms of reference. It does not have powers to initiate and pursue inquiries on its own. In recent years, the main references have sought advice on per capita relativities for distributing the distributable pool of resources among the states and territories.

The Commission was established in 1933 to assess claims made by the states for financial assistance (special grants) under section 96 of the constitution. At various times, Queensland, Western Australia, South Australia, Tasmania and the Northern Territory had sought special grants.

Various issues are referred to the CGC under sections 16, 16A and 16AA of the *Commonwealth Grants Commission Act 1973.* Although references to the CGC are provided by the Minister for Finance and Administration, their content is usually decided in negotiations between the commonwealth and the states, conducted largely through their treasuries. While the resulting Commission reports are provided formally to the Commonwealth Government, they are made available to the

states immediately thereafter. The relativities recommended in those reports are considered at the annual Treasurers' Conference.

The CGC defines its own role as "an independent, impartial and authoritative arbiter in relation to distributional aspects of fiscal federalism in Australia" (Commonwealth Grants Commission, 1983, p/160). The CGC looks at the state budgets in a comprehensive manner and looks at all needs, whether on current or capital account. There is no fragmentation in approach as is the case in India where expenditures are divided into revenue and capital accounts, and further into plan and non-plan categories, with two bodies, *viz*., Finance and Planning Commissions looking after different segments of the expenditure requirements.

Unlike in India, where the Finance Commission looks at both the vertical and horizontal dimensions of transfers, the CGC does not look into the issue of vertical imbalance. With the introduction of GST, the vertical transfers are determined by the amount of actual collections of the GST, supplemented by the Health Care Grants (HCG). Prior to the GST, the pool of transfer consisted of Financial Assistance Grants (FAG) and the HCG. In addition, the commonwealth government pays special purpose payments (SPPs), which are conditional grants aimed at specific sectors. The SPPs are broadly comparable to the centrally sponsored schemes in India.

For the 2004 Review, the terms of reference asked the CGC to review the methods used to determine and report upon the question of the per capita relativities for distribution of GST revenue grants and health care grants which the Commission would regard as appropriate to apply after 2003-04[1]. The Commission was also asked to continue to prepare its assessments on the basis that SPPs quarantined, i.e. excluded in the previous terms of reference should continue not to affect the per capita relativities[2].

In preparing its assessment, the Commission was asked to have regard for the need to observe policy neutrality in relation to a reduction in the level of a SPPs resulting from non-compliance by a state or territory with the conditions of the payment. Any such reductions should not directly influence the commission's assessments of the per capita relativities. The commission was asked to prepare its assessments on a basis consistent with the commonwealth's intention that specified

components[3] of the Australian Health Care Agreements between the commonwealth and a state should not directly influence the per capita relativities.

E. The Australian Loan Council

Australia is unique among federations in that it has a mechanism in the form of the Australian Loan Council to coordinate borrowing by the commonwealth and state governments. Effective control of public sector borrowings is a major concern for all federations as government borrowing is linked with monetary policy and macroeconomic demand management. Unrestrained borrowing can compromise fiscal discipline by softening the budget constraints to governments at all levels. The Loan Council was set up by the Financial Agreement of 1927, as ratified by a constitutional amendment in 1928, to provide an effective control of borrowings by the state governments and state business enterprises.

The Loan Council's origins lie in the 1920s when the commonwealth and states competed for funds on the capital markets. The commonwealth wanted to refinance war debt while the states wanted to fund infrastructure programmes. To resolve this and other conflicts, the May 1923 Premiers' Conference agreed to form a voluntary Loan Council. The Loan Council is formally a Commonwealth-State Ministerial Council comprising the Commonwealth Treasurer as chairman, and state and territory Treasurers. The *Financial Agreement Act 1928* provided among other things for:

- the Loan Council to regulate borrowing by the commonwealth and states
- the commonwealth to borrow on the states' behalf
- limits on the states' borrowing powers
- the commonwealth and the states to contribute to the National Debt Sinking Fund to redeem debt, and
- The commonwealth to provide grants to the states to help them meet interest payments and sinking fund contributions.

The 1928 Financial Agreement has been altered on a number of occasions to take account of new developments. The 1928 Agreement did not encompass borrowing by commonwealth and state semi-governmental and local authorities. As the Loan Council's restrictions became stringent, the states found ways of circumventing the council by

using statutory authorities for borrowing. In 1936, a voluntary 'Gentleman's Agreement' was negotiated to bring such borrowing under the supervision of the Loan Council.

A major change in the role of the Loan Council took place in the 1950s when the commonwealth increasingly saw it as an instrument of macroeconomic policy. Early in the 1950s, Australia had faced strong inflationary pressures, and the Commonwealth Treasurer advocated reducing council-approved borrowing to ease these pressures. The commonwealth's influence over the Loan Council was strengthened by the fact that the commonwealth undertook to provide funds to the states if the states were unable to raise, through the issue of securities, any borrowing that the Loan Council had approved. In effect, the commonwealth agreed to underwrite state borrowing.

The Gentlemen's Agreement was also bypassed when some states used 'unconventional' financing techniques such as financial leases to circumvent its restrictions. The States also established borrowing authorities like the New South Wales Treasury Corporation, which was used to circumvent the Loan Council borrowing limits. In 1984, the Loan Council suspended the Gentlemen's Agreement and replaced it with Global Borrowing Limits. This 'global approach', among other things, limited the level of all new borrowings, conventional and unconventional, by commonwealth and state authorities.

However, the global approach also broke down. A major reason was the increasing use of sophisticated financing techniques that eroded the Loan Council's effectiveness. In December 1992, the Loan Council meeting adopted new arrangements for monitoring and reporting. Under these arrangements which came into effect in 1993-94, each jurisdiction nominated a Loan Council Allocation, which was based on its net borrowings as indicated by its deficit/surplus. The arrangements also changed the way in which borrowings were allocated among the states. Previously, the global limit was allocated by a formula based on state population. But this formula did not take account of a state's particular fiscal circumstances. The Loan Council, therefore, considered the nominations having regard to each jurisdiction's fiscal position and 'reasonable' infrastructure needs as well as the macroeconomic implications of the total nominations.

The *Financial Agreement Act 1994* came into effect on 1 July 1995. The Financial Agreement includes changes agreed at the June 1992 Loan Council meeting. These changes:

- removed the requirement for commonwealth and state borrowings to be approved under the Agreement
- removed the commonwealth's explicit power to borrow on the states' behalf
- abolished the restriction on State's borrowing through the issue of securities in their own names, and
- Included the Australian Capital Territory and Northern Territory as members (they previously had observer status).

These changes, particularly the removal of the requirement for approval of borrowing, constitute a major restructuring of the Loan Council powers. Current arrangements seek to emphasise transparency of public sector finances, through financial market scrutiny of proposed borrowing to restrict borrowing to prudent levels. The Loan Council meets once a year to consider the nominations having regard to each jurisdiction's fiscal position.

The Loan Council's allocations are not binding in a legal sense. According to its own statement the Loan Council has moved from an approach based on rigid compliance to that of a credible and transparent framework for the allocation of net borrowings. To ensure that borrowings are consistent with the state's fiscal and debt position and the nation's overall macroeconomic strategy, the Loan Council has implemented a joint commonwealth/state forecasting exercise. The National Fiscal Outlook contained nationally agreed debt targets and states' nominations were considered in that light. This arrangement continued until 1998. Since then each government's own forecasts are used to set their targets. Governments are required to present three-year forward estimates as well as actual outcomes within a uniform presentation framework. Discipline is now exercised by ratings by international rating agencies, and majority of states have got very good ratings. Most states are now in budget surplus.

III. Australian States: Population and Incomes

Australia is world's smallest continent but the sixth largest country, with population concentrated along the eastern and southeastern coasts. Its arable land is only 6.88 percent of total area. Australia is rich in several minerals, particularly, bauxite, coal, and iron ore. In terms of 2001 figures, the share of agriculture in the economy was only 3 percent, with industry having a share of 26 percent, and services having a share of about 71 percent. As shown by Table 4, New South Wales and Victoria are the two biggest states in terms of population. The total population of Australia is about 20 million. In contrast, India has 28 states and 7 union territories and its population size is more than 50 times as large as that of Australia.

Table 4:Australia: Mean Resident Population: 1997-98 to 2002-03

Share of States and Total Population	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03
New South Wales	33.89	33.88	33.87	33.87	33.84	33.71
Victoria	24.81	24.78	24.76	24.76	24.74	24.74
Queensland	18.38	18.46	18.55	18.64	18.79	19.00
Western Australia	9.72	9.76	9.78	9.79	9.80	9.81
Southern Australia	7.98	7.94	7.89	7.82	7.76	7.71
Tasmania	2.54	2.51	2.48	2.45	2.42	2.40
Australian Capital Territory	1.66	1.65	1.65	1.64	1.64	1.63
Northern Territories	1.01	1.02	1.02	1.02	1.01	1.00
Australia	100	100	100	100	100	100
Australia (million)	18.61	18.82	19.04	19.28	19.53	19.76

Source: Commonwealth Grants Commission, 2004 Review, Supporting Information

In terms of per capita gross state product (GSP), the richest states, leaving the territories are Western Australia followed by New South Wales and Victoria. While economic activities are more concentrated in NSW and Victoria, Western Australia is richer in mineral resources. The relatively less well-off states are South Australia, Queensland, and Tasmania. Table 5 shows the statewise per capita

Gross State Products. The ratio of the highest per capita GSP to lowest per capita GSP among states (Western Australia/ Tasmania) is only 1.5. This ratio, when the territories are included is 1.6. The corresponding ratios in India's case are far higher, showing that difference in fiscal capacities is much lower in Australia compared to that in India.

Table 5 : Australia: Gross State Product at Current Prices

	1997-98	2002-03	1997-98	2002-03
	$ per capita	$ per capita	Relative to average	
New South Wales	31837	40127	105.65	105.18
Victoria	30433	39058	100.99	102.38
Queensland	26623	33782	88.35	88.55
Western Australia	33939	42269	112.63	110.79
Southern Australia	26297	32294	87.27	84.65
Tasmania	22467	27100	74.56	71.03
Australian Capital Territory	36389	47438	120.76	124.34
Northern Territories	32208	45870	106.88	120.23
Australia	30134	38151	100.00	100.00
Ratio of Max pcGSP to Minimum				
Among States only	1.51	1.56		
Among States and Territories	1.62	1.75		

Source: Commonwealth Grants Commission, 2004 Review, Supporting Information

The main states, which serve as 'donor' states, i.e. those who get less than per capita entitlement in the exercise of redistribution through the fiscal transfer mechanism, are New South Wales and Victoria (*see* table 9). Such redistribution is relatively easier to handle as most of the population is concentrated in these two states. In contrast, the recipient states have lower population. Such redistribution is far more difficult in India where a large proportion of population is concentrated in the low fiscal capacity states. Recognising this feature in Australia, Mathews (1993) had observed, "Fiscal equalisation is achieved more easily if the states with low fiscal capacity also have relatively small populations, because transfers involving small per capita payments from the federal (or other granting) government are translated into large per capita grants for the recipient governments".

IV. Vertical Transfers and Vertical Imbalance

Unconditional general revenue assistance as well as specific purpose grants is given to the states according to Section 96 of the constitution. General revenue assistance is given for recurrent as well as for capital purposes. SPPs in the form of recurrent or capital grants are given for specific state functions like social services including health, education, social security, and welfare, economic services (roads, transport, industry assistance, water resources) and other services (housing and urban renewal, regional development, disaster relief and debt charges). Three types of payments can be distinguished (i) payments to states for funding direct state outlays; (ii) payments through the states to be passed on to other bodies or individuals; and (iii) direct payments to local governments.

The evolution of the extent and shape of vertical transfers in Australia in more recent years can be seen in terms of four distinct phases, *viz*., prior to 1976 when general revenue assistance was given to states, 1976 to 1985 when revenue sharing arrangements were put in place, 1986 to 1997 when the system of financial assistance grants was reintroduced, and after the intergovernmental agreement in 2000, which provides for the sharing of the GST revenues.

Phase 1: Upto 1976: General Revenue Assistance

Prior to 1976, general revenue assistance in the form of Financial Assistance Grants (FAG) was given to each state, determined largely by a formula subject to variation through commonwealth-state negotiations. Financial assistance grants were increased annually (From 1959 to 1976) by a formula stressing three factors for each state, *viz*., population changes, average wage increases, and a so-called betterment factor designed to allow the states to expand their relative level of services.

Phase 2: 1976-1985: Revenue Sharing Arrangements

In 1976, as part of the Fraser Government's 'New Federalism' policy, the untied financial assistance grants were replaced by 'tax

sharing entitlements', whereby the states received a fixed percentage of commonwealth personal income tax receipts, distributed on the basis of existing per capita relativities. Access to personal income taxation was reopened to the states. However, the states declined to impose personal income taxes of their own and the commonwealth did not make room for them by reducing commonwealth personal income tax. A state that took up the option would have had to impose an additional tax or surcharge.

Sharing was first adopted for the income tax alone. The pool was formed by applying first a fixed proportion and later an increasing proportion of the tax proceeds collected in the states. This lead to the states' revenues being determined by factors similar to those used for financial assistance grants before. Later, revenue sharing was extended to federal tax receipts as a whole, which somewhat lowered the rate of growth of the states' revenue pool.

Phase 3: 1986-1997: Reintroduction of Financial Assistance Grants

Financial assistance grants were reintroduced in 1986. The size of pool was determined by the percentage growth rate set to reflect specified real changes in assistance, which could be negative when fiscal restraint was called for. From 1990 the commonwealth had agreed to maintain the real value of such grants in order to provide greater certainty in the funding of the state budgets.

The extent of vertical fiscal imbalance between revenue powers and expenditure responsibilities in the federation increased substantially in 1997, when the states lost the capacity to impose business franchise fees on liquor, tobacco and petroleum products. This resulted from the High Court decision, which held that such fees are in the nature of excises and reserved for the commonwealth. The commonwealth compensated the states for their lost revenue by increasing its own excise on those products and returning the revenue to the states in the form of a new component of untied grants.

Phase 4: GST Sharing and the Inter-Governmental Agreement, 1999

The Intergovernmental Reform Agreement on the Reform of Commonwealth-State Financial Relations (IGA) was signed in April 1999. It dealt with the GST-based reforms in the tax system. This agreement was revised in May 1999 as a result of negotiations between

the federal government and the Democrats. The final agreement provided for the levy of GST at the uniform rate of 10 percent. Concurrently, the federal government abolished the wholesale sales tax and the state governments abolished the Financial institutions duty, Bed taxes (in NSW and Northern Territories), Stamp duty on quoted marketable securities, and the debits tax. It was also agreed that several remaining stamp duties would be taken up for review in 2005.

The IGA also provided for the replacement of the Financial Assistance Grants (FAGs) by GST revenue sharing. The overall package of transfers now consists of the GST revenues to the extent of 100 percent, health care grants (HCG), and special purpose payments (SPPs).

The GST and related arrangements have increased the vertical imbalance in raising revenues because some state taxes have been abolished while enlarging the scope of fiscal equalisation through larger overall amount of untied transfers. In order to smoothen the transition, particularly for the states who lose more from the abolished taxes than gain from the larger divisible pool, provision has been made for giving a Guaranteed Minimum Amount (GMA) in the form of Budget Balancing Assistance (BBA) consisting of interest free loans and grants to cover the difference between the share in GST revenue and the GMA. Accordingly the CGC has been asked to calculate two sets of relativities, one based on the sharing of the GST-HCG pool, and the other on the earlier FAGs on the assumption that the old system continued. Appendix A1 gives the difference between FAG and GST relativities as assessed in the 2004 Review. The relativities differ because, among other things, states have given up some resources as part of IGA and the amount under distribution through GST is larger. Analysing the impact of the IGA, in a recent analysis, Collins (2000) observes: “Since the new arrangements will involve the application of newly-calculated GST relativities to a GST funds pool that will be in the order of 35% higher than the FAG pool, any inequities in the HFE process will tend to be magnified over time.”

Table 6 looks at the vertical fiscal imbalance at the level of raising resources in Australia. The commonwealth raised nearly 29 percent more revenues than what it required to spend in 1993-94. This vertical imbalance in raising revenues increased after the introduction of GST. In 2000-01, the commonwealth government raised nearly 40 percent more revenue than it required to spend on its own. This vertical

imbalance has been accompanied by high degree of centralisation in expenditures with the commonwealth government spending about 56-57 percent of total expenditure up to 1999-00, and 52 percent after the introduction of GST. The share of commonwealth expenditure in total expenditure has come down in 2000-01 to 52 percent.

Table 6: Vertical Fiscal imbalance in Australia: Selected Years

	1993-94	1995-96	1996-97	1997-98	1999-00	2000-01
Own Source Revenue: Relative Shares						
Commonwealth	72.6	73.6	73.1	73.1	74.8	76.4
States and Local governments	27.4	26.4	26.9	26.9	25.2	23.7
Own Purpose Expenditures: Relative Shares						
Commonwealth	56.4	57.8	57.1	55.6	55	52.0
States and Local governments	43.6	42.2	42.9	44.4	45	48.0

Source: Adapted from Collins (2000) for 1993-94 to 1997-98, Searle(2002) for 1999-00 and Madden(2002) for 2000-01

In contrast, as indicated in Table 7, in India, nearly 60 percent of total revenues are raised by the central government and its share in the combined total expenditure of the centre and states is about 43 percent. Thus, both in raising revenues and incurring expenditures India is less centralised than Australia.

Table 7 :Vertical Fiscal Imbalance in India: Selected Years

	1993-94	1995-96	1996-97	1997-98	1999-00	2000-01
Revenue Receipts: Relative Share of Centre and States in Accrual						
Centre	60.65	60.67	62.81	60.80	61.60	59.24
States	39.35	39.33	37.19	39.20	38.40	40.76
Expenditures: Relative Share of Centre and States after Transfers						
Centre	42.52	42.80	42.47	43.49	43.17	41.67
States	57.48	57.20	57.53	56.51	56.83	58.33

Source(Basic data): Indian Public Finance Statistics

In the case of receipts from the total interest receipts paid by the states to centre
Are netted out. The relative share of centre and the states in the total expenditure is also influenced by their respective shares in borrowing.

V. Horizontal Transfers: System of Fiscal Equalisation

The main task of the Commission is to advise the commonwealth government on the distribution among the states and territories of the revenue from the GST and Commonwealth Health Grants. The Commission operates such that a full review of state shares including the methods used to calculate them is undertaken every five years, and in the intermediate years shares are updated annually, using the latest available figures and the methods of the last review. The reviews have been done in 1981, 1982, 1985, 1988, 1993, 1999, and 2004. The review process is aimed at ensuring that the relativities reflect changes over time in the circumstances of the states, developments in public administration, and trends in service delivery.

The heart of horizontal transfers system is fiscal equalisation, which is defined by the CGC as follows "State governments should receive funding from the pool of goods and services tax revenue and health care grants such that, if each made the same effort to raise revenue from its own sources and operated at the same level of efficiency, each would have the capacity to provide services at the same standard". The Australian equalisation differs from the Canadian equalisation owing to the reference to efficiency and standard of services. The Canadian system makes reference only to equalisation in fiscal capacity. In Australia, fiscal equalisation looks at both the revenue and expenditure sides.

The CGC makes reference to 'three pillars' supporting and guiding the application of equalisation. These are capacity equalisation, internal service standards, and policy neutrality. Policy neutrality refers to the consideration that state's own policies or choices about services should not directly influence the level of grants it receives. The CGC's calculations are based on all-state averages so that these may reflect average efficiency. These are also treated as ensuring policy neutrality being the result of policy decisions of all states. There is a comprehensive coverage of the services provided by the states and the revenues raised by them.

A. Equalisation: From Disabilities to Relativities

The CGC recognises that since states have differential fiscal capacities and different demographic, economic, and physical circumstances, there will be differences in their revenue raising capacities and relative costs of providing services. Relative differences that are beyond the control of individual state governments are called 'disabilities'. Standards of services as well as the disabilities are measured relative to the all-state position.

The first step in the equalisation exercise is the preparation of the standard budget. The standards are equal to all-state averages in expenditures as well as revenues. The Commission does not consider any exogenous targets or norms. Any departure from the average per capita expenditure needs to be justified on account of cost disabilities.

The equalisation budget brings together all expense and revenue categories of state budgets. The per capita expense for each service that the state would incur if it were to provide the Australian average standard of service is calculated. On the revenue side, the per capita revenue each state would raise if it applied the average revenue effort to its revenue base is calculated. Expenditure assessment adjusts the standard expenses to allow for the effects of disabilities. Disabilities are broadly classified as use disabilities and cost disabilities, according to whether they affect the rate of use or the cost of each unit of service. Use disabilities reflect differences between states in the use of services as a result of factors such as population characteristics and the availability of private services. Cost disabilities are influences that affect the cost per unit of service provided to particular groups or places, e.g. large cities or remote areas. Cultural and communication factors can increase the costs of providing some services to people from cultural and linguistically diverse backgrounds. Some cost disabilities arise due to variation in inter-state prices as also due to diseconomies of scale.

On the revenue side, tax bases are generally measured using the value of transaction in each state that would be taxed under the average tax policy. For example, the value of the payroll tax is the estimated annual value of payrolls above a threshold level paid by the private sector businesses and most public trading enterprises. Table 8 gives some of the major revenue and expenditure side factors taken into account in the assessment of disabilities.

Table 8: Main Factors affecting Revenue and Cost Disabilities

Revenue Bases	Factors affecting Expenditures
GSP per capita	Share of Australian Population
Payrolls of large businesses	Proportion of population aged 65 years or over
Sales of real estate	Proportion of population who are indigenous
Value of commercial/industrial land	Proportion of population resident in centers of 50000 or more
Value of mining production	Proportion of population resident in remote areas
	Proportion of population enrolled in government schools
	Proportion of population with low income
	Relative average weekly earnings
	Relative length of arterial roads

A mathematical presentation of the equalisation methodology can be provided, using symbols defined as below:

e_i = standardised per capita expenditure of state i; $?_i$ = expenditure disability of state i

r_i = standardised per capita revenue of state i; $?_i$ = revenue disability of state I

o_i = per capita special purpose payment of state i;

d_s = per capita budget surplus; $d_i = d_s$ for all states

N_i = population of state i; ? Ni =population of all states

Subscript‘s’ indicates corresponding numbers for the all-state averages. The per capita all-state average grant is given by

$$g_s = e_s - r_s + d_s - o_s \quad (1)$$

The per capita grant to state i is given by

$$g_i = e_i - r_i + d_i - o_i \quad (2)$$

Here, e_i and r_i refer to standardised expenditure and revenue for state i, d_i is the standard budget surplus, which is common for all states

and o_i is the given special purpose payment. All standardisations are made in relation to corresponding all-state averages which provide the standard, and the relevant expenditure and revenue terms can be written as

$$e_i = ?_i e_s, \quad r_i = ?_i r_s \qquad (3)$$

For a given state the standardised expenditure and revenue will be the summation of standardised expenditures on different categories and standardised revenues from different sources. The SPPs are considered exogenously determined. The CGC determines first the total grants and derives the untied grants by deducting the SPPs (o_i) that are treated by inclusion. Grants inclusive of the SPPs may be written as g* and per capita untied grants as g, where

$$g^*_i = g_i + o_i \qquad (4)$$

There are three ways in which the derivation of the share in GST-HCG transfers can be presented: the standardised model version, the needs version, and the normative gap version. For this purpose, we focus on $g^*_{i,}$ from which gi is derived by deducting the SPP grants.

(a) Standardised Model Version

In this version, we write the state-specific terms as ratios to the all-state averages. Substituting the terms in equation (3) in equation (2), we have

$$g^*_i = ?_i e_s - ?_i r_s + d_s \qquad (5)$$

and $$g_i = g^*_i - o_i \qquad (6)$$

Thus, the financial assistance to a state is the excess of assessed expenditure over assessed revenues, both written as fractions of the all-state averages plus a budget surplus which is common for all states, minus the special purpose grants treated by inclusion.

(b) Needs Version

Substituting $r_s - e_s = d_s$ in (5), we can write what is known as the needs version of the grant equation. Thus,

$$g^{*}_{i} = [(?_{i} - 1)e_{s} + (1-?_{i})r_{s}] \qquad 7)$$

This indicates that the essence of the exercise is the departure of the disabilities $?_i$ and $?_i$ from 1. Further, total grants can be seen as the sum of expenditure disabilities and revenue disabilities. This equation also makes clear the difference between the Australian and Canadian systems. In the Canadian system only the second term, that is, revenue disability is operative and no consideration is given to the expenditure side disability. This implies that implicitly $?_i$ is put equal to 1. The revenue disability ($?_i$) in Australia [p.350 of the CGC 2004 Review, Supporting Information]is measured by the ratio of states i's revenue base (bi) and the average per capita revenue base (bs). Thus, $?_i = b_i/b_s$. Substituting this in equation 7 and setting $?_i=1$, we have

$$g^{*}_{i} = r_{s} - ?_{i}\, r_{s} = ab_{s} - a\, b_{i} \qquad (8)$$

where $a = r_s/b_s$, i.e. the average tax rate.

This describes the method of determining untied transfers in Canada (*see* Rangarajan and Srivastava, 2004 for a discussion).

A third way in which the determination of grants can be written is what might be called the normative gap version. This would facilitate comparison with the Indian system as well.

(c) Normative Gap Version

The term $?_i\, e_s$ can also be written as

$$e_{s}\, ?_{i} = e_{s} + (?_{i} - 1)e_{s} \qquad (9)$$

From equation (5)

$$g^{*}_{i} = e_{s} - ?_{i}\, r_{s} + (?_{i} - 1)e_{s} + d_{s} \qquad (10)$$

Substituting a.bi for $?_i\, r_s$, we can write

$$g^{*}_{i} = e_{s} - a\, b_{i} + ß_{i}\, e_{s} + d_{s} \qquad [\text{where } ß_{i}=(?_{i} - 1)]$$

The term e_s can be written as az where z is a constant [$e_s/a=z$]

$$g^*_i = a[z - b_i] + ß_i e_s + d_s \quad (11)$$

The first term is the term comparable to the distance criterion used in the tax sharing formula in India. However, the distance from which the revenue base of a state is measured is different in the Indian formulation. The expenditure term is also comparable to the supplementary factors representing factors accounting for more than average costs like area and infrastructure. The term d_s is constant and therefore reflects the population term in the devolution formula. Thus, the Australian formula is comparable to the Indian tax sharing formula, although the relative weights to different terms are determined and derived differently.

(d)Total Grants and Relativities

Deriving g from g*, the total CGC grant for a state can be written as:

$$G_i = N_i g_i \quad (12)$$

The per capita relativity of state i gives its per capita grant relative to the all state per capita grant, $g_{s.}$ Thus,

$$f_i = g_i / g_s \quad (13)$$

The relativities can be converted into shares:

$$s_i = G_i / ?\ G_i = g_i Ni / g_s ?\ Ni = f_i [Ni / ?\ Ni] \quad (14)$$

A relativity of below one means that a state requires less than an equal per capita share of the divisible pool. A relativity above 1 means that a state requires more than equal per capita share. No state can have its relativity increased without the relativity of one or more states being reduced. The relativities are based on the average of the assessments for the five most recently completed years. Each state's relativity for a grant year is the average of its per capita requirement for a share of the pool in each of the five most recently completed financial years. Table 9 gives relativities and corresponding shares with respect to the GST assessments in the 2004 review. It is clear that redistribution is from NSW and Victoria to the other states in comparison to an equal per capita distribution. Table 10 describes how the relativities have moved over time between the 1999 Review and the 2004 Review. Between the

two Review years, the per capita relativities of New South Wales and the Northern Territories have both gone down. There is a major change in the status of Western Australia, whose share had remained below 1 until the 2003 update. It has become a net recipient in the 2004 Review with a relativity of more than 1.

Table 9: Australian States: Population, Income and 2004 Relativities

States	PCGSP*	Population #	Share in all-state GSP	Assessed GST Relativity	Share in transfers **	Excess of Share of Transfers over share of population
New South Wales	36505	33.8	35.5	0.86750	29.322	-4.479
Victoria	35810	24.7	25.4	0.86534	21.374	-3.326
Queensland	30727	18.8	16.6	1.05504	19.835	1.035
Western Australia	38664	9.8	10.9	1.03054	10.099	0.299
Southern Australia	29286	7.8	6.6	1.20407	9.392	1.592
Tasmania	25024	2.4	1.7	1.55939	3.743	1.343
Australian Capital Territory	42549	1.6	2.0	1.12930	1.807	0.207
Northern Territories	41472	1.0	1.2	4.26538	4.265	3.265
Australia	34769	100.0	100.0	1.00000	99.836	-0.164

* Average of 1998-99 to 2002-03
# 2001-02 based on data from 2001 census
**based on GST relatives (average over 1998-99 to 2002-03)
Source: Tables C-11, E-5 and E-8, Report on State Revenue Sharing Relatives, 2004 Review, Commonwealth Grants Revnue Sharing

Table 10: Australia: Per Capita Relativities : 1999 Review to 2004 Review

	1999	2000	2001	2002	2003	2004
	Review	Update	Update	Update	Update	Review
New South Wales	0.89948	0.90913	0.92032	0.90631	0.89117	0.8670. 86750
Victoria	0.86184	0.87049	0.87539	0.86824	0.8701	0.86534
Queensland	1.00687	1.0183	1.00269	1.01174	1.01902	1.05504
Western Australia	0.94793	0.98365	0.97516	0.97592	0.96946	1.03054
Southern Australia	1.2068	1.18258	1.17941	1.19447	1.21215	1.20407
Tasmania	1.60905	1.51091	1.50095	1.55419	1.59948	1.55939
Australian Capital Territory	1.1027	1.11289	1.14633	1.15216	1.14979	1.12930
Northern Territories	4.84429	4.16385	4.02166	4.24484	4.38638	4.26538

Source: Report of Commonwealth Grants Commission, 2004 Review

An interesting issue that arises is whether equalisation calculations remain valid when the sum of total grants under the CGC formula is different from the GST amount that is to be distributed. According to the equalisation calculations, the total distributable amount is,

$$G^* = [(e_s - r_s + d_s - o_s) ? Ni] \quad (15)$$

This amount can be less than or more than the actual GST collections. Suppose that GST is a proportion ? of G*, where ? can be equal to or different from 1.

$$GST = ?. G^* \quad (16)$$

If ? = 1, the equalisation calculations remain valid. However, unless it can be established that standardised expenditures, revenues, and budget outcomes would fall or rise in the same proportion in which actual GST is lower or higher than the estimated G*, actual grants may not be consistent with required equalisation entitlements. In a recession, when GST is lower, salaries and other cost elements are not likely to fall in the same proportion as the fall in revenues. It is implicit in the

equalisation formula as it is applied that it is homogenous of degree one. In practice, such a condition may rarely be met.

B. Features of Revenue Assessment

The main revenue categories analysed are payroll tax, land revenue, stamp duty on conveyances, financial transactions taxes, stamp duties on shares and marketable securities, gambling taxation, insurance taxation, heavy vehicle registration fees and taxes, light vehicle registration fees and taxes, stamp duty on motor vehicle registrations and transfers, other tax revenue, mining revenue, and contributions by trading enterprises. A list of the assessed revenue sources is given in Appendix A2. For each category, the relevant revenue base for each state is taken up. The actual revenues from all states are added up. Dividing these revenues by the aggregate revenue base of all states gives the average tax rate.

Thus, the average tax rate for any revenue head is given by

$$a = r_s/b_s \qquad (17)$$

where r_s [=? R_i/? N_i] and b_s [=? B_i/? N_i] indicate all-state per capita revenue and expenditure from the relevant category.

The standardised per capita revenue of a state for a given category is given by

$$r_{ij} = a_j * b_{ij} \qquad (18)$$

where i refers to the state and j refers to the revenue categories. Summation of all such terms over the revenue categories gives per capita standardised total revenue of a state

$$r_i = ?_i \; r_s \quad = a \; b_i \qquad (19)$$

where a is a weighted average of the individual all-state average tax rates.

C. Features of Expenditure Assessment

On the expenditure side also assessment is undertaken in a disaggregate way. Techniques of expenditure assessment are recognised to be the unique part of the CGC methodology of determination of relativities. It is also that component of the methodology that is often criticised for its complexity and lack of transparency.

The overall methodology can be seen in three steps. Aggregate expenditures are the sum of category expenditures. Each category of expenditure consists of a weighted sum of components. Each component is a function of one or more disability factors, i.e. variables relating to which disabilities are associated. The main expenditure categories that are separately assessed relate to education, health and community services, law, order and public safety, culture and recreation, and economic activities. A complete list of the expenditure items that were separately assessed in the 2004 Review is given in Appendix A3. Expenditures are considered net of user charges. The expenditure relativity $[?_i]$ therefore gives a weighted average of the relativities of the individual expenditures categories. Many of the disability factors like wages, administrative scale, socio-demographic composition are common for several components in different categories of expenditures, and general methodologies have been developed for treating these disabilities. Appendix A4 provides an illustration of the application of the assessment methodology in the case of expenditure category of 'Inpatients Services'.

D. Common Disability Factors

A discussion of the disability factors also makes it clear that the CGC has to resort to judgments at various places, particularly in regard to weights of different factors affecting expenditure levels where expenditures are considered net of user charges.

(a) Wages Input Costs

Wages and salaries are major costs incurred by the states, which differ significantly between states. In the 1999 Review, this disability was measured by considering the inter-state differences in average weekly earnings in the non-state sector. This was considered relevant as these differences were not likely to be affected by state policies. The Commission averaged the assessments over 10 years and

halved the interstate differences on the basis of judgment. In the 2004 Review also, the Commission found that there are significant wage differentials between states. The underlying wages were well above average in New South Wales and below average in Queensland, South Australia, and Tasmania. The Commission undertook an analysis of the underlying causes of the wage differential on the basis of an econometric model but considered that the analysis did not 'provide a fully adequate basis to estimate disabilities for the smaller states' (2004 Review, p.40). Specific adjustments were then made to the model results on the basis of judgment.

(b) Socio-demographic Composition

Factors like age, sex, income, and location account for differences in per capita expenditures. The Commission in its 1999 Review assessed socio-demographic composition disabilities by applying the Australian average use and unit cost weights to the number of people in each state in different groups characterised by age, sex, income, location, non-English background, and indigenous status. Use and cost weights were calculated from national data sets, wherever possible. Judgment was used when data were not available, particularly in regard to cost weights for indigenous people living in remote locations and for people having low English ability. Similar method was applied in the 2004 Review also except that additional costs were provided on account of cultural and linguistic diversity.

(c) Administrative Scale

Some fixed costs are incurred in all states for providing basic services regardless of the size of population. In per capita terms, these costs are higher for less populous states. The administrative scale factors therefore result into higher relativities for less populous states and lower relativities for the more populous states. Here again, the commission had to resort to some judgment. The Commission observes "Some data for fixed costs are available for most expense categories or groups of categories but comprehensive estimates call for the use of judgment" (2004 Review, p.45).

E. Adjusting for Specific Purpose Payments

The Specific Purpose Payments (SPPs) are grants from the commonwealth to the states for specified services, such as health, education, roads and the environment. Section 96 of the constitution provides the legal basis for SPPs and other commonwealth grants. It stipulates that 'the (commonwealth) Parliament may grant financial assistance to any state on such terms and conditions as the parliament thinks fit."

The commonwealth uses SPPs for a number of reasons. In particular, SPPs are given to:

- introduce programs reflecting commonwealth wishes in areas of State Constitutionals responsibility (the majority of SPPs);
- impose or encourage national standards (e.g. free public health and vocational training standards);
- pay states for the delivery of commonwealth programmes (there are only a few examples of this sort e.g. funding legal aid for federal law cases);
- compensate states for the cost of commonwealth initiatives (such as the cost of the States of increased access to pensioner concessions); and
- comply with international obligations (e.g. payments to help manage World Heritage areas).

The SPPs were introduced in the 1920s to provide assistance for road construction and debt costs. These remained limited in scope until after World War II. Following World War II there was a gradual increase in the number of tied grants programmes, including those for housing, education, agriculture, some health programs and infrastructure development. The SPPs increased markedly in the mid-1970s under the Whitlam Government, with comprehensive funding for education and public hospitals and the provision of general purpose grants for local governments. Since then, SPPs have continued to increase slowly as a proportion of total commonwealth funding to the states.

The specific purpose grants are administered by the statutory commissions appointed by the commonwealth government. These constitute about 20 percent of the total expenditure of the states. The distribution of specific purpose payments hinges on several factors, including the historical distribution, which was often arbitrary or reflected

commonwealth's policy priorities. In applying the equalisation principle, the CGC takes into account all operating revenues available including the SPPs, except those quarantined, that is excluded, before calculating its relative need for revenue from the GST-HCG pool.

The SPPs are subject to individual agreements, which include a variety of terms and conditions to the grants. They are also usually classified as either: payments to the states for programmes administered by the states or payments 'through' the states, which are payments to be passed on to other bodies, principally non-government schools and local governments.

The SPPs have grown substantially in importance over time, increasing from 22 percent of total commonwealth payment in 1942-43 to 51 percent of total commonwealth payments in 2001-02. Over time The SPPs have also proliferated in number. The Commonwealth identified over 120 separate SPPs, many of which consist of a number of sub-programmes. Questions have often been raised about the efficiency of maintaining a large number of small SPP programs. Since many of the SPPs are in areas in which the states have sole responsibility under the constitution, questions arise as to whether it is efficient and appropriate for the commonwealth to be determining priorities in such areas. Commonwealth conditions on SPPs show substantial variation. Some of the largest SPP programmes (e.g.funding for government schools and hospitals) have a limited set of conditions and provide the states with a relatively high degree of flexibility to provide services consistent with the general objectives of these SPPs, whereas small SPP programmes can involve substantial commonwealth oversight and micro management.

In its assessment exercise, the CGC divides the SPPs into three main categories: SPPs considered out of scope for the assessment exercise, SPPs treated by exclusion, and SPPs treated by inclusion in the assessment exercise. Most of the major SPPs are considered by inclusion. The effect of the CGC's method of inclusion is to neutralise allocation priorities of the SPPs as higher SPP allocations would result in lower untied grants and *vice versa*. Garnaut and FitzGerald (2002) observe in their Review (Final Report 2002, p 11): "The CGC effectively overrides the assessments that underlie most SPP allocations, which are determined under direct legislative and ministerial authority."

VI. Some Issues in Assessment

The outcome of such a comprehensive equalisation exercise in Australia is to reduce horizontal imbalance in the state expenditures. Table 11 shows that this objective is successfully achieved. If the territories are excluded, the actual expenditures are within a narrow range from the all-state mean. The difference between the minimum and maximum per capita expenditure relative to the all-state average is in the range of 19 to 22 percentage points. The per capita expenditure in the northern territories is however more than double of the all-state average. This is the outcome primarily of the additional costs of providing services in this region. The coefficient of variation of the expenditures relative to the average is limited in the range of 7 to 10 per cent if the Territories are excluded. In contrast, the outcome of the overall transfer process in India still leaves considerable horizontal imbalance in the system. It is also clear that states which receive larger grants have larger per capita expenditures implying larger public sectors in these states.

Table 11: Australia Horizontal Fiscal Imbalance
Per Capita Expenditure Relative to All-State Average (percent)

	1999-00	2000-01	2001-02
New South Wales	98.27	95.39	96.30
Victoria	90.85	91.01	88.93
Queensland	90.79	98.22	104.44
Western Australia	113.01	111.91	107.17
Southern Australia	112.68	106.67	106.29
Tasmania	111.10	112.19	108.31
Australian Capital Territory	119.56	126.62	115.38
Northern Territories	265.84	266.36	249.00
Australia	100.00	100.00	100.00
Minimum	90.79	91.01	88.93
Maximum exc territories	113.01	112.19	108.31
Range	22.22	21.18	19.38
Coefficient of Variation(exc territories)	10. 5	8.7	8.5

Source: Commonwealth Grants Commission, 2004 Review, Supporting Information
Note: Expenditures are compiled from the equalisation budget.

In the context of CGC's assessment procedures regarding horizontal fiscal equalisation, several issues, particularly those related to its impact on efficiency, have been raised from time to time. These issues have become even more important in the context of the transition

from sharing the FAG pool to sharing a GST-HCG pool. Some of these issues are discussed below.

a. Extent of Redistribution

The main outcome of the exercise of horizontal fiscal equalisation is redistribution of revenue resources among states. The CGC calculates the extent of redistribution compared to a situation of equal per capita allocations. Table 12 shows that the extent of redistribution has ranged from 11.4 percent in 1981-82 to a low level of 6 per cent in 2001-02. It is also shown that the extent of redistribution has come down over the years. The extent of redistribution can also be measured in terms of what the donor states would have received on a per capita basis. For example, in 2002-03, on per capita basis, New South Wales and Victoria together would have received $21951 million, and the amount redistributed is 11.3 per cent of this.

Table 12: Total Pool over the Years and Extent of Redistribution

Year	Based on review/ update of	Total pool ($ mllion)	Amount redistributed ($ million)	Proportion redistributed (percent)
1981-82	1981Review	8202.9	932.4	11.37
1982-83	1982 Review	9217.9	1023.5	11.10
1985-86	1985Review	11826.3	1205.7	10.20
1988-89	1988 Review	16019.9	1265	7.90
1993-94	1993 Review	17315.7	1632	9.42
1999-00	1999 Review	23064.6	1692.1	7.34
2000-01	2000 Update	30506.3	1961	6.43
2001-02	2001 Update	33209.7	1988.5	5.99
2002-03	2002 Update	37555.7	2472.4	6.58
2003-04	2003 Update	38825.2	2747.5	7.08
2004-05	2004 Update	41594.1	3213.7	7.73

Source: Commonwealth Grants Commission, 2004 Review

b. Revenue and Expenditure Equalisations: Relative Roles

The distinguishing feature of the Australian fiscal equalisation exercise is the importance that is given to expenditure side equalisation.

Revenue side equalisation is practiced, for example, in Canada also, and the two systems in their mechanics are quite similar. While in Canada, in the general purpose grant calculation only revenue side equalisation is done, Australia undertakes both revenue side and expenditure side equalisation. Interestingly, as table 13 indicates, expenditure equalisation is the stronger influence since the redistribution through expenditure requirement at $2521.4 million is greater than that owing to revenue raising capacity at $1880.7 million. It can also be seen that New South Wales loses more because of its higher revenue raising capacity than on account of assessment of expenditure requirements. On the other hand, Victoria suffers only because of expenditure equalisation.

Table 13 : Relative Contribution of Revenue, Expenditure and SPP Disabilities in the 2004 Review

$ million

	Revenue Raising Capacity	Expense Requirements	SPPs	Total redistribu-ted
New South Wales	-1159.6	-625.5	69.6	-1715.50
Victoria	488.6	-1871.9	97.9	-1285.40
Queensland	262.6	132.4	21.2	416.20
Western Australia	-721.2	840.8	0.6	120.20
Southern Australia	668.8	-9.4	-49.9	609.50
Tasmania	327.5	226.3	-37.8	516.00
Australian Capital Territory	102.1	-13.7	-6.0	82.40
Northern Territories	31.1	1321.9	-95.6	1257.40
All States*	1880.7	2521.4	189.4	4591.50

* sum of positive amounts

Source: Report of Commonwealth Grants Commission, 2004 Review

c. Macro Approach in Revenue Equalisation

As far as the revenue-side equalisation is concerned, the approaches in Canada and Australia are quite similar. In both cases, a tax-by-tax approach is followed with the average all-state tax rate being applied to the actual tax base of each state. The difference is in the

nature of taxes themselves. While in Canada, most of the major taxes are used by the provinces including income and corporate taxes as also the GST, in Australia, states are left with a very limited and specialised set of taxes. This also has a bearing on the issue whether a macro approach rather than a tax by tax approach would be better. In the Canadian case, the individual tax bases are more likely to be highly correlated to a macro base than in Australia where the taxes under consideration are small and specialised. Nevertheless, the issue of substituting a macro base for the tax by tax approach has been discussed in Australia also. In the macro or global approach each state is free to choose any combination of utilisation of the tax bases available to it as long as it produces the same overall revenue result. The CGC recognises the importance of the global approach when it observes: "A global approach assumes that, whatever the legal incidence of a particular form of revenue, its ultimate effective incidence would fall on income or be reflected in the value of production…The type of tax base adopted has implications for the nature of equalisation. The use of global (and sub-global) bases tends to imply that equalisation is about the capacity of State to pay tax. The use of tax bases tends to imply that equalisation is about the capacity of state governments to raise revenues" (CGC, 1992).

Collins (2000) (pp. 49-54) shows that use of a global approach leads to results that are quite different from those of a tax by tax approach. He lists the following arguments against using partial measures, i.e., tax by tax approach in measuring fiscal capacity:

- Individual tax bases are not necessarily related directly to state taxpayers' ability to pay.
- It is possible for the states to adjust their calculated
- taxable capacities by varying tax mixes and tax policies.
- Partial measures are not policy neutral-for example, improvement in rail network of a state might reduce its motor vehicle tax capacity; on the other hand, improvement of suburban transport facilities might lead, through higher land prices, to higher land tax capacity.
- Federal tax policies can affect states' taxable capacities- for example reduction in capital gains tax rate may through raising property prices and property turnover, increase revenues from land taxes and stamp duties.

Collins argues that significant data problems exist in Australia in measuring global tax bases. He observes (Collins, 2000, p.53) that there are serious data difficulties with state national account statistics. The narrow tax bases left with the Australian states is also an issue as they are poorly correlated with global measures of fiscal capacity. Favouring the adoption of global measures of fiscal capacity in the longer run, he observes (p.53): "While the balance of the argument might lie with the use, in the long run, of global rather than partial measures of states' taxable capacities, it does not appear possible at this stage to mount conclusive arguments in favor of either approach." Given the narrow tax base of the states in Australia, a tax-by-tax approach may have more relevance. The Indian situation is quite different as the tax base of the states is much wider.

d. Equity Issues

While the CGC methodology has successfully equalised access to resources to the states provided they make comparable revenue effort, the effect of the scheme of transfers on equity objectives have often been questioned. Horizontal equity refers to 'equal treatment of individuals in equal circumstances'. Garnaut and FitGerald (2002) in their Review note that "There are well known systematic regional differences in the quality of service available to Australians (e.g. between metropolitan, provincial, rural and remote areas. Some differences are inevitable, reflecting differences in costs of provision of services, while others are amenable to policy change". They argue that "the CGC's approach has equalised States" capacity to provide services, not service provision". In particular, they argue that it is possible to base an HFE distribution on monitoring and evaluating outcomes without prescribing them.

In theory, equalisation has always been about equalising fiscal capacities. Actual outcomes may yet differ because of differences in policies and preferences as well as efficiency in different states. There is, however, some evidence of convergence in the provision of services as the proportion of redistribution of the total pool of distribution (table 12) has steadily come down.

e. Efficiency Issues

The issue of efficiency in federal arrangements can be considered in terms of whether decentralisation of expenditure is efficiency augmenting, and if that is so, whether equalisation transfers help promote efficiency of the sub-national governments. In the general literature on efficiency implications of decentralisation (e.g. Oates,1972), the source of efficiency is traced mainly either to the possibility of non-uniform provision of local public goods based on lower signaling costs of local preferences or to greater competition among jurisdictions (Breton,1996). In both cases, however, a variety of decentralisation failures (Prud'homme, 1995; Breton, 2002) may constrain the efficiency-augmenting effects. Some of the cases of decentralisation failure listed, for example, in Breton (2002) relate to costs of information, political participation costs, coordination costs, diminishing supply costs, and dynamic instability arising from unhealthy 'race to bottom' type competition.

In their Review of Commonwealth-State Funding, Garnaut and FitzGerald (2002) have summarised in their final report several types of efficiency-reducing effects of the transfer arrangements in Australia. They argue that equalising transfers tend to:

- reduce the incentives for resources to locate in higher productivity locations;
- reduce the capacity for investment in human resource development in low productivity regions to enhance national economic potential;
- increase the overhead and transactions costs of managing the system;
- discourages the attraction and retention of high-value mobile resources in an international market;
- leads to duplication, lack of co-ordination and game playing by officials;
- unduly enlarges the role of the public sector;
- encourages grant-seeking behavior, particularly where states have the capacity to influence the CGC's assessed standard budget;
- dilutes incentives for cost reducing reforms;
- discourages growth promoting policies if the benefits of growth are mostly transferred to others;

Garnaut and FitzGerald observe that most of these efficiency reducing effects arise from the expenditure side of equalisation: " It is common to perceive the efficiency costs as arising principally from compensation for disabilities on the expenditure side, through their tendency to discourage movement of people out of high cost locations." They also note that states that are larger recipients of equalisation grants have noticeably larger public sectors. Thus, they observe: "there are signs that the exceptionally large role of the public sector and exceptionally small role of the private sector in some states that are large recipients of transfers, notably Tasmania and South Australia, have changed the political orientation in ways that are unfavorable to growth."

The theoretical literature on equalisation, particularly the contributions by Buchanan, 1950; Scott, 1950; Buchanan and Wagner, 1971; Graham, 1964; Gramlich, 1985 and Mathews ,1993 has looked at the issue of the implications of equalisation, especially expenditure side equalisation on efficiency in detail. While Scott had argued way back in 1950 that equalisation is detrimental to efficiency because it impedes mobility of factors of production to locations where they would be most productive, Buchanan and Wagner have argued that efficiency would be impeded if migration is fiscally induced by states providing more public goods at lower tax costs. They argued that rich states can induce migration by providing higher net fiscal benefit but, eventually owing to the existence of congestible goods, the net fiscal benefit will fall. As too many people migrate to the richer states, there will be a loss of efficiency in the economy as a whole. This incentive towards excessive migration in their view ought to be neutralised through fiscal equalisation. Under these circumstances, equalisation is consistent with equity and efficiency.

Gramlich (1985) particularly questioned expenditure side equalisation by arguing that this removes any disincentives for people to move from high cost areas to low cost areas and therefore raises the overall costs of service provision. He favored that no allowance should be made for expenditure disabilities. In response Mathews (1985) had argued that expenditure side equalisation was an essential ingredient of overall equalisation. Grewal and Mathews (1983) also showed that locational choice is usually influenced by private production and consumption activities rather than by fiscal and other activities of the governments. While there may be a case for making transfers taking into account cost disabilities due to structural and exogenous factors, policy-

induced disabilities should not be neutralised. However, in practice, it is often difficult to separate one from the other and measure their impact.

VII. Summary and Conclusions

As compared to Australia, India has not only a larger number of states and a larger population but also greater concentration of population in low fiscal capacity states. Fiscal transfers aimed at horizontal equalisation therefore call for larger redistribution in India. The differences in the size, heterogeneity and the scale of problems notwithstanding, the conceptual basis of the transfer system in Australia has much relevance for India. At the same time, serious difficulties have been noted with the Australian system also. Some of the important differences, similarities, and essential lessons in respect of the vertical and horizontal dimensions of transfers are summarised below.

- The Australian system is characterised by a high degree of vertical imbalance and centralisation of expenditure. In raising revenues, the Indian system is also characterised by high vertical imbalance but somewhat lower than that in Australia. Also, centralisation of expenditure after transfers in Australia is higher than that in India. In the context of Australian vertical imbalance, Mathews(1993) had observed: "It is a paradox that Australia has combined the world's finest system of horizontal fiscal equalisation with one of the most vertically unbalanced fiscal systems. The threat to horizontal fiscal equalisation in Australia arises not from any inherent defects in fiscal equalisation, but from pressures which are being placed on it by continuing failure to restore vertical fiscal balance. It is the commonwealth tax monopoly that needs to be dismantled and not the system of fiscal capacity equalisation". Since Mathews wrote, with the GST arrangement, vertical fiscal imbalance has gone up rather than down. Large vertical imbalance may be justified in situations where horizontal imbalances are large requiring correction through equalisation transfers. This does not appear to be the case in Australia.

- In Australia, the determination of the vertical share of resources to be transferred to the states is not in the hands of the Commonwealth Grants Commission. It gets determined automatically by the amount of revenues collected under the GST supplemented by the Special Purpose grants which are also in the hands of the Commonwealth government. In India, the Finance Commission determines a large part of the transfers in the form of tax devolution under global sharing and grants, requiring it to determine in some way the vertical imbalance. The Finance Commission transfers are supplemented by the Planning Commission grants and other discretionary grants determined by the central government. Global tax sharing may have some merits over the sharing of a single tax as in Australia where the collecting agency, namely the Commonwealth government has no revenue interest. Deciding about vertical transfers facilitates horizontal equalisation and to that extent India has an institutional advantage.

- Australia has one of the most elaborate systems of determining equalisation transfers. The Australian equalisation payments are based on explicit principles that aim at enabling states to provide its citizens services at comparable standards if they are willing to make comparable revenue efforts and are able to operate at comparable levels of efficiency. The overall approach to equalisation is with reference to entire transfers as most special purpose payments are integrated into the equalisation calculations. The Australian system is sound in principle but the methodology adopted particularly with respect to equalising expenditure disabilities has made the system unduly complex. The system is still grappling with issues of efficiency. From the Indian perspective, the major lesson to be drawn from the Australian experience is the need for a clearer enunciation of the equalisation objective and its translation in practice is called for. It may be practical to consider a macro base for revenue side equalisation and focus expenditure equalisation in respect of select services where mobility is limited.
- An important feature of the Australian system is its emphasis on cost disabilities. In India, some consideration is given to cost disabilities through incorporation of factors such as area and infrastructure in the devolution formula. The emphasis has to be on neutralising structural and exogenous cost disabilities. Correcting policy induced cost disabilities may lead to a loss in efficiency. Separating one from the other is, however, a difficult task.

- The relativities in Australia and the shares in tax devolution in India are determined using past data. In this, Australia may have an advantage since they use a rolling forward method for each update of the relativities. The time-lag is, therefore, much less in their case than in India. However, in both countries, the shares are applied to transfers, which are not known in advance. The Australian transfer system does not use any projections. It treats the grant entitlement emerging from the most recent data as appropriate for the year for which the transfers are made. In the Indian case, since transfers are to be determined for a period five years ahead and since, in addition to tax sharing, grants are to be specified in absolute amounts, projections are required.

- The working of the Australian Loan Council has relevance for India where consideration of sub-national borrowing in a framework of sustainability and macroeconomic stability is desirable. There is need for an institutional arrangement for keeping the growth of central and state debt within prudent limits and consistent with requirements of macroeconomic stability. In fact, as in Australia, states should be allowed to raise loans in the market subject to agreed limits and there is no need for the central government to intermediate. Over time, such an arrangement can lead to better discipline.

End Notes

[1] The terms of reference called for:
a. an inquiry into and report upon, by 25 February 2004 at the latest, the question of per capita relativities which the Commission would regard as appropriate to apply after 2003-04 for the distribution of the combined pool of

GST revenue grants and health care grants among the States, the Northern Territory and the Australian Capital Territory.
b. a review as to whether the allowances for special circumstances granted to the Australian Capital Territory continue to be necessary and, if so, make appropriate assessments.
iii. Preparation of a work programme for improving methods of assessment and consult with the States and the Commonwealth in deciding the priorities for the work programme.

[2] These payments include (but are not necessarily limited to): (a) National Competition Payments; (b) states' contribution the commonwealth's deficit reduction strategy; (c) payments to the states to reimburse them for revenue lost as a result of the establishment of a national scheme of companies, securities and future regulation; (d) payments which are funded from the National Heritage Trust of Australia and the Regional Telecommunications Infrastructure Fund; (e) payments for the Fringe Benefit Tax Transitional Grants for the public and not-for-profit hospitals; (f) payments for Building IT Strengths–Tasmanian 'Intelligent Island';(g) payments for Connecting Tasmanian Schools; (h) payments for the Extension of the First Home Owners Scheme; (i)payments for the Roads to Recovery program; and (j) Commonwealth payments made to the Sinking Fund on State Debt.

[3] These components are (a) payments in relation to mental health; (b) payments in relation to the National Health Development Fund; (c) payments in relation to the Pathways Home Initiative; (d) all payments under an adjustment module, including those related to the Critical and Urgent Treatment (CUT) Waiting List Initiative; and (e) Compliance payment arrangements (in this case including the maximum available compliance payments in the assessments).

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Appendix A1: Difference between GST and FAG Relativities

Table A1 below provides a comparison between GST and FAG relativities as assessed in the 2004 review. Although the CGC was not asked to provide estimates in the 2004 review for the FAG relativities, i.e. relativities calculated with the assumption that the old system of financial grants continued. A comparison with the 2004 GST relativities shows that New South Wales and Victoria gain in the GST relativities as

compared to the FAG relativities. Their FAG relativities have gone down considerably compared to the corresponding relativities in 1999-00.

Table A1 : Comparison of GST and FAG Relativities

	GST Relativities 2004	FAG Relativities 2004	GST 2004-FAG 2004	Share in Population (2002-03)	Net aggregate loss (-)/g`in (+)[percent points]	FAG Relativi-ties 1999 Review	2004 FAG Relativi-ties-1999 Review FAG Relativi-ties
New South Wales	0.86750	0.80363	0.06387	33.71	2.153	0.89948	-0.09585
Victoria	0.86534	0.83480	0.03054	24.74	0.755	0.86184	-0.02704
Queensland	1.05504	1.10104	-0.04600	19.00	-0.874	1.00687	0.09417
Western Australia	1.03054	1.00781	0.02273	9.81	0.223	0.94793	0.05988
Southern Australia	1.20407	1.30402	-0.09995	7.71	-0.770	1.2068	0.09722
Tasmania	1.55939	1.74908	-0.18969	2.40	-0.456	1.60905	0.14003
Australian Capital Territory	1.12930	1.16529	-0.03599	1.63	-0.059	1.1027	0.06259
Northern Territories	4.26538	5.22706	-0.96168	1.00	-0.964	4.84429	0.38277

Source: Report of Commonwealth Grants Commission, 2004 Review(Tables 3-1,4-2,D-11

Appendix A2 : State Taxes in Australia

Payroll tax
Stamp duties
On contracts and conveyances of property (other than shares and marketable securities)
On unlisted shares and marketable securities

On motor vehicle registration and transfers
On cheques
Financial transactions taxes
Debits tax
Deed of settlement
Agreements under seal
Stamp duties on mortgages and loan securities
Stamp duty on leases
Other duties
Hiring arrangements duty(rental duty)
Land taxation
Gambling taxation
Motor taxation
Registration fees
Motor vehicle weight/engine capacity tax
Driver license fees
Surcharge on motor vehicle third party insurance
Energy resource levies
Pubic authority income

Appendix A3 : Australia:Main State Expenditure Categories

A. Education
1 Pre-school education
2 Government school education
3 Non-government school education
4 Vocational education and training
5 Higher education

6	Transport of rural school children
B.	**Health and Community Services**
7	In-patient services
8	Non-inpatient and community health services
9	Population and preventive health
10	Family and child services
11	Aged and disabled services
12	Homeless and general welfare
13	Housing
14	First Home Owners Scheme
15	Services to indigenous communities
C.	**Law and Order and Public safety**
16	Police
17	Administration of justice
18	Corrective services
19	Public safety
D.	**Culture and Recreation**
20	Culture and recreation
21	National parks and wild life services
E.	**Economic activities**
22	Electricity and gas
23	Water sanitation and protection of the environment
24	Non-urban transport
25	Urban transit
26	Roads
27	Primary industry
28	Mining, fuel, and energy
29	Tourism
30	Manufacturing and other industry
31	Subsidies-petroleum products
32	Subsidies-alcohol products
F.	**General Public services**
33	Superannuation
34	GST administration costs
35	General public services
36	Debt charges
37	Depreciation

Appendix A4: In-patients Services: Example of Expenditure Assessment Techniques

We look at this category as an illustration of the Australian expenditure assessment techniques. The In-patients Services category expenditure is obtained as a weighted sum of five components, namely, scale affected expenditure, hospital acute in-patient services, hospital non-acute in-patient services, patient transport, and isolation. Costs in respect of each of these components are individually affected by a set of disability factors like administrative scale, input costs, hospital costs, costs of patient transport and costs related to isolation. On the use side, costs depend primarily on the socio-demographic composition, which affect the individual component costs. Table A2 provides the components and their determinants for In-patients expenditure category. The component weights were determined from national average cost data for acute, non-acute, and mental health in-patients. The cost of patient transport component was determined from national average cost from state data returns and from cost of patient transport data based on the 2000-01 Australian Hospital Statistics Report from the Australian Institute of Health and Welfare.

Administrative scale refers to fixed costs and generally covers head office expenses. This is a component of expenditure, which is present in all expenditure categories considered by the CGC. Fixed costs for each state under the hospital in-patients category were assessed to be $8.16 million for each state in the 2004 Review. An extra fixed cost of $0.69 million was assessed for the Northern Territory for dual policy development tasks that it has to perform owing to high proportion of indigenous population. The input costs factor covers costs of labor, office accommodation, and electricity. For scale affected costs components, those factors were applied with the following proportions of standard expenses: wages and salaries (80 percent), accommodation (2 percent), and electricity (1 percent).

The acute in-patients services component considers three disability factors relating to socio-demographic composition, hospital costs, and input costs. The socio-demographic composition factor is assessed to reflect the use and unit cost influences of different population groups on the total cost of acute in-patient services. This

factor is based on Australian standard hospital use rates and Diagnosis Related Groups (DRG) cost weights for different population groups. The socio-demographic composition factor takes account of use rates and costs in respect of groups distinguished by age, sex, Indigeneity, low English fluency, population location, and socio-economic status. Use rates measure standard use of in-patient services. DRG weights measure relative costs of treating patients. Data on the use and cost of services by different population groups were derived from the National Hospital Morbidity Dataset in the 1999 Review. Data on the number of people in state populations were from the Census of Population and Housing. The 2004 Review also used data from the ABS National Health Survey and the National Hospitals In-patients Data. The 2004 Review also worked out an extra cost weight for the disability factor related to Culturally and Linguistically Diverse (CALD) groups. There was also a socio-economic status (SES) weight to account for the greater use of public hospital in-patient services by people from low socio-economic groups.

The non-acute in-patients component was also assessed as the in-patients component using socio-demographic composition, hospital costs and input costs as factors. Since the cost of treating a private patient in public hospital is less than the cost of treating a public patient in public hospital, a cost discount was applied. This discount was 12 percent in the 1999 Review, which was reduced to 9 percent in the 2004 Review. The availability of private sector hospital facilities in a state reduces the burden on the public hospitals. This also called for adjustments. Table A2 gives the component weights. In each case, the contribution of a component to category expenditure is calculated as the component weight multiplied by the component factor. The component factor is the term given in brackets and is a function of the disability factors in the *formulae* described below. The symbols are defined as below:

Fixed costs (scale) = SAE
Acute Inpatients Component = AINP
Non-acute In-patients Component = NAINP
Cost of Patient Transport = CPT
Isolation Component = ISO
Fixed costs input costs factor = ic_sae
Administrative scale factor = s
Hospital costs factor = hc
Socio-demographic composition acute in-patients = sdc_anmp

Socio-demographic composition non acute in-patients adc_naimp
Input costs acute in-patients = input costs non acute in-patients = ic_oth
Cost of patient transport (dispersion factor) = cpt
Isolation factor = iso

The component contribution equations are given by

SAE = w1* (ic_sae*s)
AINP = w2* [(hc+sdc_ainp-1)*ic_oth
NAINP = w3* [(hc+sdc_nainp-1)*ic_oth
CPT = w4*(cpt)
ISO= w5*(iso)
W1+w2+w3+w4+w5=1

Expenditures are considered net of user charges. An important part of the assessment exercise is to assess the user charges. This assessment is based on national average use rates of private patients in public hospitals, adjusted for age, sex, region, indigeneity, and income. Patient fees derived from in-patients, non-in-patients and same day patients in all public hospitals are covered. The standardised number of private patients by the different categories multiplied by the standard user charges gives the assessed user charge.

Table A2: Hospital Services Assessment Structure: 2004 Review

	Component weight	Disability factors

		Administrative scale	Input costs	Socio-demographic composition	Hospital costs	Cost of patient transport	Cost of isolation
Fixed costs/scale affected expenditure	0.44	*	A				
Hospital acute inpatient services	84.71		B	*	*		
Hospital non-acute inpatient services	13.23		B	*	*		
Patient transport	1.49					*	
Isolation	0.12						*

	Basis of calculation; weights in parenthesis
Input costs(A)	General method with Wages (80percent), accommodation (2percent), electricity (1percent)
Input costs(B)	General method with Wages (70percent), accommodation (2percent), electricity (1percent)
Administrative scale	General method
Socio-demographic composition	Cost –weighted utilisation rates by Age, Aboriginity, income, region, and low English fluency
Hospital costs	Based on the average cost of treatment by region to account for dispersion, Service delivery scale and research and use complexity
Cost of patient transport	Dispersion factor: based on general dispersion method for air travel, inter-regional travel and local travel
Isolation	Isolation factor: general method

Source: Draft Assessment Paper CGC 2003/28, Inpatients Services Assessment, Commonwealth Grants Commission

The related calculations are given in Table A3.

Table A3 : In-patient Service Costs Derivation of the Service Factor

Factors	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
Fixed costs	**0.44**	percent						
Administrative scale factor	0.340	0.463	0.615	1.178	1.487	4.774	7.000	18.945

Fixed costs input costs factor	1.035	0.990	0.974	0.982	0.971	0.920	1.013	1.090
Component factor	0.352	0.458	0.600	1.156	1.445	4.392	7.092	20.648
Contribution to category factor	0.002	0.002	0.003	0.005	0.006	0.019	0.031	0.091
Acute inpatients	**84.71**	percent						
Hospital costs factor	0.994	0.999	0.992	1.023	1.006	0.977	1.018	1.122
Socio-demographic composition	0.992	0.971	1.014	0.995	1.063	1.112	0.754	1.436
Input costs: acute inpatients	1.031	0.991	0.977	0.984	0.975	0.929	1.011	1.090
Component factor	1.016	0.961	0.983	1.003	1.041	1.011	0.782	1.698
Contribution to category factor	0.861	0.814	0.833	0.849	0.882	0.857	0.662	1.438
Non acute inpatients	**13.23**	percent						
Hospital costs factor	0.994	0.999	0.992	1.023	1.006	0.977	1.018	1.122
Socio-demographic composition	0.982	1.021	0.976	0.914	1.216	1.257	0.564	0.774
Input costs: acute inpatients	1.031	0.991	0.977	0.984	0.975	0.929	1.011	1.090
Component factor	1.007	1.011	0.947	0.923	1.191	1.146	0.589	0.977
Contribution to category factor	0.133	0.134	0.125	0.122	0.158	0.152	0.078	0.129
Cost of patient transport	**1.49**	percent						
Dispersion factor	0.9339	0.6145	1.5586	1.1956	0.8497	0.7798	0.1912	3.3280
Component factor	0.9339	0.6145	1.5586	1.1956	0.8497	0.7798	0.1912	3.3280
Contribution to category factor	0.0139	0.0092	0.0232	0.0178	0.0127	0.0116	0.0028	0.0496
Isolation	**0.12**	percent						
Isolation factor	0.051	0.107	0.178	0.748	0.565	3.495	1.518	68.272
Component factor	0.051	0.107	0.178	0.748	0.565	3.495	1.518	68.272
Contribution to category factor	0.000	0.000	0.000	0.001	0.001	0.004	0.002	0.082
Category factor	**1.0098**	**0.9591**	**0.9843**	**0.9951**	**1.0594**	**1.0433**	**0.7759**	**1.7899**

Source: Commonwealth Grants Commission, Draft assessment Paper CGC 2003/28

Table A2: Hospital Services Assessment Structure: 2004 Review

	Component weight	Disability factors					
		Administrative scale	Input costs	Socio-demographic composition	Hospital costs	Cost of patient transport	Cost of isolation
Fixed costs/scale affected expenditure	0.44	*	A				
Hospital acute inpatient services	84.71		B	*	*		
Hospital non-acute inpatient services	13.23		B	*	*		
Patient transport	1.49					*	
Isolation	0.12						*

	Basis of calculation; weights in parenthesis
Input costs(A)	General method with Wages (80percent), accommodation (2percent), electricity (1percent)
Input costs(B)	General method with Wages (70percent), accommodation (2percent), electricity (1percent)
Administrative scale	General method
Socio-demographic composition	Cost –weighted utilisation rates by Age, Aboriginity, income, region, and low English fluency
Hospital costs	Based on the average cost of treatment by region to account for dispersion, Service delivery scale and research and use complexity
Cost of patient transport	Dispersion factor: based on general dispersion method for air travel, inter-regional travel and local travel
Isolation	Isolation factor: general method

Source: Draft Assessment Paper CGC 2003/28, Inpatients Services Assessment, Commonwealth Grants Commission

The related calculations are given in Table A3.

Table A3 : In-patient Service Costs Derivation of the Service Factor

Factors	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
Fixed costs	**0.44**	percent						
Administrative scale factor	0.340	0.463	0.615	1.178	1.487	4.774	7.000	18.945
Fixed costs input costs factor	1.035	0.990	0.974	0.982	0.971	0.920	1.013	1.090
Component factor	0.352	0.458	0.600	1.156	1.445	4.392	7.092	20.648
Contribution to category factor	0.002	0.002	0.003	0.005	0.006	0.019	0.031	0.091
Acute inpatients	**84.71**	percent						
Hospital costs factor	0.994	0.999	0.992	1.023	1.006	0.977	1.018	1.122
Socio-demographic composition	0.992	0.971	1.014	0.995	1.063	1.112	0.754	1.436
Input costs: acute inpatients	1.031	0.991	0.977	0.984	0.975	0.929	1.011	1.090
Component factor	1.016	0.961	0.983	1.003	1.041	1.011	0.782	1.698
Contribution to category factor	0.861	0.814	0.833	0.849	0.882	0.857	0.662	1.438
Non acute inpatients	**13.23**	percent						
Hospital costs factor	0.994	0.999	0.992	1.023	1.006	0.977	1.018	1.122
Socio-demographic composition	0.982	1.021	0.976	0.914	1.216	1.257	0.564	0.774
Input costs: acute inpatients	1.031	0.991	0.977	0.984	0.975	0.929	1.011	1.090
Component factor	1.007	1.011	0.947	0.923	1.191	1.146	0.589	0.977

Table A3 : In-patient Service Costs Derivation of the Service Factor

Factors	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
Contribution to category factor	0.133	0.134	0.125	0.122	0.158	0.152	0.078	0.129
Cost of patient transport	**1.49**	percent						
Dispersion factor	0.9339	0.6145	1.5586	1.1956	0.8497	0.7798	0.1912	3.3280
Component factor	0.9339	0.6145	1.5586	1.1956	0.8497	0.7798	0.1912	3.3280
Contribution to category factor	0.0139	0.0092	0.0232	0.0178	0.0127	0.0116	0.0028	0.0496
Isolation	**0.12**	percent						
Isolation factor	0.051	0.107	0.178	0.748	0.565	3.495	1.518	68.272
Component factor	0.051	0.107	0.178	0.748	0.565	3.495	1.518	68.272
Contribution to category factor	0.000	0.000	0.000	0.001	0.001	0.004	0.002	0.082
Category factor	**1.0098**	**0.9591**	**0.9843**	**0.9951**	**1.0594**	**1.0433**	**0.7759**	**1.7899**

Source: Commonwealth Grants Commission, Draft assessment Paper CGC 2003/28