

**Fiscal Transfers in Canada:
Drawing Comparisons and Lessons**

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Abstract

The Canadian system of fiscal transfers, which has been developed over a long period of time, has two central features: equalisation grants, which are constitutionally guaranteed, and the Canadian Health and Social Service Transfers (CHST). This paper examines the relevance and applicability of the Canadian system of intergovernmental transfers in the Indian case. Equalisation grants are meant to ensure that provinces have sufficient revenues to provide reasonably comparable levels of services at reasonably comparable levels of taxation. An elaborate 'Representative Tax System' approach using individual revenue bases is used in Canada for determining the equalisation grants, although there has recently been a debate to use a more macro approach. The source by source approach is less practical in the Indian case for want of comparable and reliable information required for applying the method. A more practical alternative is the macro approach, which is adopted in India, but better indicators of fiscal capacity than those based on GSDP need to be used. In addition, the concept of ensuring that resources are available for maintaining the per capita expenditure of select basic services at certain levels among states, as attempted in Canada through the CHST transfers, is worth exploring.

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Introduction

Canada became a federation in 1867. Over time, Canada has developed a comprehensive system of inter-governmental transfers with a view to addressing issues both of vertical and horizontal imbalances. The heart of the Canadian system of fiscal transfers consists of a set of equalisation grants, which are enshrined in the Canadian constitution. These, together with the Canadian Health and Social Service Transfers (CHST), ensure provision of health and other social services at comparable standards across provinces. This paper examines the basic features of the Canadian system of sharing responsibilities and resources between the federal and provincial governments, and particularly, the Canadian system of intergovernmental transfers with the objective of considering its relevance and applicability in the Indian case.

The paper is divided into seven sections. Section 2 reviews the basic features of the institutional arrangements in Canada in deciding about the principles and volume of transfers. Section 3 examines the assignments of tax powers including the system of sharing tax bases. Section 4 looks at the profile of vertical imbalance before and after transfers. Section 5 examines the system of transfers in Canada with a focus on the principles and practices in regard to equalisation transfers and the related profile of horizontal imbalance before and after transfers. Section 6 looks at the management of debt in Canada drawing comparisons with India. Section 7 provides concluding observations particularly in the context of the applicability of the Canadian system of fiscal transfers to India.

II. Institutional Framework and Some General Features

Canada is a federal country with ten provinces and three special territories. The provinces are: Alberta, British Columbia, Manitoba, New Brunswick, New Found land and Labrador, Nova Scotia, Ontario, Prince Edward Islands, Quebec, and Saskatchewan. The territorial governments are Nunavut, Yukon and the North West Territories. Alberta, because of its mineral wealth is the richest province. Ontario is the second highest in terms of per capita GDP. Canada's total population is only about 31.5 million with a high degree of concentration of population and economic activities in a few provinces.

In Canada, federal fiscal relations have evolved through a non constitutional process, except for the equalisation transfers, which have a constitutional status. Most arrangements derive from a series of negotiations between the two tiers of government. Some provinces like Quebec, and more recently Alberta and, to some extent, British Columbia have been asking for greater fiscal autonomy. These demands have so far been resolved by a series of discussions and negotiations. It is generally recognised that the evolution of federalism in Canada has been driven to a large extent by Quebec, which is a large and linguistically distinct province. The House of Commons had adopted a resolution in 1995 affirming the distinct character of Quebec. Among continuing issues in Canada, there are demands for further reforms in funding health services. Quebec had in fact set up a Commission on fiscal Disequilibrium known as the Senguin Commission which gave its report in 2002.

Some of the contentious issues particularly relating to the interpretation of the *Constitution Act of 1867* are often referred to the courts. Under the *Supreme Court Act*, the federal government can refer questions to the Supreme Court for advisory opinions. The provinces can also secure a ruling from the Supreme Court of appeal after the provincial court has rendered its decision on the appeal under the *Provincial Court Act*.

In contrast, in India, the institutional arrangements are quite different. The core arrangements regarding the sharing of resources and responsibilities are built into the Constitution itself. The sharing of resources as between the central and state governments has been entrusted to the Finance Commission. In addition, resource transfers also takes place through the Planning Commission and other central ministries. Other institutions of importance of India are the National Development Council and the Inter-State Council. These bodies may broadly compare with the Premiers' or First Ministers' Conference in Canada. In Canada, transfers are calculated on a year-to-year basis, and the calculations for any one year remain 'open' for four years, and entitlements keep getting revised as fresh data become available. The relevant data are procured by an independent organisation, namely *Statistics Canada*. There have not been any significant issues regarding authenticity or comparability of data. In India, the Finance Commission awards remain valid for a five year period. Data used are generally authenticated by a body like the Central Statistical Organisation (CSO) or the Registrar General of India. But data pertaining, for example, to GSDP are usually dated by several years relative to the years for which the award is made. Unlike *Statistics Canada*, which is an independent organisation, the CSO in India is an organisation belonging to the Central Government. In the absence of any mandate calling for collection of data on individual tax-bases and bases of non-tax revenues of different states, it does not do so.

Some important features of the economy having a bearing on the system of inter-governmental transfers may also be noted. First, nearly 85 percent of the population and a little more than 87 percent of the GDP are located in just four provinces *viz* Ontario, Alberta, Quebec, and British Columbia. Secondly, disparities in per capita incomes, as indicated by per capita GDPs are also within a narrow range. The coefficient of variation has ranged between 27 to 35 percent during 1999 to 2002. Chart 1 shows the per capita provincial GDPs considering the 3-year average over 2000-2002.

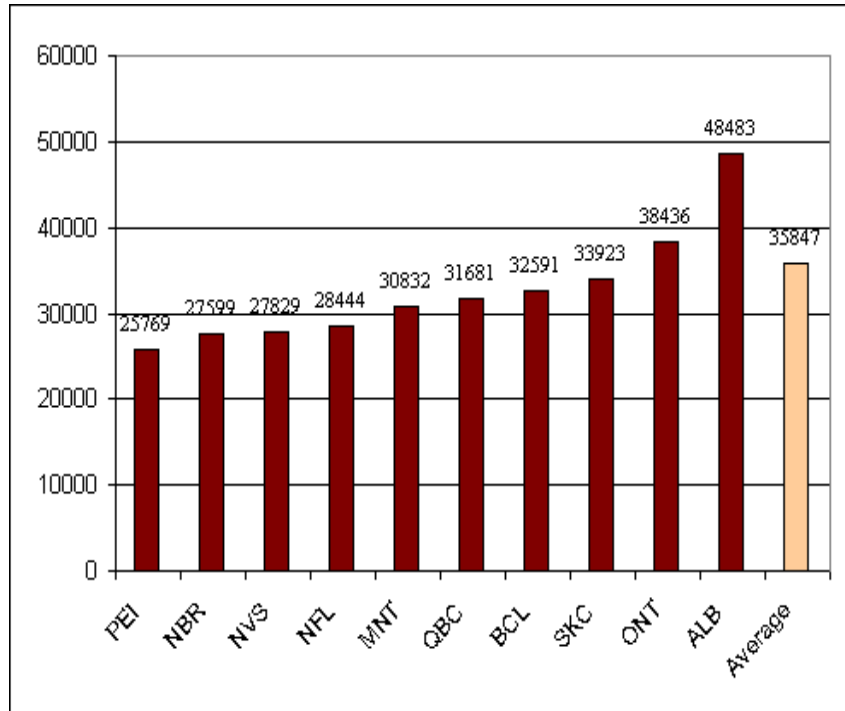


Chart 1: Provinces in Canada Arranged in Ascending Order of Per Capita GDP(in Canadian \$)

Key:

PEI=Prince Edwards Island	NBR=Nebraska	NVS=Nova Scotia
NFL= Newfoundland and Labrador	MNT=Manitoba	QBC=Quebec
BCL=British Columbia	SKC=saskatchewan	ALB=Alberta
	ONT=Ontario	

In India, in contrast not only are there considerable disparities in per capita state GDP but the share in population of the poorer states requiring transfers is relatively large as compared to the share in population of the richer states. In Canada, since the population in the better-off provinces is large, the task of re-distribution can be more easily handled. Table 1 gives for Canada data regarding

province-wise share in population and all-province GDP. Ontario alone has nearly 38 percent of population and a little more than 41 percent of the all-province GDP. The ratio of the highest per capita GDP, pertaining to Alberta to that of the lowest per capita GDP for Prince Edward Island in 2002 for example was 1.9. In India this ratio between per capita GDPs of Goa and Bihar, for example, is close to 9. Even with respect to larger states like Maharashtra or Punjab, which are next to Goa in terms of per capita GDP, the ratio with the per capita GDP of Bihar is close to 4.5. The coefficient of variation was a little more than 50 percent in 1999-00 and 2000-01.

Table 1: Share in Population and All-Province GDP in Canada

	Share in Population (%)				Share in all-Province GDP			
	1999	2000	2001	2002	1999	2000	2001	2002
Newfoundland and Labrador	1.75	1.72	1.68	1.66	1.24	1.29	1.28	1.43
Prince Edwards Island	0.45	0.44	0.44	0.44	0.32	0.31	0.31	0.32
Nova Scotia	3.07	3.04	3.01	2.98	2.35	2.30	2.35	2.35
New Brunswick	2.47	2.45	2.42	2.39	1.94	1.88	1.88	1.83
Quebec	24.09	23.97	23.85	23.73	21.46	20.94	21.01	21.27
Ontario	37.85	38.08	38.35	38.57	41.65	40.99	40.91	41.41
Manitoba	3.76	3.74	3.71	3.68	3.25	3.18	3.19	3.21
Saskatchewan	3.34	3.28	3.22	3.17	3.13	3.13	3.03	3.00
Alberta	9.71	9.79	9.85	9.93	11.92	13.37	13.65	12.99
British Columbia	13.19	13.16	13.15	13.12	12.31	12.19	11.93	11.74
Yukon	0.10	0.10	0.10	0.10	0.11	0.11	0.11	0.11
NWT	0.13	0.13	0.13	0.13	0.23	0.23	0.26	0.26
Nunavut	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.08
	100	100	100	100	100	100	100	100

Source: (Basic Data): Statistics Canada

III. Allocation of Tax Powers: Tax Base Sharing

The federal government in Canada has, in theory, unlimited powers of taxation. The constitution allows the federal government to raise revenues “by any mode or system of taxation” under section 91(3). Section 92(2) gives provinces the right to “direct taxation within the province in order to the raising of revenues for provincial purposes”. By a court decision ‘direct taxation’ has been interpreted to include commodity taxes such as sales tax or taxes on goods and services¹. In practice, therefore, federal and provincial governments have concurrent jurisdiction on the same tax bases, and both tiers collect personal and corporate income taxes as well as taxes on goods and services (VAT) or some form of sales tax. It is only the customs duties and some excises that are used exclusively by the federal government. Provinces have exclusive rights over mineral resources in their jurisdiction. In fact, it is this right over mineral resources, which enables a province like Alberta to raise considerable finances from oil and gas. It also makes Alberta as the province with the highest per capita GDP. In India, all the major minerals are with the Union government although the states are entitled to royalty. Minerals listed as minor minerals belong to the concerned states.

Concurrent jurisdiction over common or almost common tax bases implies that although the tax rates of the two jurisdictions can be independently fixed, there has to be coordination. If one level of government taxes the base excessively, it will adversely affect the base not only for itself but also for the other jurisdictions. This phenomenon of ‘vertical externality’ in the shared tax bases has been noted by many authors see, for example, Boadway *et. al.* (1998), and Keen, (1998). The federal and the provincial governments generally come to an agreement as to the tax room they can occupy with respect to a given tax base. When the federal government vacates some tax room in terms of reducing the federal rate enabling the provinces to correspondingly raise their rates, it amounts to transfer of resources². These transfers are referred to as tax points.

Personal and corporate income taxes are levied by the federal government and all the provinces³. Yukon and the North

West Territories also levy these income taxes. Corporate income tax is levied by the federal and all provincial governments but not in Yukon and the North West Territories. Customs and excise duties are levied only by the federal government. Until recently, the federal government collected the provincial personal income tax in all provinces except Quebec. The provinces were free to determine their own rates, but they had to use federal levels of exemptions, deductions, and the rate structure. In 1999, the federal government agreed to collect provincial PITs at any rates imposed by them so long as they use the federal tax base as the base for provincial PIT also. However, they can now have their own tax schedules with different degrees of progressivity. Using this provision, Alberta has imposed a 10 percent flat tax. Other provinces have also adopted schedules of tax rates that are different from that of the federal PIT.

Sales tax in the form of goods and services tax (GST) is levied by the federal and provincial governments. The GST is a multi-stage value added tax. The federal rate for most goods and services is at 7%. For goods that bear an excise tax, GST applies on values inclusive of the excise tax.

At the provincial level, three commodity taxation systems prevail, viz., Harmonized Sales Tax (HST), Retail Sales Tax (RST) and the GST. The Atlantic Provinces excluding PEI have the harmonised sales tax along with the federal GST. The federal government administers the harmonised GST with 7 percent federal rate and 8 percent provincial rate. Provinces with HST are New Brunswick, Nova Scotia, and New Foundland. Quebec has a provincial GST at 7.5 percent which is applied on top of the federal GST at 7 percent making the overall rate of provincial GST 8.025 percent. Quebec administers its provincial GST as well as the federal GST. Prince Edward Island has a provincial GST at the rate of 10 percent which is applied on top of the federal rate of 7 percent making the overall rate, 10.7 percent. Alberta does not have a provincial GST. Only the federal GST is levied at 7 percent. The rates of provincial GST in British Columbia are 7.5 percent, in Saskatchewan, 6 percent and Manitoba, 7 percent. In these cases it is not levied on top of the federal GST. The federal government collects its own GST as also the provincial GST in the case of British Columbia, Saskatchewan, Manitoba and PEI. Quebec collects provincial GST as well as the federal GST. In Ontario, the provincial government collects its RST while the federal government collects its GST.

In contrast, in India, there is no direct 'tax-base' sharing. The constitution assigns tax bases clearly either to the union or to the states. Union excise duties and state sales taxes may, however, be considered as sharing the tax base up to the stage of manufacturing in the sphere of commodity taxation. However, there are no explicit arrangements as to the rates that the central government can charge on the union excise duty items or the sales tax rates that the states can charge on the same items. Instead of the 'tax-base' sharing, in India, there is a constitutionally provided system of 'tax-revenue' sharing, which now encompasses nearly all the central tax revenues. There are many countries where some form of tax revenue sharing with the sub-national governments, i.e. provincial or local, is in vogue like Germany, Switzerland, Belgium, Hungary, Brazil, Colombia, and Russia see e.g., Ter-Minassian(1997) for a discussion.

IV. Vertical Imbalance

The main federal responsibilities in Canada relate to foreign affairs, defence, international trade, airlines and railways, money and banking, and employment insurance. Some important responsibilities being handled by both the tiers of government relate to pensions, immigration, agriculture, and industry. Some of the main provincial responsibilities relate to education, health, municipal institutions, social welfare, police, natural resources, and highways. However, as it has happened in India, the federal government is assuming increasing responsibilities in areas that are in the domain of the provinces. In Canada, this has been achieved through what has been described as 'spending power'.

Since a majority of the resource-intensive expenditure responsibilities rest with the provinces, in spite of their access to considerable financial resources, there is still a vertical imbalance between the revenue capacity and expenditure responsibilities of the provinces *vis-a-vis* the federal government. One set of transfers, *viz.*, the Canadian Health and Social Transfers serve to correct the vertical imbalance. Although conditional and for a specific purpose, these

grants can be treated as correcting the vertical imbalance since these are provided to all provinces on a per capita basis.

Vertical imbalance can be measured in a number of ways. A vertical imbalance inheres in the relationship of revenues relative to expenditure responsibilities. The federal government, prior to the transfers, have more revenues relative to expenditures and the provincial governments less. The degree of pre-transfer excess or deficiency can be measured relative to a suitable denominator. Similarly, the 'correction' in imbalance can also be measured by looking at the post transfer figures. Table 2 looks at the extent of vertical imbalance in alternative ways. Two of these, P1 and P2, provide a provincial perspective, while C1 and C2 give a federal perspective. These are described below.

- P1: This is defined as provincial expenditure *minus* own revenues divided by provincial expenditure. It indicates the built-in imbalance in terms of assignment of resources and responsibilities. Actual expenditures are treated here as appropriate and desirable.
- P2: This term is defined as the ratio of provincial expenditure *minus* own revenues plus the federal transfers divided by the provincial expenditure. This ratio indicates the vertical imbalance that is left after the transfers.
- C1: This is defined as center's expenditure inclusive of transfers *minus* center's gross revenue receipts divided by center's expenditure inclusive of transfers.
- C2: This term indicates centre's expenditure net of transfers *minus* centre's revenue net of transfers divided by centre's expenditure net of transfers.

It is clear from P1 in Table 2 that the provincial expenditure in Canada is far larger than the own revenues indicating that expenditure responsibilities are assigned largely to the provincial governments. However, it can also be seen that over the years this ratio has come down from the peak of a little more than 33 percent in 1986-87 to as low as 8.5 percent in 2000-01. P2 in Table 2 indicates that in recent years provincial expenditures have been met almost fully by own revenues and transfers implying that the vertical imbalance in the assignment of functions and resources is almost eliminated after transfers. A positive sign of P2 indicates that some of the expenditures remain uncovered by transfers, which must

therefore be financed through borrowing. A negative sign indicates surplus which could be used for retiring debt.

The issue can also be examined from the perspective of the federal government. It is clear from C2 in table 2 that since 1997-98, as indicated by the negative sign, federal revenues have exceeded expenditures net of transfers enabling them to retire debt. Thus, there is no imbalance after transfers for either of the two tiers.

Table 2 : Measuring Vertical Imbalance in Canada

	Provincial		Federal	
	(Expenditure -own revenue)/ expenditure	[(Expenditure - {own revenue+ transfers*)]/ expenditure	(Expenditure -revenue)/ expenditure	(Exp net of transfers* - revenues net of transfers*)/ exp net of transfers*
	P1	P2	C1	C2
1980-81	28.39	6.64	22.95	28.70
1981-82	26.26	4.86	20.63	25.48
1982-83	31.57	11.64	32.38	39.22
1983-84	31.68	9.37	33.88	42.03
1984-85	31.08	8.89	35.10	42.93
1985-86	31.09	10.04	31.02	38.02
1986-87	33.32	13.14	26.35	32.09
1987-88	27.57	7.36	22.16	26.91
1988-89	24.96	4.60	21.66	26.38
1989-90	23.39	3.58	20.28	24.53
1990-91	26.66	7.50	21.14	25.59
1991-92	33.07	15.32	21.97	26.44
1992-93	35.22	16.20	25.42	31.13
1993-94	30.89	12.95	26.59	32.37
1994-95	28.50	10.06	23.30	28.53
1995-96	25.90	7.45	18.01	22.16
1996-97	20.24	4.63	5.94	7.11
1997-98	16.66	2.02	-2.55	-3.03
1998-99	16.54	0.96	-2.04	-2.46
1999-00	13.49	-1.67	-8.29	-10.05
2000-01	8.54	-7.58	-11.24	-13.74
2001-02	18.43	1.14	-5.42	-6.79

Source : (Basic Data):Fiscal Reference Tables: Department of Finance, Canada

* Transfers refer to federal cash transfers.

Table 3 draws a corresponding picture for India. The P1 column indicates that more than half of the states' expenditure remains uncovered from their own resources. The time profile since 1980-81 does not indicate any significant inter-temporal variation in this built-in vertical imbalance. P2 in Table 3 indicates that considerable correction is done after transfers but there are uncovered expenditures as indicated by the positive sign, which necessitates borrowing. It is also indicated that post-transfer imbalance increased sharply after 1997-98. The centre's position is not in surplus even prior to transfers. Centre's own expenditures exceed its revenues excluding transfers by a larger margin in relation to its own expenditures.

Table 3: Vertical Imbalance in India

	(percent)			
	State Governments		Central Government	
	(State exp- own revenue)/ state exp	{State exp - (own rev + transfers)/ expenditure}	(Cent exp inc of trans.-cent gross rev rec)/ centre exp inc of transfers	(Centre exp net of trans- centre rev net of transfer) / Centre exp net of transfer.
	P1	P2	C1	C2
1980-81	56.43	22.45	35.32	47.48
1981-82	52.39	19.68	30.86	41.27
1982-83	52.77	20.13	32.71	43.38
1983-84	54.88	22.05	35.16	46.55
1984-85	55.91	24.06	37.75	48.86
1985-86	56.31	19.66	38.64	51.19
1986-87	56.42	20.66	39.88	51.77
1987-88	56.05	20.67	37.75	50.34
1988-89	54.59	19.73	37.10	48.80
1989-90	54.31	22.35	36.30	46.14
1990-91	57.05	22.82	39.76	52.34
1991-92	53.61	19.55	33.47	45.41
1992-93	54.98	19.37	33.84	46.23
1993-94	51.87	16.48	40.20	54.53
1994-95	49.81	18.79	35.28	47.05

	State Governments		Central Government	
	(State exp- own revenue)/ state exp	{State exp - (own rev + transfers)/ expenditure}	(Cent exp inc of trans.-cent gross rev rec)/ centre exp inc of transfers	(Centre exp net of trans- centre rev net of transfer) / Centre. exp net of transfer.
	P1	P2	C1	C2
1995-96	50.60	19.54	31.56	42.00
1996-97	52.20	20.36	29.42	39.48
1997-98	56.66	21.33	29.50	39.99
1998-99	56.55	30.26	34.97	44.91
1999-00	56.34	31.28	32.48	41.53
2000-01	56.91	27.68	34.48	40.90
2001-02	55.06	28.87	35.21	40.57

Source (Basic data): Indian Public Finance Statistics (IPFS) (IPFS)

Notes: Expenditure are net of loan recoveries.

Transfers are as given in IPFS Table 8.4

Central exp and revenues net of transfers are derived by deducting grants as tax devolution is already deducted in expenditure and revenue data.

V. System of Transfers and Horizontal Imbalance

a. *Aggregate Transfers*

There are three main avenues of resource transfers from federal to provincial governments in Canada: (i) Equalisation grants (ii) Canada Health and Social Transfers (CHST) and Territorial Formula Financing (TFF). In addition, there is a small and new facility called the Health Reform Fund (HRF). CHST are for the provinces as well as the territorial governments. In addition, equalisation transfers are meant for selected provinces and TFF for the Territories.

Table 4 looks at the volume of total transfers from the federal to the sub national governments and how these have changed over time relative to GDP. Way back in 1961-62, total transfers amounted to 1.6 percent of GDP. The transfers steadily increased over time to reach a peak of 4.2 percent in 1976-77 and again in 1983-84. Transfers relative to GDP have since gone down to reach a level of 2.4 percent in 2001-02. In comparison, in India transfers to the state governments relative to GDP were close to 5 percent of GDP during the award periods of the Eighth and Ninth Finance Commissions covering the years 1984-89 and 1988-1995 respectively. In India also, transfers relative to GDP declined since then but they have remained above 4 percent of GDP in except in two years in the recent period.

Relative to federal revenues, transfers in Canada reached a peak level in 1983-84 and 1984-85 when these were more than 26 percent. Since then, transfers in Canada declined relative to the federal revenues. In Canada, federal revenues relative to GDP were 17.8 percent in 1991-92. Since then they have come down to 15.4 percent in 2001-02.

Table 4: Major Transfers* to Other Levels of Governments: Canada

	Amount	Amount Relative to federal revenues	Relative to GDP		Amount	Amount Relative to federal revenues	Relative to GDP
	(\$million)	(%)	(%)		(\$million)	(%)	(%)
1961-62	642	9.90	1.6				
1962-63	737	11.06	1.6	1976-77	8,399	24.41	4.2
1963-64	798	11.24	1.7	1977-78	8,512	24.58	3.8
1964-65	918	11.17	1.7	1978-79	9,551	25.83	3.9
1965-66	841	9.28	1.4	1979-80	10,601	25.22	3.8
1966-67	1,016	10.30	1.6	1980-81	11,578	23.69	3.7
1967-68	1,464	13.62	2.1	1981-82	13,088	21.70	3.6
1968-69	1,813	15.05	2.4	1982-83	14,177	23.37	3.7
1969-70	2,237	15.54	2.7	1983-84	17,125	26.69	4.2
1970-71	2,954	19.72	3.3	1984-85	18,548	26.10	4.1
1971-72	3,610	21.72	3.7	1985-86	18,879	24.54	3.9
1972-73	4,134	21.53	3.8	1986-87	19,569	22.77	3.8
1973-74	4,585	20.44	3.5	1987-88	20,518	21.02	3.7
1974-75	5,884	20.12	3.8	1988-89	22,145	21.28	3.6
1975-76	6,874	21.71	4.0	1989-90	23,417	20.59	3.6

	Amount	Amount Relative to federal revenues	Relative to GDP		Amount	Amount Relative to federal revenues	Relative to GDP
	(\$million)	(%)	(%)		(\$million)	(%)	(%)
1990-91	22,928	19.21	3.4	1996-97	22,162	15.73	2.6
1991-92	24,865	20.38	3.6	1997-98	20,504	13.36	2.3
1992-93	26,544	22.05	3.8	1998-99	25,523	16.37	2.8
1993-94	26,947	23.23	3.7	1999-00	23,243	13.99	2.4
1994-95	26,313	21.34	3.4	2000-01	24,724	13.77	2.3
1995-96	26,076	20.01	3.2	2001-02	26,616	15.36	2.4

Source(Basic Data): *Statistics Canada*

*Only major cash transfers are included.

Table 5: Central Transfers in India Relative to Centre's Gross Revenue Receipts and GDP

	Total transfers as % of				Centre's		
	Centre's	GDP at	CGRR as		gross	GDP at	CGRR as
	gross	market	% of		gross	market	% of
	revenue	prices	% of		revenue	prices	% of
	receipts		GDPmp		receipts		GDPmp
1970-71	33.37	2.99	8.97	1985-86	39.67	5.24	13.20
1971-72	36.91	3.75	10.16	1986-87	37.96	5.21	13.73
1972-73	35.68	3.73	10.46	1987-88	39.18	5.31	13.55
1973-74	34.03	3.24	9.52	1988-89	37.23	4.92	13.22
1974-75	29.35	2.95	10.04	1989-90	32.66	4.51	13.82
1975-76	29.85	3.47	11.62	1990-91	38.97	4.89	12.56
1976-77	31.76	3.69	11.62	1991-92	38.62	5.05	13.08
1977-78	32.43	3.70	11.41	1992-93	39.62	5.14	12.97
1978-79	34.80	4.17	11.98	1993-94	42.84	5.03	11.74
1979-80	39.45	4.81	12.20	1994-95	37.86	4.46	11.77
1980-81	39.64	4.58	11.56	1995-96	35.55	4.28	12.04
1981-82	35.92	4.23	11.77	1996-97	35.40	4.28	12.10
1982-83	36.40	4.39	12.07	1997-98	38.90	4.86	12.49
1983-84	37.48	4.40	11.73	1998-99	32.25	3.73	11.57
1984-85	36.46	4.48	12.28	1999-00	30.23	3.79	12.52
				2000-01	34.93	4.26	12.19

Source(Basic data): *Indian Public Finance Statistics*

In contrast, in India, transfers to the state governments have been larger relative to Centre's gross revenue receipts, varying broadly in the range of 35-38 percent considered as averages for periods covered by the seventh and later Finance Commissions. Because of this higher proportion, transfers in India relative to GDP are higher despite the fact that centre's gross revenue receipts constitute a lower proportion of GDP than that in Canada.

b. Composition of Transfers

Table 6 indicates the relative importance of CHST and equalisation transfers in Canada for four recent years covering 2000-01 to 2003-04. While the CHST transfers including tax points, i.e. reduction in the federal rate and corresponding increase in the provincial rate, have accounted for a share of 72 to 74 percent of the total transfers, equalisation has accounted for 21 to 25 percent. This is so when some equalisation implicit in the CHST is counted on the side of equalisation. TFF accounts for a small share.

Table 6: Canada: Composition of Transfers

	(\$ millions)			
	2000-01	2001-02	2002-03	2003-04
<i>Canada Health and Social Transfer</i>				
Cash	15500	18300	19100	20800
Tax Points	16415	16153	16150	16958
Total CHST	31915	34453	35250	37758
Health reform fund				1000
Equalisation	10861	10372	10290	10499
Territorial formula financing	1205	1458	1344	1655
total Major Transfers adjusted for equalisation implicit in tax points transfers*	42688	44778	45422	49407
CHST (excluding implicit equalisation) as % of adjusted total)	71.73	73.58	74.39	73.38
Equalisation (including implicit equalisation) as % of adjusted total	25.44	23.16	22.65	21.25

Source: www.fin.gc.ca

Notes: *Equalisation associated with CHST tax transfer is included in both CHST (under "Tax Points") and equalisation. Totals have been adjusted to avoid double counting.

c. *Equalisation Grants*

The equalisation grants aim at equalising fiscal capacities. The 'equalisation' payments have been mandated in the constitution since 1982, although these were being made earlier also. Section 36(2) of the *Constitution Act* commits the federal government to the "principle of making equalisation payments to ensure that provincial governments have sufficient revenues to provide reasonably comparable levels of public services at reasonably comparable levels of taxation". The case for equalisation has been made on grounds of equity [see, e.g., Graham (1964)] as well as of efficiency [see, e.g., Boadway and Flatters (1982) and Boadway and Hobson (1993)]. Fiscal inefficiency arises when decisions regarding location of economic activity are influenced by net fiscal benefits, i.e. level of public services relative to cost. Fiscal equity requires that the public sector should treat individuals equally who are in equal circumstances implying that comparable individuals are entitled to the same net benefits from the public sector, i.e., to the same level of public services if they are taxed in the same way. The equalisation grants aim at achieving these results. As Boadway (2001) observes: "fiscal equity does not conflict with fiscal efficiency: both depend on NFBs [net fiscal benefits] being equalized across jurisdictions."

The equalisation transfer to a province in absolute amount is determined by applying the average revenue effort to the difference between standard base and the actual base for that province with respect to the various revenue sources. This produces an estimate of revenue, which is higher than the actual revenue for provinces that have 'below average' capacity. This exercise is done for all revenue bases used by the provinces. At present, there are 33 such revenue bases (listed in Annexure 1), which include tax revenues, royalties and user charges. This system of calculating the 'notional' revenue performance is called the 'Representative Tax System' (RST), where each tax or revenue source is considered individually and the 'average' or 'representative' tax effort is applied to the difference between the standard revenue base and the actual base. Let the provinces be indicated by subscript i and revenue sources by superscript j . In specifying the equalisation grant formula the following symbols may be used:

N_i : population of province i

R_i : revenue of the i th province from a given source

b_i : per capita revenue base (total base: $B = N_i \cdot b_i$) of a given source

a_x : all-province average tax rate for a given revenue source

r_i : actual per capita revenue of the i th province from a given source

b_s : Per capita standard tax base

The subscripts x and s are kept different to emphasise that, as in Canada, in calculating the average tax rate and the standard tax base, the provinces included in the respective exercises may not constitute the same set.

The average tax rate, considering the ten provinces is defined as

$$a_x = \frac{\sum R_i}{\sum B_i} = \frac{\sum N_i r_i}{\sum N_i b_i}, \quad (i=1, \dots, 10) \quad \dots (1)$$

A benchmark revenue base is derived from the revenue bases of 5 selected provinces. At present this list excludes Alberta and the four Atlantic provinces. The per capita benchmark revenue base for a given revenue source may be defined as below.

$$b_s = \frac{\sum B_i}{\sum N_i} \quad [i= 1, \dots, 5] \quad \dots (2)$$

Where b_s may be considered as the per capita benchmark revenue base.

The total equalisation entitlement with respect to an individual revenue source is determined by

$$E_i = a_x [b_s - b_i] N_i \quad \text{if } (b_s - b_i) > 0$$

$$E_i = 0 \quad \text{if } (b_s - b_i) \leq 0 \quad \dots (3)$$

Total equalisation payment for all sources for the i^{th} province will be summation of such terms for all the revenue sources. Equalisation operates as a 'gross' scheme, i.e. provinces with a positive entitlement receive their entitlement, but nothing is taken away from those that have a negative entitlement. It can also be seen that the per capita entitlement in respect of any one source can also be written as

$$a_x(b_s - b_i) = a_i(b_s - b_i) + (a_x - a_i)(b_s - b_i) \quad [a_x - a_i > 0, b_s - b_i > 0] \quad \dots (4)$$

The first term indicates the required correction if only the lack of capacity is made up. The second term indicates the correction where the shortfall in the rate is also corrected in respect of the additional fiscal capacity. If $a_i = a_x$, equalisation makes up only for the differences in fiscal capacities. If $a_i < a_x$, it not only corrects for the differences in capacity but also provides for the shortfall in the rate in relation to the additional capacity. If, however, $a_i > a_x$, the benefit from the adjustment in capacity is only to the extent of the average rate.

Some of the important characteristics of the RTS approach to equalisation may be noted, as below.

- The equalisation approach requires that for a given tax the relevant tax bases are comparable across provinces. This requires that the relevant bases are identifiable and easily measurable.
- The benchmark per capita revenue base is to be determined with reference to selected provinces. In Canada, rather than using the average of all provinces, a 5-province average is being used. The 10-province benchmark revenue base emerges to be higher than the average of the selected provinces. The 10-province benchmark revenue base would bring even Ontario, which has the second highest per capita provincial GDP, among the entitled provinces and it would also raise the volume of grants to the present beneficiaries.
- In its pure form, the total amount of equalisation payments could change significantly from year to year not only in absolute amounts but also in relation to GDP. The federal government would not also have any control over the total equalisation payments. In Canada, until recently, this pure version was not being applied. Rather, the overall entitlements were subject to a ceiling and when in any one year, estimated aggregate entitlement exceeded the ceiling, actual payments were reduced pro-rata for each of the entitled province. The ceiling was determined at \$ 10 billion with a built-in formula linked to the growth rate of the national GNP. The ceiling was removed with effect from 2002-03. There is however a floor, which protects provinces from sudden reductions in entitlements⁴
- The objective of equalisation is to make up for the deficiencies in fiscal capacities at the average all-province tax rate. The Canadian 'equalisation' is not intended to result in

equal per capita expenditures across provinces. Actual expenditures could be higher than the average in provinces where the revenue effort is higher and lower in provinces where the tax effort is lower. A province may however choose to have a lower tax rate, relying more on the private sector participation for the provision of services. The levels of expenditure of individual items as well as the aggregate also depend on the preferences of the provinces.

- Although equalisation grants are enshrined in the constitution, and a methodology has also been developed for determining normative revenues from multiple revenue bases by applying the average revenue effort, as Boadway observes “leading constitutional scholars have argued that the provisions are probably too vague, and too political to be justiceable in the courts”.

Table 7 shows the share of equalisation payments in total transfers including tax points for each of the provinces over the period 2000-01 to 2003-04. Ontario and Alberta are the only two provinces that do not qualify for the equalisation grants. British Columbia has been getting it since 2001-02. Provinces where equalisation payments account for more than half of their transfers are Newfoundland and Labrador, PEI, Nova Scotia, New Brunswick and Manitoba. For Quebec, Saskatchewan and British Columbia, equalisation payments accounted for 35, 24 and 15 percent of their respective transfers in 2003-04.

Table 7: Share of Equalisation Payments in Total Transfers
(percent)

Provinces	2000-01	2001-02	2002-03	2003-04
Newfoundland and Labrador	71.3	69.2	64.7	61.3
Prince Edwards Island	70.3	67.3	64.4	62.3
Nova Scotia	62.4	59.2	55.8	53.9
New Brunswick	65.9	62.6	61.6	59.7
Quebec	42.4	38.1	37.6	34.6
Ontario	0.0	0.0	0.0	0.0
Manitoba	54.3	53.4	52.2	49.5
Saskatchewan	18.4	20.5	18.3	24.4
Alberta	0.0	0.0	0.0	0.0
British Columbia	0.0	5.9	12.4	15.0

Source (Basic Data): www.fin.gc.ca

One clear trend that characterises all the beneficiary provinces is that the share of equalisation grants in total transfers has generally gone down between 2000-01 and 2003-04. This is in large part owing to the imposition of a ceiling on the growth of equalisation transfers. It has also been noted that equalisation has not necessarily contributed to reducing the volatility of provincial revenues nor have they made the transfers more predictable.⁵

Several problems have been noted in the literature in the actual working of the system of equalisation payments. We can group these issues into the following broad categories: (a) problems related to perverse incentives; (b) problems related to *ad hoc* adjustments which make the system opaque; (c) issues related to non-consideration of needs and costs; (d) measurement difficulties in relation to the revenue bases; (e) compensation for lack of revenue effort; and (f) faulty indicators of capacity. These are discussed below.

Perverse incentives

In spite of the normative design of the formula, it has some built-in perverse incentives. It is said that a province can increase its equalisation entitlement by raising its tax rate and reducing its tax base. However, for this to happen the tax base should be small and the elasticity of the tax base to the tax rate should be high. If its tax base is sensitive to the tax rate increase, its base will fall and its entitlement will increase, particularly if neither the average tax rate nor the standard tax base are affected significantly.⁶ Conversely, a province with a large tax base can reduce its tax rate, thereby reducing the overall tax rate, which will lead to a fall in the equalisation entitlements of all other provinces. This may be particularly attractive if the concerned province is not a recipient of the equalisation entitlement. Though there would be loss in its own revenue, the citizens of the province will gain correspondingly in their disposable incomes. This is not an unrealistic situation. One apprehension that the beneficiary provinces currently have is that the equalisation standard will fall significantly if Alberta and Ontario continue to reduce their tax rates. These provinces can easily vary their effort to affect the national average tax rate and affect the entitlement of other provinces.⁷

Ad hoc Adjustments

The federal government sometimes controls the total amount of equalisation transfers by including only a part of the base of some revenue sources. For example, in the case of oil and gas revenues, only half of the provincial revenues were included in the 1970s and early 1980s. Inclusion of these revenues fully would have raised the benchmark and thereby raise the equalisation payments. The evolution of a five-province standard is also part of this consideration where, by excluding Alberta, the federal government is able to reduce the aggregate equalisation payments. In addition, until recently, there has been an externally imposed ceiling on the growth of total equalisation payments.

Non-Consideration of Needs and Costs

Canada focuses mainly on equalisation with respect to the revenue raising capacities of the provinces. It does not give any consideration to differences in expenditures that arise owing to differences in needs or costs. For example, differences in needs may arise owing to demographic composition while costs of providing services may differ on account of geographic features. Some have argued that only needs should be taken into account as neutralising costs would affect location efficiency. In a comprehensive system of equalisation some correction for differential needs as well as costs becomes necessary.

Measurement Difficulties

Compilation of 33 revenue bases across provinces, which may not all have the same statutory definition for a given revenue source is also a problem. There are serious measurement difficulties in respect of some. The property tax is one example where the tax bases are significantly different across provinces. Different provinces use different property evaluation techniques⁸ Further, larger urban centres have relatively high per capita property values. Applying national average to determine equalisation entitlements would work in favor of provinces that are less urbanised and which have lower costs of service provision. Similar issues arise in the case of user charges. Since these are in the nature of benefit taxes, there may not be any need to equalise user charges. Using a standard tax base when some provinces levy the relevant taxes and others do not is also a

problem. Lotteries and gambling also pose such questions. Further, legality of different forms of gambling can differ across provinces.

Compensation for Lack of Revenue Effort

In spite of the elaborate design, the equalisation formula appears to provide some correction for lack of effort also. As per the constitutional provision, if a province does not make comparable effort, it should be entitled to a level of public service which is less than the standard. It may be a conscious choice by the province that it taxes less and leaves more role for the private sector to provide the service. The difference in the capacity alone needs to be corrected and not in the effort. Accordingly, the per capita entitlement, for a province which makes both less effort ($a_i < a_x$) and lower capacity ($b_x < b_i$), should be given per capita entitlement equal to $a_i (b_x - b_i)$. Since the actual per capita entitlement is $a_x (b_s - b_i)$, there is an extra payment amounting to $(a_x - a_i) \cdot (b_s - b_i)$, as indicated in equation 5. This results in some compensation for lack of effort.

Faulty Indicators of Capacity

Yet another issue is whether the tax bases that enter into the RTS are legitimate indicators of fiscal capacity. The provinces have the option to vary the tax rates and thereby influence the tax base. As Barro (2001) observes, "If two provinces have identical budget constraint but one exerts greater fiscal effort than the other, the former will have lower taxable sales and residential property per capita, and so will appear incorrectly to have lower capacity as measured by the RTS method. Thus, the RTS has a built in tendency to underestimate the capacities of high effort provinces and to overestimate the capacities of low effort provinces, even apart from any tax induced change in private sector economic behaviour".

In the context of the impact of tax rate changes on the tax bases and the related feedback mechanisms, Barro(2001) identifies three main channels as (i) spatial shifting of economic activity, ii) changes in levels or hikes of spending in respect of differential tax rates, and iii) capitalisation of taxes into asset prices. The first two mechanisms apply mainly to sales tax bases, and the third, particularly to the property tax. While spatial shifting occurs gradually, the other feedback effects can occur quickly. The distorting effect of feedback on capacity indicators is likely to be stronger for the RTS

index, which is based heavily on sales and property tax bases than for the macroeconomic measures of capacity.

d. *Macro Approaches to Equalisation*

In view of some of the conceptual and practical problems, macro approaches to the equalisation have often been discussed in Canada as an alternative. For example, Barro (2001) observes, “The RTS indicator now used in Canada has serious theoretical flaws, as a result of which the provinces’ fiscal capacity scores undoubtedly are distorted, but to an as yet unmeasured degree. The macroeconomic approach is better grounded in positive economic theory...”. It has been argued that a macro approach can avoid most of the incentive problems, as one-to-one links with individual tax bases are avoided. The complexity ⁹ of the current system and the difficulties in defining the standard tax bases can also be avoided. The success of a macro approach depends on defining a suitable macro indicator of the revenue base.

Quite a number of alternative macro formulae have been suggested. Way back in 1984, Courchene (1984) suggested a macro formula of the following form:

$$E_i = (\sum_j TR_j) [(N_i/N_c) - (MB_i/MB_c)] \quad \dots(5)$$

where, MB_i/MB_c denotes province i 's share in the macro base (MB). TR_j is total tax-revenue for all provinces from all sources, where j refers to all individual sources. N_i indicates the total population of the i th province. This formula indicates that the entitlements of a province i from all revenue sources is determined by the excess of its share in population over its share in the macro-base.

The formula suggested by Coucherene can be rewritten in the following way. Let

$$\sum_j TR_j / MB_c = a_c$$

This indicates the average all-province tax-rate relative to the macro base. The per capita macro base of the i th province can be written as

$$MB_i/N_i = mb_i$$

The expression given in (6) can be written as.¹⁰

$$E_i = N_i \cdot a_c [mb_c - mb_i] \quad \dots(6)$$

From the above it can be seen that the attempt is to compensate for the deficiency in the macro base of a province. This is equivalent to equation 4 except that b_s is replaced by mb_c and b_i by mb_i . Courchene had considered two potential macro bases, viz., personal income excluding certain items and provincial gross domestic product at factor cost. Apart from per capita personal income, per capita gross domestic product and per capita net domestic product, other broader measures have also been suggested like 'total taxable resources'(TTR), which was proposed by the United States Treasury Department and is in limited use for allocating certain US federal grants. The TTR is defined as 'the unduplicated sum of the income flows produced within a state and income flows received by its residents that a state can potentially tax'[see, Compson and Navratil(1997) and Barro(2001) for a discussion]. The concept of TTR takes into account income produced in the state and received by its residents and adds to it income produced outside the state but received by its residents after netting out income produced in the state but received by residents outside the state. The concept has considerable relevance in India as remittances add to the tax base of some states in a significant way. The macro approach as brought out by equation 7 has a close resemblance to the 'deviation' criterion used for allocating central assistance by the Planning Commission in India. In both cases, provinces above the average level are not entitled to any allocation.

The literature [e.g. Barro (2001)] also discusses the adjustment that should be made to the macro aggregates that may be used as indicators of fiscal capacity. An important issue discussed is tax exportation, which occurs when a province is able to collect revenues from non-resident persons or businesses. In fact, *Statistics Canada* has identified 14 problems which vitiate the usability of GDP as a macro indicator of taxable capacity¹¹

e. *Canada Health and Social Transfers*

Apart from equalisation grants, two other channels of transfers in Canada are the Canada Health and Social Transfer (CHST) and Territorial Formula Financing (TFF). There is also the

recently created Health Reform Fund (HRF). The CHST is the largest federal transfer to the provinces and territories. It was instituted in 1996-97 by replacing two earlier transfer programs, viz., Established Programs Financing (EPF) and Canada Assistance Plan(CAP). Though these transfers take the form of a specific purpose grant, they may be treated as correcting the vertical imbalance in as much as every province receives a share in these transfers. The CHST transfers are meant to support health care, boost secondary education and support social assistance and social services including early childhood development. These transfers imply a degree of equalisation since the determining principle for the CHST transfers effectively becomes the per capita amounts.

The CHST has two forms, i.e. cash and tax transfer points. The tax transfer arrangements were introduced in 1977 under EPF when the federal government agreed with the provincial and territorial governments to reduce its personal and corporate income tax rates by the margin of 13.5 percentage points and correspondingly allow the provinces to raise their tax rates by an equal margin. This has been called as the transfer of tax points or the vacation of tax room by the federal government in shared tax bases. This has allowed the provinces to directly obtain the revenues from the relevant tax bases that would otherwise have accrued to the federal government.

The CHST cash transfers are computed as a residual by subtracting the equivalent value of the tax points from provincial per capita total entitlements. The richer provinces gain larger amounts from the tax point transfers because their tax bases are larger. The cash transfers are estimated broadly on per capita basis adjusted for the amounts calculated under the transfer of tax points. Ontario receives the lowest cash transfer under CHSS since its own-source fiscal capacity exceeds the fiscal capacities of all other provinces inclusive of equalisation in the case of recipient provinces. Hobson (2001) refers to the portion of other provinces' cash transfer, which raises them to a common standard, as sort of "super-equalisation"¹² Such super-equalisation is paid to both Alberta and British Columbia.

The CHST is a general purpose transfer which gives the provinces and territories a flexibility to allocate payments among social programs according to their own priorities subject to upholding the principles of the *Canada Health Act* and the condition that no

period of minimum residency is required with reference to the social assistance.

In a recent meeting of the First Ministers or premiers of the provinces in February 2003, there was an agreement on an action plan for renewing health care. This would result in an increase in federal support to health care relative to the 2003 levels by \$ 17.3 billion over 3 years and by \$ 34.8 billion over five years. It has also been agreed to restructure the CHST w.e.f. 1st April, 2003 by dividing it into two separate transfers. The new system will comprise Canada Health Transfers (CHT) in support of health, and Canada Social Transfers (CST) in support of post secondary education, social assistance and social services including early childhood development. In this restructuring, the existing CHST consisting of cash as well as tax transfers will be apportioned between CHT and CST. The percentage of cash and tax points apportioned to CHT will reflect the percentage of provincial health spending within the overall provincial spending supported by the CHST. The remaining cash and tax points will be allocated to the CST.

As derived in endnote 12, the CHST formula for cash transfers can be written as

$$c_i = [c^* - zq_0] + z[q_0 - q_i] \quad \dots(8)$$

The various terms used in this equation are explained below:

- c_i is the per capita cash transfer to the i th province
- c^* is the normative per capita expenditure on health and social services
- z is the tax points transfer(13.5 percentage points) applicable to personal and corporate income tax bases
- q_i is the tax base of the i th province (covering personal and corporate income taxes)
- q_0 is the corresponding tax base of Ontario

The term $[c^* - zq_0]$ is a constant, z is a fraction and $[q_0 - q_i]$ gives the distance of the per capita revenue base of the i th province from the highest per capita base among provinces. This formulation once again has a close resemblance to the distance criterion used by the Finance Commissions in India for deciding the horizontal distribution of shareable taxes. In the formulation used by the Finance Commissions, states with lower per capita incomes benefit more as

the distance is measured from the highest per capita income or the average of three states with the highest per capita incomes. In the Canadian formulation, the distance is measured from the tax base of Ontario which has the highest tax base in this context. However, the weight attached to this criterion is differently determined.

f. *Territorial Formula Financing*

The North West Territories, the territorial government of Nunavut and the territorial government of Yukon receive a portion of their funds through Territorial Formula Financing (TFF) which is meant to compensate them for the higher per capita costs of providing services which arise due to the small size of population, large area and extreme weather conditions. In 2003-04, total TFF amounted to \$ 1655 million. For the governments of the Territories, TFF accounts for more than 90 percent of their respective total transfers. The other major source, viz, CHST, accounted for only 8, 5 and 8 percent of total transfers in 2003-04 respectively for the North West Territories, Nunavut and Yukon.

The TFF is a 'gap-filling' formula, which takes into account the difference between the expenditure needs and own resources of the territorial governments. The formula uses on the expenditure side the concept of 'Gross Expenditure Base' (GEB). The GEB is indexed to provincial spending so that the growth rates in provincial spending and territorial governments spending can match. There is a further adjustment for territorial population growth relative to that of Canada as a whole. On the revenue side, territorial revenues are derived by applying the average provincial tax effort to the territorial revenue bases. Some adjustment is done in these estimates in recognition of the special circumstances of the North. In addition, a financial incentive is also provided to the territories to encourage economic activity and greater self sufficiency. Agreements regarding federal financing of territorial expenditures are generally arrived at for a 5 year period. The present arrangements, for example, took effect on April 1, 1999.

g. *Horizontal Imbalance*

Revenues

The outcome of the Canadian Transfer System is to reduce both vertical and horizontal imbalances. As already noted, provinces differ from each other in terms of area and size of population, natural endowments and economic base. These differences result in considerable horizontal imbalance, which is addressed through 'equalisation grants' in Canada. As long as there is enough vertical imbalance in the system with the federal government transferring sufficient funds to all provinces, it could always structure them so that horizontal equalisation is achieved. We can examine as to how effective the system has been in reducing horizontal imbalances by looking at the per capita revenues of provinces relative to average provincial revenues before and after transfers.

Table 8 shows the range of the difference between the minimum and the maximum revenue before and after transfers in Canada. In 2000-01 it was 80.7 before transfers and 47.1 after transfers. The coefficient of variation prior to transfers was 17.6 in 2001-02 which fell down to 11.8 after transfers. Table 9 shows the corresponding picture for India. Three sets of 3-year averages are given providing per capita state revenues before and after transfers for the general category states excluding Goa, which is an outlier and including Assam from among the special category states.

Table 8 : Horizontal Fiscal Imbalance: Revenue Before and After Transfers: Canada

	Before			After		
	1999-00	2000-01	2001-02	1999-00	2000-01	2001-02
Newfound land and Labrador	74.5	73.2	87.3	113.2	111.5	124.3
Prince Edwards Island	79.2	76.7	83.2	111.8	110.1	117.4
Nova Scotia	66.3	65.2	73.9	92.8	90.3	96.6
New Brunswick	79.2	76.2	82.6	109.1	103.1	113.5
Quebec	110.7	107.4	110.2	109.6	109.5	112.3
Ontario	97.9	92.3	93.1	92.6	87.4	88.1
Manitoba	73.7	74.8	78.4	93.9	92.9	96.7
Saskatchewan	90.4	107.5	95.9	97.7	105.8	100.1
Alberta	123.9	145.8	128.6	115.7	134.5	119.0
British Columbia	94.7	96.8	98.8	92.2	93.9	93.6
All provinces	100.0	100.0	100.0	100.0	100.0	100.0
Minimum	66.3	65.2	73.9	92.2	87.4	88.1
Maximum	123.9	145.8	128.6	115.7	134.5	124.3
Range(% points)	57.6	80.7	54.7	23.4	47.1	36.2
Coefficient of variation	20.3	26.4	17.6	9.5	13.4	11.8

Source (Basic Data): Fiscal Reference Tables, Department of Finance, Ontario, Canada

Table 9: Per Capita Revenues Relative to 15-State Average Before and After Transfers(%): India

States	Before Transfers			After Transfer		
	Average 1993-94 to 1995-96	1996-97 to 1998-99	1999-00 to 2001-02	Average 1993-94 to 1995-96	1996-97 to 1998-99	1999-00 to 2001-02
Andhra Pradesh	82.53	91.93	106.74	89.55	97.89	108.28
Assam	42.98	39.94	44.17	94.67	91.36	87.35
Bihar*	27.90	28.00	27.28	49.00	48.30	48.83
Gujarat	142.48	150.44	149.76	121.92	128.17	128.28
Haryana	236.88	205.89	168.07	183.20	163.55	134.02
Karnataka	115.89	123.35	121.60	105.80	113.94	115.59
Kerala	110.68	126.17	121.35	107.41	119.81	114.26
Madhya Pradesh*	66.43	68.12	65.09	75.63	78.16	75.23
Maharashtra	145.21	148.94	154.97	121.49	122.97	123.40
Orissa	46.85	44.42	47.43	74.07	69.93	76.44
Punjab	179.87	173.34	186.67	145.64	140.38	150.41
Rajasthan	82.53	75.52	74.52	93.66	84.78	86.23
Tamil Nadu	117.97	130.53	135.63	110.96	120.14	121.73
Uttar Pradesh*	46.35	41.50	44.91	62.42	57.07	61.09
West Bengal	55.45	51.90	51.80	64.59	63.55	68.84
Total 15 States	100.00	100.00	100.00	100.00	100.00	100.00

	Before Transfers			After Transfer		
	Average			Average		
States	1993-94 to 1995-96	1996-97 to 1998-99	1999-00 to 2001-02	1993-94 to 1995-96	1996-97 to 1998-99	1999-00 to 2001-02
Minimum	27.90	28.00	27.28	49.00	48.30	48.83
Maximum	236.88	205.89	186.67	183.20	163.55	150.41
Range	208.97	177.89	159.40	134.19	115.25	101.58
Coefficient of Variation	58.26	55.41	52.29	34.71	33.29	30.06

Source(Basic data): Finance Accounts of State Governments and Population Census 1991 and 2001
* refers to the pre-divided states.

Annual Population figures are calculated on the basis of monthly compound average growth rates and the year October figures are taken to calculate per capita figures.

The per capita revenues prior to transfers show a minimum 28 percent for Bihar compared to the 15-state average and the corresponding ratio of 237 percent for Haryana being the highest during 1993-94 to 1995-96. The coefficient of variation was 58.3. The range as well as the coefficient of variation prior to transfers decreased subsequently but only marginally. The position improves considerably after transfers as the range went down to about 102 percentage points in the latest period and the coefficient of variation was also just a little above 30 percent. However, as compared to Canada, the coefficient of variation is about three times in magnitude after transfers showing that much horizontal difference is left in revenues even after transfers.

Expenditures

The final outcome of transfers is to correct horizontal imbalance in expenditures, which are affected by own revenues, transfers and borrowing. An examination of the per capita expenditures of provinces in Canada relative to average provincial expenditure (Table 10) shows that the range of variation is more or less the same as in the case of revenues. This is because the provinces do not resort to any significant borrowing. The range of variation from the average in Canada was 23.2 percentage points in 1999-00 with 92.6 percent of the average being the minimum and 115.8 percent being the maximum. In 2001-02, this range increased to 38 percentage points.

The extent of equalisation required in India is much more than that in Canada because of the difference in the revenue bases. In India states also borrow to a substantial extent and their relative capacities to borrow differ. This adds to horizontal imbalance when expenditures on services are considered. Differences in per capita expenditures arise because of differences in revenues as well per capita borrowing. One qualification, however, needs to be added, namely, that sometimes these differences are not just due to differences in capacities but also due to differences in provincial preferences in providing services by government where the private sector can also participate.

Table 10: Horizontal Fiscal Imbalance in Expenditure: Canada
(percent)

	1999-00	2000-01	2001-02
Newfoundland and Labrador	115.8	120.8	124.8
Prince Edwards Island	114.7	119.8	117.8
Nova Scotia	103.3	99.0	100.4
New Brunswick	110.8	106.8	109.7
Quebec	111.4	114.6	113.0
Ontario	92.6	89.5	86.8
Manitoba	97.0	97.9	95.5
Saskatchewan	98.0	99.8	103.4
Alberta	101.3	107.5	111.6
British Columbia	95.3	94.4	101.0
All provinces	100.0	100.0	100.0
Minimum	92.6	89.5	86.8
Maximum	115.8	120.8	124.8
Range(% points)	23.2	31.3	38.0
Coefficient of variation	8.19	10.21	10.51

Source(Basic Data): Fiscal Reference Tables, Department of Finance, Ontario

In India, looking at per capita expenditures, the range appears to be much larger showing that even after transfers considerable horizontal imbalances remain uncorrected. The inter-state per capita expenditure on general, social, and economic services relative to the average per capita expenditure show that disparities have been large and they have increased over time. Table 11 gives 3-year averages of per capita expenditures covering the period 1987-88 to 2001-02 covering 15 states that include all the general category states except Goa which is an outlier and Assam, which is the largest among the special category states. Bihar has the minimum per capita expenditures, which amounted to more than 62 percent of the average per capita expenditures but have fallen to about 50 percent of the average in recent years. Maharashtra and more recently Punjab have had the largest per capita expenditures. The range of variation between the minimum and maximum was 105 percentage points in the late eighties. It increased reaching a peak of 142 percentage points during 1993-94 to 1995-96 and has fallen since then to 123 during 1999-00 to 2001-02. The coefficient of

variation shows a similar pattern. In terms of magnitude, the coefficient of variation is about three times that in Canada.

Table 11: Horizontal Imbalance: India

Per Capita Expenditure of States Relative to Average(three year averages)
(in rupees)

States	1987-88 to 1989-90	1990-91 to 1992-93	1993-94 to 1995-96	1996-97 to 1998-99	1999-00 to 2001-02
Andhra Pradesh	99.9	98.3	108.6	109.8	111.9
Assam	107.6	100.9	96.4	79.3	85.5
Bihar	67.7	62.9	52.7	50.7	50.1
Gujarat	139.1	136.9	130.1	143.7	152.7
Haryana	148.3	136.3	194.9	181.6	140.9
Karnataka	110.9	114.0	117.0	115.8	118.0
Kerala	108.4	109.2	121.1	134.2	127.3
Madhya Pradesh	88.6	84.1	81.5	83.0	75.4
Maharashtra	138.7	129.8	137.3	134.4	148.6
Orissa	90.3	90.8	89.2	89.2	91.6
Punjab	172.2	174.3	179.2	168.9	173.2
Rajasthan	100.1	104.2	112.5	104.2	96.0
Tamil Nadu	111.0	130.4	119.4	128.7	120.8
Uttar Pradesh	76.2	82.3	74.8	73.1	66.9
West Bengal	80.8	75.9	77.2	83.6	99.5
Total 15 States	100.0	100.0	100.0	100.0	100.0
Minimum	67.7	62.9	52.7	50.7	50.1
Maximum	172.2	174.3	194.9	181.6	173.2
Range	104.5	111.4	142.2	130.9	123.1
Coefficient of Variation	26.6	26.7	33.8	32.8	31.2

Source (Basic Data): *Finance Accounts of State Governments*

VI. Federal and Provincial Debt

The resource gap that remains unmet by fiscal transfers leads to borrowing by the provincial governments. In Canada, however, provinces do not borrow from the central government. Total government debt in Canada excluding government employee pension liabilities went up to as high as 99.5 percent of GDP in 1995. However, since then there has been a decline in government debt relative to GDP. It was 83.2 percent in 2001. The overall debt-GDP ratio of the central and state governments considered together in India, at 75 percent at the end of 2002-03, is less than that in Canada. However, while in Canada it has been falling in recent years, in India it has been rising. Canada appears to have solved its debt-fiscal deficit problem by having a fiscal surplus for several years which resulted in the fall of the debt-GDP ratio. It may also be noted that the sustainable threshold of the debt-GDP ratio is much lower in India because it has much lower revenue to GDP ratio. As already noted, while this ratio is about 17 percent in India, it is more than 40 percent in Canada.

Provinces in Canada can borrow in the domestic market or even from abroad. However, they do not borrow from the federal government. Their ability to borrow from the market depends entirely on the assessment by the markets and the credit ratings that they might receive. This itself serves as an instrument of fiscal discipline. In India, states are heavily indebted to the central government. Part of the assistance that the central government extends to the states for their plans is in the form of loans. The borrowing that the states are able to do on the basis of small savings is fully backed by the central government. The protection and the implicit guarantee that the central government provides to the borrowings by the states serves to dilute the discipline that the markets may otherwise impose.

VII. Concluding Observations

While comparing the Canadian system of inter-governmental transfers with the system of fiscal transfers in India, the following features may be highlighted:

- The heart of the Canadian transfer system is equalisation. Apart from equalisation grants, the CHST also serves the objective of equalisation as provinces are able to spend in per capita terms close to each other. Together, these transfers are able to eliminate to a considerable extent both vertical and horizontal imbalances. While the CHST is based almost entirely on per capita expenditures, equalisation grants utilise an elaborate system of normative determination of capacities.
- Vertical imbalance is corrected in most federations through tax assignment, revenue sharing and grants. India follows all the three routes while in Canada the emphasis is on tax assignment and grants. Revenue sharing becomes necessary where tax assignment is inadequate. Unlike in India, in Canada, almost all tax bases are common to both levels of governments. It is notable that some vertical imbalance is corrected through a special purpose grant, i.e. CHST. In India, the vertical imbalance is sought to be corrected by revenue sharing, and the horizontal imbalance, through the formula of distribution of the shareable revenues amongst states supplemented by grants.
- Incomes as well as population are concentrated in just a few provinces in Canada namely, Ontario, British Columbia, Alberta and Quebec. This facilitates a transfer system aimed at equalisation. On the contrary, redistribution in India is more difficult because the share of population in states which have a high per capita income is smaller than the population in the states with low per capita incomes, which require transfers.
- In the RTS system only the revenue capacities are determined and no account is taken of relevant cost differentials in the provision of services or differences in needs. The normative determination of capacities is done by utilising a system called Representative Tax System (RTS) which requires equalisation of the bases of 33 revenue sources. Apart from other limitations, this calls for an elaborate mechanism for collecting and updating data.

In Canada, this task is facilitated by an independent statistical agency. The Indian system, in correcting horizontal imbalances, uses macro variables at the state level. An attempt is also made to correct for some cost differentials.

- Even after the determination the actual transfers in any given year, calculations remain open in Canada for 4 years where amounts are adjusted in view the revision of the relevant data. In the Indian case, this option is not open in general, particularly for the Finance Commission transfers although amounts of tax devolution automatically adjust with reference to the actual realizations of the central taxes. Most grants are fixed in nominal terms well in advance of the years for which those grants are to be given. These are also derived on the basis of data which are dated by several years.
- In the Canadian system there is no autonomous body like, Finance Commission. In their case, most decisions are arrived at through consultations and discussions. In the Indian case, apart from the constitutionally mandated body like Finance Commission, there are other institutions also dealing with different aspects of federal-state relations like the Planning Commission, and various central ministries and departments. Changes in some components of transfers like those under the *Gadgil Formula* require endorsement by the National Development Council. Thus, in India the system of transfers is fragmented with several bodies being responsible for the transfers.

Even though the modalities of equalisation may appear to be different in Canada and India, the use of the distance factor in the Finance Commission formula for distribution is not very different from the way cash transfers are determined under CHST in Canada. Similarly, the use of the deviation criterion by the Planning Commission is not very different from the equalisation principle of Canada if the macro base is substituted for the multiple individual bases.

Determining equalisation entitlements based on a source by source approach as adopted by Canada is less practical in the case of India simply for want of comparable and reliable information required for applying the method. Even on theoretical grounds, that approach has been questioned extensively. A more practical alternative is the macro approach, which is adopted in India.

However, the Canadian system brings home the point that a good indicator of fiscal capacity will have to go beyond using the per capita GSDP. Account has to be taken not just of production in a state but rather of the incomes that accrue to its citizens. Also the concept of ensuring that resources are available for maintaining the per capita expenditure of select basic services at certain levels among states, as attempted in Canada, is worth exploring.

End Notes

1 The Court's interpretation is based on the notion that retailers are the collection agents of the governments and that they are merely collecting taxes that governments intend to impose directly on the consumers of the taxed goods. This interpretation has been extended to include VAT although the tax liability can occur well before the retail stage on the basis that ultimately the tax is intended to apply to consumers.

2 The arrangement regarding transfers of tax- points arrangement came when the old EPF system was operative.

3 This is as the system exists now. The fiscal system in Canada has undergone many changes. The pendulum has swung from excessive centralisation as was seen during the World War II period to the present situation of more balanced distribution of assignment of taxes. Both in the political and economic spheres, Quebec has been responsible for pushing for more powers for the provinces.

4 In February 2003, the federal government agreed to permanently remove the equalisation ceiling on a going-forward basis, starting with 2002-03. It remains in effect for earlier years. The floor is meant to protect provinces from undue fluctuations in the equalisation payments.

5 Boothe (2001) finds using data for Saskatchewan over 1987-2001 that equalisation payments increased the volatility of total revenues of the province as compared to the volatility of own revenues, and that there is little evidence to say that equalisation improved the predictability of the Saskatchewan government revenues over the period.

6 Usher (2001) gives an example of taxation of Potash in Saskatchewan. He observes "It is in the interest of that province not to tax that base at all because it could lose dollar for dollar. This is known as "rate tax-back problem". The federal government has adopted special rates to modify the disincentive from the rate tax-back and the base tax back problem. But such rules drive the equalisation problem further and further away from the ideal section 36(2) of the Canadian constitution".

7 In the context of royalty on petroleum, Usher (2001) observes: "Whenever additions to provincial revenue-for example, from royalties on petroleum-are dissipated through the loss of equalisation payments, the province acquires an incentive to convert the additional revenue into a new form with less impact on equalisation payments. It is said that the government of Newfoundland is anxious to have aluminum from Voisey Bay processed

within Newfoundland not because it is efficient to do so, but because direct revenue from aluminum production would accrue to the federal government through a reduction in Newfoundland's entitlement to equalisation payments under the current Canadian formula. This is known as the "base tax back" problem."

8 Usher (2001) observes: "Property tax may be high or low depending in part on how the provincial government's services to the property are financed. Property tax is high to the extent that the cost of public expenditure on roads, water and electricity is covered by the revenue from the property tax".

9 One aspect for which the Canadian equalisation system has sometimes been criticized is its complexity. The system is actually simple for those who handle it, but their number is limited. The complexity arises from various *ad hoc* adjustments and special provisions that are made to make the numbers look 'right'. Usher (2001) observes "Complexity in the equalisation formula is a recipe for negotiation, compromise and conflict among the provinces that stand for gain or lose according to how the final formula is chosen".

10 The expression in equation (6) can be written as

$$E_i = [\sum_j TR_j] [N_i/MB_c] [MB_c/N_c - MB_i/N_i]$$

The term a_c in equation (6) is equal to $[\sum_j TR_j]/[MB_c]$, which is the effective tax rate with respect to the macro-base.

11 The fourteen problems listed by Statistics Canada [see Aubut and Vaillancourt (2001)] in using GDP as a macro indicator of taxable capacity are:

- (i) Classification of some government activities as intermediate of fiscal production;
- (ii) Inappropriate method of valuing services and output of banks;
- (iii) Treatment of interest on the public debt as transfer rather than fiscal expenditure;
- (iv) Mix of units in the personal and unincorporated business sector;
- (v) Treatment of consumer durables as fixed assets;
- (vi) Non- inclusion of capital gains and losses;
- (vii) non inclusion of non reproducible natural resources;
- (viii) treatment of trusted pension funds while these are considered theoretical problems with the concept of GDP itself there are some problems that are considered measurement problems;
- (ix) difficulty of data reconciliation for establishments and enterprises;
- (x) lack of real income estimation;
- (xi) inaccurate estimates of consumption by sector;

- (xii) inappropriate treatment of commercial buildings and industrial equipment leasing arrangements; and
- (xiii) Non-inclusion of the underground economy;

Aubut and Vaillancourt (2001) consider only five of these appear to be relevant in the context of equalisation. They suggest some additional items. Their main recommendations relate to : (i) inclusion of value of capital gains and losses (ii) inclusion of the value of the underground economy (iii) value of household services (iv) value of volunteer work, (v) value of non reproducible resources (vi) value of revenues of pensions (vi) value of imputed items, and (vii) income from the population living on reserves. The first four call for additions to the officially estimated GDP and the latter three (items v to vii) require to be subtracted from the official GDP. These changes affect the calculations of equalisation entitlements in different ways. The most adversely affected province would be Prince Edward Island and the most important element of adjustment is the imputation for household production.

12 Defining: z = tax points transferred to provinces under the EPF arrangement

q_i = per capita tax base of the i th province

q_0 = per capita base of Ontario

c_i = per capita cash transfer under CHST to the i th province

c_0 = per capita cash transfer to Ontario

c^* = per capita expenditure on CHST

The per capita cash entitlement to the i th province can be written as

$$c_i = c^* - z \cdot q_i$$

$$c_i = c^* - zq_0 + zq_0 - zq_i$$

$$c_i = [c^* - zq_0] + z [q_0 - q_i]$$

The second term is zero for Ontario, since $q_i = q_0$ in its case. Hence Ontario gets only $c^* - zq_0 = c_0$ as its per capita tax transfer. All other provinces get a positive amount under the second term of the expression given above since $q_i < q_0$ in their case. This leads to equalisation implicit in the calculation of CHST transfers linked to the tax points component.

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Annexure I

Revenue Sources

1. Personal Income Tax Revenues
2. Business Income Revenues
3. Capital Tax Revenues
4. General and Miscellaneous Sales Taxes
5. Tobacco Taxes
6. Gasoline Taxes
7. Diesel Fuel Taxes
8. Non-Commercial Vehicle Licenses
9. Commercial Vehicle Licenses
10. Alcoholic Beverage Revenues
11. Hospital and Medical Insurance Premiums
12. Race Track Taxes
13. Forestry Revenues
14. New Oil Revenues
15. Old Oil Revenues
16. Heavy Oil Revenues
17. Mined Oil Revenues
18. Third-tier Oil Revenues
19. Heavy Third-tier Revenues
20. Natural Gas Revenue
21. Sales of Crown Leases
22. Other Oil and Gas Revenues
23. Total Mineral Resources
24. Water Power Rentals
25. Insurance Premium Revenues
26. Payroll Taxes
27. Provincial Local Property Tax Revenues
28. Lottery Revenues
29. Other Games of Chance Revenues
30. Misc. Provincial-Local Property Tax Revenues
31. Shared Revenues:Offshore Activities/NFLD
32. Shared Revenues: Offshore Activities/N.S.
33. Shared Revenues: Preferred Share Dividend