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# **Federal Fiscal Abundance and Interregional Redistribution**

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## ***Introduction***

In fiscal year 2006-07, the federal government recorded its tenth consecutive budgetary surplus. This decade of federal fiscal abundance led to a major restructuring of the federal fiscal system as federal budget surpluses were used to finance debt repayment, tax reductions, higher transfers to provinces and territories, greater direct federal involvement in municipal financing, and higher direct program spending in selected areas.

These changes in the federal fiscal structure have the potential to alter the distribution of economic resources among Canadians in different economic positions (fiscal redistribution) and the relative economic position or average standard of living among provinces (interregional redistribution). In this paper, we focus on the second effect by measuring the change in the degree of interregional redistribution from 1998 to 2004. The initial year was selected as the beginning of the period of fiscal abundance, while the terminal year is the last year for which detailed and consistent data by province are available. The information in the Provincial Economic Accounts (PEA) is also available for 2005, but large one-time federal payments to Newfoundland and Nova Scotia do not allow for a consistent comparison with 1998.

Our results indicate that the changes over the period from 1998 to 2004 have led to a federal fiscal structure that delivers a declining degree of interregional redistribution. The implications of the new structure of fiscal federalism require greater attention than they have received so far.

## ***Federal Fiscal Changes From 1998 to 2007***

Having put into place prior to 1998 a fiscal structure capable of eventually generating surpluses of increasing amounts over time, the federal government was forced after 1988 to shift its fiscal thinking from fighting deficits to allocating surpluses. This shift in policy resulted in fiscal plans that incorporated debt repayment, tax reductions and higher spending.

The policy of debt repayment resulted in a decline in net debt by \$83 billion from 1996-97 to 2006-07 [Finance 2007]. Combined with sustained economic growth, this reduction in the federal debt led to a decline in the debt-to-GDP ratio from close to 60 percent in 1997-98 to less than 30 percent in 2006-07. Concurrently, interest payments on the federal debt fell by 34 percent from 1997-98 to 2006-07. In 1997-98, interest on the debt claimed nearly 27 cents out of each dollar of federal budgetary revenues. By 2006-07, this claim had fallen to 14.4 cents.

Since 1997-98 the federal government has implemented substantial rate reductions for personal income taxes, corporate income taxes and the goods and services tax (GST). On the personal income tax side, the major changes included periodic increases in the amount for the personal credit, increases in the limits for contributions to Registered Retirement Saving Plans (RRSPs), elimination of the high income surtax, expansion of the size of tax brackets, the

restoration of full indexing, and across the board reductions in statutory rates. Changes on the corporate tax side included increases in the amount eligible for the small business income tax reduction and substantial reductions in statutory rates. Recently, the GST rate was reduced from 7 percent to 5 percent. The result of this tax-cutting policy has been a decline in the ratio of federal tax revenues to GDP from 14.6 percent in 1997-98 to 13.7 percent in 2006-07.

A portion of the surplus was also used to undo some of the cuts in intergovernmental transfers introduced during the fiscal restraint strategy of the previous decade. Total federal transfers to other governments increased by \$30 billion. There was little change to the general unconditional transfers (Equalization and Territorial Formula Financing), but a major reform of these programs was introduced in fiscal year 2007-08. The major increase in federal transfers was directed at the Canada Health and Social Transfer (CHST) and particularly its health care component. This increase served the main purpose of redressing the vertical imbalances that had been created by federal fiscal restraint policies. There was also increased funding for conditional grants and financial aid to local governments. Substantial increases were also recorded in transfers to persons, which rose by \$25 billion from 1997-98 to 2006-07, particularly for support to families and children.

The changes in each element of the federal fiscal structure during the past seven years will have different impacts on federal fiscal balances by province. Changes in federal fiscal balances, in turn, may affect the degree of interregional redistribution. The measurement of these effects is addressed in the remainder of this paper.

### ***Interregional redistribution: 1998 and 2004***

Measuring the redistributive effect of federal fiscal activity requires three major stages. The first stage involves the calculation of federal fiscal balances, which measure the net gain from or contribution to federal finances by each province. This stage includes two steps: (a) selecting the approach for measuring federal fiscal balances, and (b) allocating federal revenues and expenditures to each province. The second stage develops the measure of regional economic disparities necessary for measuring the degree of interregional distribution. The third stage produces the indices of interregional redistribution. A detailed analysis of the methodological issues is found in Ruggeri [2008] and the methodology used to estimate federal fiscal balances and interregional redistribution for 1998 and 2004 is found in Ruggeri and Watson [2008]. In this paper we focus strictly on the presentation and interpretation of the results.

In this section we show first the estimated federal fiscal balances by province, calculated by neutralizing the interest payments on the federal debt and adjusting for the federal surpluses on allocated revenues and expenditures. Then we present our estimates of interregional redistribution for 1998 and 2004 and the changes in the contribution to redistribution made by selected components of the federal fiscal structure.

## *Federal fiscal balances*

Table 1 shows the allocated federal revenues and expenditures and the associated federal fiscal balances for 1998 and 2004. Positive values of these balances indicate a gain while negative values indicate a contribution.

**Table 1**  
**Allocation of Federal Revenues and Expenditures: 1998 and 2004**

Province	1994			2004		
	Revenues	Expenditures	Balance	Revenues	Expenditures	Balance
NL	1,587	4,480	2,893	2,315	4,421	2,106
PE	457	1,043	586	635	1,256	621
NS	3,498	6,387	2,889	4,636	7,593	2,957
NB	2,599	5,030	2,431	3,439	6,029	2,590
PQ	21,551	27,890	6,339	28,034	33,565	5,531
ON	59,941	47,408	-12,534	78,994	67,041	-11,953
MB	4,441	6,771	2,330	5,618	8,679	3,061
SK	3,728	5,363	1,635	4,764	7,227	2,464
AB	16,017	11,475	-4,543	23,550	17,464	-6,086
BC	18,486	16,457	-2,028	24,189	22,898	-1,290

For a meaningful inter-temporal comparison, in Table 2 these “balanced” federal balances for 2004 are shown in constant 1998 dollars (based on the Canadian consumer price index).

We notice that in 1998 a total of \$19.1 billion was transferred through the intermediation of the federal fiscal system from Ontario, Alberta and British Columbia to the remaining seven provinces. Of this contribution, 65.6 percent was made by Ontario, 23.8 percent by Alberta and 10.6 percent by British Columbia. Among the seven provinces benefiting from the transfers, Quebec received 33.2 percent, the four Atlantic provinces received a combined 46.0 percent, and the combination of Manitoba and Saskatchewan received 20.8 percent.

On a per capita basis, the average contribution by Ontario, Alberta and British Columbia amounted to \$1,047 and ranged from a high of \$1,567 in Alberta to a low of \$509 in British Columbia. The average per capita gain for the other provinces was \$1,618, and its value ranged from a high of \$3,731 for the average of the four Atlantic provinces to a low of \$869 in Quebec.

**Table 2**  
**Real Balanced Federal Balances, 1998 and 2004**

Province	\$Millions			Per Capita		
	1998	2004	Change	1998	2004	Change
NL	2,893	1,836	-1,057	5,358	3,550	-1,809
PE	586	542	-44	4,316	3,931	-384
NS	2,889	2,579	-310	3,100	2,749	-350
NB	2,431	2,258	-173	3,239	3,003	-236
PQ	6,339	4,823	-1,516	869	639	-230
ON	-12,534	-10,424	-2,110	-1,103	-839	-263
MB	2,330	2,669	339	2,049	2,280	232
SK	1,635	2,148	513	1,607	2,159	552
AB	-4,543	-5,307	765	-1,567	-1,654	88
BC	-2,028	-1,125	-903	-509	-268	-242
Transfer	19,104	16,856	-2,248			

This pattern of per capita contributions and gains suggests that the population size of the Canadian provinces and their respective economic structures provide the Canadian federation with conditions favourable to interregional redistribution. Since the contributing provinces account for over 60 percent of the population and for an even larger percentage of gross domestic product, relatively small levels of per capita contributions are capable of delivering large per capita gains in the smaller and less prosperous provinces. In other words, on a per capita basis, interregional redistribution in Canada is not onerous for the residents of the contributing provinces.

Substantial changes in federal balances occurred between 1998 and 2004. First, the total amount transferred in constant dollars from the contributing to the receiving provinces fell by nearly 12 percent, dropping from \$19.1 billion to \$16.9 billion. Second, the distribution of contributions and gains also changed. The contributions by Ontario and British Columbia decreased by similar degrees, 3.8 and 3.9 percentage points, respectively, while the contribution of Alberta rose by 7.7 percentage points. Among the gaining provinces, Quebec and the Atlantic provinces experienced declines, of 4.6 and 3.2 percentage points, respectively, while Manitoba and Saskatchewan combined saw their gain rise by 7.8 percentage points. Notably, the combined reduction in the contributions by Ontario and British Columbia matched the combined decline in the gains by Quebec and the Atlantic provinces, while the increase in the contribution by Alberta matches the increase in the gain by the other two prairie provinces.



The changes in total contributions and gains by provinces are reflected in the changes in per capita values. The combined per capita contribution by Ontario, Alberta and British Columbia fell by 19 percent because a decline in the total amount of the contribution was associated with a higher share of the population by these three provinces. The average gain by the receiving provinces fell by 13.3 percent to \$1,404. Substantial declines in per capita gains in Quebec and the Atlantic provinces were partly offset by increases in Manitoba and Saskatchewan.

### *Interregional Redistribution*

To measure interregional redistribution, we used global indices based on the Gini coefficient ( $G$ ) for two measures of per capita income by province. The first index is simply the difference between two values of  $G$ , one based on a broad measure of private income plus the estimated federal fiscal balances (called base income and represented by  $G_b$ ) and the other based on the assumption that federal fiscal balances are allocated among provinces in proportion to their share of per capita private income (called neutral-fisc income and represented by  $G_n$ ).

$$(1). I_a = G_n - G_b$$

When federal fiscal activity redistributes income from higher to lower income regions, actual base income will be distributed less unequally than neutral-fisc income,  $G_n$  will be higher than  $G_b$ . Therefore,  $I_a$  will have a positive value. The greater the difference, the larger is the degree of interregional redistribution.

The second index measures the proportional change instead of the absolute change in the two Gini coefficients.

$$(2). I_a^* = (G_n - G_b)/G_n$$

The estimates of interregional redistribution in Canada are shown in Table 4.

Inspection of Table 3 leads to the following observations. First, when we compare provinces with respect to average income, the degree of income disparities is a fraction of the degree of income inequality among individuals, which is associated with Gini coefficients in excess of 0.3. With respect to income inequality, differences among individuals within a province are more significant than differences of average incomes among provinces. Second, there may be a trend towards higher interprovincial disparities of neutral-fisc income as the estimated Gini coefficient rose by 7 percent from 1998 to 2004. Third, there seems to be a downward trend in the degree in interregional redistribution generated by the federal fiscal system. The estimated Gini coefficient for base income in 2004 was 33 percent higher than in 1998, resulting in a decline in the proportional change in interregional redistribution from 46 percent to 33 percent.

Table 4 shows the contribution made by selected federal budget items to interregional redistribution (excluding CPP revenues and expenditures because Quebec has its own plan). As mentioned earlier, in 1998 the federal fiscal system offset 46 percent of inter-provincial differences in a broad measure of earned income. Four-fifths of this offset was generated by federal spending and only 17 percent by federal revenues. Moreover, redistribution on the revenue side was generated almost entirely (93%) by the personal income tax.

**Table 3**  
**Indices of Interregional Distribution**

	$G_n$	$G_b$	$G_n - G_b$	$[(G_n - G_b)/G_n]*100$
1998	0.072	0.039	0.033	45.83
2004	0.077	0.052	0.025	32.47
Change	0.005	0.013	-0.008	-13.37

The degree of the federal fiscal offset fell to 33 percent in 2004. All the selected elements of the federal fiscal system contributed to this decline, though by different magnitudes. The absolute decline in the case of federal spending was almost double the decline for the revenue side. The largest decline occurred for transfers to governments (46 percent of the total decline), followed by personal income taxes (15 percent). There was no change in the redistributive impact of purchases and small declines for other revenues and transfers to persons and business.

As a result of these changes and the lower overall degree of interregional redistribution, the relative contribution of each of the selected budget items changed considerably from 1998 to 2004. Three items are particularly noticeable. First, the revenue side became largely insignificant as it accounted for less than 10 percent of the total redistributive impact. This implies that, at least with respect to interregional differentials in per capita income, recent changes in the federal taxation have moved the federal revenue system much closer to proportionality. Second, transfers to persons and business became by far the largest single contributor to interregional redistribution, accounting for 43 percent of the total, more than transfers to governments and total revenues combined. Third, transfers to governments accounted for less than one-third of interregional redistribution. The decline in the contribution of this item resulted from the fact that there were minimal changes in federal transfers for the only program specifically directed at horizontal fiscal imbalances (equalization). The increases in federal transfers were mostly directed at vertical fiscal imbalances through programs that generate little interregional redistribution.

Additional insights into interregional redistribution are gained by comparing for each province per capita actual base income and neutral-fisc income, as is done in Figure 1. In this figure, the provinces are listed in ascending order of per capita neutral-fisc income on the horizontal axis while the vertical axis measures the corresponding values of per capita base income. Circles refer to 1998 and diamonds to 2004. The forty-five degree line indicates no regional redistribution as a province's ratio of its per capita base income to the national average is equal to its ratio of per capita neutral-fisc income to the national average. The horizontal line represents complete redistribution as the ratio of per capita base income to the national average is the same for all provinces. The flatter the pattern of the per capita base income values, the greater is the degree of interregional redistribution.

Inspection of Figure 1 leads to the following observations. First, the pattern of circles and diamonds is between the line of complete redistribution and the line of no redistribution, indicating a certain degree of interregional redistribution in both years. Second, the circles (2004) follow a steeper path than the diamonds (1998), indicating a lower degree of interregional redistribution in 2004. Third, there are two main components to difference in interregional redistribution between 1998 and 2004. The pattern of the diamonds (2004) is steeper even among the provinces with below average per capita income, indicating less

**Table 4**  
**Components of Interregional Redistribution: 2004**

	$G_n - G_{bj}$			$[G_n - G_{bj}/G_n - G_b]*100$		
	1998	2004	Change	1998	2004	Change
Personal Income Taxes	0.0050	0.0030	-0.0020	15.6	13.8	-1.8
Other Revenues*	0.0004	-0.0011	-0.0015	1.2	-4.4	-5.6
Total Revenues*	0.0055	0.0024	-0.0031	16.8	9.4	-7.4
Transfers to Persons and Business	0.0118	0.0107	-0.0011	35.6	42.8	7.2
Transfers to Governments	0.0130	0.0081	-0.0049	39.3	32.2	-7.1
Purchases of Goods and Services	0.0018	0.0018	0.0000	5.5	7.1	1.6
Total Expenditures*	0.0266	0.0206	-0.0060	80.4	82.1	1.7

\* Excludes CPP Revenues and Expenditures

redistribution within this group of provinces although their relative income positions do not seem to have changed. Also, there is an increase in the dispersion of per capita income among the three provinces with above average per capita income. We notice that from 1998 to 2004,

Ontario's position (the second highest circle in 1998) moved closer to the national average in 2004 while Alberta's position (the highest circle in 1998) moved further away. However, Alberta's deviation from the line of no redistribution did not increase as its relative economic position advanced. This means that, based on its impact on interregional redistribution in 1998, Alberta's increase in per capita contribution from 1998 to 2004 was not commensurate with the rise in its economic position.

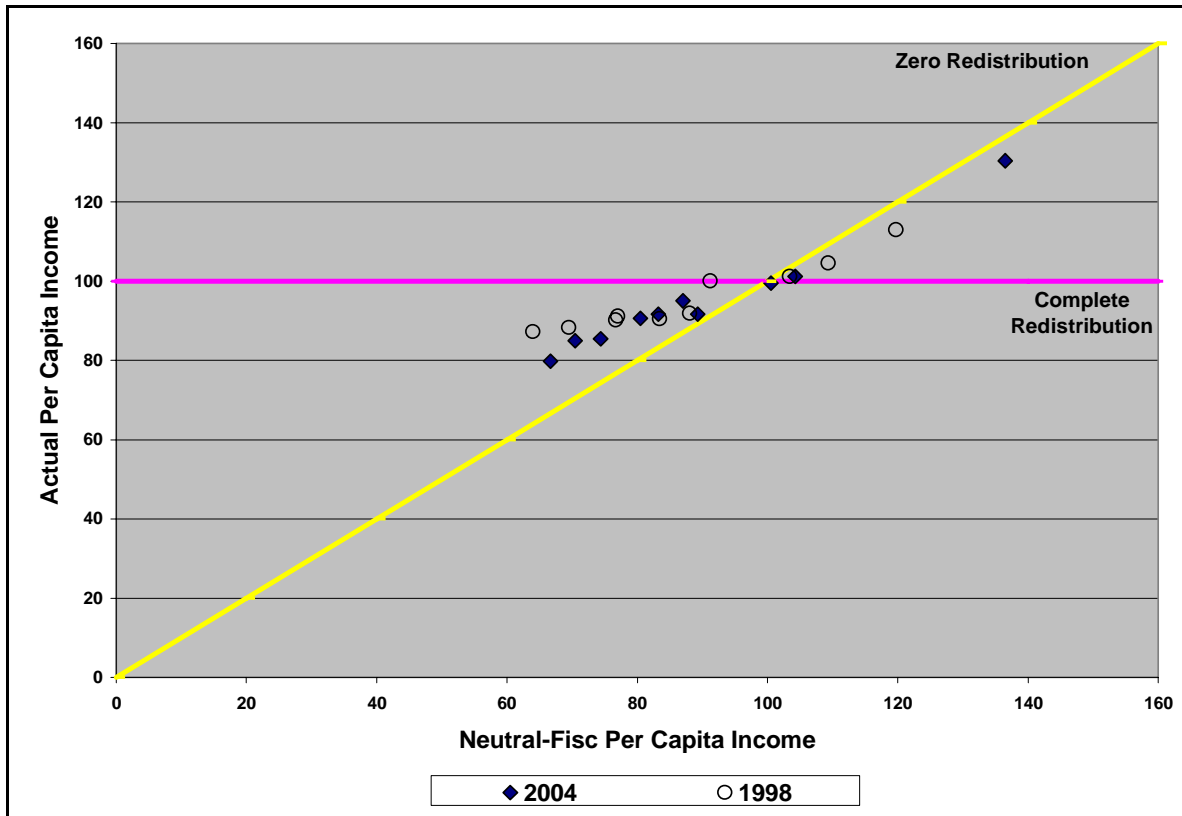
## *Conclusions*

The period of federal fiscal abundance that started in 1998 allowed the federal government to make major changes to its fiscal structure. These changes resulted in a substantial reduction in the debt-to-GDP ratio, in the share of revenues claimed by interest payments on the debt, and in the share of tax revenues to GDP. They were also associated with increases in federal spending, particularly for transfers to persons and transfers to other governments. This restructuring of the federal fiscal system may have affected the degree to which the federal fiscal system influences the pattern of regional economic disparities. Estimates of the impact of federal fiscal activity on interregional redistribution in 1998 and 2004 are presented in this paper. Our results lead to the following observations.

1. When measured with respect to a broad measure of earned income per capita, the degree of economic disparities among provinces is quite small relative to the degree of income inequality among individuals.
2. There was a moderate increase in the inequality of earned income from 1998 to 2004.
3. The degree of interregional redistribution declined substantially from 1998 to 2004, as the offset of regional disparities in per capita income generated by the federal fiscal system fell from 46 percent to 33 percent.
5. Most of the interregional redistribution was generated by the spending side, particularly transfers to other governments and transfers to persons.
6. The contribution of the revenue side became even smaller in 2004, accounting only for less than 10 percent of the total change in that year.

Our results indicate that the period of federal fiscal abundance, combined with the shift of economic power to resource rich provinces, may have ushered a new structure of fiscal federalism that generates a lower degree of interregional redistribution for three main reasons. First, the rise in the relative economic power of Alberta has not led to a commensurate increase

**Figure 1**  
**Relationship between Provincial Relative per Capita Base**  
**and Neutral-Fisc Income, 1998 and 2004**



in its contribution to interregional redistribution because the federal government has no direct means of appropriating a portion of the increase in resource revenues. Second, the substantial reductions in federal tax rates have reduced the degree on interregional redistribution generated by the revenue system. Finally, the increase in intergovernmental transfers has been concentrated almost entirely on programs that benefit all provinces, regardless of their relative economic position, and generate little interregional redistribution.

Since this new trend is a drastic departure from the past, it is essential that its implications be explored thoroughly. Currently the analysis of interregional redistribution is hampered by the lack of agreement among researchers with respect to the relevant data and the methodology to be applied. In our view, it is imperative to develop a generally accepted conceptual framework and methodological toolbox for measuring and interpreting interregional redistribution so that the debate can focus on substantive issues rather than on differences in methodology.

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