

Funding of Canadian Provinces, Mechanisms and Solidarity

Julien Vandernoot¹

Abstract

Canada is a federal state made up of thirteen entities, ten Provinces and three Territories. This article focuses on the funding mechanisms of the ten Provinces which induce solidarity in favor of some of them. The aim of this article is thus to describe the funding mechanisms of the Canadian Provinces and to measure the solidarity, based on the rules and formula provided by the Canadian law and on calculations for the year 2009-2010. This article underlines the redistributive character of the Canadian system and reveals in some cases a paradox of revenues, leading some poor provinces becoming wealthier than others which were initially wealthier.

JEL classification numbers: H77, H20, H71

Keywords: Funding of Canadian Provinces, solidarity, paradox of revenues, federalism, equalization.

1 Introduction

Canada is made up of ten Provinces, namely: Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland and Labrador, Nova Scotia, Ontario, Prince Edward Island, Quebec and Saskatchewan. There are also three Territories, namely: Northwest Territories, Nunavut and Yukon.

This article will focus on the ten Provinces. It will not describe the funding of the three Territories which is different from the funding of the Provinces.

The funding of Canadian Provinces is not frequently studied in scientific literature. Nevertheless, there is a debate about the measurement of the fiscal capacity of the Canadian Provinces, which is used to calculate equalization payments.

Some authors want to take into account revenues from natural resources while others do not want. This lack of consensus is not something new and was mentioned by Boadway

¹University of Mons (UMONS), Public Finance and Tax department.

and Flatters (1982) [1].

Godbout and St-Cerny (2005) [2] want to include 100% of revenues from natural resources in the fiscal capacity. They consider that failing to take into account all these revenues would lead to incorrect equalization payments which would violate article 36(2) of the Constitution Act, 1982. Indeed this article sets out that: « *Parliament and the government of Canada are committed to the principle of making equalization payments to ensure that provincial governments have sufficient revenues to provide reasonably comparable levels of public services at reasonably comparable levels of taxation.* » [3]

Gainer and Powrie (1975) [4] suggest that 70% of revenues from natural resources should be taken into account in the fiscal capacity. They think that these revenues should be considered as income subject to federal tax. They assume a 30% income rate, 70% being subject to equalization.

Feehan (2005) [5] and Courchesne (2004) [6] consider that 25% of revenues from natural resources should be taken into account in the fiscal capacity which is more or less what Provinces would get if they levied taxes on these revenues.

The Expert Panel on Equalization and Territorial Formula Financing [7] mentions that it is possible to exclude revenues from natural resources in the fiscal capacity if referring to article 109 of the Constitution Act, 1867 [8] which gives the Provinces the ownership of the natural resources. The Expert Panel considers that, if we follow that line of thinking, the Provinces should get a net benefit from natural resources, which would be unduly removed if these resources were included in the fiscal capacity and in equalization calculations. The Expert Panel on Equalization and Territorial Formula Financing would rather include 50% of revenues from natural resources in the fiscal capacity considering that this percentage would reconcile differing points of view.

This article will first study the funding mechanisms of the Canadian Provinces and place figures on the amounts they received in 2009-2010.

Then it will measure the solidarity by calculating the difference between the amounts the Canadian Provinces have received and what they would have received if there were no redistributive mechanisms.

This will underline the degree of solidarity in the funding mechanisms of the Canadian Provinces and will show the beneficiaries and contributors.

2 Funding Mechanisms

The funding of the Canadian Provinces includes three mechanisms: Equalization, Canada health transfer and Canada social transfer.

2.1 Equalization

Equalization in Canada is provided for in article 36(2) of the Constitution Act, 1982 setting out that « *Parliament and the government of Canada are committed to the principle of making equalization payments to ensure that provincial governments have sufficient revenues to provide reasonably comparable levels of public services at reasonably comparable levels of taxation.* » [3]

Equalization is based on the fiscal capacity of the Canadian Provinces which can be defined as « *how much revenue a province could raise on its own if it levied national*

average tax rates » [9]

Each Canadian Province receives as equalization payment the highest of the following three amounts:

$$\text{Amount 1: } \left[\begin{aligned} & (Rev. A \text{ Canada}/inhabitants_{Canada}) - (Rev. A \text{ Province}/ \\ & inhabitants_{Province}) + (Rev. B \text{ Canada}/inhabitants_{Canada}) - \\ & (Rev. B \text{ Province}/inhabitants_{Province}) + \\ & (Rev. C \text{ Canada}/inhabitants_{Canada}) - \\ & (Rev. C \text{ Province}/inhabitants_{Province}) + \\ & (Rev. D \text{ Canada}/inhabitants_{Canada}) - \\ & (Rev. D \text{ Province}/inhabitants_{Province}) + \\ & \frac{(Rev. E \text{ Canada } /inhabitants_{Canada}) - (Rev. E \text{ Province } /inhabitants_{Province})}{2} \end{aligned} \right] \times$$

$(Population_{Province})$

$$\text{Amount 2: } \left[\begin{aligned} & (Rev. A \text{ Canada}/inhabitants_{Canada}) - (Rev. A \text{ Province}/ \\ & inhabitants_{Province}) + (Rev. B \text{ Canada}/inhabitants_{Canada}) - \\ & (Rev. B \text{ Province}/inhabitants_{Province}) + \\ & (Rev. C \text{ Canada}/inhabitants_{Canada}) - \\ & (Rev. C \text{ Province}/inhabitants_{Province}) + \\ & (Rev. D \text{ Canada}/inhabitants_{Canada}) - \\ & (Rev. D \text{ Province}/inhabitants_{Province}) \end{aligned} \right] \times (Population_{Province})$$

Amount 3: 0

Source: Federal-Provincial Fiscal Arrangements Act [10]

Where:

Rev. are Revenues

Revenues A are revenues relating to personal income, calculated as the sum of 50% of revenues relating to personal income two years prior to the year in question, 25% of revenues relating to personal income three years prior to the year in question and 25% of revenues relating to personal income four years prior to the year in question

Revenues B are revenues relating to corporate income, calculated as the sum of 50% of revenues relating to corporate income two years prior to the year in question, 25% of revenues relating to corporate income three years prior to the year in question and 25% of revenues relating to corporate income four years prior to the year in question

Revenues C are revenues relating to consumption, calculated as the sum of 50% of revenues relating to consumption two years prior to the year in question, 25% of revenues relating to consumption three years prior to the year in question and 25% of revenues relating to consumption four years prior to the year in question

Revenues D are revenues derived from property taxes and miscellaneous revenues, calculated as the sum of 50% of revenues derived from property taxes and miscellaneous revenues two years prior to the year in question, 25% of revenues derived from property taxes and miscellaneous revenues three years prior to the year in question and 25% of revenues derived from property taxes and miscellaneous revenues four years prior to the year in question

Revenues E are revenues from natural resources, calculated as the sum of 50% of revenues from natural resources two years prior to the year in question, 25% of revenues from natural resources three years prior to the year in question and 25% of revenues from natural

resources four years prior to the year in question

Thus, Equalization in Canada takes into account 0% or 50% of revenues from natural resources.

In 2009-2010, equalization payments reached 14 185 million Canadian dollars (CAD).

Additional equalization payments are granted to Newfoundland and Labrador and Nova Scotia due to their offshore oil and gas exploitation. These additional payments are provided for in Nova Scotia and Newfoundland and Labrador Additional Fiscal Equalization Offset Payments Act [11]. In 2009-2010, 465 million CAD were granted to Newfoundland and Labrador and 180 million CAD to Nova Scotia.

In 2009-2010 (in Canada, the financial year runs from 1 April to 31 March), equalization payments granted to the Provinces are as follows:

Table 1: Equalization and additional equalization payments granted to the Canadian Provinces (2009-2010)

Province	Amount received (million CAD)	Amount received per inhabitant (CAD)
Alberta	0	0
British Columbia	0	0
Prince Edward Island	340	2 431
Manitoba	2 063	1 709
New Brunswick	1 689	2 253
Nova Scotia	1 571	1 675
Ontario	347	27
Quebec	8 355	1 066
Saskatchewan	0	0
Newfoundland and Labrador	465	902
Total	14 830	/

Sources: Canadian Ministry of Finance [12], own calculations.

From this table, it appears that Quebec received the highest amount, namely 8 355 million CAD, which represents more than half of the total amount granted to the Provinces. The highest amount per inhabitant was granted to Prince Edward Island, which received 2 431 CAD per inhabitant. Seven out of ten Provinces received equalization payments for amounts ranging from 27 to 2 431 CAD per inhabitant.

2.2 Canada Health Transfer

Canada health transfer is a funding mechanism involving solidarity. Indeed Federal-Provincial Fiscal Arrangements Act provides that all Provinces receive the same amount of money per inhabitant under this program.

The total amount allocated to the Provinces in 2009-2010 is 37 856 million CAD which represents 1 131 CAD per inhabitant.

The amounts received by the Provinces as Canada health transfer are shown in table 2 below.

Table 2: Canada health transfer granted to the Canadian Provinces (2009-2010)

Province	Amount received (million CAD)	Amount received per inhabitant (CAD)
Alberta	4 153	1 131
British Columbia	4 983	1 131
Prince Edward Island	158	1 131
Manitoba	1 365	1 131
New Brunswick	848	1 131
Nova Scotia	1 061	1 131
Ontario	14 676	1 131
Quebec	8 861	1 131
Saskatchewan	1 168	1 131
Newfoundland and Labrador	583	1 131
Total	37 856	/

Sources: Canadian Ministry of Finance [12], Statistics Canada [13], Federal-Provincial Fiscal Arrangements Act [10], own calculations.

2.3 Canada Social Transfer

Canada social transfer is provided for in Federal-Provincial Fiscal Arrangements Act [10]. Unlike Canada health transfer, it does not grant the same amount of money per inhabitant to the Provinces.

The total amount allocated to the Provinces in 2009-2010 is 20 403 million CAD.

The amounts received by the Provinces as Canada social transfer are shown in table 3 below.

Table 3: Canada social transfer granted to the Canadian Provinces (2009-2010)

Province	Amount received (million CAD)	Amount received per inhabitant (CAD)
Alberta	2 647	721
British Columbia	2 571	583
Prince Edward Island	82	588
Manitoba	715	592
New Brunswick	440	587
Nova Scotia	552	589
Ontario	8 013	618
Quebec	4 591	586
Saskatchewan	543	526
Newfoundland and Labrador	249	483
Total	20 403	/

Sources: Canadian Ministry of Finance [12], Statistics Canada [13], Federal-Provincial Fiscal Arrangements Act [10], own calculations.

From this table, it appears that Ontario received the highest amount, namely 8 013 million CAD, under Canada social transfer. The highest amount per inhabitant was granted to Alberta, which received 721 CAD per inhabitant. All the Provinces received money under Canada social transfer for amounts ranging from 483 to 721 CAD per inhabitant.

2.4 Summary

Table 4 below summarizes the amounts allocated to each Province in the framework of the different funding mechanisms of the Canadian Provinces.

Table 4: Amounts allocated to the Canadian Provinces in the framework of the funding mechanisms of the Canadian Provinces (2009-2010)

Province	Equalization (million CAD)	Canada health transfer (million CAD)	Canada social transfer (million CAD)	Total (million CAD)	Total per inhabitant (CAD)
Alberta	0	4 153	2 647	6 800	1 852
British Columbia	0	4 983	2 571	7 554	1 715
Prince Edward Island	340	158	82	580	4 148
Manitoba	2 063	1 365	715	4 143	3 433
New Brunswick	1 689	848	440	2 977	3 971
Nova Scotia	1 571	1 061	552	3 184	3 396
Ontario	347	14 676	8 013	23 036	1 775
Quebec	8 355	8 861	4 591	21 807	2 783
Saskatchewan	0	1 168	543	1 711	1 657
Newfoundland and Labrador	465	583	249	1 297	2 516
Total	14 830	37 856	20 403	73 089	/

Sources: Canadian Ministry of Finance [12], Quebec Ministry of Finance [9], Statistics Canada [13], own calculations.

From this table, it appears that Canadian Provinces received amounts ranging from 1 657 to 4 148 CAD per inhabitant in the framework of Equalization, Canada health transfer and Canada social transfer.

3 Solidarity

Table 5 below shows the changes in the financial position of Canadian Provinces as the funding mechanisms are progressively being introduced.

It takes into account 50% of revenues from natural resources. This percentage is indeed recommended by the Expert Panel on Equalization and Territorial Formula Financing (cf. supra).

It also shows the solidarity per inhabitant, measured by calculating the difference between the total amounts per inhabitant that each Canadian Province would receive in case of the application of an allocation key based on the index before funding and the amounts actually received

Table 5: Changes in the financial position of the Canadian Provinces before and after application of the funding mechanisms (2009-2010)

Province	Fiscal capacity with 50% of revenues from natural resources/inh. (CAD)	Index	Equalization/inh. (CAD)	Fiscal capacity and equalization /inh. (CAD)	Fiscal capacity and equalization index	Canada health transfer/inh. (CAD)	Fiscal capacity, equalization and Canada health transfer /inh. (CAD)	Fiscal capacity, equalization and Canada health transfer index	Canada social transfer /inh. (CAD)	Fiscal capacity, equalization, Canada health transfer and Canada social transfer/inh. (CAD)	Fiscal capacity, equalization, Canada health transfer and Canada social transfer index	Solidarity per inhabitant (CAD)
Alberta	11 611	162.5	0	11 611	153.0	1 131	12 742	146.1	721	13 463	144.3	-1 684.4
Brit. Col.	7 606	106.4	0	7 606	100.2	1 131	8 737	100.2	583	9 321	99.9	-602.2
Pr. Ed. Isl.	4 598	64.3	2 431	7 029	92.6	1 131	8 160	93.6	588	8 748	93.8	2 750.4
Manitoba	5 317	74.4	1 709	7 026	92.6	1 131	8 157	93.5	592	8 749	93.8	1 812.9
New Bruns.	4 824	67.5	2 253	7 077	93.3	1 131	8 208	94.1	587	8 795	94.3	2 502.0
Nova Scotia	5 331	74.6	1 675	7 006	92.3	1 131	8 137	93.3	589	8 726	93.5	1 771.6
Ontario	7 040	98.5	27	7 067	93.1	1 131	8 198	94.0	618	8 816	94.5	-369.0
Quebec	5 889	82.4	1 066	6 956	91.7	1 131	8 087	92.7	586	8 673	93.0	989.5
Saskatch.	7 161	100.2	0	7 161	94.4	1 131	8 292	95.1	526	8 818	94.5	-523.9
New. and Lab.	6 322	88.5	902	7 224	95.2	1 131	8 355	95.8	483	8 838	94.7	590.2
Average	7 146	100.0	443	7 589	100.0	1 131	8 720	100.0	610	9 330	100.0	0.0

Sources: Canadian Ministry of Finance [12], Quebec Ministry of Finance [9], Statistics Canada [13], own calculations.

It can be seen from table 5 above that Canadian funding mechanisms are highly redistributive and lead, in some cases, to a paradox of revenues.

Indeed, we can see significant differences between the index before funding based on fiscal capacity with 50% of revenues from natural resources and the index after funding taking into account the funding mechanisms of the Canadian Provinces, namely equalization, Canada health transfer and Canada social transfer.

Before funding, the indexes ranged from 64.3 (Prince Edward Island) to 162.5 (Alberta) and after funding, from 93.0 (Quebec) to 144.3 (Alberta). The greatest gap between Provinces fell from 98.2 to 51.3.

Six Provinces received solidarity, for amounts between 590.2 and 2750.4 CAD per inhabitant and the other four financed it, with contributions between 369.0 and 1684.4 CAD per inhabitant.

The ranking of the Canadian Provinces before and after funding is detailed in table 6 and figure 1 below.

Table 6: Ranking of the Canadian Provinces in terms of wealth index per inhabitant, before and after application of the funding mechanisms (2009-2010)

Before funding			After funding		
Position	Province	Index	Position	Province	Index
1	Alberta	162.5	1	Alberta	144.3
2	British Columbia	106.4	2	British Columbia	99.9
3	Saskatchewan	100.2	3	Newfoundland and Labrador	94.7
4	Ontario	98.5	4	Saskatchewan	94.5
5	Newfoundland and Labrador	88.5	5	Ontario	94.5
6	Quebec	82.4	6	New Brunswick	94.3
7	Nova Scotia	74.6	7	Manitoba	93.8
8	Manitoba	74.4	8	Prince Edward Island	93.8
9	New Brunswick	67.5	9	Nova Scotia	93.5
10	Prince Edward Island	64.3	10	Quebec	93

Sources: Canadian Ministry of Finance [12], Quebec Ministry of Finance [9], Statistics Canada [13], own calculations.

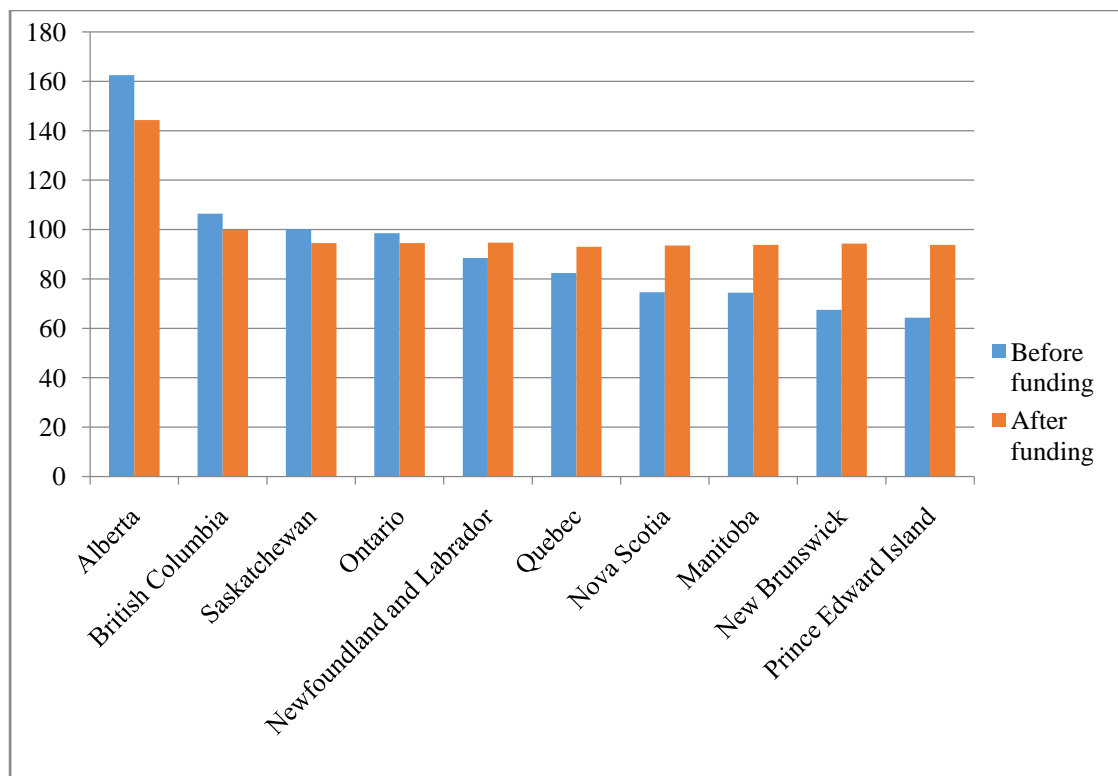


Figure 1: Ranking of the Canadian Provinces in terms of wealth index per inhabitant, before and after application of the funding mechanisms (2009-2010)

Sources: Canadian Ministry of Finance [12], Quebec Ministry of Finance [9], Statistics Canada [13], own calculations.

The changes in the ranking of the Canadian Provinces before and after funding mean that a paradox of revenues is present in addition to solidarity.

Indeed, eight of the Provinces moved in the ranking while the last two did not.

The larger changes were experienced by Quebec which fell four places going from the sixth to the tenth position and by New Brunswick which gained three places going from the ninth to the sixth position.

4 Conclusion

The aim of this paper was to explain the funding mechanisms of the Canadian Provinces and to quantify to what extent they generate solidarity.

This paper highlighted a redistributive system, leading to a reduction of the gap between the richest and the poorest Province and in some cases to a paradox of revenues.

This paradox could be legitimate for the purpose of relaunching the economy of the poorest Provinces.

Moreover, this situation is not an isolated case. Such paradox of revenues was for instance observed in Belgium by Pagano, Vandernoot and Tyrant (2011) [14] and in Spain by Martinez, Vandernoot and Pagano (2014) [15].

It could be interesting to study in future studies the financial flows between the Canadian Provinces on longer periods in order to measure the cumulative effect of the phenomenon.

References

- [1] R. Boadway and F. Flatters, "Efficiency and Equalization Payments in a Federal System of Government : A Synthesis and Extension of Recent Results", *The Canadian Journal of Economics*, vol. 15, no. 4, November 1982, pp. 613-633.
- [2] L. Godbout and S. St-Cerny, "La réforme fédérale proposée de la péréquation : le mauvais remède pour l'un des organes vitaux du fédéralisme fiscal canadien", Submission to the Expert Panel on Equalization and Territorial Financing.
- [3] Constitution Act, 1982 (Canada)
- [4] W. Gainer and T. Powrie, "Public Revenue from Canadian Crude Petroleum Production", *Canadian Public Policy*, vol. 1, no. 1, Winter 1975, pp. 1-12.
- [5] J. Feehan, "Equalization and the Provinces' Natural Resource Revenues: Partial Equalization Can Work Better" In H. Lazar (ed.) "Canadian Fiscal Arrangements: What Works, What Might Work Better", 2005, pp. 185-208.
- [6] T. Courchesne, "Confiscatory Equalization: The Intriguing Case of Saskatchewan's Vanishing Energy Revenues", *Choices*, vol. 10, no. 2, March 2004, pp. 1-42.
- [7] A. O'Brien, F. Gorbet et al. "Pour réaliser un dessein national : Remettre la péréquation sur la bonne voie", Ministère canadien des finances, 2006.
- [8] Constitution Act, 1867 (Canada)
- [9] Ministère des Finances du Québec, "Le point sur les transferts fédéraux", Gouvernement du Québec, 2012
- [10] Federal-Provincial Fiscal Arrangements Act (Canada)
- [11] Nova Scotia and Newfoundland and Labrador Additional Fiscal Equalization Offset Payments Act, 2005 (Canada)
- [12] <http://www.fin.gc.ca/>
- [13] <http://www.statcan.gc.ca/>
- [14] G. Pagano, J. Vandernoot and T. Tyrant, "Vingt ans de solidarité entre les entités fédérées (1989-2009)", *Courrier hebdomadaire du CRISP*, no. 2122, December 2011, pp. 1-39.
- [15] M. Martinez, J. Vandernoot and G. Pagano, "Comparación Entre el Federalismo Económico Regional de Bélgica y España", *Revista Internacional Administracion & Finanzas*, vol. 7, no. 1, January 2014 pp. 1-30.