**Funding of Canadian Provinces, Mechanisms and Solidarity**

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**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.

**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 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:

Amount 1: $\left[\left(Rev. A Canada/inhabitants\_{Canada}\right)-(Rev. A Province/inhabitants\_{Province})+\left(Rev. B Canada/inhabitants\_{Canada}\right)-(Rev. B Province/inhabitants\_{Province})+\left(Rev. C Canada/inhabitants\_{Canada}\right)-(Rev. C Province/inhabitants\_{Province}) +\left(Rev. D Canada/inhabitants\_{Canada}\right)-(Rev. D Province/inhabitants\_{Province}) + \frac{\left(Rev. E Canada/inhabitants\_{Canada}\right)-(Rev. E Province/inhabitants\_{Province})}{2}\right]×(Population\_{Province})$

Amount 2: $\left[\left(Rev. A Canada/inhabitants\_{Canada}\right)-(Rev. A Province/inhabitants\_{Province})+\left(Rev. B Canada/inhabitants\_{Canada}\right)-(Rev. B Province/inhabitants\_{Province})+\left(Rev. C Canada/inhabitants\_{Canada}\right)-(Rev. C Province/inhabitants\_{Province}) +\left(Rev. D Canada/inhabitants\_{Canada}\right)-(Rev. D Province/inhabitants\_{Province}) \right]×(Population\_{Province})$

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 chart 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.

Chart 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.

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