

As mentioned in the previous section, the “ideal” self-financing equalization formulae in the first part of that section were never actually used in Canada.

The modern equalization programme was introduced in 1957. For its first 25 years, its rules looked fairly similar to what we do now. For each revenue category  $j$ , a province’s entitlement was calculated as<sup>1</sup>

$$E_j^i \equiv t_j(b_j - b_j^i)P^i \quad (5)$$

where  $P^i$  was the province’s population,  $b_j^i$  the province’s per capita tax base in category  $j$ ,  $b_j$  the Canadian average tax base per capita in category  $j$ , and  $t_j$  the national average tax rate in category  $j$  (defined by  $t_j[\sum_{i=1}^{10} b_j^i P^i] = \sum_{i=1}^{10} [t_j^i b_j^i P^i]$ ).

Then the total entitlement  $E^i$  of a province was calculated by adding up the  $E_j^i$ ’s over all the categories  $j$  of revenue. If  $E^i$  was positive (so that the province was a “have-not” province), then the province received  $E^i$  from the federal government, but if  $E^i$  were negative, then the province received nothing, and did not have to pay anything.

So the 1957 – 82 system was very similar to the current system. Some of the details and guarantees were not the same.

And the number of revenue categories were not the same. Now (starting in 2008) we have 5 revenue categories (business income taxes, personal income taxes, consumption taxes, property taxes, and [half of] resource revenues).

Initially, in 1957, there were only 3 categories : personal income taxes, corporate income taxes and succession duties<sup>2</sup>. In 1962, resource revenues were added, but only 50 percent of them.<sup>3</sup>

Then in 1967, the revenue categories were broken down much more finely. There were 16 different categories in all, and entitlements in each category were calculated according to equation (5), and then added up over all 16 categories. The number of categories was increased further in 1974, and then again increased (to 29 in all) in 1977. This increase was not due to new revenue sources being added, but instead to existing revenue sources being divided more finely.<sup>4</sup>

But the key features were :

- entitlements in each category were based on the difference between a province’s tax base per person, compared to the **national average** for that category
- entitlements were added up over all categories

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<sup>1</sup> Actually, in the first five years of the programme, the formula was a little different than equation (5). Instead of the national average tax base per capita, the formula used the tax base per capita in the richest province, Ontario.

<sup>2</sup> which were taxes levied by the provinces on people receiving inheritances ; they were phased out in the late 1960’s

<sup>3</sup> just like in 2008!

<sup>4</sup> for example, instead of one category for provincial government liquor sales, there were two categories : wine and beer sales, and distilled spirits sales

— a province received money if the sum of its entitlements was positive, and was ignored if the sum was negative

In the late 1950's 9 of the 10 provinces received equalization revenue. Including resource revenues in the formula made Alberta and British Columbia into “have” provinces, which no longer received any equalization provinces. The sudden increase in the world price of oil in 1974<sup>5</sup> made Alberta's resource revenues increase sharply. By the nature of the equalization formula, that made all the “have-not” provinces, which had virtually no oil production in the 1970's, much more “have-not”. That is, Alberta's  $E^i$  became much more negative, and every other province's  $E^i$  increased.

This change in resource revenues meant that the federal government suddenly had to pay out much more money in equalization payments. Over the next few years, the federal government modified the formula, so as to control the growth of payments. In 1977, they revised the system in several ways, increasing the number of categories (again) to 33, and including only 50 percent of the revenue in the 6 categories corresponding to non-renewable resources.

In other words, we have had the same equalization system in three different periods : 1962 – 67, 1977 – 1982, and 2008 – 14<sup>6</sup>. In each case the features were

- entitlements in each category were based on the difference between a province's tax base per person, compared to the **national average** for that category
- only 50 percent of resource revenues were included
- entitlements were added up over all categories
- a province received money if the sum of its entitlements was positive, and was ignored if the sum was negative

Only the number of categories has changed among the periods.

What has made the federal government keep changing the rules has been the conflict among several principles. These principles include

- (1) transferring revenues to provinces with fewer economic resources
- (2) not requiring any direct payments from provinces with abundant economic resources
- (3) not spending an exorbitant amount of money on the programme
- (4) making sure that Ontario does not get classified as a poor province

Since the basis of some of our provinces' wealth is their endowment of non-renewable resources, principle (1) says that those resource endowments should be used as a basis for equalization. But increasing resource prices then imply that resource-poor (but otherwise rich) Ontario becomes relatively poorer, threatening principle (4). Also, principle (2) means that nothing gets collected from rich provinces directly, so that increases in resource prices threaten principle (3).

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<sup>5</sup> to astronomical levels : nearly 12 dollars a barrel!

<sup>6</sup> The current equalization arrangements are scheduled to end after the 2013–14 fiscal year. That means that there may be some modifications to the system starting in 2014.

In 1982, the federal government modified the rules again. This time, they devised a new method to prevent increases in Alberta’s oil revenues from putting strain on the system ; they decided to ignore Alberta’s oil revenues. From 1982 until 2007, the equalization system replaced the national averages of the earlier system (which is also more–or–less the present system) with something different.

What was used between 1962 and 1982, and since 2008, is often called the “national average system”. What replaced it in 1982 – 2007 was the “5 province” standard.

### The “5 Province” Standard

Let’s number provinces from west to east, so that B.C. is 1, Alberta 2, and so on. The national average system averaged tax bases per capita over all 10 provinces. The 5 Province standard uses only provinces number 1,3,4,5,6 : B.C., Saskatchewan, Manitoba, Ontario and Québec. That is, all the larger provinces are included, except for Alberta. Now define some new variables :

$$\hat{P} \equiv P^1 + P^3 + P^4 + P^5 + P^6$$

$$\hat{B}_j \equiv B_j^1 + B_j^3 + B_j^4 + B_j^5 + B_j^6$$

$$\hat{b}_j \equiv \frac{\hat{B}_j}{\hat{P}}$$

Then the “5 Province” equalization entitlements  $\hat{E}_j^i$  were defined by

$$\hat{E}_j^i \equiv t_j(\hat{b}_j - b_j^i)P^i \quad i = 1, 2, 3, \dots, 10 \quad ; \quad j = 1, 2, \dots, 33 \quad (5P1)$$

That is, instead of the national average tax base per capita in each category, between 1982 and 2007 we used the average in the 5 provinces. <sup>7</sup> Under the 5–province standard of 1982 – 2007, a province’s equalization entitlements were based on formula (5P1), with the total entitlement defined by

$$\hat{E}^i = \sum_{j=1}^{33} \hat{E}_j^i \quad j = 1, 2, \dots, 33 \quad (5P2)$$

Using the 5 Province standard, it was not true that the  $\hat{E}_j^i$ ’s for any category  $j$  add up to 0. Neither did the  $\hat{E}^i$ ’s. But of course that feature of the equalization entitlements — that they were self–financing — was never actually used.

The result, in practice, of the 5 Province formula was that equalization payments were more stable than they were in the last few years of the representative national average standard (the

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<sup>7</sup> The average tax rate  $t_j$  used in the formula was still the average over all 10 provinces, as defined by formula (1) in the previous section.

late 1970s and early 1980s). The 4 Atlantic provinces all had very large equalization entitlements per capita. Québec's entitlement per capita was much smaller, but the aggregate equalization revenue received by Québec was still much larger than that received by any other province, since Québec has so much larger a population. Manitoba also was persistently a "have not" province, with per capita entitlements similar to Québec's. Saskatchewan went from "have-not" to "have" province towards the end of the 5-province-standard era ; British Columbia moved in the opposite direction. Ontario (and Alberta) remained "haves" throughout the era.