Strategies of Multinationals and Government Revenues under Separate Accounting and Consolidation with Formulary Apportionment

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Summary

In 2001, the European Commission proposed replacing the current system of taxation of multinational companies by the taxation of a consolidated base, computed at the level of all the European entities in a group, and then distributed for taxation purposes between the various jurisdictions in which these entities operate, according to pre-established criteria. In this article, we build up a case study of an international investment. We use it first to compare the behaviour of a multinational in the current system of separate accounting for national entities, without and then with tax strategies, and in the system, currently under examination, of consolidation and formulary apportionment. This exercise permits a comparison of the effects of these strategies on the tax revenue of Member States and a discussion, in that context, of the changeover to consolidation and formulary apportionment, especially in terms of interjurisdictional distribution of tax revenue, degree of tax competition and political economy issues related to the adoption of the new system by either the entire European Union or by certain Member States in the context of an Enhanced Cooperation Agreement process.

JEL: H32, H73, H87
Key words: multinational enterprises, multinational companies, European taxation, tax consolidation.

1. Introduction

In the fall of 2001, with a view to eliminating the tax obstacles to economic activity in Europe, the European Commission (2001, 2003) suggested replacing the current system of taxation of multinational companies, based on separate taxation of different national entities in a group, by the taxation of a consolidated base calculated at the level of all the European entities in a group, and then distributed for taxation purposes between the different jurisdictions in which these entities operate, according to pre-established criteria. In so doing, it proposed replacing a typical system of tax relations between sovereign states with a mechanism that is more characteristic of tax relations within a federation; such a system is, e.g. applied in the United States to tax companies operating in several States.

This system, which has in the meantime been examined and discussed by experts and by the parties concerned, certainly has the great advantage, providing it is sufficiently widespread, of putting an end to a certain number of tax strategies which multinationals find it in their interest to practise. As shown in the seminal work of Gordon and Wilson (1983) and the studies motivated by the planned reform in Europe – see Sorensen (2004) and the other references for this article – this change could, however, and under some conditions, increase tax competition between States. More specifically, Gérard (2005) and others show that the effect of this change on tax competition is ambiguous, with the intensification of tax competition being all the more probable if the formula adopted for the distribution of the consolidated taxable base between the States concerned gives more emphasis to a criterion over which multinationals have control, such as the geographic distribution of investment, production or employment.

In this article, we build up a case study of international investment. We first use it to compare the strategies adopted by a multinational company in the current system of separate accounting for national entities without (section 2) and then with (section 3) the adoption of tax strategies such as intra-group transactions and the indirect circulation of financial flows, and in the above-mentioned system of consolidation and formulary apportionment (section 4). This comparison of strategies by a multinational company permits in turn a comparison of the effects of these strategies on the tax revenue of States. We then show up the risks of increased

tax competition depending on the formulary apportionment formula chosen, as well as the way in which the geographic distribution of tax revenue is affected by the formulae and the problems posed by the adoption of this system either by the entire European Union, if the rule on unanimity prevails, or by certain Member States in the context of an Enhanced Cooperation Agreement process. Prior to this, we will have shown that a key distinction must be made between competition between States to attract real investments and competition to attract tax bases or "paper profits".

We should add that while this system does not make taxation neutral as regards decisions by a multinational company (only complete harmonisation of effective tax rates could achieve this), it does, however, form part of the solution of eliminating tax obstacles to economic activity, notably because of its implications in terms of common rules on constituting the tax base and, upstream, on accounting (see for instance Jacobs *et al.*, 2005). Moreover, it can easily be combined with subsidiarity, a principle that is at the heart of the whole organization of the Community.

It must also be noted that an entire theoretical corpus underlies this text – it is referred to in the bibliography, with a reference, notably, to the excellent article by Mintz and Smart (2004) – and more detailed studies are available on the system proposed by the European Commission based, for instance, on lessons drawn from the US and Canadian (the latter for the sole apportionment) experiences – see in particular the references in the bibliography to the work of Weiner, like Weiner – or Martens-Weiner – (2005, 2006), and McLure, e.g. Hellerstein and McLure (2004), and the article by Goolsbee and Maydew (2000).

Finally, notice that, throughout all the article, tax rates are fixed and not "optimised" by the various involved governments.

2. The system of separate accounting, without tax strategies

In this section we assume that our company is operating in a situation of separate accounting and that it adopts simple strategies only. Following a pattern made popular by Devereux and Griffith (1998), when the company realises that it has a foreign market, two options are open to it: exporting to this market and establishing a local facility there. This facility will initially

be a   permanent establishment, and will then become a subsidiary. In the latter case, the parent company will finance it by means of a capital increase or a loan. The   rather provisional conclusion ending this section paves the way for more strategic approaches by the company .

2.1. Producing at home and exporting

Once the company realises that it can produce not only for its home market but also for a foreign market, it can decide to produce in its own country and to export to the foreign country. That option is used as a point of comparison in the rest of this study.

Let us assume, then, that the firm builds two factories side by side, each one representing an investment I of one million euro, capable of producing each year $q = 100,000$ boxes, of chocolates for instance, at a unitary cost of $c = 1$ euro, and that it will sell these boxes at a price of two euro, $p = 2$, on each one of these markets. Let us assume that the corporate tax rate in the company's country is 34 per cent, $\tau = .34$.

Both investment projects are obviously equally profitable. With a discount rate r of five per cent, a long time span and the hypothesis of the absence of any inflation and risk, the following net present values are obtained

$$VAN = (1-.34)\frac{2-1}{.05}100,000 - 1,000,000 = 320,000$$

$$VAN^* = (1-.34)\frac{2-1}{.05}100,000 - 1,000,000 = 320,000 \tag{1}$$

$$VAN^M = 640,000 = 2\left\{(1-\tau)\frac{p-c}{r}q - I\right\}$$

where the * designates what refers to the foreign market, and superscript M refers to the multinational. The discounted flows of before- and after-tax profit for the firm and tax revenue for the respective governments are given in Table 1 below. As the goods are directly exported by the company from its home country, the foreign country does not receive any tax

revenue. [1] The after-tax profit of the firm is a measure of its value since the investment is fix throughout the exercise.

Table 1 – Producing at home and exporting

	Before-tax profit of the Multinational	After-tax profit of the Multinational	Tax revenue of the Home country	Tax revenue of the Foreign country
Producing at home and exporting	4,000,000	2,640,000	1,360,000	0

It is worthwhile noting that, in this table, and in the whole exercise conducted in this paper, we identify the taxable profit and the value of the sales less the costs of production and distribution, thus the before-tax profit. That means that depreciation allowances and other tax shields are not explicitly introduced. We do not ignore however that they can play a key role in the corporate decision when based on tax comparisons; a simple way to introduce them in this exercise is to reinterpret the tax rates as effective rather than statutory rates.

Now let us add the hypothesis that the tax rate in the foreign country is lower, say $\tau^* = 0,30$. The question of how to benefit from this rate is raised.

2.2. A permanent establishment abroad, but what should be done in it?

A permanent establishment is a dependent facility which does not have its own legal status, and which therefore operates under the legal cover of the company established in the home country. However, it does have a sufficiently stable and permanent activity to be taxed in the country in which it is established. The concept is explained in international tax law, notably in Article 5 of the international model tax convention aimed at preventing double taxation proposed by the OECD (OECD, 1996). If the conditions governing a permanent establishment are satisfied, the profits obtained by it shall be taxed there, with no possibility of double taxation in the home country.

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[1] The discounted flow of taxable profit is 2x(2-1)x100,000 divided by .05, the discounting rate; that of after-tax profit for the firm is that amount multiplied by (1-.34) and that of tax revenue for the home country is the discounted flow of taxable profit multiplied by .34.

But what is to be done in this permanent establishment? In our case, there are two possibilities: export the products made in the country destined for the foreign market to this new facility, and supply them from this facility to local distributors, or install a production and distribution facility there.

In the first case, goods supplied to the permanent foreign establishment should be at the transfer price normally practised between independent entities. Let us assume that this is a wholesale price $p^w = 1.6$. Using this permanent establishment will increase the company's value. We will return later to the question of transfer pricing.

The second possibility is to transfer to the foreign country the production of goods destined for that country. That is the case illustrated in Table 2. Given the difference in tax rates between the two countries, the company's value, measured by its after-tax profit, will improve, all other things being equal (in this hypothesis they will intentionally remain equal). The first column gives the aggregate taxable profit of the multinational: that value does not change although its distribution between the jurisdictions does.

<center>Table 2 – A single legal facility</center>

	Before-tax profit of the Multinational	After-tax profit of the Multinational	Tax revenue of the Home country	Tax revenue of the Foreign country
Producing at home and exporting	4,000,000	2,640,000 $t = .34$	1,360,000	0
Permanent foreign production establishment	4,000,000	2,720,000 $t^* = .32$	680,000	600,000

The differences in the company's value observed in the above table may be reflected in differences in the average effective tax rate, since in the absence of taxation, the amount of the first column would be 4,000,000. The average effective tax rates are defined here as

$$t = \frac{\left(VAN_{nt}^M + I\right) - \left(VAN_t^M + I\right)}{VAN_{nt}^M + I} \tag{2}$$

where subscript *nt* refers to a situation without taxation and subscript *t* to a situation with taxation.[2]

2.3. A foreign subsidiary

The next step is to turn the permanent establishment into a subsidiary. Unlike a permanent establishment, a subsidiary has its own legal status, most often that of a company resident in the country where it is established, in this case the foreign country. It is therefore taxed in this country.

In the next part of this sub-section, we will assume that the production for the foreign market is carried out in this country, therefore we will take as a basis the second case in the previous sub-section. However, we will now turn our attention to the circulation of financial revenue flows, and consequently investment flows, within what has actually become a multinational. Let us put the question simply: how can the revenue be repatriated to the parent company?

2.3.1. Repatriating dividends: exemption

The Directive of 23 July 1990 governing the circulation of dividends between parent companies in the European Union first states that, under conditions which we assume to be satisfied, *dividends cannot be subjected to a withholding tax in the country in which they are paid*.

Additionally the Directive provides Member States with two options. One is *exemption*: at most five per cent of the cross border dividends can be taxed in the country of residence of the company receiving them (the parent company). In this case, given the hypothesis of maximum distribution of profits – we intentionally discard the idea of the accumulation of profits in the subsidiary – we get, assuming that the 95 per cent exemption rule applies,

$$VAN = (1-.34)\frac{2-1}{.05}100,000 - 1,000,000 = 320,000$$

$$VAN^* = (1-.05(.34))(1-.30)\frac{2-1}{.05}100,000 - 1,000,000 = 376,200 \qquad (3)$$

$$VAN^M = 696,200 \; ; t = .3260$$

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[2] E.g. (4,000,000-2,640,000) divided by 4,000,000 is .34.

As a result of that limited additional taxation in the country of residence of the parent company, the taxable profit can be slightly larger than the before-tax one and the average effective tax rate, slightly higher. This additional tax may be regarded as a tax on the "privilege" that consists of the subsidiary being incorporated in its own country, hence reducing the risk for the parent company because of the legal independence of its subsidiary.

It must be noted that this system has one important characteristic, or property, known as capital import neutrality: *if the rate of additional taxation is zero, the value of the subsidiary is independent of the origin of the capital financing it.*

An immediate corollary is that *in such a system, the location of subsidiaries is what is important, not that of the parent company. Consequently, tax competition between countries will focus on attracting subsidiaries.*

2.3.2. Repatriating dividends: crediting

The other option provided by the Directive (and this is also the practice in countries such as the United States) is *crediting*: the parent company shall be taxed on the group's global profits, but taxes levied outside the borders, within the European Union, shall be credited to its tax liability up to the amount owed to its country of residence. Consequently, equation (3) is as follows

$$
VAN = \left(1 - .34\right)\frac{2-1}{.05}100,000 - 1,000,000 = 320,000
$$
$$
VAN* = \left(1 - \max\left(.34, .30\right)\right)\frac{2-1}{.05}100,000 - 1,000,000 = 320,000 \qquad (4)
$$
$$
VAN^M = 640,000\,; t = .34
$$

and in this case, since the foreign tax rate is lower than the national rate, we are back in the initial tax situation.

As far as technical properties are concerned, this system is capital export neutral provided that the foreign tax rate does not exceed the rate in the parent company's country of residence: *if*

the foreign tax rate does not exceed the rate in the parent company's country of residence, the group's value does not depend on the geographical distribution of its subsidiaries.

An immediate <u>corollary</u> of this observation is that *in such a system, the location of the parent company in the country of lower taxation is, all things being equal, likely to raise the value of the multinational. Consequently, tax competition will focus on attracting parent companies or, where appropriate, intermediate holding companies.*

On the contrary – if the tax rate in the subsidiary's country exceeds that of the parent company – there may be capital import neutrality according to the definition in the preceding point.

2.3.3. <u>Repatriating interest</u>

If the investment in the subsidiary was financed by a loan from the parent company, the latter may receive interest which, in most tax systems, is deductible by the company which pays it and taxed in the case of the company receiving it – we assume that the rate of interest is equal to the rate of dividend. In that case, the result is the same as for crediting:

$$VAN = \left(1-.34\right)\frac{2-1}{.05}100,000 - 1,000,000 = 320,000$$

$$VAN^* = \left(1-.34\right)\frac{2-1}{.05}100,000 - 1,000,000 = 320,000 \tag{5}$$

$$VAN^M = 640,000 \, ; t = .34$$

Two comments must be made, however.

First, most countries apply a withholding tax on the payment of interest. As it is generally lower than the corporate tax rate and contractual provisions provide for its crediting, it can be ignored. In fact it will be ignored all the more readily since European Union legislative developments provide for its disappearance within multinational groups.

Second, financing by loans is limited by measures aimed at averting thin capitalisation of companies. We assume that we are not in this situation here (if we introduce this aspect, we would have to resort to mixed financing, and we would not learn anything new from this).

2.3.4. Tentative conclusion and strategic explorations

The three situations looked at above can be compared by revisiting Table 2; they replace the second line – see Table 3.

Table 3 – the financing of a multinational

	Before-tax profit of the Multinational	After-tax profit of the Multinational	Tax revenue of the Home country	Tax revenue of the Foreign country
Producing at home and exporting	4,000,000	2,640,000 $t = .34$	1,360,000	0
Foreign subsidiary – shares/exemption	4,000,000	2,696,200 $t = .3260$	703,800	600,000
Foreign subsidiary – shares / crediting	4,000,000	2,640,000 $t = .34$	760,000	600,000
Foreign subsidiary – Loan	4,000,000	2,640,000 $t = .34$	1,360,000	0

This clearly shows that

(1) *the decision regarding the method of financing, and hence of repatriation of profits, is not independent of the location of the entities concerned and hence of the geographic distribution of tax rates,* and

(2) *this decision has an impact on the distribution of the tax revenue of the countries concerned.*

Once again, an immediate corollary emerges: *only the equalisation of effective tax rates can ensure neutrality of taxation in terms of the location of subsidiaries and of parent companies, and hence in terms of the distribution of tax revenue between the countries concerned.* It must be noted that equalisation of effective tax rates may be obtained by various combinations of tax parameters, but that the simplest way of doing this is to use identical methods of composing the tax base and to equalise the statutory tax rates.

Most studies in literature stop at this lesson, forgetting that multinationals often pursue more complex strategies and are established simultaneously in more than two countries. For our part, we will try to go beyond this limit by examining transfer pricing strategies, and then financial detour strategies.

3. Strategies in a system of separate accounting

There are, at least, two conceivable situations. In the first one, the multinational engages in internal transactions involving its entities and performs them at a transfer price, either the arm's length price or a price chosen by it for strategic reasons which must then be justified. In the second situation, it replaces the direct investment and revenue flow circulation with an indirect circulation involving a low-tax jurisdiction and intermodal finance.

3.1. Transfer prices and their manipulation

The multinational company discovered that producing goods abroad was fiscally more advantageous than producing goods on its home territory. It will quite naturally consider locating abroad the production facility that also produces goods for its home market. In this case, let us suppose that it maintains a distribution facility at home to which the production facility sells its products at an internal price.

3.1.1. Arm's length price

In this case Article 9.1 of the OECD's international model tax convention binding the two countries (there is also a European treaty along the same lines) obliges it to practise arm's length (wholesale) prices for intra-group transactions between the foreign production facility and the home country distribution facility. Let us set this price at 1.6 and split the unit costs between .8 for the production and .2 for the distribution facility.

This concentration of production abroad improves the company's value and lowers the effective tax rate it must pay, as can be seen from the equations below and the corresponding line in Table 4 further on, calculated on the basis of a hypothesis of financing by shares in a situation of 95 per cent exemption:

$$VAN = (1-.34)\frac{2-1.6-.2}{.05}100,000 - 200,000 = 64,000$$

$$VAN^* = (1-.05(.34))(1-.30)\left[\frac{2-1}{.05}+\frac{1.6-.8}{.05}\right]100,000 - 1,800,000 = 677,160 \quad (6)$$

$$VAN^M = 741,160 \,; t = .3147$$

3.1.2. Manipulated transfer price

The company could then take the risk of distancing its internal transfer price from the arm's length price in order to boost its taxable profit in the jurisdiction with the lowest tax rate, in this case the foreign country. Suppose that it raises this price from 1.60 to 1.79. In this case, equation (6) becomes

$$VAN = (1-.34)\frac{2-1.79-.2}{.05}100,000 - 200,000 = -186,800$$

$$VAN^* = (1-.05(.34))(1-.30)\left[\frac{2-1}{.05}+\frac{1.79-.8}{.05}\right]100,000 - 1,800,000 = 938,638 \quad (7)$$

$$VAN^M = 751,838 \,; t = .3120$$

One <u>important comment</u>: *the extra profit the multinational obtains in this way – and this will henceforth be the case in the rest of this section – is pure "paper profit" since it arises from a change in the sole company's financial strategy without real investment behind it.*

However, this gain is not without risk. The country of residence of the distribution unit, in this case merged with the parent company, could reject this difference compared with the arm's length or full competition price and carry out what is called a primary adjustment, in other words re-calculate the taxable base on its fiscal territory using the arm's length price as the purchase price for the product. The foreign jurisdiction, which the company will then ask to carry out a correlative or secondary adjustment – re-calculating in turn its taxable base using the arm's length price – will either agree to this or refuse depending on whether or not Article 9.2 of the OECD's international model tax convention is included in the convention between the two countries. In the event of the application of the European treaty on transfer pricing, a negotiated solution will have to be found.

Below – see Table 4 –, two hypotheses are set down: first, a prudent one whereby the company has not adopted a price that is different from the arm's length price, and second, a hypothesis whereby it has done so, adopting an optimised transfer price, and has managed to justify this difference (for instance by using an argument based on the special nature of the product).

3.2. A lucrative detour

We can now suppose that the multinational discovers that there is a jurisdiction in Europe that taxes corporate profits at a very modest rate of, say, 14 per cent. This country, which we will call a third country, does not constitute a market for the company's product or a place where it could produce it, but it will certainly host a passive facility owned by this group, a simple financial centre.

It must be noted that this third country must belong to the European Union, otherwise the passage of a financial flow through its territory could be said to be a detour via a tax haven, depriving the parent company of the benefit of the exemption on the taxation of dividends.

The detour which the multinational then comes up with is as follows: rather than subscribe to new shares in its foreign production subsidiary, it will subscribe in the same amount to shares in a passive subsidiary in the third country which, in turn, will lend the amount collected to the production subsidiary. As already mentioned, financing by loans is limited by measures aimed at averting thin capitalisation of companies and we assume that we are not in this situation here (if we introduce this aspect, we would have to resort to mixed financing, and we would not learn anything new from this).

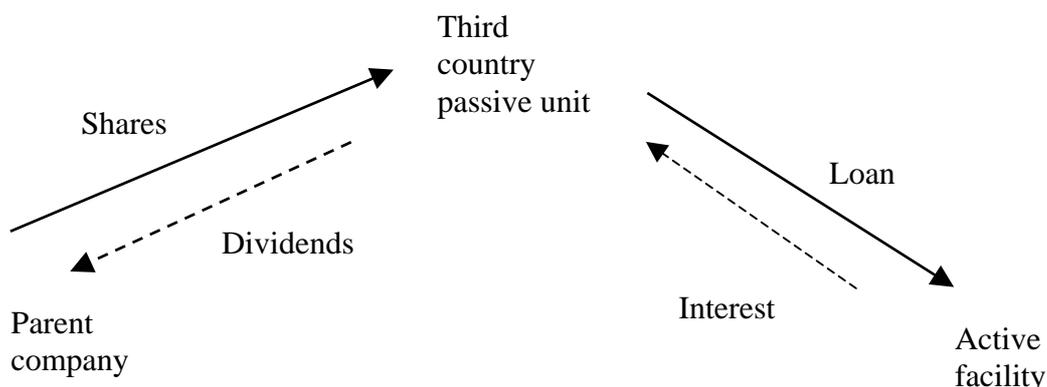That detour is intermodal financing as shown in Figure 1 below:

<u>Figure 1 – Intermodal financing</u>

If this detour is applied to the previous situation, equations (6) and (7) become, respectively:

$$VAN = (1-.14)\frac{2-1.6-.2}{.05}100,000 - 200,000 = 64,000$$

$$VAN^* = (1-.05(.34))(1-.14)\left[\frac{2-1}{.05}+\frac{1.6-.8}{.05}\right]100,000 - 1,800,000 = 1,243,368 \qquad (8)$$

$$VAN^M = 1,307,368\,;t=.1732$$

and

$$VAN = (1-.34)\frac{2-1.79-0.2}{.05}100,000 - 200,000 = -186,800$$

$$VAN^* = (1-.05(.34))(1-.14)\left[\frac{2-1}{.05}+\frac{1.79-.8}{.05}\right]100,000 - 1,800,000 = 1,564,612 \qquad (9)$$

$$VAN^M = 1,377,812\,;t=.1555$$

<u>Three propositions</u> or observations can then be made. The <u>first one</u> is that *without making any real investment, the multinational obtains a substantial gain.*

The <u>second one</u> concerns the *geographic (re)distribution of tax revenue*:

(1) *the country of the foreign active facility is deprived of any tax revenue.* In itself *this is not directly connected with the detour but rather with the fact that the actual existence*

of a jurisdiction with a lower tax rate means that it loses the advantage of its lower rate compared with the parent company's country, that of the possible alternative location for the production facility.

(2) *the passive facility's country obtains substantial tax revenue*, once again *without any real effort.*

The <u>third observation</u> concerns the policy pursued by governments: a distinction must be made between competition between jurisdictions to attract real investments (active facilities) and competition to attract tax bases or "paper profits". The latter has a <u>corollary</u> of prime significance: the tax sacrifice to which a country consents in order to attract a real investment can be infinitely expanded simply by the existence of a jurisdiction that is attractive for tax bases. In this case, the foreign country attracted the active facility by offering a tax rate of 0.30 instead of 0.34, but the advent of a third jurisdiction has had the effect that the tax rate is effectively zero in the country of the active facility.

Of course, these tax strategies, the effects of which are shown clearly in Table 4, would be irrelevant if the effective tax rates were identical.

Table 4 – A multinational engaging in tax strategies

	Aggregate Taxable Profit	After-tax profit of the Multinational	Tax revenue of the Home country	Tax revenue of the Foreign country	Tax revenue of the Third country
Producing at home and exporting	4,000,000	2,640,000 $t = .34$	1,360,000	0	0
Foreign subsidiary shares/exemption	4,000,000	2,696,200 $t = .3260$	703,800	600,000	0
Arm's length price	4,000,000	2,741,860 $t = .3147$	178,840	1,080,000	0
Optimised transfer price	4,000,000	2,751,838 $t = .3120$	54,162	1,194,000	0
Arm's length price and detour	4,000,000	3,307,368 $t = .1732$	188,632	0	504,000
Optimised transfer price and detour	4,000,000	3,377,812 $t = .1555$	64,988	0	557,200

What happens to these observations and propositions if taxation based on a separate accounting mechanism is replaced by tax consolidation accompanied by the distribution of the consolidated tax base between the States concerned, according to a pre-established formula, a system which in short is called *Consolidation and Formulary Apportionment* (C&FA)?

4. The formulary apportionment system without tax strategies

As stated in the introduction, in the autumn of 2001, the European Commission proposed a substantial modification as regards the manner of taxing multinational companies operating on its territory, justifying this change by the need to put an end to tax obstacles to economic activity in Europe. The proposed system is similar to the one practised in the United States and in other federal countries, for the taxation by the federation members of companies operating on several of the members' territories – see European Commission (2001, 2003), Gérard (2003) and the references at the end of this article. It consists of two stages. First, a consolidated base is calculated using common rules applicable in all the federation members. Second, this common basis is distributed between the members concerned according to pre-established rules, with each member taxing its share at the rate it intends to practise. In the United States, the distribution formula is based on three criteria, namely properties, payroll and gross receipts from sales. In Canada, which does not apply consolidation, apportionment is based on payroll and gross revenue – for lessons for Europe, from the US and Canadian experiences, see Weiner (2005). It should be noted that criteria that are completely independent of the company may be chosen, such as the respective relative area or population of the States, or even their share in the common value added.

4.1. First stage: consolidation

As the EU says[3], "Only providing multinational companies with a <u>consolidated corporate tax base</u> for their EU-wide activities will really, through a <u>single framework of company taxation</u>, systematically tackle the majority of the tax obstacles to cross-border economic activity in the Single Market."

In the last situation encountered in the previous section, the one combining a manipulated transfer price with a lucrative detour, there were three taxable bases, one in each jurisdiction,

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[3] EU Commission (2001), quoted by Weiner (2005).

which we denote respectively as T_1, that of the parent company's country of residence, T_2, that of the country of the foreign active unit, and T_3, that of the third country

$$
\begin{aligned}
T_1 &= (2 - 1.79 - .2)100,000 \\
&= 1,000 \\
T_2 &= (2-1)100,000 + (1.79 - .8)100,000 - \big[(2-1) + (1.79 - .8)\big]100,000 \\
&= 0 \\
T_3 &= \big[(2-1) + (1.79 - .8)\big]100,000 \\
&= 199,000
\end{aligned}
\tag{10}
$$

The term between the square brackets represents the interest which is deductible in the country of the foreign active unit, and taxed in the third country, where the passive facility is established. The corresponding discounted values are respectively 20,000, zero and 3,980,000 summing up to the unchanged amount of 4,000,000.

In the case of consolidation – hence of summation – of the three taxable bases, the terms between the square brackets are cancelled out and the detour has no effect on the composition of the consolidated base. Similarly, consolidation cancels out the effect of manipulating the transfer price. Consequently, the consolidated base is

$$
T^{FA} = T_1 + T_2 + T_3 = 2(2-1)100,000 = 200,000
\tag{11}
$$

thus again 4,000,000 if discounted at a 5 per cent rate over the long run.

The property obtained is that *consolidation erases the interest of adopting strategies relating to the manipulation of transfer prices and detours via third units.* One comment must be made, however: *this important argument in favour of consolidation does not hold unless consolidation is compulsory and adopted by all the Member States of the European Union.* If a facility, for instance the third country facility, remains outside the consolidation perimeter, then all the strategies remain possible. That comment is especially important for the case where some EU Member States should want to adopt Consolidation and Formulary Apportionment within the framework of an Enhanced Cooperation Agreement – this is not a

reason *per se* to reject such an Agreement, but it shows the need to be careful about its consequences.

4.2. Second stage: formulary apportionment

The criteria of formulary apportionment can generate weights which the company will find more or less difficult to control or manipulate. We will consider four possibilities here.

First, the <u>investment criterion</u> involving 90 per cent – 1,800,000 out of 2,000,000 – in the State of the foreign active facility and the balance in the State of the distribution facility, which is also that of the parent company. Since investment decisions are in the company's power, it can be said that this is a criterion controlled by it. If this criterion prevails, the company will continue to decide on the location of its investments on the basis of taxation. Not only will <u>tax competition</u> continue, but *maybe it will increase since the attraction of investments will again mean the attraction of a taxable base*.

Next, the <u>criterion of final sales</u> – understood as sales to outside the company and in line with the principle of destination – involving 50 per cent in the parent company's State and 50 per cent in that of the foreign market. It can be supposed that the company, wishing to attract consumers, does not control this criterion or in any case controls it less. *For a State, attracting the company to its territory has no implications for tax revenue provided that sales are not affected – of course it is quite a different story if attracting investment stimulates local sales – and the effect on* <u>tax competition</u> *is not univocal*.

A third rule consists of taking an <u>average of the two</u> preceding ones. Lastly, we will take a <u>quite arbitrary criterion</u>: since the company is established in three jurisdictions, each one of them has the right to tax one-third of the consolidated base.

Notice that criteria exogenous to the firm like the distribution of the population or that of GDP are, in this discussion, encompassed by that of final sales assumed to be not controlled by the firm.

Table 5 illustrates the impact of each one of these criteria.

Table 5 – Changeover to consolidation with formulary apportionment, compulsory C&FA

	After-tax profit of the Multinational	Tax revenue of the Home country	Tax revenue of the Foreign country	Tax revenue of the Third country	Aggregate Tax Revenue
Producing at home and exporting	2,640,000 $t = .34$	1,360,000	0	0	1,360,000
Foreign subsidiary shares/exemption	2,696,200 $t = .3260$	703,800	600,000	0	1,303,800
Optimised transfer price and detour	3,377,812 $t = .1555$	64,988	0	557,200	622,188
C&FA, criterion: investment	2,784,000 $t = .3040$	136,000	1,080,000	0	1,216,000
C&FA, criterion: sales	2,720,000 $t = .3200$	680,000	600,000	0	1,280,000
C&FA, criterion: invest. and sales	2,752,000 $t = .3120$	408,000	840,000	0	1,248,000
C&FA, criterion: equal distribution	2,960,000 $t = .2600$	453,333	400,000	186,667	1,040,000

Several comments must be made in this respect. Thus, in relation to the multinational, it can be seen that

(1) *Regardless of the formulary apportionment criterion used, the multinational is in a more favourable situation in the new system than with taxation based on separate accounting without tax strategies – second line – but in a less favourable situation than if it pursued tax strategies under cover of separate accounting.*

(2) *The more weight given by the criterion to a lower rate of taxation, the lower the average effective tax rate to which the enterprise is subjected.* Thus, on the contrary, recourse to the sole criterion of sales, giving equal weight to the two jurisdictions where active facilities are established, leads to heavier taxation than the sole criterion of investment, which gives precedence to the active country where the tax rate is low. And the last line lowers the effective tax rate by bringing in a jurisdiction with a particularly low rate.

From the point of view of the Member States, it can be seen that:

(3) *The tax revenue of Member States is affected considerably by the formulary apportionment criteria used. Generally speaking, looking at the situation of optimised transfer pricing combined with a detour via a third country, the changeover to a C&FA system produces two winners and one loser among the States concerned.*

(4) *However, global tax revenue is higher: therefore it may be supposed that compensation between States could consist of side payments likely to induce the third country to become involved if unanimity is required.*

4.3. Caveat: non-compulsory consolidation and Enhanced Cooperation Agreement

So far we have assumed that C&FA applied to the whole multinational enterprise. However, we have issued the comment that, if a facility, for instance the third country facility, remains outside the consolidation perimeter, then all the strategies remain possible. And we have stressed that this is an especially important remark for the case where some EU Member States should want to adopt Consolidation and Formulary Apportionment within the framework of an Enhanced Cooperation Agreement, adding that this is not a reason *per se* to reject such an Agreement, but that it shows the need to be careful about its consequences.

Let us now illustrate that assuming that the passive entity in the third jurisdiction is not included in the consolidation perimeter either because consolidation is not compulsory or because the third country does not participate the C&FA Agreement supposed to be signed by the countries of the two active entities – this is the case of an Enhanced Cooperation Agreement.

Then the multinational continues to make use of the lucrative detour through the third jurisdiction, and

$$
\begin{aligned}
T^{FA} &= T^1 + T^2 + .05(1-.14)T^3 \\
&= 2(2-1)100,000 - \left[1-.05(1-.14)\right]\left[(2-1)+(1.79-.8)\right]100,000 \\
&= 9,557 \\
T^3 &= \left[(2-1)+(1.79-.8)\right]100,000 = 199,000
\end{aligned}
\tag{12}
$$

so that the consolidated tax base reduces to 9,557 or 191,140 in discounted value, while that in the third jurisdiction remains equal to 199,000 or, again, 3,980,000 in discounted value. Notice that the consolidated tax base now includes 5 per cent of the flow of dividends paid out to its parent company by the passive entity in the third jurisdiction since that latter entity is no longer included in the consolidation perimeter (we assume that the Directive on the taxation of dividends paid by a subsidiary to its parent company still applies).

Table 5 is then replaced by Table 6 below.

Table 6 – Changeover to consolidation with formulary apportionment, non-compulsory C&FA

	After-tax profit of the Multinational	Tax revenue of the Home country	Tax revenue of the Foreign country	Tax revenue of the Third country	Aggregate Tax Revenue
Producing at home and exporting	2,640,000 $t = .34$	1,360,000	0	0	1,360,000
Foreign subsidiary shares/exemption	2,696,200 $t = .3260$	703,800	600,000	0	1,303,800
Optimised transfer price and detour	3,377,812 $t = .1555$	64,988	0	557,200	622,188
C&FA, criterion: investment	3,384,693 $t = .1538$	6,499	51,608	557,200	615,307
C&FA, criterion: sales	3,381,635 $t = .1546$	32,494	28,671	557,200	618,365
C&FA, criterion: invest. and sales	3,383,634 $t = .1542$	19,496	40,139	557,200	616,836
C&FA, criterion: equal distribution	3,381,635 $t = .1546$	32,494	28,671	557,200	618,365

Comparison of Tables 5 and 6 immediately reveals that the partial adoption of Consolidation and Formulary Apportionment turns out to imply that

(1) *the third country has the same tax revenue as before the partial introduction of C&FA*; since that amount is presumably the side payment it should have requested to adhere to a compulsory C&FA system, *that country is deemed to be as well off*,

(2) *aggregate tax revenue is smaller than in Table 5, so that tax revenue obtained by the countries where the active entities are located is small and even smaller than under Separate Accounting combined with transfer price manipulation and lucrative detour*; the reason is that the five per cent of the flow of dividends paid out by the entity in the third jurisdiction, which was previously taxed at the 34 per cent rate of the parent jurisdiction, is now taxed at a weighted average of the 30 and 34 per cent rates of the active entities jurisdictions, depending on the apportionment formula; therefore *those two countries are worse off in terms of tax revenue*,[4]

(3) *since its aggregate tax liabilities are smaller, the multinational firm is better off*, which is illustrated by reduced effective tax rates.

4.4. Tentative policy conclusions

There appear to be two tentative conclusions that can be made.

First, the above figures and comments set forth the political economy or collective choice problem raised by a potential change of system, in particular in a context where unanimity of Member States is required. However, if the changeover to this new system were to be made by only some Member States in the context of an Enhanced Cooperation Agreement, other problems would arise, especially that of handling flows that "would go to be taxed" in Member States outside the consolidation perimeter that apply low tax rates.

Second, while the adoption of C&FA eliminates strategies, it does not put an end to tax competition between jurisdictions. This may even be accentuated if the apportionment criterion grants a high weight to a variable such as investment, production or employment, with respect to which the multinational controls the interjurisdictional distribution.

4.4. One particular point: international loss-compensation

We will not examine the question of international loss-compensation within a multinational here, a subject particularly close to UNICE's heart (UNICE, 2000), which we can look at in

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[4] That result is due to the fact that the tax rate in the parent company jurisdiction is larger than the one in the jurisdiction of the other active entity of the group.

Gérard and Weiner (2003, 2005). It must be noted, however, that while consolidation entails cross border compensation of losses, the latter can also be established in the context of the current system of taxation of separate accounting. In this case, it is one of the <u>targeted measures proposed by the European Commission</u>, forming part of the process of gradually eliminating tax obstacles to economic activity in Europe. If consolidation with formulary apportionment is not adopted, then the introduction of international compensation of losses would be a step in the "right" direction.

5. Conclusion

In this article, we took a case study of an international investment and used it first to compare the strategies of a multinational in the current system of separate accounting of national ▨ies, without and then with the adoption of tax strategies, such as intra-group transactions and the indirect circulation of financial flows, and in the system, under examination, of consolidation and formulary apportionment.

As a result of this comparison of strategies by the multinational company, it was possible to compare the effects of these strategies on the tax revenue of Member States. We demonstrated in particular the risks of the accentuation of tax competition depending on the apportionment formula chosen, as well as the way in which the interjurisdictional distribution of tax revenue is affected by the formulae and the problems posed by the adoption of this system by the entire European Union, if the rule on unanimity prevails, and by its selection by certain Member States in the context of a Enhanced Cooperation Agreement process.

Tables 5 and 6 show this comparison and highlights the role of apportionment criteria. As mentioned above, there are several <u>comments</u> to be made in this respect.

<u>As far as the multinational is concerned</u>, it can be seen that

(1) *regardless of the formulary apportionment criterion used, it is in a more favourable situation in the new system than with taxation based on separate accounting without tax strategies, but in a less favourable situation than if it pursued tax strategies under cover of separate accounting; however if C&FA is only partially implemented, either because consolidation is not compulsory or because the new system is not adopted by*

one of the jurisdictions, then the multinational may be even better off than under separate accounting with tax strategies,

(2) *the more weight given by the criterion to a lower rate of taxation, the lower the average effective tax rate to which the enterprise is subjected,*

while <u>in relation to Member States</u>, it is clear that

(3) *the tax revenue of Member States is affected considerably by the formulary apportionment criteria used: looking at the situation of optimised transfer pricing combined with a detour via a third country, the changeover to a C&FA system compulsory and adopted by all Member States produces two winners and one loser among the States concerned,*

(4) *however, global tax revenue is higher: therefore it may be supposed that compensation between States could consist of side payments likely to induce the third country to become involved if unanimity is required,*

(5) *but unlike that if the changeover is only partially implemented, the tax revenue obtained by the participating countries – those where the active entities are located and consolidation is compulsory – can even be smaller than under Separate Accounting combined with transfer price manipulation and lucrative detour.*

Two conclusions thus appear to be evident. First, the last comments *indicate the political economy or collective choice problem raised by a potential change of system, in particular in relation with the required* <u>unanimity</u> of Member States, in tax matters, and the opportunity to use <u>Enhanced Cooperation Agreements</u>.

Moreover, *while the adoption of consolidation with formulary apportionment eliminates strategies, it does not put an end to* <u>tax competition between jurisdictions</u>. *This may even be accentuated if the apportionment criterion grants a high weight to a variable such as investment, production or employment, with respect to which the multinational controls the geographic distribution.*

We should add that *while this system does not make taxation neutral as regards decisions by a multinational company* (only complete harmonisation of effective tax rates could achieve this) *it does, however, form part of the solution of removing tax obstacles to economic activity, notably because of its implications in terms of common rules on constituting the tax*

base and, upstream, on accounting (see for instance Jacobs *et al.*, 2005). *Moreover, it can easily be combined with the principle of subsidiarity which is at the root of the Community*.

We did not examine the question of *international compensation of losses within a multinational*. While consolidation entails international compensation of losses, the latter can also be established in the context of the current system of separate accounting taxation. In this case, it is one of the target measures proposed by the European Commission, forming part of the process of gradually eliminating tax obstacles to economic activity in Europe. *If consolidation with formulary apportionment is not adopted, then the introduction of international compensation of losses would be a step in the "right" direction*.

Prior to this, we had also demonstrated that a *key distinction must be made between competition between States to attract real investments (active facilities) and competition to attract tax bases or "paper profits"*. This has a corollary of prime significance: *in the separate accounting system, the tax sacrifice to which a State consents in order to attract a real investment can be infinitely expanded simply by the existence of a State that is attractive for taxable bases*.

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