Implications of the introduction of the Common Consolidated Corporate Tax Base for tax revenues in Romania

DANIELA PIRVU, PhD*
University of Pitesti, Department of Economic Theory and Finances, Pitesti
ddanapirvu@yahoo.com

LOGICA BANICA, PhD*
University of Pitesti, Department of Accounting and Management of Computer, Pitesti
olga_banica@yahoo.com

ALINA HAGIU, PhD candidate*
University of Pitesti, Department of Economic Theory and Finances, Pitesti
alinahagiu@yahoo.com

Review article**
JEL: F23, H25, H32
UDC: 336.22

* The authors would like to thank the two anonymous referees for their valuable comments.

** Received: January 15, 2011
Accepted: March 29, 2011

FINANCIAL THEORY AND PRACTICE
35 (2) 197-215 (2011)

Abstract

In order to address some existing difficulties in corporate income taxation (CIT), the European Commission proposed the introduction of measures for coordination, a solution contested by some member states but supported by most professionals and many organizations representing the interests of European employers. Disputes in connection with the introduction of the Common Consolidated Corporate Tax Base (CCCTB) are occasioned by the uncertainty regarding its effects. Since CIT makes an important contribution to the forming of central budget revenues, the CCCTB is a challenge for Romanian public authorities. The Romanian government has not made clear its options in this respect. In this paper we present the main points of view about the implications of introducing the CCCTB as seen by specialists and estimate the effects of the EU formula apportionment on CIT revenues in Romania.

According to research results on a sample of companies in 2006-09, Romania will assume a loser position if the EU formula apportionment uses the payroll (although the loss of tax revenue would be lower than other researchers have estimated) and a winner position if the EU formula apportionment does not use the payroll.

Keywords: coordination, corporate, consolidation, taxation, EU formula apportionment, tax revenues

1 INTRODUCTION

In accordance with the European Union Treaty, member states have a full autonomy in direct taxation, including CIT. This autonomy may be limited only if domestic taxes are not compatible with EU law. In principle, national tax legislation should not create obstacles to cross-border economic transactions. In fact, the existence of 27 CIT national systems is a significant obstacle to the proper functioning of the Single Market. The main difficulties generated from the lack of common rules on corporate taxation inhere in the costs of knowing the tax legislation in each member state, monitoring the transfer pricing, the risk of double taxation, the general inability to offset losses in one member state by revenues in another state and the possibility of transferring the tax base from countries with high tax to countries with low tax levels.

In this context, efforts have been made to ensure the better coordination of international corporate taxation. In order to solve the existing CIT problems, the European Commission proposed the introduction of measures for coordination, a solution contested by some member states but supported by most specialists, many organizations representing the interests of employers and public authorities in countries affected by the migration of capital located in their territory under the influence of tax competition manifested in the European Union. No decision regarding the setting of the framework for coordination of CIT has yet been made, but important steps in this direction have been taken.

The CCCTB system is an ambitious goal of the European Commission. Technical discussions related to this system were launched in September 2004, when a working group was formed to help the Commission prepare a legislative proposal in this regard. The common tax base involves establishing a single tax base for the activities of a transnational company, while consolidation means that the income, the expenditure, and the taxable profits will be calculated in one state (that in which the parent company is located), then the tax will be collected in that state and afterwards distributed to the other states in which the company has its activities.

Our research started with the question "In which camp will Romania be after the introduction of the CCCTB: that of the winners or that of the losers in tax revenues?" The need to find an answer to this question was determined by the low number of European studies on the tax harmonization issue in which Romania is included (due to the relatively recent accession of Romania to the European Union).

Representatives of the Romanian Government have so far expressed no pro opinions or views against the European Commission proposal, because no assessment of the impact of the introduction of CCCTB at a national level has been made. The main objective of this paper is to suggest the impact of using the EU formula for apportionment on CIT revenue in Romania. For this purpose a representative sample of companies was made and the necessary data were collected for determining EU formula apportionment components from consolidated financial statements and balance sheets. After processing the data we determined the level of CIT in the sample, at two moments: (1) the existing situation characterized by lack of consolidation and distribution rules, and (2) after the consolidated tax base assignation. Because the analysis focused on a period of four years (2006-09), we avoided getting results influenced by incidental factors.

The first two parts of the work aim to familiarize the reader with issues relating to CCCTB, and the last parts represent our contribution to the enrichment of literature.

2 MAIN ISSUES IN THE COMMON CONSOLIDATED CORPORATE TAX BASE

2.1 ADVANTAGES AND DISADVANTAGES

A common tax base involves establishing a single tax base for activities of a transnational company, and consolidation means that the income, the expenditure, and the taxable profits will be calculated in one state (–the home state of the parent company), then the tax will be collected in that state and afterwards distributed to other states in which the company has its activities. The expected benefits of introducing this model are many (Commission of the European Communities, 2001):

- the significant reduction of compliance costs;
- the disappearance of the double taxation problem within the EU;

- the removing of a major obstacle to the free movement of capital and unrestricted exercise of the right of establishment, by cross-border loss compensation of tax losses by reducing the taxable profits of parent companies (but only within the European Union);
- the disappearance of the tax avoidance practices by using "transfer pricing", because intra-firm transaction prices can not affect the distribution of taxable income to tax jurisdictions;
- the comparability of effective tax burdens in each jurisdiction (in terms of a single base, the nominal rates are perfectly comparable), with the consequence of an improvement in the quality of investment and hence of resource allocation to the whole EU.

The advantages of the CCCTB could create the preconditions for achieving important goals of EU fiscal policy:
- supporting the success and the common market development by allowing all member states to compete fairly and to take advantage of the internal market;
- sustainable reduction of the overall tax burden in the European Union, by ensuring a balance between tax reductions, investment in public services and sustaining fiscal consolidation.

On the other hand, we must not neglect the negative aspects that come with CCCTB:
- increasing the complexity of tasks of workers in the government tax service and the creation of new jobs, i.e. hiring of additional labour in public finances, since the introduction of the CCCTB implies a new system, besides the 27 national systems that exist currently in the European Union;
- achieving fiscal control will cause difficulties because the tax authorities of member states need to cooperate and coordinate their activities very well;
- implementation of the CCCTB does not preclude the possibility that there will be an increase in tax competition, because to attract foreign investment, national authorities will continue to use a tax rate reduction as a tax incentive.

2.2 THE EUROPEAN UNION FORMULA APPORTIONMENT

Legislation on the CCCTB will apply to companies paying tax in the EU member states (these will be specified in an annex to the regulation that will be amended annually) organized in groups, but operating according to individual economic strategies. Corporations resident in the European Union countries may choose to employ the CCCTB. The conditions for creating a corporate group for application of the CCCTB relate to equity (the parent company has to hold at least 75% of the equity of subsidiaries), control (the parent company must have at least 50% of voting rights (at the general meetings of shareholders of controlled companies) and the right to repatriate (at least 75% of the profits made by subsidiaries are distributed to parent company).

In order to allocate the consolidated tax base among member states entitled to levy taxes on corporate income, the working group for designing the CCCTB proposed a sharing mechanism, easy to implement and to verify for both taxpayers and tax administrations, fair and equitable for all member states and not likely to generate undesirable effects in terms of tax competition.

In late 2007 the working group for the design of the CCCTB system published a document with the Commission's proposal on the mechanism for allocating the consolidated tax base among entitled member states. The document states that the working group tried to create an allocating mechanism easy to implement and to check both for taxpayers and tax administrations. The working group proposed a fair and equitable mechanism for allocating to all members in order to avoid undesirable effects in terms of tax competition. To avoid the manipulation of the system by taxpayers, the working group focused on the factors that cannot be artificially transferred between different tax jurisdictions (European Commission, 2007b).

The formula for allocating the tax base for branch A (EU formula apportionment), as shown in the Working Group document, is the following:

$$\text{Tax Base A} = \left(\frac{1}{m}\frac{\text{Sales}^{A}}{\text{Sales}^{\text{Group}}} + \frac{1}{n}\left(\frac{1}{2}\frac{\text{Payroll}^{A}}{\text{Payroll}^{\text{Group}}} + \frac{1}{2}\frac{\text{No\_of\_employees}^{A}}{\text{No\_of\_employees}^{\text{Group}}}\right) + \frac{1}{o}\frac{\text{Assets}^{A}}{\text{Assets}^{\text{Group}}}\right) * \text{CCCTB}$$

with $\frac{1}{m}+\frac{1}{n}+\frac{1}{o}=1$

To avoid manipulation of the system by taxpayers, the working group turned to factors that cannot be artificially transferred between different tax jurisdictions: the assets, the workforce and the turnover.

Using the characteristic factors of individual companies allows for correlation between the real economic activity of a particular company and the consolidated tax base distributed to the member state in which that activity took place. The accurate reflection of the consolidated tax base depends, however, on how the information on the EU formula apportionment factors is collected. In addition, any chosen allocation key will affect in a certain way the incentives for taxpayers and therefore there is a risk of manipulation by the authorities. Specifically, they can reduce the un-harmonized taxes to maximize the level of a certain factor in its own jurisdiction: for example, if the number of employees is used as a criterion, by reducing social security contributions it can stimulate employment. This could reach a situation where even if the activity of a group is profitable as a whole, states may try to attract unprofitable activities to its own territory only to increase

FINANCIAL THEORY AND PRACTICE
35 (2) 197-215 (2011)

its share of a consolidated tax base. For example, the choice of home sales will be an incentive to locate investments in jurisdictions with lower tax rates. Choosing the destination of sales will stimulate the consumption and imports and will discourage the exports (Negrescu at al., 2007).

Calculations for the taxable distribution will be made annually. A positive consolidated tax base (net profit) will be allocated immediately, and a negative consolidated tax base (net loss) will be compensated for in the future with the group earnings. When a company leaves a group of companies that opted for strengthening the tax base or when a company joins a group that has opted for strengthening the tax base, the strengthening of the tax base and its distribution will be made for that fraction of the tax period in which the company was a member of the group (European Commission, 2007a).

The problem for which at present no convenient solution has been found relates to the accounting rules to be used to define the common base. Discussions at the level of the working group frequently targeted the idea of using International Financial Reporting Standards (IFRS). They have the advantage, in addition to their wide international recognition, of easy adaptation to taxpayers, because – with effect from January 1, 2005 – at Community level a Regulation is applied requiring listed companies on regulated capital markets to prepare their consolidated balance sheets under International Financial Reporting Standards requirements.

2.3 LITERATURE REVIEW

The introduction of some measures to coordinate the CIT in the EU member countries is likely to have positive effects on some of those states, but also to affect others adversely. Results of testing performed in 2004 in order to evaluate the effects of the CIT coordination in the EU (Nielsen et al., 2004) pointed out the following aspects:

- a total harmonization based on CIT rules determined through a weighted average of GDP of member states will generate the greatest benefits at the EU level (an increase of GDP across the EU about 4%), increasing the welfare of people throughout the Union by 0.1%, while maintaining the same level of tax revenues);
- whatever the scenario applied, some member states will record losses of tax revenues from CIT harmonization, so that a compensation mechanism will be necessary.

On the other hand, states capable to obtain higher tax revenue (due to higher tax rate and/or tax base) will record a loss of GDP due to distortions occurring in the business, so the compensation mechanism has little chance of implementation.

Scenarios were tested using the CETAX model developed by Peter Birch Sørensen that is simulates the international side effects of national fiscal policies, with macroeconomic indicators of countries included in the analysis as input.

In 2006, a number of specialists (Brøchner et al., 2007) said that EU-wide the necessary consensus for a major reform in the CIT system (the introduction of harmonized rules) will not be achieved, because the CIT harmonization will generate antagonistic effects for individual member states, while the scale of changes in GDP (around 5 percentage points), the welfare level (about 0.8 percentage points) and tax revenue (about 2 percentage points) will be quite broad. Instead, strengthened coordination between a number of countries that are relatively homogeneous (in terms of economic development level, tax rates and rules for determining the tax base) in the CIT was held to be a viable solution. Such an approach will lead to less radical policy changes but smaller gains from harmonization. Conclusions of the study made by Jeans Brøchner, Jesper Jensen, Patrik Svensson and Peter Birch Sørensen have proved correct. In 2006-08, the representatives of some member countries (UK, Ireland, Poland, Latvia) came out against total CIT harmonization and also against the introduction of the CCCTB. Some of those politicians claimed the need to maintain national sovereignty in taxation and others have complained about the tax losses will be recorded. Since the unanimous support of member states for CIT harmonization is unlikely to be achieved, the European Commission decided that the proposal for a Directive which will introduce the CCCTB could be the subject of enhanced cooperation between member states, provided that there are at least eight participating countries (DG ECOFIN, 2008).

Estimates regarding the effects of CIT harmonization achieved through the CETAX model (described above) does not include the effects of tax base consolidation and its distribution among member states entitled to levy taxes, but only the effects of introducing a single tax on corporate income and/or some common rules for determining the EU tax base.

The effects of the introduction of coordinating rules of the CIT systems were simulated using the CETAX model in 2007 by Albert van der Horst, Leon Bettendorf and Hugo Rojas-Romagosa, who included in their model data about 17 member states and the US. Testing several hypotheses regarding the CIT coordination in the European Union (where common corporate tax system adoption was optional or mandatory, the introduction of a single corporate tax rate or the maintenance of national tax rates) and considering the distribution of consolidated tax base according to a formula with three factors (capital, production and employment), the three authors reached several conclusions, including the following: states with an initial narrow tax base (Spain, Portugal, Italy, Greece) will register an increase in revenue tax and vice versa.

The model for analyzing the impact of the CIT coordination in the European Union did not include the effect of strengthening the tax base, and the calculations were based on a series of indicators with unrealistic values: compliance costs equal with 10% of payments for tax profit, transfer pricing completely eliminated, rate of depreciation of fixed assets representing the average rates used in all member states. Even if it has certain limitations, the study by Albert van der Horst, Leon Bettendorf and Hugo Rojas-Romagosa represents an important step in examining, in dynamic terms, the economic effects of the CIT coordination in the European Union.

2010 saw a further simulation based on the CORTEX model, which generated new results related to changes in national tax systems (Bettendorf et al., 2010). In a first stage, the simulation analyzed the implications of introducing common rules for determining the tax base for all companies (domestic or foreign owned) operating in the territory of the member states. Strengthening the tax base across the EU will create a reduction in CIT revenues of about 0.1% of GDP due to offsetting the revenue and losses for companies with cross-border activities. This reduction will have greater amplitude for countries with a high CIT rate (i.e. Malta) or for countries where the corporate segment has a high importance (i.e. Belgium). Romania may assume a loser position with a reduction of about 0.5% of GDP in fiscal revenues.

Other studies (Fuest, Hemmelgarn and Ramb, 2006; Devereux and Loretz, 2007, 2008) have estimated the impact of the use of the EU formula apportionment on CIT revenues.

The first study, assessing the impact of the introduction and distribution rules to strengthen the tax base for corporations in the European Union, was made by Fuest, Hemmelgarn and Ramb (2006). In the absence of a comprehensive database with information on companies in all EU member states, the authors focused on the work undertaken by parent companies in Germany and their subsidiaries abroad between 1996 and 2001. The particular conditions of the analysis of the three German authors generated the following results (Fuest et al., 2006):

- enhancing and sharing the corporate income tax base will generate losses of tax revenue for small states using tax incentives, because the incentivising tax bases in these countries are high compared with the real economic activity taking place on their territory (measured by assets, turnover and wage fund);
- compensation for loss of income in cross-border activities will generate a significant decrease in the total tax base. In the case of the analysis for 1,844 parent companies in Germany and 5,827 foreign subsidiaries, reduction of the total tax base was estimated at 20%.

Starting from the premise that the companies with cross-border activity will not change their location choices by the introduction of rules to harmonize CIT in the European Union, Devereux and Loretz (2007) estimated the effects of the EU apportionment formula on CIT revenues in the 22 member states. They made a comprehensive analysis (for all member states) because the database used did not contain the information on the number of employees and payroll for companies in certain states (essential for determining the tax base shared by member states).

The study was based on financial results provided by some 400,000 companies that had assets worth at least 2 million and carried on business within the 25 states in 2000-2004.

In addition, Devereux and Loretz (2007) considered the possibility that some of the companies included in the database might refuse participation in the CCCTB, in view of its optional character. The authors concluded that consolidation and distribution of the tax base would generate a loss of tax revenues across the EU because CIT revenues would fall by 2.4% due to cross-border offsetting of losses in profits. Most new member states will register growth of CIT revenues, while the majority of Northern and Western Europe will face a reduction of these revenues.

In 2008, Devereux and Loretz expanded the analysis on the impact of CIT coordination focusing on the effects of business efficiency. Observations made of a group of 4,567 companies (323,442 companies) in 27 member states in 2001-05 allowed the measurement of the change in the ratio of income taxes paid and the value of corporate profits before tax in: (a) the current situation, (b) the case of voluntary consolidation, and (c) the case of strengthening and sharing tax base. When there are different national tax systems (the current situation), the tax burdens of companies examined in 2001-05 showed significant differences among member states of the European Union (from 40.1% in Malta to 20.9% in Belgium). The introduction of some optional consolidation rules on losses and income from cross-border activities will considerably diminish these differences (from 29.9% in Malta to 18.3% in Italy). And more favorable results in terms of reducing the tax burden were obtained in the strengthening and sharing tax base situation (from 28.6% to 19.7%). Also, the spread between countries is reduced significantly (from 21.6% in Cyprus to 18% in Italy), by creating the prerequisites to ensure a tax neutral conditions throughout the European Union. The average effective CIT rate in Romania will be reduced by about 7 percentage points should there be tax base consolidation and distribution, estimated thus a reduction in tax revenue collections (Devereux and Loretz, 2008).

The research results listed above only partially reflect the impact of the CCCTB introduction because the models used do not include all the technical elements of the system.

3 SHORT ANALYSIS OF TRENDS AND MAJOR CHANGES

The taxable corporate income is calculated as the difference between the income from any source and expenses incurred in order to achieve the revenue minus non-taxable income plus non-deductible expenses. In calculating the taxable corporate income, authorities granted the following tax incentives:

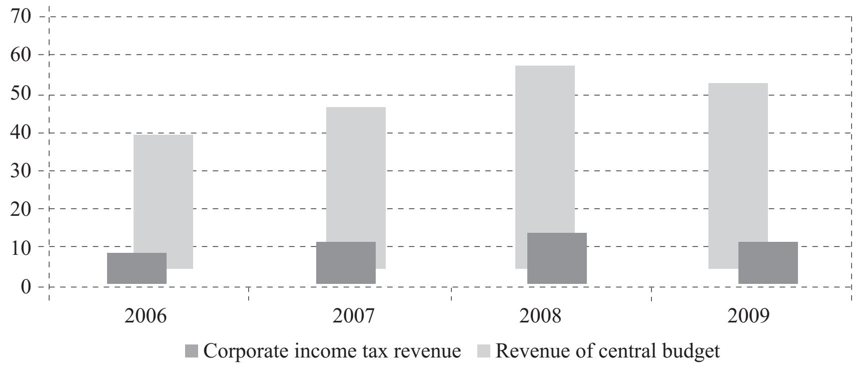
a) additional deduction of R&D expenditures of up to 20% of taxable income;
b) the method of accelerated depreciation for equipment and equipment for research and development.

FINANCIAL THEORY AND PRACTICE
35 (2) 197-215 (2011)

Profit reinvested in production and/or purchase of equipment (machinery and equipment work) is tax exempt.

Since 2005, the income tax rate has been 16% and is applied to taxable corporate income. The CIT revenues are collected by the central administration. Revenues from income tax in recent years registered an upward trend, representing over 20% of the tax revenue of the central budget (see figure 1).

Figure 1
Evolution of the CIT revenue in Romania (thousands lei)



The introduction of a minimum income tax in May 2009 was a transitional measure regarding CIT. It applies to businesses whose tax was below the level for certain intervals depending on the total income in the previous fiscal year. So, for a company with total income of about 10,000 euro, the minimum income tax was about 500 euro, and for a company with total income exceeding 30 million euro, the minimum income tax was around 10,000 euro. Because even companies that temporarily have no work are obliged to pay the minimum income tax, since its introduction, thousands of companies have suspended their operations and CIT revenue decreased in 2009 compared to 2008. Also, the number of newly established companies decreased considerably, small entrepreneurs preferring to conduct economic activities as authorized individuals (thus paying income tax with a rate of 16%). In this context, representatives of the Romanian Government repealed the minimum income tax in September 2010.

4 EFFECT OF THE CORPORATE INCOME TAXATION COORDINATION IN THE EUROPEAN UNION ON TAX REVENUE IN ROMANIA

4.1 METHODOLOGY

In order to evaluate the effect of the CIT coordination in the European Union on tax revenue in Romania, we analyzed the existing situation in September of 2008 for 9 corporations (Carrefour, E.ON AG, France Telecom, Hewlett-Packard, OMV Aktiengesellschaft, Peugeot SA, Saint-Gobain, Siemens, Unilever N.V.) and all their subsidiaries active in Romania (37 subsidiaries). These subsidiaries are representative of non-financial companies with a foreign stake in capital in Romania in terms of the fields: industry, mining and processing, distribution and telecommunications. We believe that the chosen sample can provide correct results regarding the impact of using the EU formula apportionment because the subscribed capital of the companies that are part of our sample is 7-13% of the total subscribed capital of financial and non-financial companies with foreign stake in capital in Romania (see table 1).

Table 1
The subscribed capital of companies (bill. euro)

	2006	2007	2008	2009
The subscribed capital of companies that are part of our sample	2.0	2.1	2.0	1.8
The subscribed capital of companies with foreign stake in capital in Romania	15.3	17.7	21.7	25.2

Source: Authors' calculations based on Statistics, National Trade Register Office of Romania and Database on Businesses and Public Institutions (Identification Data, Tax Information, Balances), Ministry of Public Finance of Romania.

This percentage was determined by sharing the amount of invested capital (expressed in euro at current exchange rates) entered in the annual balance sheets submitted to the National Trade Register Office by firms in the sample to the total value of subscribed capital of companies with foreign equity stake in Romania (National Trade Register Office of Romania, 2006-09). The decrease in the subscribed capital of companies that are part of our sample in 2006-09 was generated, in large part, by a significant devaluation of the leu (the Romanian national currency) against the euro (about 20%).

Of the companies sampled there are: Carrefour Romania SA (the retail company ranked in the top three retail companies in Romania), Petrom SA (the biggest company in Romania in terms of turnover – a member of the group OMV Aktiengesellschaft of Austria) and Orange Romania SA (the most profitable company in Romania). Information about the assets, the number of employees, the turnover, the taxable gross income and the CIT was obtained by consulting the consolidated financial statements of companies and the accounting balance of branches, in 2006-09 (annex 1).

Since the application of minimum tax on profit (firms with a tax loss in 2009 paid income tax according to the total revenue obtained in 2008) would create distortions in results, calculations were made by applying the rate of 16% to the fiscal base of 2009.

To obtain the necessarily processed information we designed an information system, which aims at achieving a comparative analysis between the existing situation in the CIT and an apparent situation based on the distribution of the consolidated tax base. An information system can be defined as a set of interrelated elements or components that collect (input), manipulate and store (process), and disseminate (output) data and information as well as a feedback mechanism. Our software can be considered a management information system, characterized by the use of information systems to produce reports that help managers to perform their duties. The information system has been practically implemented in the Microsoft Access environment and it is easy to use, thanks to a friendly graphic interface.

The focal point of the research was to determine the tax paid by sample companies in the existing situation and the tax that they would have to pay if the tax base were consolidated and divided. To determine the divided tax base of the sample branches, we used the formula agreed by the European Commission. Because we had no access to information about the payroll (companies are not obliged to disclose this information), we considered two variants:

1) we estimated the value of this indicator taking into account the level of the average gross annual wage in Romania (3,713 euro in 2006; 4,825 euro in 2007; 4,992 euro in 2008; and 5,464 euro in 2009) and in the European Union (31,302 euro in 2006), according the Eurostat data and the studies and press releases of the Romanian Government. Official statistical information on the average gross annual wage in the European Union covers only 2006, so for the coming years we indexed this value with annual inflation rate in the European Union, published by Eurostat (2.2% in 2007, 2.3% in 2008 and 1% in 2009);
2) we removed the payroll factor from the EU formula apportionment, giving an equal weight (1/3) of assets, turnover and number of employees.

4.2 DATA

In assessing the position held by companies of the sample within the group we present the following information.

TABLE 2

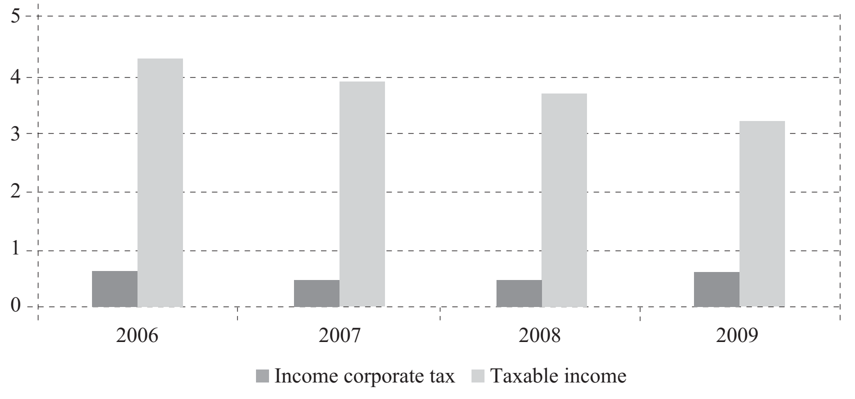
Information about the Romanian branches (%)

Year	Assets of Romanian branches in total corporate assets	Turnover of Romanian branches in total corporate turnover	Employees of Romanian branches in total corporate employees
2006	1.37	1.35	3.00
2007	1.65	1.38	2.66
2008	1.70	1.80	2.40
2009	1.69	1.27	2.60

Source: Authors' calculations based on annex 1.

The CIT revenues from the 37 Romanian subsidiaries included in the sample (according to annual balance sheets) have had a tendency to decrease, from 734.2 million lei (208.3 million euro) in 2006 to 701 million lei (165.43 million euro) in 2009 (see figure 2).

Figure 2
Evolution of the CIT and taxable income for the Romanian branches sampled (thousands lei)



In 2008, the income tax by branches of the Romanian companies decreased from 2007, due to construction demand reduction (for example, two subsidiaries of Saint-Gobain Group recorded fiscal losses). Also, E.ON Gaz Distributie SA company (the largest subsidiary of E.ON AG group) recorded a fiscal loss due to higher costs for re-technologization. In 2009, as a result of the economic crisis, the number of branches with fiscal losses increased (see diminishing tax base) but this situation has not affected the CIT revenue because companies have paid the minimum tax on profits.

We should mention that the amount of income tax paid by branches of the Romanian companies represented 6-9% of the CIT revenue collected in the central budget in 2006-09.

4.3 RESULTS

Application of the EU apportionment formula for each group of companies, in variant 1) and 2) generated a series of changes in the average CIT revenue in Romania (see table 3).

Using the two options for determining the CIT revenue we obtained different results. If the formula included payroll (in the form approved by the European Commission), the CIT revenue in Romania would register a decline of 0.035% and the elimination of the payroll would generate an increase of these revenues by 32.6%. Therefore, if the average gross annual salary in Romania were close to that of the

European Union, Romania would fall into the winners in the context of the introduction of CCCTB.

Table 3

The variation of the average level of CIT revenues from the subsidiaries in Romania (2006-09)

Company (Romanian branches)	The average level of CIT revenue before the application of the EU formula apportionment (million euro)	The variation of the average level of CIT revenue by applying the EU formula apportionment (%)	
		variant 1	variant 2
Carrefour	4.6	-35.9	-19.6
E.ON AG	2.4	857.3	1,475.9
France Telecom	69.5	-76.8	-73.7
Hewlett-Packard	2.2	-49.7	-27.5
OMV Aktiengesellschaft	96.2	33.9	74.5
Peugeot SA	0.5	-88.8	-83.6
Saint-Gobain	1.6	90.4	109.6
Siemens	0.8	27.3	79.0
Unilever N.V.	1.2	148.7	184.8
Total sample	179.0	-0.03	32.6

5 CONCLUSIONS

Applying the EU apportionment formula generates significant variations in the average level of CIT revenue from the most subsidiaries in Romania. This is due to the importance, lesser or greater, of subsidiaries in Romania in the group of companies, in terms of assets, sales and employment.

Compared with the study by Devereux and Loretz (2008), we identified a more favourable position of Romania in terms of the effects of introducing CCCTB on tax revenue.

The most important limit of this research comes from the fact that the size of the sample is small, so our results can be interpreted only in this context. Also, the absence of actual data on payroll can affect the accuracy of results. For example, the average gross annual wage in Petrom SA (the largest subsidiary of OMV Aktiengesellschaft) is much greater than the annual average gross wage in Romania (used in our calculations), because employees have a number of bonuses for work in conditions hazardous for health. Change with + / -1% of the average gross annual wage used in our calculations for subsidiaries in Romania generated a change in the average CIT revenue by +0.04, respectively -0.06 percentage points. A change of + / -1% of average gross annual wage used in our calculations for corporations generated a change in the average CIT revenue by -0.06, respectively +0.02 percentage points. The sensitivity of results to changes in payroll factor is not great, but this may bring about a change of Romania's position regarding the impact of the EU formula apportionment on tax revenues: whether it is in the loser or the winner category.

However, an accurate assessment of implications of the CCCTB on tax revenues cannot be made because we cannot determine which groups of companies in the EU will choose to use this system. In the future, we plan to extend this research by introducing a larger number of companies into the sample.

However, given the recent discussions between representatives of member states on measures needed to increase the competitiveness of the European Union, among which we find the expanding tax coordination in the field of CIT, our research can provide a scientific basis for Romania's representatives in support for or rejection of such approaches.

Annex 1

Information on companies in the sample

Company	Fixed assets (mil. euro)				Turnover (mil. euro)				Employees (persons)			
	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
Carrefour (group)	48,847.3	52,768.8	44,696.3	48,984.8	86,661.9	92,915.1	84,095.1	90,436.0	456,295	490,042	479,072	475,976
Carrefour (5 Romanian branches: Terra Achizitii SRL, Carrefour Romania SA, Artima SA, Carrefour Property Romania SRL, Carrefour Voaj SRL)	207.8	241.7	331.5	291.9	639.2	894.1	1,139.3	1,111.5	4,839	6,193	8,892	8,729
E.ON AG (group)	147,505.5	165,133.0	147,500.6	181,831.9	147,505.5	85,943.0	97,932.7	111,109.2	80,453	83,434	91,546	88,402
E.ON AG (2 Romanian branches:E.ON Gaz Distributie SA, E.ON Moldova Furnizare SA)	252.7	295.7	283.8	265.6	705.7	458.8	589.1	514.8	8,563	7,846	6,841	5,347
France Telecom (group)	52,308.7	49,249.1	39,163.9	35,764.8	52,308.7	58,601.2	51,110.8	47,358.3	191,036	187,331	186,049	181,000
France Telecom (1 Romanian branch: Orange Romania SA)	671.8	752.2	763.2	627.6	1,067.1	1,212.0	1,279.3	1,044.4	2,238	2,627	2,953	2,907
Hewlett-Packard (group)	6,531.0	5,761.2	6,407.6	8,091.1	6,531.0	82,066.4	75,933.7	82,028.1	156,000	172,000	321,000	304,000
Hewlett-Packard (2 Romanian branches: Global E-business Operations Centre SRL, Hewlett-Packard SRL)	1.4	2.5	4.2	7.8	60.7	91.5	99.9	87.7	361	877	1,285	1,755
OMV Aktiengesellschaft (group)	7,928.0	9,450.0	11,228.0	12,182.0	7,928.0	20,042.0	25,543.0	17,917.0	40,993	33,665	41,282	34,676
OMV Aktiengesellschaft (7 Romanian branches: Petrom SA, Aviation Petroleum SRL, M.P. Petroleum Distributie SRL, Petrom Aviation SA, Romania Mineraloil SRL, Petrom LPG SA, Petrom GAS SRL)	3,833.6	5,030.4	5,500.5	5,348.2	4,530.3	4,639.5	5,729.1	3,770.6	38,175	30,175	30,533	30,661
Peugeot SA (group)	43,197.1	41,809.5	34,357.3	36,542.1	43,197.1	67,720.7	51,809.2	50,142.9	211,700	207,800	201,700	186,220

Company	Fixed assets (mil. euro)				Turnover (mil. euro)				Employees (persons)			
	2006	2007	2008	2009	2006	2007	2008	2009	2006	2007	2008	2009
Peugeot SA (3 Romanian branches: Citroen Romania SRL, Gefco Romania SRL, Faurecia Seating Talmaciu SRL)	6.1	8.0	7.8	6.8	30.5	72.3	116.1	87.8	548	724	798	867
Saint-Gobain (group)	15,971.0	15,878.0	16,242.0	16,242.0	15,971.0	43,421.0	43,800.0	37,786.0	206,940	205,730	209,175	191,442
Saint-Gobain (7 Romanian branches: Saint-Gobain Glass Romania SRL, Saint-Gobain Construction Products Romania SRL, Saint-Gobain Weber Romania SRL, Saint-Gobain Abrazivi Romania SRL, Saint-Gobain Conducte SRL, Brodrene Dahl Romania SRL, MTI Impex SRL)	142.3	212.4	210.0	208.9	36.9	154.1	184.9	145.8	626	857	955	958
Siemens (group)	42,811.2	48,388.3	49,754.9	50,502.9	71,752.2	78,569.4	76,763.7	81,758.7	368,500	386,200	420,800	413,650
Siemens (8 Romanian branches: Siemens Electrical Installation Technology SRL, Simea Sibiu SRL, Osram Romania SRL, Siemens (Austria) Proiect Spital Coltea SRL, Siemens Motor Systems SRL, Siemens Program and System Engineering SRL, Siemens SRL, Sykatec Systems Components Application Technologies SRL)	7.8	17.1	17.9	12.2	86.5	153.5	172.1	158.6	1,363	1,672	2,082	2,046
Unilever N.V. (group)	11,057.0	10,795.0	10,383.0	11,227.0	39,642.0	40,187.0	40,523.0	39,823.0	189,000	175,000	174,000	168,000
Unilever N.V. (2 Romanian branches: Unilever South Central Europe SA, Unilever Romania SA)	33.5	31.1	29.1	41.5	222.2	218.8	204.7	189.6	640.0	613	619	603

LITERATURE

Bettendorf, L. [et al.], 2010. "Corporate Tax Consolidation and Enhanced Cooperation in the European Union" [online]. *Centre for Business Taxation, Oxford University, Working Paper,* No. 1. Available from: [http://www.sbs.ox.ac.uk/centres/tax/Documents/working_papers/WP1001.pdf].

Brøchner, J. [et al.], 2007. "The Dilemmas of Tax Coordination in the Enlarged European Union". *CESifo Economic Studies*, 53 (4), 561-595.

Commission of the European Communities, Communication, 2001. *Towards an Internal Market without tax obstacles: A strategy for providing companies with a consolidated corporate tax base for their EU-wide activities.* COM (2001) 582 final, Brussels, 23 October 2001.

Devereux, M. P. and Loretz, S., 2007. "The effects of the EU formula apportionment on corporate tax revenues" [online]. *Centre for Business Taxation, Oxford University, Working Paper,* No. 6. Available from: [www.pcb.ub.es/ieb/aplicacio/fitxers/WS07Loretz.pdf].

Devereux, M. P. and Loretz, S., 2008. "Increased efficiency through consolidation and formula apportionment in the European Union?" [online]. *Centre for Business Taxation*, *Oxford University, Working Paper,* No. 12. Available from: [www.nd.edu/~tgresik/EER/Loretz.pdf].

DG ECOFIN, 2008. "Training and Community Assistance". *European Business Newsletter*, June 20. Available from: [www.mdlpl.ro/_documente/inforegional/iunie_2008.pdf].

European Commission, 2007a. "CCCTB: Possible Elements of a Technical Outline". *Common Consolidated Corporate Tax Base Working Group, Working Paper,* No. 57. Brussels, 20 November 2007.

European Commission, 2007b. "CCCTB: Possible Elements of the Sharing Mechanism". *Common Consolidated Corporate Tax Base Working Group, Working Paper,* No. 60. Brussels, 13 November 2007.

Eurostat, 2010. *Labour market statistics* [online]. Available from: [http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-30-09-149/EN/KS-30-09-149-EN.PDF].

Fuest, C., Hemmelgarn, T. and Ramb, F., 2006. "How would formula apportionment in the EU affect the distribution and the size of the corporate tax base? An analysis based on German multinationals" [online]. *Deutsche Bundesbank Discussion Paper Series 1: Economic Studies*, No. 20. Available from: [www.econstor.eu/bitstream/10419/19648/1/200620dkp.pdf].

Ministry of Public Finance of Romania, 2011. *Database on Businesses and Public Institutions - Identification Data, Tax Information, Balances* [online]. Available from: [http://www. mfinante.ro / pjuridice.html].

National Trade Register Office of Romania, 2006-09. *Stats. Companies with Foreign Capital Participation*. [online] Available from: [http://www.onrc.ro/statistici/is_decembrie_2006.pdf, http://www.onrc.ro/statistici/is_decembrie_2007.pdf, http://www.onrc.ro/statistici/is_decembrie_2008.pdf, http://www.onrc.ro/statistici/is_decembrie_2009.pdf].

Negrescu, D. (coord.), 2007. "Trends in the EU tax harmonization. Challenges for Romania". Project SPOS 2007 - Strategy and Policy Studies. *European Institute of Romania*, Study No. 5, 61-63.

Nielsen, B. [et al.], 2004. "Economic effects of tax cooperation in an enlarged European Union. Simulations of corporate tax harmonisation and savings tax coordination" [online]. Study prepared for the European Commission, *Copenhagen Economics*. Available from: [http://ec.europa.eu/taxation_customs/resources/documents/taxation/gen_info/economic_analysis/economic_studies/economic_effects_enlargedeu.pdf].

van der Horst, A., Bettendorf, L. and Rojas-Romagosa, H., 2007. "Will Corporate Tax Consolidation improve Efficiency in the EU?" [online]. *Tinbergen Institute Discussion Paper*, No. 76. Available from: [http://ideas.repec.org/p/dgr/uvatin/20070076.html].