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TAXATION AND ITS EFFECT ON FOREIGN DIRECT INVESTMENTS – THE CASE OF ROMANIA

Abstract: This paper focuses on the link between taxation and foreign direct investments and the struggle of governments to create a tax regime that would attract investors on the one hand and on the other hand increase revenues. The paper wants to test if the economic development of a country represented in consumption (measured in VAT income for the country) and production (measured in the change in Corporate Income Tax) would create an increase in Foreign Direct Investments. Based on a series of models of multiple regressions we test if the FDI is influenced by income obtained through Corporate Income Tax and Value Added Tax.

Keywords: taxation, revenues, company income tax, value added tax, foreign direct investments.

1. Introduction

Nowadays the interaction between nations brings direct implications for increasing competition. Due to globalization, companies are forced to be more competitive, innovative and dynamic and all this represented an aim for passing the market test. Companies have managed to evolve in terms of internationalization through the emergence and development of new information and communication technologies and by entering into new markets such as Eastern Europe and Central Asia, but also through trade liberalization based on WTO provisions.

This process of openness to trade, combined with the need to reduce costs and increase competitive pressure has led the companies to find new strategies in order to gain competitive advantages. Due to the fact that recently more and more businesses are investing in other countries, we can easily see that one of their strategies in achieving the desired competitive advantage is the search for new locations that are more attractive from several reasons such as cheap labor, exemption from tax payment, tax secrecy or other taxation benefits, not forgetting geographical benefits.

A competitive environment depends both on companies operating in that environment and on the rules and regulations provided by the state. Businesses are

also seeking to obtain a higher profit through market share and in this sense they develop policies and strategies to differentiate them from the competition. At the same time, governments are struggling to gain a competitive advantage in order to attract greater investment in their territory. They are doing this because it will create new jobs, will boost revenues from taxation, lead to the formation of local budget and will also increase property value. The main reasons why some businesses tend to have a higher interest in some countries rather than others is provided by the economic and fiscal policies of those states, and the level of bureaucracy or the presence of the necessary infrastructure. Tax policies occupy a central place in the final destination of choice for a company wishing to invest in a country other than the country of origin [Justman, Thisse & Ypersele 2001]. Bearing this in mind, we can say that a country is even more attractive to investors if its taxes are low. Moreover, the size of the economy, its purchasing power and other market related factors can be compensated if there are fiscal incentives for companies [Bucovetsky 1991; Wilson 1991; Bénassy-Quéré et al. 2005]. In this way, each country wants to attract more foreign investors and it will act accordingly in terms of the administrative and legal framework. So these countries will try to favor the market access for foreign businesses. Of course in this context there will be tax competition between the states, which may increase even more in the future. This way, it should be observed more closely at what point a country can reduce its taxes so that in the economic environment the presence of other countries can be taken into consideration and an ethical attitude towards them can be developed. Probably in an effort to keep this aspect of ethics and to prevent any deviation from the rule of mutual agreement between states, various bodies have been created (for example: WTO – World Trade Organization or OECD – Organization for Economic Co-operation and Development) and they have set a number of common provisions for countries. Thus, with the help of statistical data beginning with the year 1995 for foreign direct investments, value added tax and corporate income tax, we have tried to see if there is a link between taxation and the flow of foreign direct investment in Romania. In our work, we have used the econometric theory of multiple regression analysis. The paper will test if there is a link between the flow of foreign direct investments, corporate income tax and value added tax.

The increase of foreign direct investments is seen as a positive aspect, not only from an industry point of view as shown by Yin [1999], but also from a social and economic point of view. Countries use tax incentives and tax reductions to stimulate the inflow of foreign direct investments. China, for instance, has reduced taxes from 30% to 15%-24% for investments in specific parts of the country [Easson 1992, p. 407], Romania has exempted various companies from paying custom taxes and corporate taxes after their investment (see the case of Renault's Dacia purchase – Romanian Fiscal Code). All these measures have stimulated the local economy and in the end have led to an increase in the state budget through social contributions and the personal income tax of the employed.

2. Fiscal competition in Europe

The European Union, through its composition, is a default set of countries and tax jurisdictions. Their diversity, characterized by each state's differences, has led to strong competition among the countries, and because of this we have witnessed a reduction in corporate tax rates, an increase in tax incentives offered to strategic investors in the area and also an increase of public spending in order to create the infrastructure for new investment.

When talking about tax competition in Europe, issues such as the geographical, political and economic aspects of the countries must be considered. Thus, this continent that stretches from Gibraltar to Svalbard and from the Channel Islands to Lithuania, contains institutionalized democratic states each with a tax system that differs from the other. In European countries, citizens elect their government that will control the budget and tax system in their country. On the other hand, with the recent crisis we can talk about the far greater attention paid towards fiscal consolidation in the European Union.

The European Union Treaty and other secondary legislation provides a set of rules that define the limits of fiscal and economic behavior for both the taxpayers and citizens of the states in question [Schon 2003]. Because in the European Union we cannot talk of a federal system, as in the U.S., the idea of the creation of a European tax system convergence cannot be raised. One cannot speak about tax harmonization if, for example, we speak about flat rate, progressive or regressive tax rate. Tax harmonization is almost impossible if we do not have a common accounting system or a common set of tax rules related to activities that can be tax deducted or not. This, however, can be implemented through the cooperation of EU Member States [Mara 2010]. The concept of tax harmonization is a much newer term than tax competition; it was first mentioned in the Treaty of Rome, the European Economic Community, articles 95-98, and it requires the Member States to harmonize their indirect taxes [Raspiller 2006]. We note that despite the adoption of the *acquis communautaire*, or of the various agreements signed, member countries are not fully dependent on those regulations.

In this context, looking at a general level, taxpayers believe that both national and local governments, who have powerful tools to influence the allocation of capital with significant consequences for their welfare as taxpayers. However, in comparison with the large number of factors usually considered as crucial for private investors when deciding where to invest, governments have at their disposal only two main sets of instruments which directly affect investors: business taxation and public benefits. Based on this, each country uses different methods of taxation to differentiate them from the others, thus making them more attractive for foreign investors. In this respect, a country may introduce a series of generic or specific practices or measures in a legislative or administrative form and these will be for

its later benefit. Generic measures are measures designed to achieve a significant improvement in the country and tax competition. This could take, for example, the form of a general reduction in corporate taxes. We can offer in this respect the example of Ireland, which in 2003 cut its corporate tax rate to 12.5%. After lowering its tax rate, the country became home to a number of multinational companies. Ireland was thus seen for a long period of time as one of the success models of the European Union. On the other hand, having the bad experiences of the recent economic crisis, we can see that only offering tax incentives is not the right way to create a healthy budget. There are other cases of countries that allow the establishment of companies on their territory and provide them with special taxation rules, offer them tax incentives and also invest public funds in order to create a snowball effect for the economy of that area.

Specific measures, otherwise known as “preferential tax measures”, are designed to improve the competitive position of countries on a specific segment in order to attract new foreign investment. These measures may take the form of permanent or temporary tax exemptions, reduced fees for foreign tax payers, special investment grants, the allowance of accelerated depreciation of assets, and special arrangements for expatriation. Examples of preferential arrangements in the EU aimed at attracting funding groups include the Belgian Coordination Center Regime¹, the Irish International Financial Services Centre² and the Dutch Group Financing Regime³. In this context it is also necessary to remember about the tax havens. Although there is still no precise definition of this term, tax havens are countries or regions that have an advantageous tax system, with very low or in some cases even nonexistent direct taxes. In addition, most of the time, these countries also have a system of regulations that prevent the exchange of information with other countries thus giving confidentiality of data. At European level, some of the regions considered as tax havens are Gibraltar, Monaco, Andorra, Liechtenstein and Cyprus [Kiegebeld 2004]. In the last decade, rates of CIT (Corporate Income Tax) have experienced a period of shrinking. In Western European countries, the average CIT rates prescribed by law fell from 38% in 1995 to 28% in 2008. This has attracted foreign capital to those areas, in particular from multinationals. On the other hand, in the new EU member states (“the wave of 10”, composed of countries that joined the EU in 2004 and 2007, excluding Cyprus and Malta), the CIT rate fell from 38% to below 18% in 2008. At the same time, as can be seen in Figure 1, the rates fell in the former Soviet countries (Member States CIS – Commonwealth of Independent States) and South-eastern Europe (SEE), which are currently the most attractive areas for businesses and to mobilize capital.

¹This represents a revenue tax exemption for member companies.

²This system allows companies to provide financial services in the Dublin Docks, to pay taxes with a 10% reduction, but also to use accelerated depreciation when they deem it necessary.

³This arrangement allows the transfer of 80% of the income of an international corporation to a risk reserve.

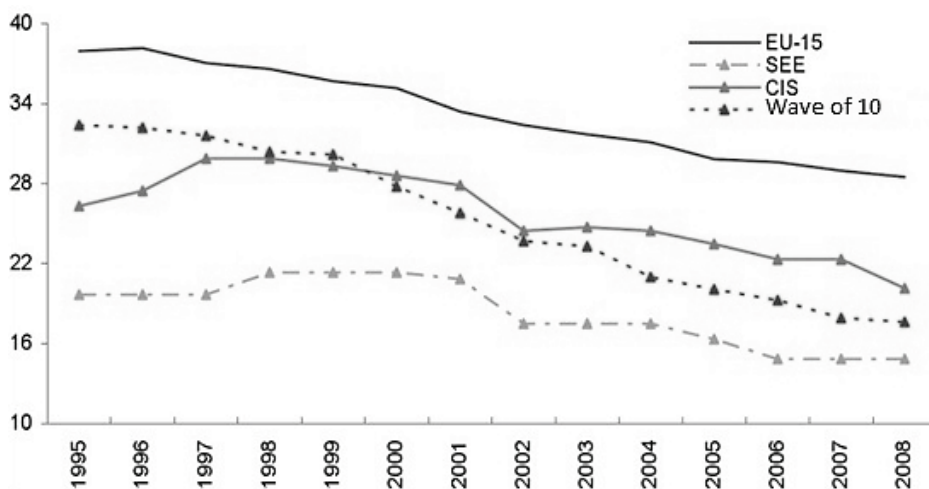


Figure 1. Evolution of CIT in 1995 to 2008

Source: [Piatkowski, Jarmuzek 2008, p. 4].

To attract foreign capital in the long term, CIT should continue to decrease, making these countries more and more competitive. Since 2008, ten countries (Bulgaria, Denmark, the Netherlands, Portugal, Greece, France, Spain, Albania, Italy and Germany) have reduced CIT rates, while in the Czech Republic this percentage gradually decreased from 24 % in 2007 to 19% in 2011 and in Poland to 15% [Piatkowski, Jarmuzek 2008].

Developed countries interact in CIT rate setting, and a change of even one percent of those rates may result in significant changes in foreign investment. An OECD study argues that if Ireland, for example, would increase the present income tax rate by 1%, foreign investment in the country would experience a decrease of 3.7%.

In the competition for capital, countries may introduce two methods to attract it: the rates and the basis of taxation. We can say that according to these methods and referring only to taxation, without taking into account the geographic location advantages of countries, the cost of human capital or the presence of the appropriate infrastructure, companies wishing to invest in new countries will choose the location which has the most attractive package.

There are two types of actual taxes that will be taken into consideration by every company that wants to expand to a different country:

- The effective average tax rate, calculated as the ratio of future taxes imposed on gross profit and the estimated duration of the investment project; this manages to determine which location is a more convenient benefit.
- The effective marginal tax rate, calculated as the product of ante and post-tax income statement for a marginal investment project, with no economic rent (in

this case the gains are equal to the cost of capital); this manages to influence the size of investment.

CIT rates established by law are the second most important direction for profitable investment, exchange profits and competition between states. In OECD countries, CIT rates policies are used much more than policies for the tax base. This is due to the fact that a decrease in rates would prevent profit from shifting to a more favorable business location. On the other hand, changing the tax base would ensure a higher income. Increased competition on tax rates between countries is due to the fact that small economies are likely to lower CIT rates below the CIT rates of large countries, so they will attract income from outside without losing too much revenue from domestic taxation. In 2007, small European countries have resorted more and more to this method in order to attract foreign capital.

We can say that in terms of tax rates, one result of the competition between states is limited to decreasing the degree of difficulty in the evolution of international investment and of its profits, and not to decreasing its corporate activity. This is advantageous to both multinational corporations and domestic businesses that do not have activity abroad. In addition, since multinational companies may change more easily their profit, they may even reduce in future the overall burden of corporate taxation [Piatkowski & Jarmuzek 2008].

3. Effects of taxation on foreign direct investments

Starting in the early 1980s, numerous studies have pointed out how foreign direct investments are affected by fiscal pressure, especially by the taxes applied to companies. Studies conducted by Gorter and De Mooji [2001], which this time include Europe, have mostly shown the same sensitivity between the two variables. Other studies [De Mooij & Ederveen 2003] on the American market have shown that a 1% rise in taxes applied to companies will lead to a decrease in foreign direct investment by 0.5-0.6%.

According to the International Monetary Fund, foreign direct investments are defined as foreign investments in local companies that exceed 10% of the company's assets. Usually these refer to investments made by multinationals in companies controlled abroad, like subsidiaries or branches. The investment decision of a multinational company is complex and is based on a series of factors, among the most important being the location, how internationalized the country is and the degree of implementation of management policies. All of these elements are directly influenced by the taxation level adopted by the company.

At the same time, the value of foreign investments is important to all countries as they generate income in the state budget. Starting from this premise, we analyzed the link between the level of FDI in Romania between 1995 and 2010, and the level of revenues received by the state budget from taxes applied on

companies' income and VAT, in order to be able to address the way these values have progressed. The statistical data used in the analysis is data after 1995, prior to that Romania had other forms of taxation and the information related to the revenue produced by what we do not have now.

In our analysis we used a series of regression models to test if there is a link between the income derived from Corporate Income, Value Added Tax and Foreign Direct Investments. The data for the models is taken from the data provided by the Ministry of Finance, the National Bank of Romania and the National Institute for Statistics.

Table 1. Corporate Income Tax, Value Added Tax and Foreign Direct Investments in Romania

Year	VAT Income VAT	VAT level	Corporate income tax TAX	CIT level <i>Imp</i>	FDI
1995	1.86	0.18	1.31	0.38	0.42
1996	1.73	0.18	1.1	0.38	0.26
1997	1.63	0.18	1.48	0.38	1.22
1998	2.59	0.18	1.56	0.38	2.03
1999	2.15	0.11	1.35	0.38	1.03
2000	2.4	0.19	1.11	0.25	1.06
2001	2.51	0.19	1	0.25	1.16
2002	3.25	0.19	1.19	0.25	1.14
2003	4.28	0.19	1.67	0.25	2.2
2004	5.04	0.19	2.42	0.25	6.44
2005	7.98	0.19	2.67	0.16	6.48
2006	9.71	0.19	3.43	0.16	11.37
2007	13.68	0.19	5.25	0.16	9.92
2008	15.8	0.19	6	0.16	13.91
2009	10.63	0.19	4.35	0.16	4.85
2010	12.61	0.24	3.72	0.16	3.57

Source: Romanian Tax Code and the Romanian Institute for Statistics.

In order to test the link between taxation and foreign direct investment, we tested our assumption with the help of three linear models. In all the models we assumed that foreign direct investments are influenced by corporate income tax. Due to the nature of taxation, we have to take as variables the revenue from corporate income tax, the revenue from value added tax and the rates for corporate income tax and value added tax.

Linear Regressional Model between Foreign Direct Investments and Corporate Income Tax

Theoretical Model:

$$Y_i = B_0 + B_1 X_i + u_i$$

$$y_i = b_0 + b_1 x_i + \varepsilon_i \text{ (sample)}$$

Terms used:

B_0, B_1 – regression parameters

u_i – error (random)

b_0, b_1 – regression parameters estimators

ε_i – residuals

B_0, B_1 are estimated using the method of least squares, thus we have the model:

$$\hat{y}_i = b_0 + b_1 x_i$$

\hat{y}_i represents the average level of the variable

$$\widehat{FDI} = -1,57 + 2,32TAX$$

$$r^2=0,7636$$

p-value = 0,000

P-Value is 0,000 and is less than the significance level that we have used for this model $\alpha = 0.05$ leading to the result that the model is significant.

The model shows that there is a direct link between the level of the income from Corporate Income Tax and FDI. The model could be explained if we look at it from an economic point of view where an increase in revenue derived from Corporate Income Tax is explained in two ways: an increase in the level of CIT or an increase of the Gross Income of companies in that economy.

Given the changes that occurred in the analysed period (1995-2010) and the fact that all changes were to reduce taxation, we believe that the results are influenced by the second factor, namely the increase of the Gross Income of companies, which is then taxed. Given the economic situation worldwide, this explains the fact that corporations are attracted to Romania by factors such as cheap labor force, state subsidies and a growing economy – and thus set up their companies in this environment. The income that is reported by companies in Romania could be considered by other companies to be a good practice example.

Based on the model, the variation of the CIT explains the variation of the foreign investments in 76.36%. In our results, we can assume that if the level of revenue from Corporate Income Tax increases with 1 point, then the level of FDI increases with 2.32 points.

Simple log-linear model FDI-TAX

$$\ln Y_i = \ln B_0 + B_1 \ln X_i + u_i$$

This model is interesting because in this case B_1 is the elasticity coefficient.

Thus we have:

$$\widehat{\ln FDI} = -0,38 + 1,72 \ln(TAX)$$

p-value = 0,000

P-value has a lower value than the significance level that we used on this model, showing that this model is also significant. We have again the same correlation between the two variables (FDI-TAX) which shows us that FDI follows the revenue from Corporate Income Tax.

The results in this model are similar to the first model, showing us again that the FDI is influenced by the economic growth in the Romanian economy. An increase of 1% in revenue from Corporate Income Tax would generate, based on this model, an increase of 1,72% in FDI. This shows the elasticity of the FDI compared to CIT.

Multiple linear model

Theoretical model:

$$Y_i = B_0 + B_1X_{1i} + B_2X_{2i} + \dots + B_kX_{ki} + u_i$$

$$y_i = b_0 + b_1x_{1i} + b_2x_{2i} + \dots + b_kx_{ki} + \varepsilon_i$$

Terms used:

B_0, \dots, B_k – partial regression parameters

u_i – error (random)

b_0, \dots, b_k – regression parameters estimators

ε_i – residuals

$$\hat{y}_i = b_0 + b_1x_{1i} + b_2x_{2i} + \dots + b_kx_{ki}$$

$$\widehat{FDI} = 20,87 + 1,91TAX - 91,02VAT - 16,03imp$$

(0,0014) (0,0542) (0,0985)

p-value = 0,0001

$R^2_{adj} = 0,7956$ (adjusted coefficient of determination).

Results of the model:

1. If we consider a significance level of 10% ($\alpha = 0.01$), the results show that the model is significant in accordance to each of the variables introduced in the model.

2. The model is significant as p-value is 0,0001.

3. In the model we have also included the revenue from VAT and the level of CIT. The results show that an increase in VAT income for the state would create a decrease in the level of FDI. Also, an increase in taxation (increase of CIT level) would determine a decrease of FDI in Romania.

4. One of the problems of the model that we used is the fact that the level of taxation influences the income from CIT and the linear correlation coefficient for the two is (-0,7394). This could be explained by the fact that Romanian companies, not necessarily foreign companies operating in Romania, tend to avoid taxation if the level is high. Once the level of taxation decreases, companies tend to produce

more, due to the fact that they have more money to use. This triggers, after a while, an increase in revenue from Corporate Income Tax for the state. The indirect link between the taxation level and the revenue from CIT can also be seen in Table 1, between the years prior to 2005 and after 2005 when, although the tax level fell from 25%-16%, there was an increase in the amount of CIT collected by the government.

4. Conclusions

Using the statistical data from Romania, we have tested the hypothesis that the economic development and the taxation level of a country influence the level of Foreign Direct Investments. The three models that we used to test the link between the revenue derived from Corporate Income Tax and FDI show that our initial assumption is correct. There is a strong link between revenue from CIT and FDI, and the logical economic explanation is that economic development attracts companies in their search for bigger markets and higher income.

In the case of Romania, the economic boom between 2004-2008, when Gross Domestic Product increased substantially, attracted a lot of foreign companies eager to enter into this new emerging market of Eastern Europe.

Of course economic development is not the only explanation for the increase in FDI, as said before the increase can also be explained by the costs of the Romanian market, production prices, labor prices and transportation prices.

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WPLYW OPODATKOWANIA NA BEZPOŚREDNIE INWESTYCJE ZAGRANICZNE – PRZYKŁAD RUMUNII

Streszczenie: Artykuł przedstawia zależności między opodatkowaniem a bezpośrednimi inwestycjami zagranicznymi oraz staraniami regulatorów co do stworzenia odpowiedniego systemu podatkowego, który jednocześnie zachęci inwestorów i zwiększy dochody budżetowe. Celem omawianych badań jest weryfikacja, czy rozwój gospodarki danego kraju mierzony konsumpcją (wartość dochodu podatku od wartości dodanej – VAT) powoduje wzrost w bezpośrednich inwestycji zagranicznych. Przy użyciu serii modeli regresji wielorakiej przetestowano wpływ bezpośrednich inwestycji zagranicznych na poziom dochodów z tytułu podatku dochodowego od osób prawnych i z tytułu podatku od wartości dodanej.

Słowa kluczowe: system podatkowy, dochody, podatek dochodowy od osób prawnych, podatek od wartości dodanej, bezpośrednie inwestycje zagraniczne.