The Analysis of Correlation between Profit Tax and Corporate Financial Performance

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Abstract

This working paper wants to understand the meaning and extent of the relationship between income taxes and financial performance of the company. Thus, it aims at understanding the influence of financial indicators of the effective tax rate, seen as the determining factors in the context of the fiscal policy of the company.

The analysis captures 90 companies on the market in Romania, using data about financial indicators recorded in the year 2012, focusing on research related to actual rate of taxation on profits. This paper builds a quantitative study that measured the impact of financial performance indicators such as the assets structure, the degree of indebtedness, company size and rates of return on the effective tax rate of the company.

Keywords: Corporate effective tax rates; Performance; Size; Assets ratio; Financial stability; Return on Capital Employed, Sales Ratio

1. Introduction

The company, as an individual entity, aims at improving and maximizing financial performance, in connection with the fiscal management as efficient as possible. In this test of optimization, an important place takes the profit tax, which can be described as one of the factors is a key point in the fiscal management of the undertaking.

Income taxes and, by correlation, the effective tax rate have an important place among the points of interest in the company, especially within the framework of the global market for both

companies, managers and those who set the policy of charging. Obviously, the burden on enterprises taxation depends on many other factors, independently of the established tax rate.

According to Winston Churchill, if you do not learn from the mistakes of history, we could never build this nor did we manage to improve the future. Literature in economics, economic history, as a whole, suffered several changes, being influenced by mankind's steps.

Thus, the importance of the involvement of the state in the economy through fiscal policies, has always occupied a central place in economic theories, starting from those of the classical liberal School of England, represented by Adam Smith and John Stuart and ending with the Socialist school, represented by Marx or that of Keynes.

Tax policy shows its influence on companies since the first phase, once the investment decision is taken. Thus, in addition to the quantitative analysis of the results that will be obtained compared to the costs involved (analysis of effect vs effort), tax parameters are considered in the investment decision.

To be considered, however, that the trend of fiscal policy is not easy to predict, and the amendments thereto may have impressive consequences over the companies. Unlike the price of factors of production, for example, tax parameters, always pursuing the next trend: remain constant or in similar shares for an extended period of time, following that, at some point, to make a significant change. However, over time, the amendments will adjust to the average because tax rates when required are high, you can estimate a reduction in future.

However, there are, in the specialized literature, studies which consider that there is not a direct link between the tax policy and investment decisions. For example, Hassett and Metcalf believed that profits tax is only a secondary variable in correlation with investment decisions, there are other factors that directly puts the fingerprint as well as asset prices or demand for the goods or services designated.

2. Theoretical aspects involved in the analysis of corporate income tax

We offer a constantly growing interest and corporation tax and the effective tax rate whereas, at the level of a company, its level to share "basis may be modified, provided that such enterprise manages a rigorous tax planning, calling the optimization strategies and, finally, reduce the tax burden.

Emerges thus the need to define the effective rate of taxation on profits deriving from profits tax, since it is the one that faithfully reflects the tax amount indeed the burden borne by

the company. By comparing the effective tax rate with the statutory rate, we can form an opinion about the tax incentives offered by the authorities, referring here either to a lower taxation base or to a reduction in tax pressure.

Also, this comparison between a number of companies operating in different areas of the same country demonstrates that there can be substantially different tax treatments at the level of companies in the same country, but fields or different recorded performances. Following the same principle, businesses with similar characteristics, but are located in different States, may reflect considerable differences in terms of taxation for profits

The effective tax rate as opposed to profits tax, considered individually, no indicator highlights the incentives of a fiscal nature, such as the different tax treatments for different types of income or expenditure provided by the tax authorities of a particular state.

There are numerous studies in the literature specialist who looked at these two different ways of reflection of fiscal pressure in terms of corporation tax. Thus, the study conducted by S Lazar, analyzing companies in Romania in the period from 2000 to 2009, has shown that the effective rate of corporation tax, calculated as the ratio between the tax actually due to the gross profit was lower than the statutory rate of corporation tax in our country, with the exception of 2009, year in which was introduced alternative minimum tax.

For the calculation of the effective tax rate , economic theory, but also literature, propose various approaches. Methods of calculating the profit tax differentiates through the analysis of the results (future or past), as well as the scope of the analysis to the microeconomic level or at the macroeconomic level. Thus, there are three approaches to the effective tax rate, namely: macroeconomic approach using the previous data, the approach using data and microeconomics addressing future data using microeconomics.

Clearly, the distinction between the microeconomic approach and the macro-economic plan depends on the data considered in the analysis. Thus, the macroeconomic approach will calculate the tax rate as aggregate data, such as national accounts, while microeconomic studies will analyze tax rate starting from the data contained in the financial statements of an enterprise.

In the same vein, the differentiation of the previous approach to that future comes from the information used. While a study based on previous results will be considered as the starting point, concrete, accurate results recorded in the past, the future is based on estimates, will be considered as a starting point the statutory component of income tax. In this project, for the implementation of the empirical analysis, we used the third approach, whereas, by means of regression, it can identify items in the balance sheet which have an impact on the effective tax rate.

At the level of a company, the taxable base is intended to be as small as possible, so that income tax expense to be reduced. Thus, an efficient management knows how to influence

the underlying indicators for calculating taxable profit, thereby reducing the fiscal burden. The approach of various strategies for reducing tax burden plays a particularly important role at the enterprise level, taking into account that profits tax remains a cost for the company. Moreover, he has the ability to affect cash flows, money and expense, at the last instant, influencing the profitability of the company having a direct impact on net profit.

3. Literature review - Influence of corporate financial performance on corporate income tax

Literature, in terms of the factors of influence the effective rate of taxation on profits, comes in response to the need to determine and define the implications of these factors correctly, both to economic theory, as demonstrated and to validate the results of the analysis carried out in the last chapter of the thesis. A study conducted in 2006 by Becker emphasizes the influence of taxation on investment decision. Research conducted on the case of Germany is considering factors such as variation in the effective marginal rate of taxation, indebtedness, size of company.

Authors Richardson and Lanis in 2007 carried out a study on the determinants of the effective rate of taxation on profits on the Australian case. They identified as factors of influence indicators such as capital structure, but structure and leverage assets (asset headings concerned at reported current assets total assets).

The size of the company and its sector of activity were found to be factors of influence on the effective rate of taxation on profits and if a survey by Nicodeme in 2002. The analysis was carried out for 11 European countries, Japan, and United States of America. Research findings put the problem of tax discrimination, taking into account the fact that some companies have proven to be advantaged by lower tax burden.

The link between the effective rate of taxation on profits and various forms of lever pops up in some studies as being negative: Md Noor et al., 2010; Richardson and Lanis, 2007; Gupta and Newberry, 1997. However we find studies that we are dealing with a positive influence (Adhikari, 2006).

According to Devereux and Griffith (2003), Commission decision of investment of multinational companies can be regarded as having three dimensions: first, the company decides whether to export or produce in foreign countries (decision of investing abroad), later will determine the location where it will produce (locational decision) because, in the end, decide how much will be producing (investment decision). In correspondence, there are two types of influences that share "basis of corporation tax may have on foreign direct investments. First, taxes, a cost to the company, reduce the estimated average yield for a project, thus influencing the decision to invest abroad and the location.

In the second place, the fees may have an impact on the cost of capital of a company and, implicitly, of the decision to invest.

One of the indicators with the influence on corporation tax has been debated in the literature is the size of the company. The relationship between this indicator and share of taxation is proven to be positive in studies such as that of Zimmerman (1983), or negative, in the analysis such as that of Porcano (1986).

Most times, however, analyses the influence of a capture the stack of financial performance indicators on the corporation tax or, in most cases, the effective rate of taxation on profits. Thus is built and the analysis performed by Janssen and Buijink (2000), the studio conducted on companies in the Netherlands.

In this study, the variable dependent is the ETR (effective tax rate), calculated as the ratio between income tax expense and gross profit. The starting point of the analysis is the hypothesis large companies had an effective tax rate, compared to small businesses. To allay the criticism that this flag is one tried and that, in dying, cannot be considered the sole determinant of the ETR, the authors took into account other performance indicators, analyzing the Dutch companies in 879 between 1994 and 1998. Thus, among the explanatory variables considered in this study include: company size, measured as total assets held (SIZE), capital intensity, calculated as the ratio between tangible assets and total assets (CAPINT), the ratio of net sales to total sales and net export (FOREIGN), leverage, i.e. the ratio of long-term debt and equity, rate of return on assets, defined as the ratio between net profit and total assets (ROA).

The results of the study conducted by Janssen and Buijink looks like between the size of the company and ETR can be both a positive relationship, as well as a negative one, according to various other factors. Going forward, the study shows that the return on assets in a negative impact on the effective tax rate, as well as the leverage.

On the other hand, however, the intensity of capital and operational activity in the foreign share of total sales can have a positive impact or a negative impact on STUDENTS, depending on other conditions, as well as the sample considered.

Authors Richardson and Lanis in 2007 carried out a study on the determinants of the effective rate of taxation on profits, to sample an assortment of companies in Australia. As explanatory variables, such as financial performance indicators such as capital structure, financial leverage, the structure of assets (asset headings, stocks or the costs of research and development, reported the total assets of the company). The size of the company's proposal as a descriptive variable is based on two opposing viewpoints concerning the Association of these two elements: political theory and the theory of political power. According to the first theory, how a company is larger and more prosperous, the Government will impose upon them a regulatory measure, resulting in effective tax rates higher.

The alternative theory that larger firms incur a lower owing to ETR resources available for substantive handling of political processes in their favor, as well as their capacity to develop strategies and lines of action in order to achieve optimal tax savings.

As regards the impact of the structure of assets (defined as the ratio between fixed assets and total assets), Richard and Lanis endorsing the idea that companies that have a higher proportion of fixed assets in total assets arrive, finally, to record an effective tax rate of less than. The reason is that the relevant regulations allow faster depreciation of fixed assets for tax purposes-according to the register of fixed assets owned by the company tax. The same thing has been shown and Stickney and McGee in 1982.

4. Case study – Correlation between financial performance indicators and effective tax rate

In terms of the analysis of my own work, it had as its starting point the sum of all of the items described. Thus, we establish that the actual rate of dependent variable taxation. Within a company, almost every time, this share will be different from the tax rate set by the tax code, 16% because, as has been highlighted in the previous chapter, practically the effective tax rate is influenced by non-taxable income and non-deductible expenses.

The definition of the relationship between variables is:

ETR = f (sales_ratio, sales_margin, assets_ratio, ROE, stab_fin), where:

ETR (effective tax rate) is calculated as the ratio between the income tax expense for the year and gross profit (from operating activities, financial and extraordinary) obtained in the reference year.

Assets ratio, determined as the ratio between the assets of the undertaking and the total assets in the balance sheet in fiscal theory is defined as having an inverse relationship with the effective tax rate. The reason for these results is the fact that depreciation is a deductible expense, thus reducing the taxable base.

Sales margin shows basically the company's performance in terms of results achieved, the question of the efficiency of managing costs, so as to achieve substantial results, using the resources in an effective way, concerned with low expenses.

SIZE is perhaps the most common indicator of financial performance considered descriptive variable in most empirical studies in the field, as it is present in the first part of this work. As part of this work, it was determined that the natural logarithm of net assets (total assets-total liabilities).

ROE (return on equity) measures the financial performance of the company, as the ratio between net profit and equity. Thus, financial profitability is expected by the shareholders, for

the investment that they made it in company and is influenced by factors such as: the degree of indebtedness, economic profitability and the rate of interest paid by the company for financial liabilities that it incurs.

Stab_fin (financial stability) is the financial stability of the company, calculated as the ratio between long-term debt and permanent capital, invested capital respectively the total equity plus total debt incurred by the entity. This indicator is a more refined version of the indebtedness, the lever, one of the most analyzed the financial performance indicators in comparison by reference to the actual rate of tax in the studies.

Regarding the selection of sample to be further analyzed, the research describes the impact of explanatory variables on the dependent on a database that contains 90 companies in Romania, with indicators and variables registered thereto in 2012. Data were collected with the help of the database Company Screener, in the balance sheet and the Profit and loss Account of the company. As regards the companies analyzed for efficient data collection, point out that they have been taken into account in their choice of requirements such as: companies in various fields. The original database was processed because they were eliminated companies that have experienced a loss or zero profit tax during the year.

For a start, it is necessary to establish a level of significance on the basis of which it will interpret all the results of the econometric analysis. As part of this research will work with a probability of 90% maximum error, as such we allow is 10%. The choice of this percentage, and not the 95% probability, was prompted by the fact that, due to the large number of domains from which I extract the data, the analysis can easily be distorted depending on the domain, type and size of non-deductible expenses and non-taxable income varies significantly.

The results of the analyzed model are:

Substituted Coefficients:

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ETR = -0.3251822507*ASSETS_RATIO - 0.0008959589105*ROE - 0.01502775688*SALES_MARGIN + 0.02337599404*SIZE - 0.2564211156*STAB_FIN + 0.4323905684

To be mentioned that all the variables included in the model are valid, considering their associated probability, which is always lower than the limit of 10% established for the significance level. Furthermore, based on R^2 result, the variation of Effective Tax Rate is described in a proportion of 27% by the modification in the dependent variables.

In the figure showing Substituted Coefficients, we can easily distinguish and, subsequently, interpret, the numerical values of coefficients, as described below.

The relationship between assets ratio and ETR is negative, in other words the two indicators in different meanings, and the numeric value of-0.3251 explains evolution ETR when amending ARTICLE, of course, keeping the remaining independent variables constant. An increase of 1% of the ratio between fixed assets and total assets, the effective rate of taxation on company level decreases with 0,3251%. This finding is consistent with the hypothesis formulated before testing the model and the empirical results of the studies referred to in the theoretical side of this work-a firm with a large proportion of permanent assets will be able to deduct expenses with depreciation, high on the basis of fixed asset tax ledger. Thus, the taxable base decreases, resulting in expenses with income taxes and ETR, respectively.

The interpretation of the relationship between variables dependent, ETR and the second independent variable analyzed, ROE, we note that this is the negative one. Thus, the profitability of the company's financial influences in the opposite way the effective tax rate, the relationship in different studies. As a conclusion, we note that, to an increase of 1% of the actual share of ROE, corporation tax from next year is micsoareaza with 0,0008%. This confirms the assumption made that a firm will give stronger evidence of effective management of the fiscal impact of the taxable base, achieving effective tax rates reduced.

Between sales margin and ETR analysis outlines everything an indirect relationship, moreover, at a 1% increase in the ratio of gross profit and operating income, we expect a decrease of 0,0015% effective tax rate at the company level. The explanation provided is similar to that for the relationship between ROE and ETR.

In accordance with the size of the company researched, studies directly influence the effective tax rate. Thus, to an increase of 1% of net assets, the effective tax rate increases and she with 0,023%. This can be interpreted as follows: the net asset increase corresponds to a decrease in debt. Considering that a large portion of a company's debt, the value is represented by the contracted loans from the Bank, say that reducing the debt corresponding to a reduction of the interest costs. Due to the fact that these expenses are deductible, their decline will result in increased taxable base, so an ETR.

Financial stability negatively influences the size of the ETR. Thus, an increase in the ratio of long-term debt and capital employed by 1%, the effective tax rate of profit decreases by 0,2564%. This negative relationship is similar to that of the relationship between SIZE and ETR. An indicator of greater financial stability means an increase in the debt, so interest expense, expense, higher deductible, so a lower taxable base and finally, an ETR.

Conclusions of the Eviews model:

To formulate the conclusion on the results of the analysis conducted in this paper, we compare these results with those of specialized studies. In the case of the actual study contradicts economic theory and reference literature, a detailed analysis of the reasons for these variations will be performed.

As regards the first indicator analyzed, assets raţio, defined as permanent assets and total assets of the company, in most studies, it demonstrated a negative relationship between the independent variable and the dependent variable: Derashid and Zhang, 2003 (Malaysia 2101 observations); Gupta and Newberry, 1997 (1982-1985, 3292 observations; 1987-1990, 3660 cobservations). Thus, the results obtained in the analysis of this work are in corcordanta with those obtained in the empirical studies mentioned above.

Financial profitability indirectly influences the effective rate of taxation on profits according to the model, a result that is not in keeping with studies (Richardson and Lanis 2007).

Further, the link between the effective tax rate and leverage, calculated as the ratio between debt and equity, occurs in some studies as being negative (Md Noor et al., 2010; Richardson and Lanis, 200717; Gupta and Newberry, 1997), as well as positive studies such as: D et al., 2006. In the study conducted by MD. Noor, are considered public companies from Malaysia, a sample of 363 companies, during the period 1993-2006. In its own study, financial indicator is not considered identical to the lever, but it's similar, and one who wants to demonstrate practically the relationship between changes of debts of the company, including financial liabilities and the effective tax rate. The relationship between this variable and dependent on indicator is negative one, consistent, for example, with Richardson and Lanis study, the study described in the theoretical part of this work.

As regards the relationship between the size of the company, calculated by different methods, and the effective tax rate, the above studies have described a positive relationship, or a negative, between the two indicators. In this paper, the negative relationship may be made on account of debts which, when growing up, decrease SIZE, and thereby increasing the ETR, whereas being indebted firm, will not deduct the interest expense.

The sales-margin is not considered in any of the studies described above, but its evolution as compared to that of the effective tax rate can be described in a similar manner the relationship between ROE and ETR. A high sales_margin demonstrates that the company is strong, get big profits, meaning they will demonstrate effective management of taxation.

5. Conclusion

Determining factors of influence of the effective rate of taxation on profits remains an issue of concern in economic theory for that identifying them accurately is the basis of effective fiscal management. Only after they have been properly defined, the company can carry out strategies and action plans that will lead to the reduction of the fiscal burden and in this direction the optimization and improving performance.

Studies involved provide a starting point correctly founded. From this point on economic theory and empirical studies become applicable in practice for any company that prides itself on a healthy and that management is using all the tools at his disposal to achieve performance.

The goal of this project is to place the correct concept of the actual duck for taxing the margin and understand the necessity of determining both the factors of influence and of the implications that it was fulfilled. Of course the study conducted form the basis of a future deterioration in order to elaborate a model of more complex analysis.

Reducing the effective rate of taxation on profits in any company is an action plan to translate the efficiency and performance, its level can be a key objective in relation to direct competitors. Last but not least an effective tax rate on profits diminished, in legal terms, it is a sign of an effective administration of the tax burden.

Moreover, comparisons of tax systems is of particular importance for tax agents, whereas the level of taxation has a significant influence on investment decisions.

In conclusion, I consider that the analysis carried out in this work joins the numerous studies that have dealt with this issue, demonstrating the importance and timeliness of the topic chosen.

6. Bibliography

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7. Appendix – Eviews Output

Dependent Variable: ETR

Method: Least Squares

Date: 05/18/14 Time: 19:04

Sample: 1 90

Included observations: 90

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ASSETS_RATIO	-0.325182	0.095943	-3.389311	0.0011
ROE	-0.000896	0.000368	-2.435205	0.0170
SALES_MARGIN	-0.015028	0.005155	-2.915391	0.0046

SIZE	0.023376	0.012204	1.915449	0.0588
STAB_FIN	-0.256421	0.115586	-2.218448	0.0292
C	0.432391	0.151012	2.863285	0.0053

R-squared	0.275444	Mean dependent var	0.265333
Adjusted R-squared	0.232316	S.D. dependent var	0.240263
S.E. of regression	0.210513	Akaike info criterion	-0.214202
Sum squared resid	3.722507	Schwarz criterion	-0.047548
Log likelihood	15.63909	F-statistic	6.386620
Durbin-Watson stat	1.926465	Prob(F-statistic)	0.000045