



## DETERMINANTS OF FIRM PERFORMANCE: EVIDENCE FROM ROMANIAN LISTED COMPANIES

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**Abstract:** *The paper investigates firm-specific determinants of firm profitability for Romanian listed companies over the 2000-2011 period within the framework of resource based view of the firm. The results show that tangibles, leverage, size and labour intensity have negative effect on firm performance, while sales growth and value added have a positive effect. The results prove robust when introducing two-way fixed effects model and industry year effects model (in order to simultaneously account for specific industry characteristics and time effects).*

**Keywords:** *firm performance, firm-specific determinants*

**JEL Classification:** *L25*

### 1. INTRODUCTION

The issue of firm performance is of large interest on corporate finance research agenda. The performance of companies is an important source of sustainable economic growth. Profitable companies create value, hire people, promote innovation, and pay taxes from which we all benefit. Investigating the determinants of firm performance may provide insights in what drives performance up and down and teach valuable lessons both for business executives and policy makers. This is especially valid for a former communist country such Romania, who experienced the troubles of transition and the lessons that come with it. Consequently, such an investigation is of particular interest since it may disclose peculiarities valid only for transition countries. For instance, if size is generally considered to positively affect firm performance for developed economies (Lee, 2009), mainly because of economies of scale or entry barriers, for a transition economy, the things may be opposite, since size may stand for former large state

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owned enterprises who had hard times in dealing with market economies requirements. Similarly, according to agency cost theory, leverage decreases agency costs and make managers more selective and responsible thus leading to increasing performance, but this is not likely to be true in a transition country where conflicts between stakeholders are something new and interest rates are high. In this setting, I believe that the sign and significance of well-established determinants of firm performance in previous related literature for developed countries are questionable when it comes to transition countries where economic and social climate triggers specific constraints.

Apart from the peculiarities that stem for the investigation of firm performance for a former communist country, the paper investigates the labour and capital firm-specific inputs as determinants of firm performance. This also presents peculiarities for a transition country. For instance, labour intensity may negatively affect firm performance mainly because of the management's inability to conduct proper human resources policies, which often implies firing people. The same applies to tangibles intensity, which, in many cases, stand for huge industrial platforms that do not generate profits anymore.

Therefore, my investigation deals with firm-specific determinants of firm performance in a former communist country where specific characteristics affect the determinants' nature and sign. The paper contributes to the literature in two ways: it investigates the determinants of firm performance for a former communist country and it expands the determinants by looking at the labour and capital firm-specific inputs. The sample consists in all non-financial Bucharest Stock Exchange listed companies over the 2000-2011 period.

The rest of the paper is organized as follows: section 2 presents a brief literature review, section 3 develops the hypotheses, section 4 describes the data, section 5 presents the results, while section 6 concludes.

## **2. LITERATURE REVIEW**

Literature related to firm performance is extremely vast and developed around two broad theoretical perspectives: marked based view (MBV) and resource based view (RBV). While the former puts the emphasis on firm's external environment and market characteristics (Porter, 1979, Geroski and Masson, 1987, Cano et al 2004, Grinstein, 2008), the latter focuses on firm-specific resources

which companies use in order to increase performance (Barney, 1991; Peteraf, 1993; Day, 2011). There is strong evidence that, in former communist countries, the experiment transition to market economy, the resources based view has greater importance than market based view, because in such economy, the instability of markets make the firms' current market positions less relevant to their performance (Grant 1991, Makhija, 2003). Moreover, Hawawini et al (2003) found that for dominant firms, firm-specific factors matter more than market characteristics. Since the sample comprises all non-financial companies listed at Bucharest Stock Exchange, generally leaders in their field, the investigation strategy will emphasize firm-specific determinants. Therefore, for the purpose of this research the focus will be on RBV approach of firm performance.

According to RBV, firm resources include all assets, capabilities, organizational processes, firm attributes, information, knowledge controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness (Daft, 1983). Barney (1991) classified firm resources into three categories: physical capital resources, human capital resources and organizational capital resources. These inputs are then used by the firms in order to enhance performance measured by various profitability ratios.

In related literature there is a huge heterogeneity with respect both to firm performance measurement (dependent variable) and its determinants (independent variables). In most cases, firm performance is measured as a financial ratio, namely return on assets (ROA) such as in Hansen and Wernerfeld (1989), Glancey (1998), Goddard et al (2005), Zeli and Mariani (2009), Asimakopoulos et al (2009), Maçãs Nunes et al (2009), Crespo and Clark (2012), Yazdanfar (2013). Alternative measures are share value (Makhija, 2003), profit-cost margin (McDonald, 1999) or net income plus advertising expenses to assets ratio (Lee, 2009).

With regard to dependent variables, the heterogeneity is even greater and varies across the countries. The majority of studies deals with a single country setting, but multi-country analysis is also present. For instance, Hansen and Wernerfeld (1989) used firm-specific human resources determinants for a sample of US firms, while Glancey (1998) used companies' characteristics such size, age, location, inter-industry differences and growth for Scottish firms. For Greece, Asimakopoulos et al (2009) investigated company size, leverage, sales growth, investments and current assets as determinants of firm profitability, while for

Portugal Maçãs Nunes et al (2009) investigated size, growth, leverage, liquidity and tangibility. Lee (2009) covers 7,000 US public companies over 20 years and investigated size, market share, capital intensity, advertising and research and development intensities, bad debt ratio and inventory, while Yazdanfar (2013) looked upon size, age, growth, productivity and lagged profitability and industry affiliation as determinants of current profitability for Swedish small firms. With regard to multi-country setting, Goddard et al (2005) investigated lagged profitability, size, market share, financial gear and liquidity for Belgium, France, Italy, Spain and UK, while Crespo and Clark (2012) used as dependent variables sales, net working capital, assets mix and firm location for 12 European countries.

The results are mixed. For instance, company size is found to have a positive effect on firm performance (Yazdanfar, 2013; Asimakopoulos et al, 2009), Maçãs Nunes et al (2009), Lee (2009), a negative effect (Goddard et al, 2005) or no effect at all (Glancey, 1998; Crespo and Clark, 2012). Company growth is generally seen as having a positive impact (Asimakopoulos et al, 2009; Maçãs Nunes et al, 2009; Lee, 2009; Yazdanfar, 2013), while leverage is considered to have a negative impact (Asimakopoulos et al, 2009; Maçãs Nunes et al, 2009). Liquidity was found to have a positive effect (Goddard et al, 2005; Crespo and Clark, 2012) or no effect at all (Maçãs Nunes et al, 2009). Lagged profitability has a positive effect (Yazdanfar, 2013; Goddard et al, 2005), Lee (2009).

With regard to Romania, the literature on firm performance is rather small. Pantea et al (2014) found that firm size, capital intensity and number of employees positively affect firm performance. Gavrea and Stegorean (2012) focusing on a corporate governance approach found that board size has a negative impact on firm performance. Mihai & Mihai (2012) found that leverage has a negative impact on performance of Romanian mining and quarrying companies.

The main contribution of this paper consist in expanding both the companies' coverage and the determinants investigated within the resource-based view of the firm, while at the same time developing an investigation strategy that allows to capture the time-specific effects for companies or industries, which adds up to the robustness of the results.

### 3. RESEARCH DESIGN AND HYPOTHESES

#### **The dependent variable**

The firm performance is measured using return on assets (ROA) computed as net income to total assets ratio.

#### **The independent variables**

Most of the independent variables were intensively used in similar previous research: firm size, leverage, tangibles, growth, while others were not (labour intensity). The decision to include labour intensity is justified by the generally accepted opinion in Romania that labour costs negatively affects firm performance mainly because of high social security contributions borne by employers<sup>1</sup>. Another reason consists in the hypothesised soft labour policies of Romanian listed companies.

With respect to firm size, there are two opposite views concerning the effects on firm performance. According to the first one, larger firms are able to make use of economies of scale, have better access to capital markets (Titman and Wessels, 1988) and possess a greater ability to put barriers to new comers (Maçãs Nunes et al, 2009). All these are factors that promote performance. The second view (Pi and Timme, 1993) claims that larger companies might also display more conflicts between managers and shareholders, which can lead to diminished profitability due to less control of management's behaviour. Also, larger companies might display huge diversification, which makes them less efficient. Moreover, for the case of former communist countries, large companies stand in many cases for former or actual state owned enterprises that do not perform very well since they failed to properly adapt to market economy requirements. Therefore, I have no expectations regarding the sign of the relation between size and firm performance.

Leverage is another determinant that was extensively used in the previous studies. Goddard et al (2005), Asimakopoulos et al (2009), Maçãs Nunes et al

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<sup>1</sup> Based on Doing Business portal, Romania ranks 16th (out of 27) in European Union in terms of statutory aggregate social contributions rates for which the legal incidence falls on the employer (data for 2011). In addition, there are others surveys (KPMG, 2011) ranking Romania on the 15th position (out of 24) in terms of effective employer and employee social security rates corresponding to an annual gross income of 300,000 USD. In 2011, out of the EU-27 member states, only Estonia, Lithuania and Slovenia were not covered by the survey. The employer statutory aggregate social security rates were 34.4 % for Estonia, 31.18 % (for Lithuania, and 16.1 % (for Slovenia (data compiled from Doing Business portal and OECD tax database).

(2009) found a negative effect of leverage on firm profitability. The argument is that the need of continue servicing the debt reduce the ability of companies to invest in profitable projects with negative effects on profitability. On the other side, authors like Jensen (1986), Wells, Cox and Garver (1995) and Adams (1996) claim that debt forced the managers to use resources more efficiently, thus not wasting them on unprofitable projects. However, for the specific case of Romania, I expect a negative sign of leverage, given higher interest rates for company loans.

With respect to tangible assets it is hard to emit a hypothesis. Nevertheless, given the fact that most of the Romanian listed companies are former socialist enterprises with high levels of fixed assets and poor performance, I expect a negative effect of tangibles on firm profitability. Moreover, the negative effect is further supported by the fact that buildings and land which in principle are not directly involved in producing goods for sale (as oppose to machines and equipments), represent a significant share of tangible assets and subject to frequent revaluations.

Labour intensity (personnel expenses to turnover ratio) is expected to have a negative impact, mainly due to the fact that Romanian companies generally avoid making radical adjustments to their personnel policy. This often means overstaffing, which, together with relative high social contributions rates borne by employers, negatively affects firm performance.

Company growth (percentage sales growth) was also investigated as a determinant of firm performance. Generally/Usually, growth is seen as having a positive impact, mainly due to the additional income that company generates. Therefore, I expect a positive sign, similar to Asimakopoulos et al (2009), Maçãs Nunes et al (2009) and Yazdanfar (2013).

Value added (value added to turnover ratio) is expected to have a positive sign. After all, the value that a company adds to its inputs is what drives the performance up and down.

A synthesis of independent variables and their expected sign is provided in Table 1.

**Table 1.** *Independent variables and their expected sign*

Firm size (SIZE)	Logarithm of total assets	+/-
Leverage (LEV)	Total debt to total assets ratio	-
Tangibles (TANG)	Tangible assets to total assets ratio	-

Labour intensity (LAB)	Personnel expenses to turnover ratio	-
Company growth (GROWTH)	Sales growth in percentage	+
Value added (VA)	Value added to turnover ratio	+

All variables are computed using relevant data collected from companies financial reports. The items from balance sheet were scaled by total assets, while the items from income statement were scaled with respect to sales. A detailed description of data structure is provided in Appendix. Usual checking did not reveal any concerns with regard to multicollinearity between explanatory variables.

#### 4. DATA AND METHODOLOGY

The dataset used in this paper contains detailed information from balance sheet and income statement. It follows closely the BACH data scheme (see Appendix) and covers all non-financial Bucharest Stock Exchange listed companies for twelve years period (2000–2011), thus having 668 complete company-years observations. I did not cover years following 2011 because the implementation of International Financial Reporting Standards (IFRS) from 2012 makes company reports data less comparable. Nevertheless, the time spanning and company coverage is large enough for valuable insights.

I used unconsolidated data in order to better capture the specific company relevant data and to provide a longer period of comparable data. The sources of data were financial reports of listed companies available on the Internet sites, both of the companies and of the Bucharest Stock Exchange and National Security Commission. The list of companies is available at <http://www.cnvmr.ro/InfoUtile/ro/RapoarteEmitenti/RapoarteEmitenti.html><sup>2</sup>. Also, a subscription access to Bucharest Stock Exchange data directory was needed in order to get the data for earlier years. The data are reliable and have already a history, being previously used in papers dealing with effective corporate taxation in Romania (Lazăr, 2013; 2014). Since I use percentage sales growth from previous years, 60 firm-years are removed, thus the final sample having 608 firm-years observations.

Descriptive statistics for dependent and independent variables are reported in Table 2.

<sup>2</sup> Our dataset comprises all the companies, thus we have the entire population (non-financial companies traded at Bucharest Stock Exchange).

**Table 2.** Descriptive statistics for dependent and independent variables

stats	N	mean	sd	min	p25	p50	p75	max
ROA	608	2.44	11.06	-116.65	0.21	2.66	7.54	82.1
TANG	608	50.80	20.19	0.00	37.93	50.02	64.31	96.75
LEV	608	39.39	25.61	0.51	19.76	36.23	53.17	158.08
SIZE	608	18.65	1.51	15.90	17.55	18.39	19.30	24.24
GROWTH	608	0.16	0.41	-0.91	-0.05	0.12	0.29	3.51
LAB	608	21.04	12.65	0.11	11.61	19.93	28.22	76.91
VA	608	31.02	26.19	-262.17	20.67	31.88	44.09	177.64

The mean for ROA is 2.44, while the median is rather close at 2.66. The majority of firms display positive ROA which suggest that listed companies are in general profitable. The tangibles represent in average half of total assets, and again the mean and the median are very close (50.8 and 50.02 respectively). The zero value for tangibles is for one IT seller company at the beginning of the period. Average leverage is around 40 %, slightly lower than the average corporate indebtedness for the Euro area non-financial companies of 43 % in the first quarter of 2011 (ECB, 2012). Annual average percentage sales growth is 0.16 which is quite a low figure. The mean for labour intensity is approximately 21 %, while the median is around 20 %. Corporate value added also displays similar values for the mean and median (around 31 %). In general, a raw inspection of data does not suggest significant skewness.

Since the data covers listed companies over a period of 12 years, the investigation strategy consists in fixed-effects panel data estimation. The fixed-effects general specification is:

$$Y_{it} = \alpha + X_{it}\beta + u_i + \varepsilon_{it} \quad (1)$$

where  $Y_{it}$  is the dependent variable observed for individual  $i$  at time  $t$ ,  $X_{it}$  is the time-variant  $1 \times k$  regressor matrix,  $\alpha$  is the intercept,  $u_i$  are the unobserved time-invariant individual effect and  $\varepsilon_{it}$  is the error term. Unlike  $X_{it}$ ,  $u_i$  stand for permanent differences between firms which cannot be observed, but are likely to be correlated with explanatory variables (ownership structure, managers team, earnings management, corporate culture, etc.). Since as a result of the fixed effects estimator,  $u_i$  are cancelled out, I can control for the unobservable or unmeasurable firm characteristics correlated with firm-specific regressors.

Since I suspect that there are also time-specific effects which affect all companies in the same way (tax changes, general economic climate, etc.) I also implement a two way fixed effects model:

$$Y_{it} = \alpha + X_{it}\beta + u_i + v_t + \varepsilon_{it} \quad (2)$$

where  $v_t$  controls for time-specific effects, i.e. impacts common to all firms but varying by year.

Finally, in order to control for industry-specific time effects (the industry business or financial risks), I also implement an industry-year-dummies model:

$$Y_{it} = \alpha + X_{it}\beta + u_i + v_t i_j + \varepsilon_{it} \quad (3)$$

where  $i_j$  stand for a rough classification of industries (manufacturing, energy and extractive industry, commerce, construction, transport and hotels and restaurants).

The major advantage of the fixed-effect estimator is that it controls for firm-characteristics which are not observable or measurable, but are likely to be correlated with the regressors, thus allowing a limited form of endogeneity. A shortcoming of the fixed effect model is that the results, being conditional on the sample, cannot be extrapolated. But, since data covers all non-financial companies traded at Bucharest Stock Exchange, this remains only a marginal problem (when inferring the results beyond public companies<sup>3</sup>).

## 5. RESULTS

Table 3 summarizes the results of fixed effects regression:

- (1) depicts the results of the base model;
- (2) presents the results of a two-way fixed model with year dummies variables included (not reported), while
- (3) adds industry year effects (not reported).

**Table 3.** *Determinants of firm performance (ROA)*

	(1)	(2)	(3)
TANG	-0.125** (0.0475)	-0.141*** (0.0467)	-0.143*** (0.0479)

<sup>3</sup> Privately held companies have different financing and investment choices, therefore extrapolating the results from public companies remains questionable irrespective of the estimation technique.

	(1)	(2)	(3)
LEV	-0.178*** (0.0283)	-0.182*** (0.0285)	-0.182*** (0.0296)
SIZE	-2.307*** (0.746)	-0.326 (1.279)	-0.0434 (1.327)
GROWTH	1.717** (0.693)	1.197* (0.665)	1.248* (0.710)
LAB	-0.473*** (0.0712)	-0.435*** (0.0675)	-0.429*** (0.0713)
VA	0.263*** (0.0343)	0.262*** (0.0333)	0.260*** (0.0348)
Constant	60.35*** (13.44)	25.50 (22.09)	20.71 (23.05)
Observations	608	608	608
R <sup>2</sup>	0.617	0.636	0.657

Clustered robust standard errors at firm level in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

- (1) Base model
- (2) Year effects
- (3) Industry year effects

ROA = return on assets (net income to total assets ratio)

TANG = capital intensity (tangible assets to total assets ratio)

LEV = leverage (total debt to total assets ratio)

SIZE = company size (natural logarithm of total assets)

GROWTH = sales growth (annual sales growth in percentage)

LAB = labour intensity (personnel expenses to turnover ratio)

VA = value added (corporate value added to turnover ratio)

Tangibles negatively affect firm performance. One percentage point increase in tangibles triggers 0.121 pp reduction in ROA. This suggests that Romanian companies do not make use of their tangibles in a profitable manner. Apart from the systemic cause hypothesised (former socialist enterprises with high levels of obsolete fixed assets), frequent revaluations of buildings and land cause an increase in tangible assets without any subsequent increase in profits. Moreover, in order to get real-estate tax reductions, companies were enticed to constantly reevaluate their

buildings, which lead to an increase in tangibles without any corresponding real economic performance.

Leverage displays a significant negative effect on firm performance. One p.p. increase in debt ratio determines 0.08 decrease in profitability. The theory stating that debt makes managers more responsible in allocating corporate funds is not valid for Romania, but on a contrary, there is evidence in favour of the fact that servicing the debt reduces the ability of companies to invest in profitable projects, especially when taking into account the relatively high company interest loan. During the period surveyed (2000–2011), the annual average interest rate for new corporate bank loans in Romanian New Currency (RON) was more than 15 % in eight of the twelve years, while the minimum annual average interest rate of 9.40 % was recorded in 2010 (National Bank of Romania reports available at <http://www.bnro.ro/Publicatii-periodice-204.aspx>). Prior to 2005 when corporate income tax rate was 25 %, the annual average interest rate for corporate bank loans was more than 24 %. Therefore, tax deductions triggered by higher corporate income tax rate were offset by higher nominal interest rates, which made debt financing less appealing.

Size has a negative effect on firm performance, but the effect is statistical significant only for the base case model. The negative sign suggests that Romanian listed companies are not able to make use of economies of scale, but rather points out that their size stands as evidence of the performance issues associated with former or present state owned enterprises (failure to properly adapt to market economy requirements) as hypothesised. This is in line with the finding on tangibility.

Labour intensity also plays a negative role with regard to firm profitability. The coefficient is negative and statistical significant in all model specifications. The results prove robust when using the number of employees as alternative regressor. This suggests that Romanian companies were not able to efficiently use their labour force, mainly because of weak firing policies and strong labour unions.

Growth measured as annual percentage change in sales has also a positive effect on firm performance. Additional proceeds from sales represent an important factor for increasing profits.

Value added positively affects firm performance in all model specifications. Due to public scrutiny and the prestige derived from the listing, public companies

are able to enhance the value of the products offered to customers, which drives performance upwards.

When introducing a two-way fixed effects model (2), by allowing year dummies, the coefficients retained both their level and significance, while time specific effects are precisely identified. The model is similar with the base model, with much of the variation being explained by the companies' heterogeneity.

The third specification (3) introduced industry year dummies in order to simultaneously account for specific industry characteristics and time effects. While coefficients record only slight changes, they also retain their level of statistical significance in most cases. One must take into account that, due to the reduced number of companies ( $n = 60$ ), only a rough classification of industries was possible (see the previous section), and, therefore, extreme caution has to be displayed when interpreting the results. Nevertheless, the deviations from base (manufacturing 2001) were significant in the vast majority of cases. Commerce recorded the largest deviations (negative) from base, while manufacturing the smallest.

Overall, the results show that the hypotheses stated taking into account the peculiarities of a transition country were confirmed empirically.

## 6. CONCLUSIONS

The paper investigates firm-specific determinants of corporate performance for Romanian non-financial companies listed at Bucharest Stock Exchange over twelve years period (2000–2011) using corporate financial reports publicly available. The investigation was carried out within the framework of resource based view on firm performance according to which a firm is able to use its physical capital, human capital and organizational capital resources in order to increase profits. The research hypotheses were developed taking into account the peculiarities of a transition economy such as Romania.

The results showed that tangible intensity, leverage, size and labour intensity negatively affects firm performance, while sales growth and corporate value added have a positive impact. The roots of these causalities lie in the transition character of Romanian economy. Tangibles who count for half of the total assets for Romanian listed companies include industrial platforms that do not generate profits anymore. Moreover, the real-estate assets were subject to

frequent revaluations that increase their share without a corresponding increase of the profits. Leverage negatively affects firm performance mainly due to high interest rates common for a transition country. The lack of hard budget constraints adds up to this effect. The findings on size, although significant only for the base model, are in line with those on tangibles. Labour intensity also displays a negative effect, mainly because of the strong labour unions and of the political connections of managers and members of the board, which triggered a soft personnel policy. As expected, sales growth had a positive impact on firm performance, as well as value added that companies created. Romanian listed companies are able to create value in spite of their ineffective personnel policy and asset mix. The results have several policy implications.

First, the asset mix of Romanian listed companies is not value driving. Too much emphasis put on tangibles, especially on real-estate assets is bad for business. The share of intangibles is only 1 %, which suggests a poor orientation to knowledge intensive activities. In the actual global knowledge based economy this is a handicap hard to overcome, but tax incentives related to intangibles may provide a boost in that respect. For instance, expanding the availability of accelerated depreciation beyond patents, by including software as well may contribute to a knowledge-based value driving conduct of Romanian companies.

Second, with regard to leverage, things are more readily to change. The recent drop in interest rates all over the world, together with increasing budget constraints, makes debt more appealing and managers more responsible in dealing with it. Nevertheless, caution has to be taken if the interest rates trend will reverse. Expanding the use of financial derivative instruments (i.e. interest rates swaps) will boost the propensity for debt of Romanian listed companies. Also, adopting and applying codes of corporate governance with strict rules on how managers respond before shareholders with regard to debt performance may force managers being more responsible in taking debt.

Third, the negative effect of labour intensity suggests that reforms meant to reduce the overall labour costs should be undertaken. This can be done either by reducing the number of employees, either by reducing the labour payments charged to companies. If the former requires more determination from the management and less intrusion from the politics, the latter is hard to implement in a country where average salary is among the lowest in the European Union.

Nevertheless, the reduction of social security contributions borne by employers may act in this respect<sup>4</sup>.

The results are robust to several robustness checks. However, they are valid only for Bucharest Stock Exchange listed companies and cannot be extrapolated to private held companies, since they have different investment and financing choices and certainly, different reporting requirements.

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<sup>4</sup> The social security contributions borne by employers were diminished by 5 p.p. in October 2014.

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## APPENDIX

### The structure of data

<b>The balance sheet</b>	
<p>A      <b>Fixed assets</b></p> <p>A.1.    Intangible fixed assets</p> <p>A.2.    Tangible assets, from which</p> <p>A.2.1.    <i>land and buildings</i></p> <p>A.3.    Financial fixed assets</p> <p>B      <b>Current assets</b></p> <p>B.1.    Stocks</p> <p>B.2.    Receivables</p> <p>B.3.    Current investments</p> <p>B.4.    Cash at bank and in hand</p> <p>C      <b>Prepaid expenses</b></p> <p>AC     <b>Total assets</b></p>	<p>D      <b>Short term creditors</b></p> <p>G      <b>Long term creditors</b></p> <p>H      <b>Provisions</b></p> <p>I      <b>Deferred income, from which</b></p> <p>I.1.    <i>investment subsidies</i></p> <p>J      <b>Capital and reserves, from which</b></p> <p>J.1.    <i>Share capital</i></p> <p>J.2.    <i>Share premium</i></p> <p>J.3.    <i>Revaluation reserve</i></p> <p>J.4.    <i>Reserve</i></p> <p>J.5.    <i>Profit or loss brought forward</i></p> <p>J.6.    <i>Profit or loss for the financial year</i></p> <p>DJ     <b>Total liabilities</b></p>
<b>The profit and loss account</b>	
<p>1    Net turnover, from which</p> <p>1.4. Revenues from current subsidies related to net turnover</p> <p>S    Total operating income</p> <p>5    Cost of materials and consumables, from which</p> <p>5.a. <i>Raw materials and consumables</i></p> <p>5.b. <i>Other external charges</i></p> <p>8    Other operating charges and taxes, from which</p> <p>8.1. <i>third parties services charges</i></p> <p>8.2. <i>other taxes, duties and similar expenses</i></p> <p>8.3. <i>compensation, donation and assets related charges</i></p> <p><b>T    Added value (S-5-8)</b></p> <p>6    Staff costs, from which</p> <p>6.a. <i>wages and salaries</i></p> <p>6.b. <i>social security costs</i></p> <p><b>U    Gross operating profit (T-6) - EBITDA</b></p> <p>7    Value adjustments for non financial assets</p> <p>7.a. Depreciation on fixed assets</p> <p>7.b. Value adjustments for current assets</p> <p><b>V    Net operating profit (U-7) - EBIT</b></p> <p>9_11 Financial income, from which</p>	

- 11 *interest income*  
 12\_13 Financial expenses, from which  
 13 *interest expenses*  
**W Net financial income**  
 14 Profit or loss on ordinary activities  
 15 Extraordinary income  
 16 Extraordinary expenses  
 17 Net extraordinary income  
**X Profit or loss before taxes (14+17)**  
 18 Corporate income tax  
 20 Profit or loss for the financial year (X-18)
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**Informative notes**

Number of employees

Meal vouchers granted to employees

Innovation expenses

Affiliation

**Formulas for computing corporate effective tax rates****Dependent variables**

$$ROA = 20/AC*100$$

**Independent variables**

$$TANG = (A2)/AC*100$$

$$LEV = (D+G)/AC*100$$

$$SIZE = \ln(AC)$$

$$LAB = 6/1*100$$

$$GROWTH = 1_t - 1_{t-1}/1_{t-1}*100$$

$$VA = T$$


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