



Firm's Capital Structure Determinants and Financing Choice by Industry in Morocco

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Abstract: The paper employs Panel regression approach to investigate capital structure impact on firm's performance in Morocco, Based on the result of Hausmann test, fixed effect fit the first model better; thus it was utilized to examine the capital structure determinants in Morocco firms. The annual data was collected from Moroccan authority of capital market and Casablanca stock exchange official website; it covers a period of eight years from 2009 to 2016 of 52 Moroccan companies. The results of this research conclude that out of seven variables there are four more significant ones, which are: return on asset, asset tangibility, size and liquidity, all of them have a negative impact, except for size is positively significant. Therefore, the main determinants of capital structure are firms' specifics factors in Morocco and the choice of leverage is different from industry to another according to the specifics of its activity.

Keywords: Leverage choice, Firms specifics, Panel regression

1. Introduction

Capital structure is seen differently from a firm to another. To decide how to finance, there are many variables to take in consideration; in this way so many theories have been settled to help financial managers, some are promoting debt financing, some others are promoting equity financing. Equity, debt or a mix of debt and equity can finance corporation capital. Firm's specifics and macroeconomics factors can influence the combination of equity and leverage of the corporations. Thus, theories of capital structure invoke the best mixture of equities and liabilities. Through this combination, managers can maximize firm's performance.

In fact, the capital structure and its impact are widely explained in the literature. However, every work tries to defend a different assumption. In this article, the main topic we are discussing is the main factors. The capital structure is considered as one of the most studied topics in finance. So far it is acceptable that capital structure provides information to investors. Certainly, literature has wildly discussed the relationship between investors and managers, in such a way to procure the ultimate position that could be related to their agency. Especially, the agency theory tries to solve the costs induct by the asymmetric information between stakeholders and managers, but the optimal capital structure is still not completely understood. For us, the priority is to list a literature review about capital structure impact on firm's performance. Moreover, we have to find the basics variables influencing managers' decisions regarding capital structure choice.

To do so, we divided our contribution into four subdivisions related to explaining firstly, generalities about capital structure; secondly, we will explain its determinants highlighting how macroeconomic variables, industry specifics, and firm specifics can impact the choice of capital structure presenting evidence from different countries.

2. Literature Review

2.1 Capital Structure Theories

Theorizing about capital structure is a process of thinking the way of financing corporate activities within the internal and eventually the external conditions. The traditional thought state that when we minimize the average capital weight, and we maximize assets' market value, where an optimal capital structure exists. By 1958, Modigliani and Miler formed the basis of modern thinking. The basic theorem states that "in the absence of taxes, bankruptcy costs, agency costs, and asymmetric information, and in an efficient market, the value of a firm is unaffected by how that firm is financed," this theory approve that there is no correlation relating firm value and capital structure. However, the expected future earnings affect the company value, which means that leverage increase is expecting that the future earning will increase. In 1963, Modigliani and Miler argued that "when there are corporate taxes, then interest payments are a deductible tax; one hundred percent debt financing is optimal. This means that the firms' value increases as debt increases".

Modigliani and Miler (1958, 1963) was the flame to start and dig down the relationship between capital structure and firms' performance, and then the capital structure literature has been dominated by two theories. The first theory is Trade-off theory which suggests that "firms will choose their mix of debt and equity financing to balance the costs and benefits of debt. A point or range is reached beyond which debt becomes more expensive because of the increased risk (financial distress) of excessive debt to creditors as well as to shareholders". Practically, debt can be used over equity to minimize capital costs. As we know, debt payments are deductible from tax payments; hence, there is less risk if we privilege debt over equity. However, if debt amount exceeds its limit, the risk increase to enterprises.

The second theory belongs to Myers and Majluf (1984), it's pecking order theory, Based on least resistance, companies choose their financing strategy. The order takes finance choice; internal finance is the first choice, secondly debt and finally equity as a last resort. This order is made to minimize costs of asymmetrical information. In a pecking order world, a firm will always cover its external financing needs with debt as long as its debt capacity does not constrain it". If we go further the pecking order theory, we can say that firms eschew debt as long as they can afford its expenditures internally. The same idea is treated in the case of the "zero leverage phenomenon".

In order to understand the way of financing corporate operations, we need a more insight on capital structure determinants. Indeed, many studies have defined these determinants as the variables influencing the act of financing. These determinants can be explained differently from a country to another. For example, Dongyang Zhang (2017) made a study about capital structure determinant, he selected as sample non-listed Chinese enterprises, taking from 1999 to 2007 as a period of study, his results conclude to new evidence, total factor productivity is an important determinant to choose the capital structure. The following figure is the summary of the determinant of capital structure:

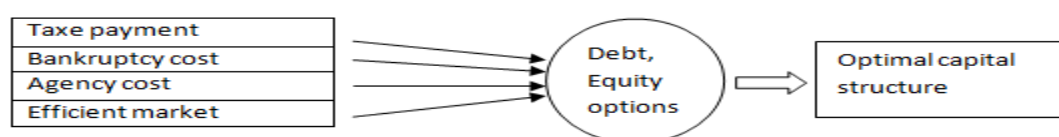


Figure1: Basic modern theories' summary of capital structure determinants

As shown in the previous figure, the firm can choose how to finance its activity to reach the optimum value of the firm in the market; the best combination of equity and debt is still attracting the research nowadays. The determinants of the capital structure can change depending on the environment, the industry, the country or firms specification, so during the last years their many research have been conducted to solve this question, so we got the following summary of the recent research done in this field:

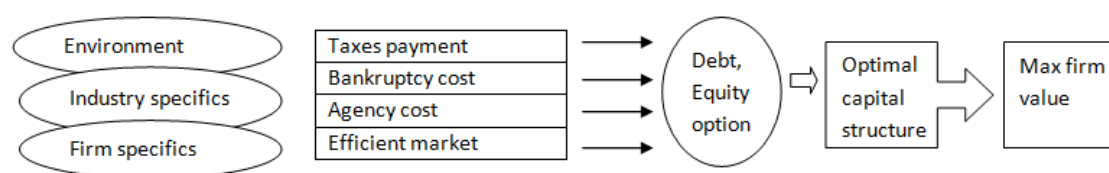


Figure 2: Determinants of capital structure and firm performance

We all agree that the environment is an external factor, it influences firm decisions from different angles, the countries specifications is one of those environmental factors. A macroeconomic study is a necessary study of the relation between firms' performance and financial decision; in the previous study, they used domestic growth product, interest rate, industry median and debt market conditions as a measure of macroeconomic effect. Also, industry specifics and firm specifics influence the choice leverage.

2.2 Optimal Capital Structure and Financial Performance

There are dissenting views among scholars on what constitutes optimal capital mix and its effects on a firm's financial performance. Theoretical Review made by Obim 2014 seems to be a good response to this request. First, it gives a theoretical review capital structure impact on firm performance, to locate, identify and analyze comments, suggestions, conclusions, and recommendations by other researchers and scholars alike on the contentious issue of capital structure choice and increasing firm's performance. Moreover, the same study present insight on the particularities of analyzing in developed countries and developing countries. Precisely, "in developed countries, financial markets are complete and almost perfect in their operations. They are characterized by strict regulations by the governments, advanced debt instruments such as debenture and mortgage bonds, long-term debts and other fixed-income securities. On the other hand, financial markets in developing countries cannot meet the financial obligations of their business firms. Here, the firm relies heavily on commercial bank loans and lease financing as sources of debt financing. Judicious use of debt and equity enhances the value of the firm". in addition to this, Obim 2014 agreed with the traditional theory of capital structure. As followed, "firms can borrow when profit is high, taking advantage of tax shield. Long-term debts should be utilized in the financing of long-term projects. And short-term debts should be employed in financing fast maturing financial obligation". Obviously, financial managers have to choose policies increasing stockholders' wealth. Therefore, a debt and equity combination will enhance both the financial performance and the value of the firm.

In the other side, Zeyad Saleem Ramadan and Imad Zayed (2015), showed that "the most profitable companies rely less on borrowing to finance their cash needs. This result is supported by Pecking-order theory which states that the relationship between borrowing and profitability of the company is an inverse relationship so that the most profitable companies are less dependent on profits to finance their needs". With this result, we can say in a different context the reliability of debt or equity change, due to the financial policies and the style of managing financial activities. Furthermore, the nature of market suppliers is a relevant variable. So, reliance on the foreign exchange is also a significant factor of a capital structure puzzle; this is why we note a remarkable interest in the adjustment speed of corporate finance to different alterations.

Therefore, other scholars opted for a large panel of factors to verify either the impact of internal and external variables on the optimal capital structure. Minga Negash (2014), found that: "more profitable firms tend to adjust their capital structures than less profitable firms rapidly. The effects of firm size, growth opportunities, and the gap between observed and target leverage ratios on adjustment speed are functions of how one measures capital structure. Adjustment speed tends to be faster for firms in industries that have a relatively higher risk and countries with common law tradition, less developed stock markets, lower income, and weaker creditor rights protection". After identifying the multiple determinants of optimal capital structure, we are going now to specify the impact of each component on the performance of a company. We start with the macroeconomic variables at first and after we make clear the role of internal factors in the choice of the capital structure.

Macroeconomic variables:

Deesomsak et al. (2004) research conclude that every country has a different assessment of determinants which impact positively or negatively the choice of the capital structure. However, some context of the crisis has affected the large among of countries. This led us to accept the general effect of the macroeconomic variables. As soon as we accept this fact, we don't have to neglect the specific context of each country. Therefore, we can presume that every country has her mix of variables explaining an optimal structure of capital. As a general fact, financing decisions are taken by financial managers based on the level of development of domestic financial markets. In developed countries, financial markets are complete and almost perfect in their operations. They are characterized by strict regulations by the governments, advanced debt instruments such as debenture and mortgage bonds, long-term debts and other fixed-income securities. On the other hand, financial markets in developing countries cannot meet the financial obligations of their business firms. Here, the firm relies heavily on commercial bank loans and lease financing as sources of debt financing. The view expressed in this paper is in agreement with the traditional theory of capital structure. Firms can borrow when profit is

high, taking advantage of tax shield. In Europe, Andrea Mc Namara and al. (2017) found as a result of his research, SME debt is higher in more efficient bankruptcy regimes and less stringent regulatory environments around banks capital requirements. Their cross-sectional analysis reveals differences in the determinants of short-term vis-a-vis long-term debt, with the information, and legal environment influential in explaining short-term debt and the bankruptcy environment for longer-term debt. The capital regulatory environment matters for both forms of debt. In particular, the impact of stringent bank capital regulatory requirements on SME firm leverage illustrates a possible trade-off between the goals of bank stability and funding SMEs".

From the literature above we can see clearly that the macroeconomic variables can be explained differently whether we are talking about a regional agglomeration or simply about a country. The macroeconomic variables are defined by the political, institutional, regional policies dedicated to enhance the access to financial market and by the same effect improve the capital structure. However, the general environment can't explain for his own the capital structure, but the firm specifics have been largely discussed for the same purpose.

Firm specifics:

Earlier, we indicated that in "a perfect capital market the value of the firm is independent of its capital structure, and hence debt and equity are perfect substitutes for each other, is widely accepted." However, perfect capital markets are not consistent anymore; capital structure choice becomes crucial as value factor. "This paved the way for the development of alternative theories of capital structure decision and their empirical analysis. Although it is now recognized that the choice between debt and equity depends on firm-specific characteristics, the empirical evidence is mixed and often difficult to interpret". Despite, many studies describe firm specifics characteristics through analyzing different aspects.

Min-Geu Jung (2015), chooses to study the impacts of family firms and their characteristics on their use of debts to analyze Korean family firms' decision-making in the capital structure. As a result, we can affirm that family firms in Korea maintained a relatively low level of debt ratios. In other sentences, the characteristics of ownership and governance of family firms affect agency problem, and it is explained by the fact that the agency problem acts as a key influence factor in the family firms' decision-making in the capital structure. Thus, it can be understood that decision-making in the capital structure of family firms in Korea is made as a result of the agency problem.

In a different context, Azzouz Elhamma (2015) took 62 Moroccan firms as a sample and identified three types of budgetary evaluation which are: "strict budgetary evaluation", "moderate budgetary evaluation" and "lower budgetary evaluation." Consequently, "firm's performance is significantly and positively correlated with the budgetary evaluation in large enterprises. This correlation is not significant in SMEs. The findings of this research can help managers of companies in emerging economies in the choice of a better budgetary evaluation system".

Another perception of the optimal capital structure is introduced by Kit Pong Wong (2015), Two meaningful results are proved: "the manager optimally opts for zero leverage if risk aversion is relatively more important than regret aversion in representing the manager's preferences. Otherwise, the optimal capital structure is interior such that the optimal amount of debt increases when regret aversion becomes increasingly more important than risk aversion in representing the manager's preferences".

From the literature above, firm specifics are internal factors influencing the decisions of financing activities. They can be related to firm characteristics such as profitability, size, growth, assets nature, liquidity. Or relatively to the characteristics of management as gender, the composition of the board directors, the personality of a manager, etc.

To conclude our review, we remind that the purpose was to present some points of view explaining the optimal capital structure undertaken theoretical approaches that build the corpus of the corporate finance. Therefore, we presented three principal theories: the traditional theory of Modigliani and Miller, viewed as the primary financial approach. In the pecking order theory, however, we don't have a predilection for debt or equity, we choose the perfect way of financing adequate for the abilities of the firm and its determinants. The main finding of the pecking order theory is to think about a solution to reduce costs of asymmetrical information.

Consequently, we found some relevant explanation for the differences between countries concerning corporate performances: the impact of macroeconomic context and the significant influence of the internal variables. Another fact

was demonstrated is the adjustment speed and its participation to define the firms' performance, especially when we talk about the relation of the firm and the international market, either of supplies and finance. Finally, there is no perfect capital structure, but there are combinations that attend an optimal level of performance. This assumption indicates that abnormalities exist and affect the capital structure wildly.

3. Methodology

3.1 Data Collection Method

To investigate the factors influencing leverage choice inside Moroccan firm, we have collected the data from market data and accounting data, our sample includes firms listed on the CSE, the period cover from 2009 to 2016. We do not include banks and financial companies in our data sample due to the special financial behaviors and nature of these businesses (King and Santor, 2008). Accounting data are used to calculate variables measuring growth opportunity, tangibility, profitability, size and liabilities of firms. So the total of sample firms is 52 firms during eight years, which leave us with 416 observations.

3.2 Method of the Study

As a method, we have used ordinary least square because we have one variable to explain and theoretically it is the best method for our model. The dependant variable is :

Debt ratio (DR)= total debt/ total asset

The independent variables are:

Return on asset (ROA) = net income/ total asset

Return on equity (ROE) = net income/ average shareholder's equity

Asset tangibility ratio (ATR) = fixed asset/ total asset

SIZE = natural logarithm of total asset

GROWTH = variation in the size of firms

LIQIDITY = current asset/ liabilities

Gross domestic product (GDP) = the rate of gross domestic profit

Interest loan rate (IS) = loan interest rate defined by Bank-al-maghereb (central bank of morocco)

3.3 Econometric Model

This research seeks to investigate the determinants of capital structure in Moroccan firms by employing Panel least square estimator framework. The regression model can be written as follows:

$$DR = \beta_0 + \beta_1 ROA + \beta_2 ROE + \beta_3 ATR + \beta_4 SIZE_{it} + \beta_5 Growth_{it} + \beta_6 GDP + \beta_7 Liquidity + \beta_8 IS + \epsilon_i \quad (1)$$

Where is:

ROA: return on asset

ROE: return on equity

α : intercept

β : coefficient of the independent variable

DR: Total liabilities to total asset ratio

ATR: Asset tangibility ratio

Growth: Variation of the firm size

SIZE: Logarithm of total asset ratio

GDP: Goss domestic profit

Liquidity: current asset to liabilities

IS: interest on loan rate

ϵ : Error terms

i: total number of companies

t: total number observation for each company

4. Result and Discussion

4.1 Assumption Tests and Descriptive Analysis

Multicollinearity is the assumption that must be tested before applying any regression analysis as such problem exists is because of one variable is superfluous. Therefore, such variable should not be included in the regression model as an explanatory variable. To check the multicollinearity assumption for our regression model, we have used Pearson correlation. The results of correlation tests are presented in the table:

Table 1: Matrix of multicollinearity test

	ROA	ATR	SIZE	GROWTH	GDP	LIQUIDITY	IS
ROA	1						
ATR	0.33	1					
SIZE	0.07	0.23	1				
GROWTH	-0.01	0.10	0.08	1			
GDP	0.00	0.00	0.03	-0.00	1		
LIQUIDITY	0.01	0.11	-0.25	0.18	-0.02	1	
IS	0.04	-0.01	0.06	-0.00	0.62	-0.09	1

N.B: ROA= return on asset, ATR= asset tangibility ratio, Size= natural logarithm of total asset, growth ratio of the firm, GDP, liquidity= cash flow, IS= interest rate defined by the central bank of Morocco.

Correlations between independent and control variables reveal no issue of multicollinearity, because no correlation coefficient is higher than 0.80. Based on the above Table 1, multicollinearity does not appear to be an issue in the regression analysis. Morocco firms tend to finance its activity by half debt resources and half equity. The following table is the statistical description of variables:

Table 2: Descriptive statistics of 416 observations over the period 2009-2016

Variable	Mean	Std. Dev.	Min	Max
ROA	0.07	0.09	-0.68	0.58
ROE	0.13	0.34	-5.13	1.93
DR	0.48	0.22	0.01	0.99
ATR	0.39	0.23	0	0.98
SIZE	20.86	1.52	17.61	24.46
Growth	0.52	1.15	-5.36	17.63
GDP	3.72	1.064	1.9	5.3
liquidity	2.87	7.58	-13.72	64.85
IS	3.12	0.27	2.5	3.5

From the table above and during eight years, non-financial firms listed in Casablanca stock exchange register an average of 7% of profitability, this rate is considered as a good rate since it's above 5%, so the investment in morocco firm is profitable. The highest rate belongs to "delta holding" operating in holding industry in 2015, and the lowest rate belongs to " Stroc Company" operating in the engineering industry in 2012.

Debt ratio, measure the level of leverage financing the activity of firms. As shown in Table 2, an average of 48% of assets are financed by debt; the most indebted industry is forestry and paper, it is financing by 99% of the debt. However, the sector profitability is 12%. On the other hand, the less indebted sector is holding company, it is financing by 1% debt, and the profitability in 2015 is 58%. The sample of the study have as mean 39% as asset tangibility ratio, it's expected to use these assets as collateral, so the debt rate is high in morocco nonfinancial firm listed in CSE.

By the natural logarithm of total asset we obtained size ratio, the size of our sample is between 17 points and 24 points; the growth ratio shows that there some firms which reduce its size but there are others which are growing. The gross domestic profit was select as a variable for macroeconomic impact on the choice of financing activities, in Morocco the

gross domestic profit is between 1.9 as minimum and 5.3 as a maximum. Therefore the mean of GDP is 3.7 from 2009 to 2016; Morocco's economic growth is considered developing by time. Unfortunately, in 2016 the economic growth has slowed down dramatically from 4.5% to 1.2%.

In our case of non-financial companies listed in CSE, they are solvency companies since the average of liquidity ratio is 2.87 %. Thus the companies can cover its liabilities and have cash flow. Interest rate defined by bank-al-Maghreb is the tool to control the level of debt, if bank-al-Maghreb wants to promote the debt rate, it will reduce the interest rate. If it wants to slow down the debts, it will make the interest rate higher. Morocco believes that debts are a driving force for growth. It has a mission to support the development and improvement of performance. Therefore, Morocco maintains the interest rate between 2.5% and 3.5 %.

4.2 Regression Analysis

Table 3: Table of regression of the determinant of capital structure in Morocco

DR	Coef	Std. Err.	t	p> t	[95% Conf. Interval]
ROA	-0.68	0.10	-6.88	0.00	-0.88 -0.49
ROE	-0.06	0.02	-2.50	0.013	-0.12 -0.01
ATR	-0.17	0.04	-3.93	0.00	-0.25 -0.085
SIZE	0.04	0.00	7.10	0.00	0.03 0.06
Growth	-0.00	0.00	-0.52	0.60	-0.02 0.01
GDP	0.00	0.01	0.34	0.73	-0.01 0.02
Liquidity	-0.00	0.00	-4.98	0.00	-0.00 -0.00
IS	-0.05	0.04	-1.38	0.16	-0.14 0.025
_Cons	-0.18	0.17	-1.08	0.28	-0.52 0.15

Number of obs= 416 ; Prob>F= 0.0000 ; Adj R-squared= 0.2985; F(8, 407)=23.08; R-squared=0.3121;
Root MSE= .18875

Out of seven variables, there are four significant, which are: return on asset, asset tangibility, size, and liquidity. All of them have a negative impact, except for size, which is positively significant. Firms' profitability (ROA) is significantly related to leverage level in the firm; there is an inverse relationship between profitability proxy and debt ratio. Higher profitability leads to lower debt decisions to finance the activity. Therefore, the profit of a Moroccan company decreases the possibility of borrowing, thus minimize the dependence on the possibilities of external sources of financing. Two contradicting theories are determining the relationship between the capital structure and the performance of a company. Trade-off Theory assumes that capital structure impacts the profitability of a firm positively. On the other hand, there is Pecking Order Theory arguing that capital structure and firms performance is negatively related. In our sample, the relationship is negative; hence, we reject the hypothesis of trade-off theory.

The companies tend to opt for less debt whenever the shareholders' invest, according to regression result, the relationship between shareholders' profitability proxy and debt ratio is significantly negative, once more, the results approve the validity of pecking order theory, the companies tend to prefer the internal finance than an external source of finance. Asset tangibility ratio is significantly negative in our results.

Diamond (1989) suggests that large firms can assume more debt at lower costs because of their better reputations in the debt market (La Rocca et al., 2009). There is the case of Moroccan companies listed in CSE, the relationship between size and debt decision is significantly positive. The macroeconomic impact on financing choice is insignificant, both gross domestic product and loan interest rate tend to not influence the manager's decision. Liquidity as well is significantly negative; more cash flows less debt.

Table 4: Regression results of the determinant of financing choice by industry

	ROA	ROE	ATR	SIZE	GROWTH	GDP	LIQUIDITY	IS	TC
Chemical	NS	NS	NS	NS	NS	NS	NS	NS	NS
Distributors	-S	NS	NS	NS	NS	NS	NS	NS	NS
Engineering	-S 5%	-S 10%	NS	NS	NS	NS	NS	NS	NS
Food producer	-S 5%	+S 1%	NS	+S 1%	NS	NS	NS	NS	NS
Holding company	+S 5%		+S 5%	+S 5%	-S 5%	NS	-S 5%	-S	NS
Material and software	-S	-NS	-S 1%	+S	NS	-S 10%	+NS	-S 10%	NS
Mining	+NS	-NS	-NS	+S 55	NS	NS	NS	NS	NS
Oil and Gaz	NS	-S 5%	-S 1%	-S 1%	NS	NS	+S 10%	NS	NS
Real Estate	NS	NS	-S 5%	NS	+S	NS	NS	NS	NS
Construction and building	-S 5%	NS	NS	NS	NS	NS	NS	NS	NS
pharmaceutical	NS	NS	NS	+S	NS	NS	NS	NS	NS

Note: +S mean positively significant, -S negatively significant, NS mean nonsignificant

Return on asset has a significant negative impact on financing choice for almost all the industries, only for holding companies, the significance is positive. Therefore, profitable firms tend to have less debt. Return on equity has an inverse impact on financing choice for both industries "oil and gas" and "engineering" but a positive significant impact on food producer industry.

Asset tangibility is positively significant for holding companies; this ratio is used as collateral to reduce bankruptcy risk. Many studies confirm the higher asset tangibility ratio is, the higher is leverage ratio. Surprisingly, there is an inverse relationship between (ART) and debt ratio in the following industries Materiel and software, Oil and Gas and Real Estate. Our regressions conclude to a mix of results of size ratio impact, for some industries the size is nonsignificant as Chemical, Distributors, Engineering, Real Estate, Construction, and building. The positive significant impact as results shown in the table above is noted in Food producer, Holding company, Materiel and Software, and Mining and Pharmaceutical. However Negative relationship exists between oil and gas industry.

In holding company, the growth has a significant negative impact on debt level, but in a positive impact of real estate industry, for the others industries, there no significant impact. Material and software seem to be the only industry influenced by the macroeconomic change; leverage level tends to be less when economic development is good.

Holding company industry tend to borrow less when the cash flow is available, however positive and significant impact of liquidity ratio is noted in oil and gas industry. Loan interest rate has an inverse impact on debt ratio in both industries "material and software" and "holding company."

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5. Conclusion

The factors which can affect the managers' decision of capital structure can be two categories of factors, based on previous research, the first category is macroeconomic and the second is firms' specifics. Based on our research, we have chosen tax rate and growth development product as variables for macroeconomic impact. As a result, we have discovered that both variables have no significant impact on debt decision, so the macroeconomic factors have no impact on leverage level of firms, so the debt decision is completely relative to firms specifics.

For the firms' specifics, we have chosen several variables which can affect the debt decisions; the variables are: return on asset, return on equity, asset tangibility, growth, size, and liquidity. Out of those six variables, there are four significant, which are: return on asset, return on equity, asset tangibility and liquidity. There is only one factor which has a positive impact; the size has a positive significant impact. Hence the larger the enterprise is, the better is to opt for more loan. Higher return on asset ratio, return on equity and asset tangibility, will lead to better opt for less loan. The three variables have a negative significant relationship. The capital structure decisions can be different from activity sector to another; hence in this part, we recommend each sector:

The distribution and engineering sector, the financial managers, should be affected by the profitability of firms, depending on return on asset ratio the leverage level is defined, it is preferred to finance the activity of firms from internal finance. Food producer, the profitability, and size are the factors which affect the capital structure decisions, the size of firms is important to decide to have more loan, the size impact positively the debt decision.

Profitability and debt ratio in Holding companies have a significant positive relationship, the more debt more profitability, also the size is positively related to debt ratio, so the larger the enterprise is, the better to have more debt.

As for Material and software sector, the profitability and debt-equity ratio have a negative relationship, but the size is important, larger enterprises are better to finance the activity by loans.

Concerning Oil and gas sector, liquidity is an important factor in capital structure decisions, it has a positive significant impact on the debt-equity ratio, and hence, it is important to have cash flow by loans finance.

To ensure the growth of enterprises in real estate sector, the debt is a good decision to take to finance the activity. The profitability of construction and building sector activity is affected negatively by debt; it is better to finance the activity by equity.

Turning to Pharmaceutical sector, the size is the only factor which affects capital structure decisions; the relationship is positive. Therefore, larger enterprises need more loans to finance the activity.

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