

DETERMINANTS OF CAPITAL STRUCTURE: A CASE OF NON-FINANCIAL FIRMS LISTED AT PAKISTAN STOCK EXCHANGE TEXTILE SECTOR

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ABSTRACT

The most important decision for a company to take is to choose their capital structure due to their influence on a firm's value. This paper gives details about the determinants that affect the capital structure of Pakistani firms (Textile sector) registered at Pakistan securities Exchange (PSX). The data set used in this paper is Panel Data set. The Data for the Analysis has been taken for the years of (2012-2016). For this study we have taken the data from Publication of State Bank. 50 companies were selected randomly as a sample size from the population of whole textile sector. The explanatory variables chosen for this study are Profitability, Non-Debt Tax Shield, size and Liquidity and financial leverage is chosen as Dependent variable. For analysis we used ANOVA, Descriptive statistics, and regression analysis has been to find the relationship among these variables through SPSS Software. The results conclude that our Independent Variables such as Profitability, Size and Liquidity have Significant and Negative Correlation with level of debt, While Non-Debt Tax Shield has Insignificant and Positive Correlation with level of debt.

Keywords: Capital Structure, leverage, Liquidity, size, Pakistan Textile Sector, Profitability, and Non-Debt Tax shield.

INTRODUCTION

Capital is reflected as the most important source to run a company. Company's capital can be classified into two parts i.e. Debt financing and Equity financing. Debt financing in a sense, is when a corporation owes money in order to operate its business and then make repayment of

borrowed funds with interest amount. On the contrary Equity financing takes place when a company sells some of its shares in order to obtain funds to operate its business and give right of ownership to the investors in return of their investment. Various definitions have been developed about capital structure. Capital structure includes debt, shareholder's equity or combination of both allotted by the firm.

For some firms it may bring good returns to some shareholders, if increase financial leverage of the increases, but it also gives rise to risk as the company might fail to pay its obligations. Then financial distress can be occurred which will lead the company to bankruptcy. A well appropriate capital structure should be placed as it is the most integral decision for every company as it doesn't only bring good returns but also can significantly affect the company's position in challenging environment.

Many financial economists have developed theories about leverage, thus in the publication of Modigliani and Miller (1958), to measure the fluctuations occurring in debt ratios of different firms. The trade-off theory identifies the relationship between taxes and cost of borrowing, and bankruptcy.

Pecking order theory is another vital theory which suggests that, first the company should use their retained earnings for the purpose to finance their assets, if the company doesn't has retained earnings then the second option is to finance their assets through debts by issuing debt instruments, if suppose the company doesn't has anyone of the above choices, then the company needs to choose equity financing to finance their assets. Steward Myers (1984).

Problem Statement

The question still remains unanswered that how firms should choose their capital structure? This study examines to know which factors determine the capital structure of the corporation. For this study we have selected Textile Industry of Pakistan.

Objectives of the Study

The objectives that are set for the study are:

- To find what are the factors that determine the capital structure of Textile Industry of Pakistan.
- To inquire how the decision of choosing capital structure is affected by the determinants of capital structure of Textile companies.
- To see what is the relationship between financing decision and using of debt.

Hypothesis

H₁: Firm size has a significant impact on Company's Capital Structure.

H₂: Profitability has a significant impact on Company's Capital Structure.

H₃: Non-debt tax shield has a significant impact on Company's Capital Structure.

H₄: Liquidity has a significant impact on Company's Capital Structure.

Scope of the Research

The research's scope is applicable to textile industry of Pakistan. This study is applicable on secondary data of 50 randomly selected textile companies (listed at PSX).

LITERATURE REVIEW

Numerous researchers have explained the factors that determine capital structure of a corporation from different angles and in different concerns. Silva.M, Cerqueira.A and Brandao. E (2017) has done a study to examine the factors that determine capital structure of German companies. They have used panel data ranging from 2005-2014 sample included 443 non-financial German companies. The OLS model has been used to find relationship between independent variables that are risk, tangibility, profitability and non-debt tax shield and dependent variable which is financial leverage. Their results have concluded that all the explanatory variables were significant and positively correlated with dependent variable.

Omrawoo.V.T, Jaunky.C.V and Ramesh.V (2017) investigated a study to analyze the determinants of capital structure. Panel data of 10 companies of non-financial firms ranging from 2010-2015 was taken. Long term debt to total assets was taken as dependent variable, dividend payment, return on assets, earning per share, leverage ratio and tangibility were taken as independent variables. Their results indicated that Liquidity and earning per share had a positive Impact however the remaining independent variables such as leverage and tangibility, dividend payments and return on assets, have adverse impact on debt.

Singh.D (2016) carried a study to examine the determinants of capital structure of firms of non-financial sector of Oman. Panel data sample of sixty one (61) companies registered at Muscat Stock exchange ranging from 2011-2015 was taken for the analysis. Fixed effect model was used. Their results suggested that liquidity, tangibility, and profitability were negatively correlated with the leverage, while growth opportunity and firm size were positively correlated to the debt level. Non-debt tax shield did not perform to be related significant to leverage of Omani firms.

Orman.C and Koksai.B (2015) conducted a study in which they conducted a comparison test of

trading order theory and peaking order theory. From their study, it was found that trade off theory offers clear and well explanation of firm’s structure of capital than peaking order theory. In addition, when an economic environment is relatively stable, and then trade off theory acts to be more accurate to understand the financing options of big private companies in the non-manufacturing sector. On the contrary, when economy is unstable, then pecking order theory would be most advantageous once it arises to minor public-traded manufacturing firms.

Awan.G and Amin.S.A (2014) investigated a study to identify the factors affecting textile firms of Pakistan. panel data of sample of sixty eight (68) firms registered at Karachi stock Exchange ranging from 2006-2012 was taken for the analysis. The determinants in their study such as non-debt tax shield, size of the firm, earnings volatility, collateral fixed assets, liquidity of firms, commercial trades’ positions and profitability of the firm affects the capital structure choice.

Daskalakis.N and Psillaki.M (2014) conducted a study in which the intention of the study was to know about the main determinants of capital structure of small and medium companies of France and Greece. Panel data was obtained from Diane and ICAP for Greece and France firms. Debt ratio was taken as dependent variable and independent variables were asset structure, company’s size, growth rate and profitability of the company. Their results indicated that Profitability and assets structure had negative correlation with firm’s debt level. On against, the growth rate of the firm and firm size had positive relationship to the firm’s leverage.

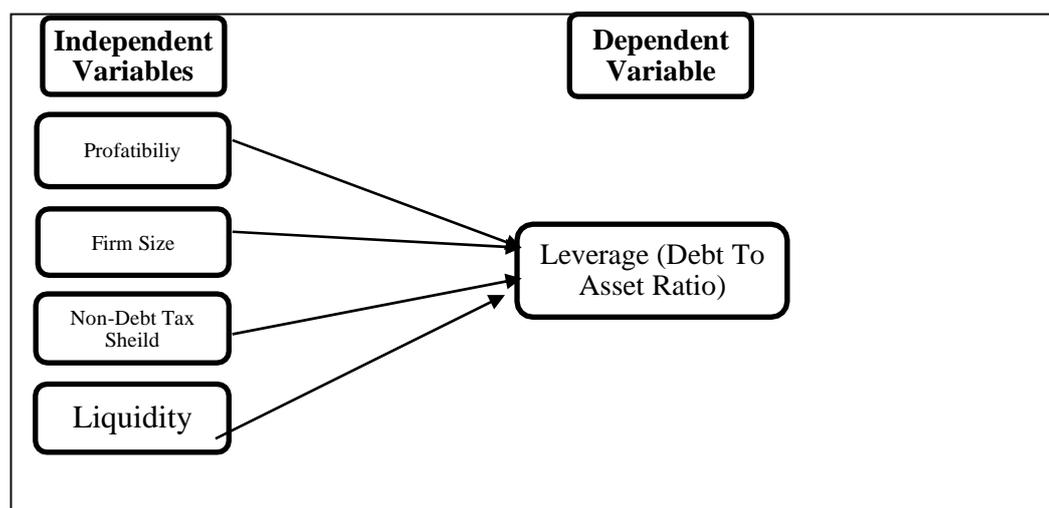


Figure 1: Theoretical Framework

METHODOLOGY

Data Collection

The data collected for the analysis is quantitative in nature. The type of data used for this paper is panel data. The data for debt to equity ratio (DER), Liquidity ratio (LR), profitability ratio (PR), firm's size and Non debt tax shield (NDTS) is gathered for 5 years (2012-2016) from FSA Non-Fin 2011-16.pdf which is a file published by State bank of Pakistan and can be took from the website of central bank of Pakistan.

Population

Whole textile sector companies listed at Pakistan Stock Exchange (PSX) is selected as a population for this research.

Sample

The total number of companies which are registered at Pakistan Stock exchange (PSX) is 572 companies, 475 companies are of non-financial sector and 97 companies are of financial sector. The textile sector (composite, weaving and spinning) includes 147 total numbers of companies. Companies were randomly selected for this research; the sample of 50 Textile firms of non-financial sector of Pakistan, ranging from 2012-2016 has been selected for this research to evaluate the determinants of capital structure of companies of non-financial registered at Pakistan stock exchange (PSX).

Model Specification

Panel regression analysis has been used. Panel data is the combination of time series & cross-sectional data.

Equation of our model is:

$$LG = \beta_0 + \beta_1 (PF) + \beta_2 (SZ) + \beta_3 (NDTS) + \beta_4 (LQ) + \varepsilon$$

Where:

LG = Leverage PF = Profitability

SZ = Firm Size (measured by Log of sales) NDTS = Non-Debt Tax Shield ε = the error term

Variables Dependent Variable

1: Leverage (Total Debt to Total Asset Ratio)

Debt to assets ratio could be defined as the ratio that indicates the financial leverage of a firm.

DAR = Total liabilities / Total assets.

Independent Variables

1: Size of firm

The speed and level of growth that is better for a specific small business refers to as firm size.

We calculate firm size as natural logarithm of sale.

2: Profitability of Firm

The ability to make profits from investment can be defined as profitability of the firm. We calculate profitability as EBIT (operating Income) to total asset.

3: Non-Debt Tax Shields:

The advantage a company can have is not paying taxes on borrowed funds. We calculate non-debt tax shield as depreciation for the year to total assets.

4: Liquidity of Firm:

The ability of a business to cover its short term payments with its short term assets. We calculate liquidity of firm as total current assets to total current liabilities.

DATA ANALYSIS

Table 1: Descriptive Statistics

	Mean	Std. Deviation	N
Debt Ratio	.587523	.2722174	250
Profitability	.052618	.1081928	250
Size	15.038636	1.7196760	250
NDTS	.038494	.0901569	250
Liquidity	1.296544	1.1003418	250

Descriptive Statistics

The Table 1 tells us about the descriptive analysis for our data in which the value of Mean of Debt Ratio is .5875 that shows that the total debt covers 58 percent of the total assets financing. In the context of independent variables, the size of the firm shows highest value of Mean which is 15.0386, with the highest Standard Deviation with unit of value 1.7196 respectively. Contrary to this, The Non Debt Tax Shield has the lowest value of Mean which is .0384, with the lowest value of standard Deviation which is .09015 respectively.

Table 2 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.641 ^a	.411	.402	.2105266	1.132

a. Predictors: (Constant), Liquidity, Size, NDTS, Profitability b. Dependent Variable: Debt Ratio

Table 3 : ANOVA^a

Model		Sum of Squares	DF	Mean Square	F	Sig.
	Regression	7.593	4	1.898	42.828	.000 ^b
1	Residual	10.859	245	.044		
	Total	18.451	249			

a. Dependent Variable: Debt Ratio

b. Predictors: (Constant), Liquidity, Size, NDTs, Profitability

The Table 2 presents the rapid summary of our Data analysis, in which the R square value shows that there is 41 per cent variation, appears in dependent variable due to explanatory variables. In other words, 41% of variation is caused by Independent variables in Dependent variable.

ANOVA stands for Analysis of Variance.

The ANOVA Table shows the signification of the Model and Variations among the variables. In the above model the value of F-statistic is found as 42.828 and the P-value as .000 which is less than 0.005, displays that there is strong significant variation or difference among variables. In other words, we can say that our Model is strongly significant.

Table4 : Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Correlations		
	B	Std. Error	Beta			Zero-order	Partial	Part
(Constant)	1.118	.124		9.018	.000			
Profitability	-.966	.137	-.384	-7.049	.000	-.520	-.411	-.346
Size	-.024	.008	-.153	-2.957	.003	-.287	-.186	-.145
NDTS	.028	.153	.009	.185	.854	.153	.012	.009
Liquidity	-.090	.012	-.363	-7.189	.000	-.459	-.417	-.352

a. Dependent Variable: Debt Ratio

Table 4 shows that the Summary of correlation between dependent variable with Independent variables which is as follow:

Profitability is statistically strongly significant with the value of .000; it is negatively correlated with financial leverage with value of -.966.

Size of firm is also statistically highly significant with the value of .003; it is negatively correlated with financial leverage with the value of -.024.

Non Debt Tax Shield is statistically insignificant with the value of .854; it is positively correlated with firm's financial leverage level with the value of .028.

Liquidity is statistically strongly significant with the value of .000; it is negatively correlated with firm's financial leverage level with the value of -.090.

Discussion

The Value of Beta in Table 4 shows that per unit change in the dependent variable which is financial leverage would be because of the change in the Independent Variables which are Profitability, Size, Non-debt Tax Shield and Liquidity. More specifically, variables like Profitability, size And liquidity are having negative betas which mean that these have negative correlation with Debt level, while on the other variable such as No-Debt Tax shield is having Positive beta which means that it is positively correlated with Financial Leverage.

After evaluating the T-values of the Variables, it is concluded that size of firm, Profitability, and Liquidity have significant effects on the Debt level while the Non-Debt Tax shield has insignificant impact on the dependent variable which is financial leverage.

CONCLUSION

This study was conducted to realize what are the determinants of capital structure? Based on our results, Empirical evidence on the structure of capital decisions for Textile companies reveals that Profitability, Size and Liquidity, have significantly and negatively Correlation with the financial leverage. While on the other hand, Non-Debt Tax shield is positively but insignificantly correlated with the leverage ratio. So lastly, we can conclude that our three explanatory variables are negatively correlated with Leverage and one is positively correlated with financial leverage.

Recommendations

- Future researchers are recommended to consider other factors such as growth opportunities, free cash flows and assets efficiency and maybe be other factors that might determine capital structure of Textile sector.
- This study might help future researchers to compare textile sector with other sectors at Pakistan Stock Exchange (PSX). By doing so, researchers would know about the density of borrowed funds of different firms in different sectors.
- We have taken long term debt to total assets ratio, future researchers could also take only long term debt to assets ratio for their analysis as many researchers have taken it.

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