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DETERMINANTS OF CAPITAL STRUCTURE

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ABSTRACT: *The main objectives of this empirical study are: to investigate which factors affect the textile firms of Pakistan and which type of capital structure theory does more prevail in textile sector of Pakistan. This empirical study is done by applying the panel data techniques in analyzing sample of 68 textile firms of Pakistan listed on Karachi Stock Exchange during 2006-2012. The determinants of this study like liquidity of firms, non debt tax shields like depreciation, more collateral net fixed assets, earnings volatility, size of firms, net commercial trade position and firms' profits have impact on the capital structure choice*.

KEYWORDS: Capital structure, Textile firms, Stock exchange and Pakistan

INTRODUCTION

The success or failure of any firm depends upon the managerial and financial decisions made by the management. The financial decisions include the raising of funds from different sources. Capital market is the source of long term finance while Money market is the source of short term finance. The motive behind is to minimize the financial costs of funds rising. These financial decisions may be viewed by various capital structure theories: Static Trade Off, Free Cash Flows and Pecking Order. Trade off theory says that each source of money has its own cost & return and these are associates with the firm's earning capacity and its business & insolvency risks. According to Myers & Majluf, (1984) Pecking order theory argues that firms first choose to employ internal sources like reserves & retain earnings to finance a project instead of arranging new debt, or prefer debt to issuance of new shares. The capital structure theories emphasis only on the long term debt while analyzing capital structure, but Sheikh & Wang, (2011) included both types of debt: short term and long term while analyzing the capital structure of 160 Pakistani firms over five years period because of Pakistani firms more depend on short term loans rather than long term debts. Demirguc-Kunt & Maksimovic, (1999) found that developing economies more rely on the short term loans than developed economies. Ezeoha,(2008) used both forms of debts, while analyzing capital structure of developing economy Nigeria, Serrasqueiro & Rogao, (2009) took total debts in determining the determinants of debt adjustment of listed Portuguese companies and Karadeniz et al. (2009) used total debts or total liabilities while determining the factors of capital structure of Turkish lodgings firms.

The researchers are different in regarding the significant factors that affect the capital structure decisions and there is diminutive research on the financial behavior of textile sector firms of Pakistan. We use net commercial trade position in our study that was yet not used by any researcher while analyzing the financial behavior of Pakistani firms.

LITERATURE REVIEW

There are two schools of thought on capital structure. Value of firm is independent of its capital structure: it means that a firm whatever has the combination of securities; it does not affect on its value. Modigliani & H.Miller, (1958) put a proposition that the maket value of any firm is independent of its capital structure and market securities in a perfect financial market. They discussed it in a perfect market conditions and ignores imperfect markets that exist in reality. They also ignored the floatation costs incurred to issue bonds or shares that cause to raise their costs.

Miller, (1977) says that the tax advantage is zero when considering the personal taxes on the income of sharholders in the form of dividends & capital gains and debtholders' regular income on the debts. He stated that capital structure has no impact on the market values of any firm under the assumption of competitive market equilibrium and rational behavior of the investors. He induced three types of taxes: the firms' tax rates on its earnings and the stockholders' personal tax rates on income derived from common stocks in the form of cash dividends and capital gains and last one the tax rates on the regular income from the bonds to the bondholders. He concluded that the tax advantage is zero or even negative of debt financing by taking the wider considerations of corporate tax, tax on shareholders' income and tax on debt holders' income. Miller (1963) found that debt to assets ratio of non financial firms of 1920s and 1950s has little variations while the corporate tax rates vary from 11% to 52%. Preferred stocks substituted the debt and not debt for common stock. This lower the bankruptcy costs because preferred stocks are not the pure creditors and non tax deductable source of funds.

The second school of thought says that value of firm is dependent of its capital structure: it means that a firm whatever has the combination of securities: it has effect on its value.

Modigiliani & H. Miller, (1963**)** communicates that debt gives a firm tax shield. In their opinion high debt gives high tax savings because the interest expense is deductable expense from the firm's income. They argued that after taxes yields are affected by the leverages. They argued that as debt increases the tax advantage also increases. But they did not consider the risks associated with increased debts like financial distress that eventually bankrupt a firm.

Both Trade off and Financial distress & Agency cost theories say that higher debts bring financial distress and eventually bankrupt a firm or force it to go into liquidation or restructuring a firm. Warner, (1977) found that bankruptcy costs are negatively correlated with the firm size. Haugen & Senbet, (1988) found that bankruptcy costs have significant affect on the capital structure and participants and claimants are irrational. Warner, (1977) analyzed the data of eleven railroads and examined the debt ratios based on market values of stock and debts. He found that direct bankruptcy costs were negatively correlated with the value size of the firms. Haugen & Senbet, (1988) concluded that bankruptcy costs have

significant impact on the capital structure when the participants or claimants are irrational and arbitrage process is allowed. Altman (1984) explained two views of bankruptcy costs: one is that if bankruptcy costs are relative significant that is the expected values of its cost out weights the tax benefits derived from increasing leverage. Other, if insignificant, then should not be considered seriously. He assumed that these costs are relevant and have significant impact in contradict to the Warner (1977) that bankruptcy costs are insignificant in the capital structure. He attempts to measures the indirect cost that is ignored before this. He found from empirically evidence of one sample of 19 bankrupt industry's firms (1970 – 1978) and other sample of 7 large bankrupt firms. The results from these sample show that bankruptcy has strong impact on capital structure on average bankruptcy costs are ranged from 11% to 17% of the firms' value up to three years prior to bankruptcy. He also found that the present value of expected bankruptcy costs exceeded the present value of tax benefits from leverage.

Cash flow theory underlines the assumption that managers act in their own interest rather than shareholders' interests. Myers S. C., (Spring 2001) explained that cash flow theory discussed the agency problems and their relating costs because of the conflicts in interests between the shareholders and the management.

The pecking order theory emphasis on the uses of internal funds generated from operations of firm. Because of internal funds are relatively low costs than debts while Debts are relatively low costs than issuing of new securities. Myers S. C., (1984) modified the pecking order theory by introducing the information effect. He discussed "asymmetric information" has impact on firms' value. The announcements made by the managers regarding the changes in capital structure give a signal to existing and potential investors to make or withdraw their investments.

Myers S. C., (Spring 2001) proposes Pecking order hierarchies the financing as fellow:Preference of internal finance rather than external finance,Dividends are sticky. It means do not cut dividends to finance capital expenditures, First issue safety securities like debt before issuance of new equity. This theory also addresses the asymmetric information regarding the firm's potential earnings. Managers are well informed than the market investors. Myers S. C., (1984) dicussed that managers issue new securities when these securities are overvalued in the financial markets.

Durand, (1952) argued that with the increase in debt volume brings more risks for the businesses under net profits before interest (NOI) approach. At this, each type of the financing demands more returns in order to offset the risks. He explained this under the corporate tax regime. He showed the impacts of equity financing: common stock floatation and retention of earnings on the costs of capital as well as on the required rate of returns. Loan agreements or a low current ratio enforces the firms' management to restrict dividends in order to avoid bankruptcy. The required rate of return and personal income tax on stockholders may influence the paid out and retention of earnings decisions. He assumed that cost of debt is smaller than the cost of equity, absence of income tax and cost of equity and debts remains constant whatever the degree of leverage.

Myers S. C., (Spring 2001) explained the comparatively the basic three theories regarding the optimal capital structure: Trade off theory, Pecking order Theory and Free cash flow theory. Trade off theory and pecking order theory assumed that the interests of shareholders and the

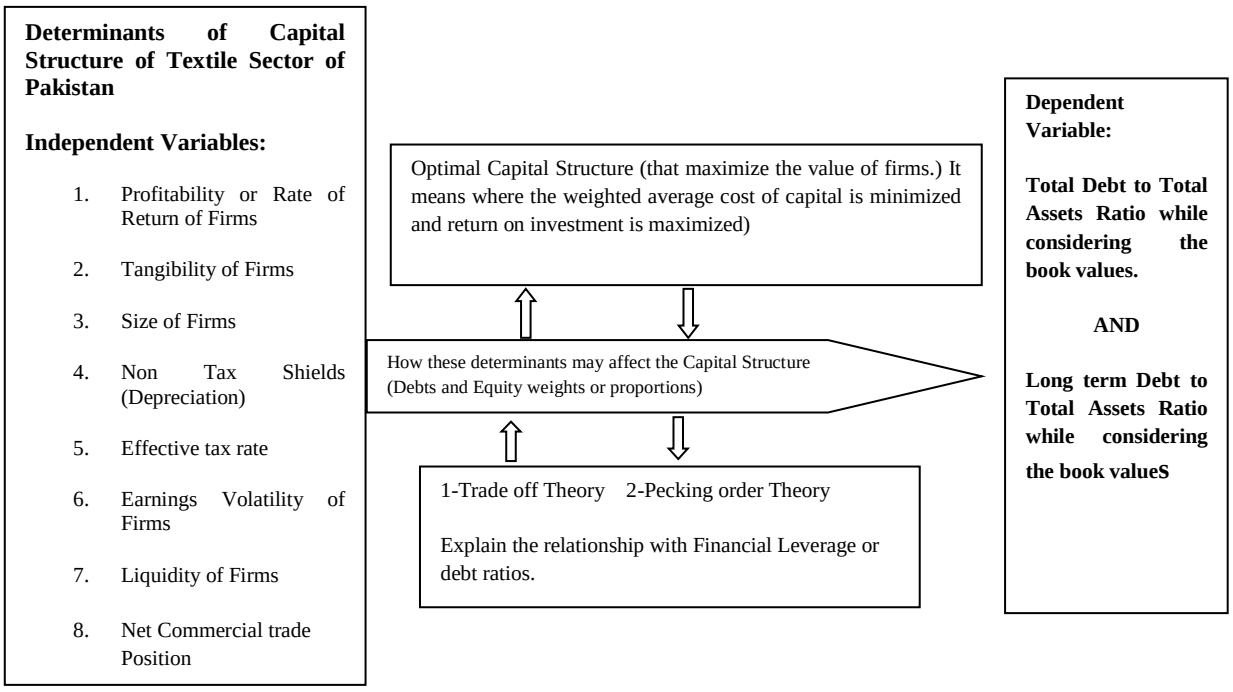
management are same while free cash flow theory explained the agency problems and their relating costs because of the conflicts in interests between the shareholders and the management. He reworked on the Modigliani and Miller (1958) proposition that the market value of a firm is independent of capital structure by introducing the financial innovation. He argued that financial innovations have low costs than imitation. The earlier adapters of financial innovative products only increase the firms' value. Successful financial innovations become commodities. These commodities are standardized and low margin financial products. He quoted the example of Floating –rate preferred shares or auction-rate preferred (partially tax exempt securities) were introduced and these added values to the firms by the earlier adaptors of these.

Trade off Theory Versus Pecking Order Theory

Both theories underlines the assumption that managers act in the favour of sharesholder. The main difference between these twos is that Trade off theory addresses all the shareholders both existing and potential while Pecking Order theory addresses only the existing shareholders.

Trade off theory emphasis on the debt as tax shields. It means use of more debt is advantageous for the firms to save tax because of interest on debt is tax deductable expense. Trade off theory emphasis on the asymmetric information prevails in the financial markets. That means each partcipant in the financial market has different amount of informations regarding the firms and investment.

Figure 1



Conceptual Frame Work of Capital Structure of Textile Sector of Pakistan

Determinants of Capital Structure:

Various studies have been done on the factors which affect the capital structure decisions. After literature review regarding Pakistan industrial sector, we reached that there is a little research has been conducted on textile industry of Pakistan regarding the determinants of capital structure. We include new variables like net commercial trade position, net working capital to total assets as a proxy for liquidity and tangibility of firms take as net fixed assets plus inventories in stead of gross fixed assets in our study. In this paper, We include the following factors based on the literature review:

Size of firm:

Trade off theory shows a positive linear relationship between firm's size and leverage subject to moderate or low debt ratios and even zero impact on firms with high debt ratios. Fattouh, P, & Harris, (2002) shows emprically positive relationship between them. Where as Pecking order theory establishes the negative linear relationship between size and leverage. Zingales & Rajan, (1995) emprically showed that large firm may prefer equity financing due to relatively cost of equity financing based on asymmetric information. Haung & Song, (2002) suggested that natural logrithem of sales or absolute values of total assets is better measure for the size of firm rather than natural logrithem of total assets. They explained the reason of non linear relationship between the firm size and debt ratio.

Profitability of Firm:

Trade off theory shows a positive linear relationship between firm's profitability and leverage. It describes that more profitable firms have higher income to shield tax. Therefore, these firms borrow more debts. Where as Pecking order theory establishes the negative linear relationship between profitability and leverage of a firm. Myers & Majluf, (1984) contributed to develop the pecking order theory. They say that both firms and investors have asymmetric information regarding the firms' performance.

Tangibility of Firm:

Trade off theory shows a positive linear relationship between firm's fixed assets and leverage. Miller, (1977) and Myers & Majluf, (1984) emphases that structuring of a firm's assets has impact on its financial policies. Where as Pecking order theory establishes the positive linear relationship between fixed assets and long term leverage of a firm and negatively related with short term leverage.

Risks or Earnings Volatility of Firm:

Trade off theory shows a negative relationship between firm's earnings volatility and leverage. Because more debt increases the earnings volatility or risks. Where as Pecking order theory establishes the positive linear relationship between firm's earnings volatility and leverage. Correa et al. (2007) uses the variance of earnings before interests and taxes to total assets as a proxy for risks and found a positive relationship between them.

Effective Tax Rate of Firm:

Trade off theory shows the positive relationship between the effective tax rate and leverage. Because it decreases the effective costs of debts. Therefore an increase in tax rate increases the tax advantage of debt financing. DeAngelo & Masulis, (1980) found Positive relationship between them. Where as Pecking order theory does not specify the certain relationship between the effective tax rates and debt level.

Non Debt Tax Shields:

DeAngelo & Masulis, (1980) and Myers & Majluf, (1984) studies show that both theories show negative relationship between non debt tax shields and leverage. But empirical findings are mixed like some studies showed the positive relationship of non debt tax shields with debt ratios like Karadeniz et al. (2009), while some studies shows negative relationship between the non debt tax shields and debt ratios like Sheikh & Wang, (2011)

Net Commercial Trade Position:

Pecking order theory takes commercial trade position as a internal source of finance. Hence it suggests negative relationship between them. Colombo, (2001) found a negative relationship between them while trade off theory suggests positive relationship between them.

Liquidity of Firm:

The relationship between the liquidity ratios and debt ratios are positive as suggested by the trade off theory. Pecking order theory predicts the negative relationship between the liquidity and debt ratios. Negative relationship shows that agency costs of liquidity are high. While positive relationship shows that high liquidity firms are able to pay off its obligations as arises. Some empirical studies show the negative relationship of liquidity with debt ratios like Faris & Abu, (2011), Eriotis, (2007) and Sheikh & Wang, (2011).

METHODOLOGY

We used the secondary data sources published by the reliable source State Bank of Pakistan. There are 155 textiles companies that are covered in the year book "Financial Analysis of Non Financial Companies listed at Karachi Stock Exchange" of State Bank of Pakistan 2012 and 2013. We select 68 companies among them in order to make a panel data which covers the seven years starting from 2006 to 2012. These companies are engaged in spinning, weaving and finishing operations. This panel data comprises 476 observations.

We choose book values of total debt to total assets to measure the leverage.

Table I

Variables	Definition	Used by other researchers
Dependent Variable: Debt ratio	(STD + LTD)/(Total assets)	Sheikh & Wang, (2011), Ezeoha, (2008), and viviani,(2008)
Explanatory Variables:		
Profitability	(net profit before interest, tax and depreciation)/ Total assets	Sheikh & Wang, (2011)
Size of Firm	(natural log of sales)	Sheikh & Wang, (2011) and Ezeoha, (2008)
Non debt tax shields	(Depreciation Exp)/ total assets):	Sheikh & Wang, (2011), viviani, (2008),and Karadeniz et al. (2009).
Tangibility	(Net fixed assets+ inventories)/ Total Assets):	Ganguli, (2013) and viviani, (2008)
Liquidity	(Net working capital /Total Assets)	Seppa et al., (2008)
Risk or Earnings Volatility	(Earnings before interest and taxes / Total Assets -Ave. of EBIT/TA)^2	Ganguli,(2013)
Effective tax rate	(corporate tax/ taxable income)	Karadeniz et al. (2009)
Net Commercial trade position	(Trade debtors- trade Liability)/ (Total Assets)	Karadeniz et al.(2009)

Ratios formulae used in this study

Econometric Techniques for Panel Data:

i).Pooled OLS Model:

This model assumes that the regression coefficients B_1 to β_8 are same for all the textile firms of Pakistan. It means there is no difference between and among the textiles firms. The intercept β_0 is same for the textile firms.

$$FL_{it} = \beta_0 + \beta_1 Proft_{it} + \beta_2 Size_{it} + \beta_3 Tangbty_{it} + \beta_4 NTaxS_{it} + \beta_5 Liqudty_{it} + \beta_6 Risks_{it} + \beta_7 ETaxR_{it} + \beta_8 NCTP_{it} + \acute{\varepsilon}_{it}$$

ii). Fixed Effects Model:

This model shows that the intercept β_{0i} of each textile firm is different from each other but does not vary over time. It means that each textile firm has its own specific financial policy and managerial philosophy. This model assumes that the slopes coefficients B_1 to β_8 of determinants are invariant across the textile firms or over time.

$FL_{it} = \beta_{0i} + \beta_1 Profit_{it} + \beta_2 Size_{it} + \beta_3 Tangbty_{it} + \beta_4 NTaxS_{it} + \beta_5 Risks_{it} + \beta_6 ETaxR_{it} + \beta_7 NCTP_{it} + \beta_8 Liqudty_{it} + \mu_{it}$

iii). Random Effects Model or Error Components Model:

This model breaks the intercept β_{0i} of fixed effect model into β_0 and $\acute{\epsilon}_{it}$. It assumes that the intercept is a random variable with a mean value of β_0. This model $\acute{\epsilon}_{it}$ shows the cross section or individual firms error component where as μ_{it} shows the time series and individual firms error component.

$FL_{it} = \beta_0 + \beta_1 Profit_{it} + \beta_2 Size_{it} + \beta_3 Tangbty_{it} + \beta_4 NTaxS_{it} + \beta_5 Risks_{it} + \beta_6 ETaxR_{it} + \beta_7 NCTP_{it} + \beta_8 Liqudty_{it} + \acute{\epsilon}_{it} + \mu_{it}$

Where

FL_{it} = Debt to total Assets ratio of ith firm at time t period

$Profit_{it}$ = net income before interest, tax and depreciation to total Assets ratio of ith firm at time t period

$Size_{it}$ = Size of ith firm at time t period

$Tangbty_{it}$ = Tangibility of ith firm at time t period

$NTaxS_{it}$ = Non debt tax shields of ith firm at time t period

$Risks_{it}$ = Earnings volatility of ith firm at time t period

$ETaxR_{it}$ = Effective Tax Rate of ith firm at time t period

$NCTP_{it}$ = Net Commercial Trade of ith firm at time t period

$Liqudty_{it}$ = Liquidity of ith firm at time t period

B_0 = Common intercept

$B_1 – \beta_8$ = Coefficients of concerned explanatory variables

$\acute{\epsilon}_{it}$, μ_{it} = Stochastic error term of ith firm at time t period

RESULTS

Total debt (It includes both short term loans and long term loans) is taken as a dependent variable. It is used as a proxy for leverage.

Table II:

	Total debt to total assets	Effective Tax Rate	Liquidity	Net Commercial Trade Position	Non Debt Tax Shields	Profitability	Tangibility	Size of firm	Risks
Mean	0.501	1.035	0.153	-0.066	0.039	0.129	0.755	14.736	0.006
Maximum	0.945	381.267	0.538	0.306	0.305	0.401	0.968	17.698	0.187
Minimum	0.0003	-58.782	-0.639	-0.701	0.000	-0.372	0.171	10.028	$8.95*10^{-9}$
Std. Dev.	0.156	18.238	0.174	0.145	0.021	0.082	0.136	1.054	0.014
Observations	476	476	476	476	476	476	476	476	476

Summery Analysis

Table II shows mean value of financial leverage of 68 a textile sector firms over seven years' period (2006 – 2012) is 0.501. That means 50.10% of total assets of sample textile firms is financed by total debts. The minimum debt ratio for the sample is 0.0003 which shows that some of sample textile firms have near zero debt and totally financed by the equity. The maximum debt ratio is 0.945 which shows that the firm with this ratio has 94.50% of total assets are financed by total debts.

Table III

Year wise Averages	2006	2007	2008	2009	2010	2011	2012
Total debt to Total assets	0.52	0.43	0.50	0.61	0.52	0.48	0.45
Profitability	0.12	0.11	0.10	0.09	0.19	0.19	0.12
Size	14.34	14.45	14.55	14.62	14.87	15.25	15.07
Non Debt Tax Shield	0.04	0.04	0.04	0.04	0.04	0.04	0.03
Tangibility.	0.79	0.77	0.78	0.76	0.73	0.72	0.74
Liquidity	0.12	0.03	0.12	0.20	0.18	0.22	0.20
Risk	0.01	0.01	0.00	0.00	0.00	0.01	0.00
Effective Tax Rate	0.23688	6.23927	-0.61194	0.07540	0.15918	1.17	-0.02
Net commercial Trade Position	-0.09	-0.17	-0.12	-0.02	-0.02	-0.02	-0.02

Horizontal Analysis of leverage of sample firms

Table III shows that financial leverage with total debt to total asset has mixed trend during 2006 to 2012, from 2008 it increased from 0.50 to 0.61 in 2009 and again it tends to decrease during the last three years from 2010 to 2012. This ratio shows the density of debt in textile sector over seven year of study period. Prior and after 2009, the textile sector has less density of debts against 2009.

Year wise average profitability of textile sample firms varies between 0.09 in 2009 and 0.19 during 2011, log of sale as proxy for size has increasing trend from 14.34 during the year 2006 to 15.07 during 2012, non debt tax shield average value 0.04 remain constant during 2006 to 2011, tangibility has also decreasing trend from 0.79 to 0.74 during the periods of 2006 to 2012, liquidity position of sample of textile sector has 0.03 in 2007 while 0.22 in 2011 which shows this sector improve its solvency position, average value of earnings volatility varies from 0.000 to 0.01 during 2006 to 2012, effective tax rate has mixed average trends in values and net commercial trade position remains negative over the studied period which shows sample textile firms have more trade liabilities than trade assets.

Table IV

	LEV	**FS**	**TA**	**PFT**	**SG**
Mean	0.023	0.452	2097.356	-0.008	0.028
Maximum	0.343	3.959	7467.710	0.072	2.362
Minimum	-0.381	-4.168	-6985.600	-0.108	-1.593
Std. Dev.	0.129	0.917	1339.430	0.029	0.576
Observations	104	104	104	104	104

Source:Aurangzeb & Haq, (2012) page# 416 cover the period from 2004 to 2009.

Aurangzeb & Haq, (2012) conducted an emprical study of capital structure of textile industry of Pakistan over the period of six years with 104 number of observation. They found mean value of total debt to total asset is 0.023 as in above data which is far less than our sample of 476 observations mean value which is 0.503 over the seven year period from 2006 to 2012. Our findings shows more indensity of debt in textile sector.

Table V

	Eff. tax rate	**TD to TA**	**Liquid.**	**Net com. trade position**	**Non debt tax shields**	**Profit.**	**Risks**	**Size**	**Tang.**
Effective tax rate	1.000								
total debt to total assets	-0.007	1.000							
Liquidity	-0.064	0.340	1.000						
Net com. trade	-	0.320	0.855	1.000					

position	0.077								
Non debt tax shields	-0.017	0.030	-0.053	-0.026	1.000				
Profitability	-0.018	-0.149	0.363	0.297	0.282	1.000			
Risks	0.023	-0.027	0.044	0.034	0.066	-0.010	1.00		
Size	-0.087	0.078	0.404	0.352	-0.102	0.355	-0.036	1.000	
Tangibility	-0.024	0.128	-0.261	-0.394	0.200	-0.09	-0.060	-0.441	1

Pearson correlation coefficient of variables:

Table VI

	Eff. tax rate	**TD to TA**	**Liquid.**	**Net com. trade position**	**Non debt tax shields**	**Profit.**	**Risks**	**Size**	**Tang.**
Effective tax rate									
total debt to total assets	1.00								
Liquidity	1.00	1.13							
Net commercial trade position	1.01	1.11	3.71						
Non debt tax shields	1.00	1.00	1.00	1.00					
Profitability	1.00	1.02	1.15	1.10	1.09				
Risks	1.00	1.00	1.00	1.00	1.00	1.00			
Size	1.01	1.01	1.20	1.14	1.01	1.14	1.00		
Tangibility	1.00	1.02	1.07	1.18	1.04	1.01	1.00	1.24	

Variance Inflation Factor: VIF

Table V and VI show that all coefficients of correlations of variables show that there is no serious problem of multicollinearity exists. The maximum correlation coefficient is 0.855 between the net commercial trade position and liquidity but its variance inflation factor is less than 10 which shows that there is no serious multicollinearity problem exist.

Asteriou & Hall, 2011 argue that if R_j^2 is greater than 0.9, then there exists a serious multicollinearity problem, at R_j^2 0.9 the VIF is 10. If VIF is 10 or less than 10 by calculating as $1/(1- Rj^2)$ then it shows that there is no serious problem of multicollinearity is existed. Gujarati writes in his book "Basic Econometric" on pages on 342 to 370 the same criteria to see the multicollinearity issues.

Table VI

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.087544	0.123093	-0.711199	0.4773
Effective Tax rate	0.000431	0.000334	1.287982	0.1984
Liquidity	0.241156	0.072498	3.326376	0.0009
Net commercial trade position	0.302346	0.086739	3.485692	0.0005
Non debt tax shields	0.868995	0.315185	2.757097	0.0061
Profitability	-0.743126	0.087464	-8.496412	0
Tangibility	0.367453	0.055018	6.678717	0
Size	0.0243	0.007168	3.389919	0.0008
Risks	-0.419838	0.448567	-0.935954	0.3498
R-squared	0.298064	Sum squared resid		8.080298
Adjusted R-squared	0.286039	F-statistic		24.78785
S.E. of regression	0.131539	Prob(F-statistic)		0

Pooled OLS Model Results:

Size of firm is statistically significant and positively correlated with financial leverage at less than 1% level of significant. The sign of the coefficient of size of firm is in accordance with the trade off theory. Other studies also show the positive relationship of size of firms with leverage like Sheikh & Wang, (2011) and Serrasqueiro & Rogao, (2009). Profitability is statistically significant and negatively correlated with financial leverage at less than 1% level of significant. The sign of the coefficient of size of firm is in accordance with pecking order theory. Other studies also show the negative relationship of profitability with leverage like Shah & Hijazi, (2004), Sheikh & Wang, (2011), Ezeoha, (2008), El & Ebaid, (2009), Ganguli, (2013), Karadeniz et al., (2009), viviani, (2008), and Serrasqueiro & Rogao, (2009)

Tangibility of firm is statistically significant and positively correlated with financial leverage at less than 1% level of significant. Our findings are in accordance with the both theories pecking order and trade off. Other studies also show the positive relationship of tangibility with leverage like Seppa,et al, (2008) and Serrasqueiro & Rogao, (2009).

Risks or earning volatility is insignificantly negative correlated with financial leverage. But sign of the coefficient in accordance with trade off theory and other studies like Sheikh & Wang, (2011) found that negative relationship between them at a less level of significance at 11% of 800 manufacturing firms of Pakistan and Ganguli, (2013) also found negative relationship but statistically insignificant .Effective tax rate is statistically insignificant and positive correlated with financial leverage. The sign of the coefficient of effective tax rate is in accordance with the trade off theory but statistically insignificant. Other studies also show the positive relationship of effective tax rate with leverage like DeAngelo & Masulis, (1980).

Non debt tax shield is significantly positive correlated with financial leverage at less than 1% level of significant. Other studies also show the positive relationship of non debt tax shields with leverage like Karadeniz et al. (2009) and Sheikh & Wang, (2011).Net commercial trade position is significantly positive correlated with financial leverage at less than 1% level of significant. Our findings are in accordance with the trade off theory and other studies also show the positive relationship between these two like Colombo, (2011).Liquidity is significantly positive correlated with financial leverage at less than 1% level of significant. Our findings are in accordance with the trade off theory and other studies like Seppa et al., (2008). The coefficient of determination R square shows that this model explained the 29.80% of financial leverage of 68 textile firms of Pakistan by the explanatory variables included in this model. Adjusted R^2 shows that 28.60% financial leverage of textile firms of Pakistan is explained by the independent variables including in this study. Overall this model is good because of its F-statistics is 24.7878 with probability 0.00000.

Table VII

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.092698	0.188291	5.803231	0
Effective Tax rate	-0.000144	0.000248	-0.58025	0.5621
Liquidity	0.256195	0.081643	3.13799	0.0018
Net commercial trade position	0.448035	0.084789	5.284141	0
Non debt tax shields	0.948455	0.27884	3.401431	0.0007
Profitability	-0.590829	0.07703	-7.67015	0
Tangibility	0.166094	0.072852	2.279876	0.0231
size	-0.046312	0.011911	-3.88804	0.0001
Risks	-0.794788	0.352326	-2.25583	0.0246
R-squared	0.716694	F-statistic		13.49201
Adjusted R-squared	0.663574	Prob(F-statistic)		0
S.E. of regression	0.090295			
Sum squared resid	3.261261			

Fixed Effect Model Results:

Size of firm is statistically significant and negatively correlated with financial leverage at less than 1% level of significant. The sign of the coefficient of size of firm is in accordance with the pecking order theory at less than1% level of significant. Other studies also show the negative relationship between size of firms with leverage like Akhtar et al., Afza & Hussain,(2011) and Qayyum, (2013).

Profitability is statistically significant and negatively correlated with financial leverage at less than 1% level of significant. Our findings are in accordance with the pecking order theory. Other studies also show the negative relationship of profitability with leverage like Shah & Hijazi, (2004) , Sheikh & Wang, (2011), Ezeoha, (2008), El & Ebaid, (2009), Ganguli, (2013), Karadeniz et al., (2009), viviani, (2008), and Serrasqueiro & Rogao, (2009)

Tangibility of firm is statistically significant and positively correlated with financial leverage at less than 5% level of significant. Because our findings are in accordance with the both theories pecking order and trade off. Other studies also show the positive relationship of tangibility with leverage like Seppa,et el, (2008) and Serrasqueiro & Rogao, (2009)

Risks or earning volatility is significantly negative correlated with financial leverage at less than 5% level of significant. Our findings are in accordance with Trade off theory and other studies like Sheikh & Wang, (2011) and Ganguli, (2013)

Effective tax rate is statistically insignificant and negative correlated with financial leverage.

Non debt tax shield is significantly positive correlated with financial leverage at less than 1% level of significant. Our findings are in accordance with other studies like Karadeniz et al. (2009), Sheikh & Wang, (2011).

Net commercial trade position is significantly positive correlated with financial leverage at less than 1% level of significant. Our findings are in accordance with the trade off theory and other studies also show the positive relationship between these two like Colombo, (2011).

Liquidity is significantly positive correlated with financial leverage at less than 1% level of significant. Our findings are in accordance with the trade off theory and other studies like Seppa et al., (2008).

The coefficient of determination R square shows that this model explained the 71.67% financial leverage of textile sample firms of Pakistan by the explanatory variables included in this model. Adjusted R^2 shows that 66.35% financial leverage of textile sector of Pakistan is explained by the independent variables including in this study. Overall this model is good because of its F-statistics is 13.49 with probability 0.00000.

Table VIII

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.59904	0.152314	3.932924	0.0001
Effective Tax rate	-3.36E-05	0.000245	-0.13706	0.891
Liquidity	0.222641	0.073487	3.029675	0.0026
Net commercial trade position	0.438842	0.078908	5.561434	0
Non debt tax shields	0.976161	0.266466	3.663359	0.0003
Profitability	-0.65053	0.0724	-8.98516	0
Tangibility	0.231216	0.062119	3.722159	0.0002
size	-0.015425	0.009283	-1.66167	0.0972
Risks	-0.746198	0.344089	-2.16862	0.0306

R-squared	0.411119	F-statistic	40.75368
Adjusted R-squared	0.401031	Prob(F-statistic)	0
S.E. of regression	0.092478	Sum squared resid	3.993871

Random Effect Model Results

Size of firm is statistically significant and negatively correlated with financial leverage (total debts to total assets) at less than 10% level of significant. The sign of the coefficient of size of firms is in accordance with the pecking order theory at less than10% level of significant. Other studies also show the negative relationship between sizes of firms with leverage like Akhtar et al, Afza & Hussain,(2011) , Qayyum, (2013)

Profitability is statistically significant and negatively correlated with financial leverage at less than 1% level of significant. Our findings are in accordance with the pecking order theory. Other studies also show the negative relationship of profitability with leverage like Shah & Hijazi, (2004), Sheikh & Wang, (2011), Ezeoha, (2008), El & Ebaid, (2009), Ganguli, (2013), Karadeniz et al., (2009), viviani, (2008), and Serrasqueiro & Rogao, (2009).

Tangibility of firm is statistically significant and positively correlated with financial leverage at less than 1% level of significant. Our findings are in accordance with the both theories pecking order and trade off. Other studies also show the positive relationship of tangibility with leverage like Seppa,et al, (2008) and Serrasqueiro & Rogao, (2009).

Risks or earning volatility is significantly negative correlated with financial leverage at less than 5% level of significant. Our findings are in accordance with Trade off theory. Other studies like Sheikh & Wang, (2011) and Ganguli, (2013).

Effective tax rate is statistically insignificant and negatively correlated with financial leverage.

Non debt tax shield is significantly positive correlated with financial leverage at less than 1% level of significant. Other studies also show the positive relationship of non debt tax shields with leverage like Karadeniz et al. (2009) , Sheikh & Wang, (2011).

Net commercial trade position is significantly positive correlated with financial leverage at less than 1% level of significant. Our findings are in accordance with the trade off theory and other studies also show the positive relationship between these two like Colombo, (2011).

Liquidity is significantly positive correlated with financial leverage at less than 1% level of significant. Our findings are in accordance with the trade off theory and other studies like Seppa et al.(2008)

This model explained that 41.11% financial leverage of textile firms of Pakistan is explained by the explanatory variables included in this model. Adjusted R^2 shows that 40.10% financial leverage is explained by the independent variables included in this study. Overall this model is good because of its F-statistics is 40.75 with probability 0.00000.

Hausman test:

Hausman test is used to check which model is better when we are using panel data analysis. It compares the fixed effect model with random effect model and tells which one is better of these: whether Fixed Effect Model or Random Effect model.

Null Hypothesis= H_o = Fixed effect model is inappropriate

Alternative Hypothesis= H_1 = Fixed effect model is better, at probability 0.10 or less.

Correlated Random Effects - Hausman			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	30.856009	8	0.0001

This shows that fixed effect model is better to explain rather than random effect model. Because the probability value is less than 0.10

DISCUSSION

Haussman test shows that fixed effect model is better than random effect model. In fixed effect model, when total debt to total assets is taken as regressed variable with regressor variables like, profitability and size of the textile sector firms of Pakistan more follow the pecking order theory then trade off theory. Liquidity, net commercial trade position and earnings volatility more follow trade off theory than pecking order theory while effective tax rate and non debt tax shields signs are not in accordance with trade off theory but studies are

mixed in pecking order theory. Tangibility follows both theories pecking order and trade off. It means that this sector nearly equally rely on the internal sources of funds: retain earnings & surpluses of firms and external sources: short term debts & long term debts.

The independent variable effective tax rate is insignificant in all of three techniques of panel data.

Non debt tax shields show positive relationship that is statistically significant at less than 1% level of significant but trade off theory suggests negative relationship and pecking order theory studies showed both mixed results. Profitability is statistically significant at less than 1% level of significance and shows a negative relationship that shows it follow the pecking order theory. Size of firm variable is statistically significant at less than1% level of significant and it is negatively correlated with total debt to total assets which shows that it is in accordance with pecking order theory.

Tangibility follows both theories pecking order and trade off and statistically significant at less than 3% level of significant. Tangibility changes with total debt to total assets in the same direction. Risks or firms' earning follow trade off theory and negatively correlated with leverage.

Liquidity and net commercial trade position of the firms are statistically significant at less than 1% level of significant. Both variables have direct relationship with dependent variable. It shows that both variables follow the trade off theory.

IMPLICATION TO RESEARCH AND PRACTICE

This research finding may help the businesses as well as Government officials to formulate a policy for the textile sector of Pakistan like:

1. This study shows that capital structure matters in textile sector of Pakistan, therefore executive finance managers should give more considerations each factor that may influence their capital structure to attain optimal capital structure.
2. The determinants of this study like liquidity of firms, non debt tax shields like depreciation, more collateral net fixed assets, earnings volatility, size of firms, net commercial trade position and firms' profits have impact on the capital structure choice. Therefore these factors may be given more consideration while deciding financial leverage of firms in optimal capital structure of textile firms of Pakistan.

CONCLUSION

1- Our study shows that factors like liquidity, net commercial trade position, non debt tax shields, profitability, tangibility, size and risks of earning of firms have statistically significant impact on the total debt to total assets ratio. It means that capital structure does matter in textile sector of Pakistan. Therefore, all textile firms' management should consider these factors while deciding the optimal capital structure of their firms.

2- Liquidity, net commercial trade position, non debt tax shields and tangibility of firms have statistically positive impact on total debt to total assets ratio, while profitability, size, and risks of earning of firms have statistically negative impact on total debt to total assets ratio.

3- This study shows that textile sector of Pakistan supports nearly equal both theories: pecking order and trade off.

FUTURE RESEARCH

This study may be extended by including other factors like growth opportunities, assets efficiency and free cash flows and like others. This study is based on the static theories of trade off and pecking order; it may be analysis with the dynamic model of trade off, pecking order and free cash flow or agency theory.

This study may be used for comparatively analysis with other Pakistan's industrial sectors such as sugar, cement, transport, services and like others. By doing so, we may be able to compare the density of debts of each sector under studies and degree of importance of factors that influence the capital structure choice.

The dependent variable long term debts to total assets may be used for further analysis or extension of this study. This study model of long term debt to total assets may be compare with total debts to total assets, to see the impact of each type of debt with independent variables.

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