

# **The Determinants of Corporate of Debt Policy –Pre and Post Financial Market Reforms (A Case from Textile Industry of Pakistan)**

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## **Abstract**

This study investigates the effect of pre and post financial market reforms on corporate debt policy and explores the evidences for static trade off theory and Pecking order theory in financing decisions of Textile Sector of Pakistan. The Analysis depicts, that reforms have statistically significant effect on debt policy of textile industry. Negative coefficient of profitability decreased from 0.85 to 0.23 which changed its strong negative relationship with debt to weaker negative relationship with debt and improved its weaker relationship with tangible assets to strong positive relationship with debt as evident from coefficient 0.29 to 0.61. This improvement can be attributed to the financial market reforms. However during the total period under analysis the industry remained under the same debt burden of 82 percent of its assets. High operating expenses and cost of goods is associated reason of financial distress. Results show on average, the industry in the ten years (1995-2004) earned nothing. To capture the firm specific effect, fixed effect model has been used. The evidences of firm specific effects on the use of debt exist. Analysis gives no support to trade off theory for textile sector of Pakistan. However, there is some support for pecking order theory.

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## **Introduction**

Capital structure of a firm is a mix of several securities that include debt and equity. In general, a firm can choose among many alternative capital structures. Large number of ideas and theories has been developed to discuss the optimal capital structure. Corporations can arrange lease financing, use warrants, issue convertible bonds, shares, bank loan or spend its retained earning. Optimums normally require a trade off, for example, the tax advantage of borrowed money and the costs of financial distress when the firm borrowed too much. In spite of several researches the capital structure remains one of the unsettled topics in finance. Optimal capital structure has an impact on long term corporate profits, firm's valuation and capital budgeting decisions.

Debt is considered the cheapest source of financing just as if firm uses low cost factors like low cost material, low cost wages, and then firm is going to be profitable. The trade off theory predicts that higher debt is associated with higher profitability. Three reasons support this theory; one debt allow tax shield. Second, investors trust that more profitable firm will not go bankrupt; hence high profitable firms get advantage of investors trust and seek more debt. Third, agency cost, for the profitable firms, lenders/creditors give relaxation in monitoring charges, which reduces the debt cost. This motivates profitable firms to go for more debt.

If firms follow pecking order theory then it base financial decision on the availability of internally generated funds and free cash flows. External finance is only used when internally generated funds are not sufficient to pay dividends and financial growth opportunities. Profitable firms prefer internal financing.

Number of studies worldwide shows different results. Capital structure is influenced by many factors like size, growth, profitability and specific industry also plays its role in capital structure decisions. Textile industry is the largest sector of Pakistan, which has major share in exports. The performance of this sector, therefore, has a strong impact on the national economy. This sector major financing depend on bank loan. Financial sector reforms started in mid 1990s but in 1997 it was strengthened when the government issued three amendment ordinances in May 1997. That includes the State Bank of Pakistan Act, 1956, Banking Companies Ordinance, 1962, and Banks Nationalization Act, 1974. These amendments gave full and exclusive authority to the State Bank of Pakistan to regulate

the banking sector. The Securities and Exchange Commission of Pakistan (SECP) was established under the Act of Parliament in 1997 as an autonomous body. It started operations from January 1999. As per Act, SECP responsibility is (1) regulating the issue of securities; (2) regulating the business of stock exchanges and other security markets; (3) supervising depository and clearing houses; (4) registering stock brokers and sub-brokers; (5) regulating investment schemes and funds; (6) preventing fraud in securities markets; (7) regulating share acquisition and mergers/take-over of companies; and (8) regulating the issues of securities. Upon independence of SECP operations as autonomous body from January 1999 as regulator of Non- banking financial institutions strengthened the financial market reforms as SBP already working as an independent body in DFIs and Commercial banks. This study examines the debt and its determinants in the light of capital structure theories in the pre and post financial sector reforms.

### **Objectives of the Study**

Textile industry is the largest and core sector of Pakistan. This study is the first in the Pakistan's finance literature, according to the authors' knowledge, to shed light on determinants of debt policy in Pakistani textile mills considering pre and post financial market reforms and analyze how firms make financing decisions. Pakistan textile mills are of interest for several reasons particularly now days are in unique position. The termination of MFA and the full applicability of the WTO regime have ushered in a new era of challenges and opportunities for the textile industry. The performance of this sector, therefore, has a strong impact on the national economy. We mainly focus on different predictions implied by trade off and pecking order theories and investigate the determinants of debt policy in this sector and also examine which theory supports our results.

The study has been organized as follows. In the next chapter, review some of the empirical literature concerning the capital structure is given. Section three, describe data and specification of model used in this analysis. The section four, present the results of the empirical analysis and the conclusion that can be derived from the results.

## 2 Literature review

### Capital structure theories

Static trade off theory: Finance managers often think of the firm's debt – equity decision as a trade off between interest tax shield and the cost of financial distress. The static trade off theory of capital structure states that optimum capital structure is obtained where the tax advantage of debt balances leverage related cost such as financial distress and bankruptcy holding firms assets and investment decision constant (Baxter 1967) and Altman(1984,2002) Trade off theory of capital structure recognizes that target debt ratios may vary from industry to industry . Industries where assets are mostly tangible, borrow heavily because their assets are collateral and relatively safe, however, the trade off capital structure advocates moderate debt ratio.

Rajan and Zingales (1995) compared leverage and its determinates across G-7 countries that are united states, Germany, Canada, Italy, France, Japan and united kingdom. They analyzed there was a positive relationship of leverage and profitability only in Germany. Tangibility is positively correlated in all countries. Size is positively correlated with leverage except Germany.

Jose M. C. and E.L have studied the relationship between capital structure and profitability of the Brazilian firms. They have concluded that in short run there was a positive relationship between debt and profitability. However, in the long urn there was inverse relationship between debt and profitability.

Antoniou, Guney and Paudyal (2002) investigated determinants of capital structure and leverage ratio of French, German and British firms with the help of penal data. Their results suggested that size of the firm positively affect the leverage ratio. They analyze relation of profitability, size of firms, fixed assets. This study identifies a positive impact on firm's size on leverage. While the relationship between fixed asset ratio and level of leverage was mixed means positive in Germany but negative in France and UK. This shows that tangibility of assets is more significant in bank borrowing in Germany. The effect of all these factors on leverage depends on financial environment and tradition of the country in which firm operates.

Frank and Vidhan (2005) investigated that there are a large number of variables that appear to be related to debt ratio of the firm but only few factors have significant effect on debt ratio. They found that relation between leverage and size of firm is positive. For tangibility of assets Empirical results showed a positive relation among leverage and tangibility of assets of firm.

On the basis above literature review on static trade off theory, following hypothesis can be developed and tested whether static trade off theory is relevant in Pakistan textile sector.

H1: There is a positive relationship between leverage ratios and profitability

H2: There is positive relationship between leverage ratios and tangibility

H3: There is positive relationship between leverage ratios and size.

### **Pecking order theory:**

Asymmetric information affects the choice between internal and external financing and between new issues of debt and equity securities, this lead to pecking order theory. Myers (1984) suggested that retained earning is better than debt but on the other hand debt is better than equity if external financing is used. Hence profitability should have inverse relationship with leverage. Managers use private information about the characteristics of firm's return on investment or investment opportunities which is not known to common investors.

Antoniou, Guney and Paudyal (2002) investigated determinants of capital structure and leverage ratio of French, German and British firms with the help of penal data. This study identifies a positive impact on firm's size on leverage. They also find an inverse relationship among profitability and leverage only in France and UK, which supports pecking order theory in these countries. While the relationship between fixed asset ratio and level of leverage was mixed means positive in Germany but negative in France and UK. This shows that tangibility of assets is more significant in bank borrowing in Germany. The effect of all these factors on leverage depends on financial environment and tradition of the country in which firm operates.

Frank and Vidhan (2005) found that relation between leverage and size of firm is positive. For tangibility of assets empirical results showed a positive relation among leverage and tangibility of assets of firm. The results showed a negative relation between profitability and leverage.

Hijazi. S and Y.B Tariq (2006) analyzed determinants of capital structure of cement industry of Pakistan with the help of OLS regression. They found that size of firms and profitability were negatively correlated with leverage. Hence this rejects the static trade off theory, which showed a positive relation between size of the firm and profitability. This shows that firms in cement industry use more equity and less debt. Tangibility of assets and growth found to be positively correlated with leverage. All the results were significant except the size of the firm. Their results with Shah A and Hijazi S. (2005) were found to be different in terms of growth and size of the firm. They concluded that in developing countries like Pakistan, cement industry usage of short term financing is higher than long term financing.

Rao, Waters and Payne, (1995) concerned with those variables that indicate the level of leverage in firm. It shows that there is a negative relation among growth and leverage of the firm. Size of the firm is negatively correlated with the leverage of the firm hence smaller firms are expected to increase the profitability of going private.

Scot J H (1976) argues that a firm determining the optimal capital structure will issue as much secured debt as possible, because the agency costs of secured debt are lower than those of unsecured debt. Securable assets are considered the fixed assets such as plant and machinery. Thus, firms with securable assets should issue more debt. Therefore, firms that employ larger amount of fixed assets are expected to maintain more debt level than firms with lower fixed assets ratio.

Keister, L (2000) argues that during economic transition, the capital structure of companies might be affected due to shortage of financing from the state.

Titman and Wessels, R (1988) were the first authors to investigate the effects of size on financial leverage across countries with particular interest in identifying patterns distinguishing very small firms from their larger counterparts. Data presented to him for the U.S. U.K, Japan, France, Israel showed that there was more variation in financial leverage across countries than across size.

Korajczyk and Levy (2003) argue that both macroeconomic conditions and firm specific factors have an effect on firms financing choices. Antoniou et al, (2002) find that the capital structure decisions of firms are not only affected by its own characteristics, but also by its surrounding environment. The surrounding environment may affect the firm's capital structure for different reasons, such as, the deterioration or the improvement in the state of economy, the existence of a stock market and/or the size of banks sector. Leverage can be changed due to an active decision of the firm to issue repurchase securities. Leverage can also be changed when the firms circumstances changes or when its stock prices changes.

Rajan and Zingales (1995) concluded profitability is negatively correlated in all G-7 countries except Germany and analyzed that size is positively correlated with leverage except Germany. Tangibility is positively correlated with leverage in all countries.

Wolfgang and Fix (2003) concluded that firms with less investment opportunities apply more leverage that is in accordance to both theories and leverage has a direct relation with the tangibility of assets. They also suggest that more profitable firms use less leverage.

On the basis of above literature review on Pecking order theory, following hypothesis can be developed and tested whether Pecking order theory is relevant in Pakistan textile sector.

H4: There is a negative relationship between leverage ratios and profitability

H5: There is positive relationship between leverage ratios and tangibility

H6: There is positive relationship between leverage ratios and growth.

## 2. METHODOLOGY

### **Data**

The data used in empirical analysis are sourced from the State Bank of Pakistan Publications "Balance Sheet Analysis of Listed companies on KSE" for the period from 1995 to 2004 (10 years), 176 firms from textile industry included in this analysis.

### **Model specification**

Most of the studies used OLS model for analysis but this model has very strong assumption of constant intercept and slope coefficients. In this study Fixed effect model has been used on a panel data set considering different intercepts for different companies to capture firm's special features. Time dummies have not been used as there is only one industry, time effects during this period were common for all firms.

Following is the model specification:

$$Y_{it} = \alpha + \sum_{i=1}^{175} \alpha_{1i} D_i + \lambda_1 MRD_t + \sum_{i=1}^4 \beta_1 X_{it} + \mu_{it}$$

Where:

$Y_{it}$  = Leverage ratio of individual firm over time

$X_{it}$  = Independent variables (as mentioned below) of individual firms over the time.

$D_i$  = Dummy for each company.

MRD= Market Reform Dummy

$\mu_{it}$  = Residual of individual firm over the time.

### **Leverage (Dependent Variables)**

Academic literature suggests various definitions regarding leverage. The debt ratio is defined as the ratio of total debt divided by the total assets of the firm. Burgman (1996), states leverage can be defined as the ratio of the book value of long term debt to book value of long term debt plus market value of equity. Total debt contains both long-term and short-term liabilities of the firm. Rajan and Zingales in 1995 provides definition of leverage as leverage is the ratio of debt to total assets. Most of the studies measured leverage following Rajan, hence in this paper leverage measured as the ratio of debt to total assets.

Leverage= Total Debt/ Total Assets

### **Profitability**

Profitability is important determinant of business performance. In the long run, the manager must earn a competitive return on the contributed resources if the business is to

continue. In the short run, the manager must earn sufficient return to at least pay for variable costs. If this is not possible, then some short-term response to minimize losses will be necessary. In addition, there are a number of financial measures or ratios that can provide further insight into a firm's profitability. The ratio of profit after taxed to the book value of total assets is used to proxy for profitability in this paper.

$$\text{Profitability} = \text{NPAT} / \text{Total Assets}$$

### **Size**

Smaller firms are less exposed to general public as compared to larger firms. This shows larger firms provides more information to its customers, suppliers, investors and analysts. They can gather information easily because larger firm's resources to furnish information are available. Larger firms can easily cut short its transaction costs linked with debt issuance and level of leverage of larger firms is more. Log of sales as variables to measure size of firms is used in this paper.

$$\text{Size} = \text{LN}(\text{total sales})$$

### **Tangibility of assets**

Tangibility of assets is an important determinant of leverage (Rajan and Zingales, 1995). Those firms whose assets are highly tangible can borrow debt on favorable terms. Creditors might impose restrictions on those firms having fewer tangible assets in case of debt financing. This concludes a positive relation between tangibility of assets and level of debt.

$$\text{Tangibility of assets} = \text{Fixed Assets} / \text{Total Assets}$$

## **Analysis:**

### **Descriptive Statistics**

Table 1 shows that on average this industry finance 82 percent of its assets through debt with the variation of 43 percent that means in some cases its debt is more than assets. Profitability shows on average industry earned nothing as a return to its investors with the variation of 15 percent that means loss may reach to 15 percent. This study shows on average, the industry in the last ten years earned nothing rather generated losses. Equity financing on average in this industry is 18 percent. Growth on average found to be 15 percent with a variation of 92 percent. This shows high volatility in growth. Tangible

assets on average in this industry are 59 percent with the variation of 20 percent. This percentage seems reasonable for this industry.

The industry must realize that the cost associated to debt is the reason of financial distress. This cost of distress increases when firm uses more debt and is unable to meet interest and principle payments.

**Table1**  
**Descriptive Statistics**  
**For the period 1995-2004**

Variables	Observations	Mean	SD	Minimum	Maximum
Leverage	1760	0.82	0.43	0	4.79*
Tangible Assets	1760	0.59	0.20	0	1.0
Size (LN sales)	1760	6.20	1.40	-1.6	10.6
Growth	1760	0.15	0.92	-0.99	13.89
Profitability	1760	0.00	0.15	-1.87	1.51

Note: \* theoretically, debt ratio should be less than one or equal to one, but we have find that most of the firms have negative equity that shows why ratio is more than one.

**Fixed Effect (Ordinary Least Square Dummy variable) Model**

**Table 2**

No. of Observations	1754
R-squared	0.61
Adjusted R-squared	0.58
F(117,1636)=22.10	Prob>F=0.0000

Variables	Coefficient	t-value	P-value
Tangible Assets	.5755544	11.58	0.000

Size Ln(Sales)	-.0625018	-8.99	0.000
Growth	-.0173403	-2.30	0.021
Profitability	-.2775967	-5.60	0.000
Market Reform Dummy	.039492	2.89	0.004
$\alpha$ D1	.6121978	6.77	0.000
$\alpha$ D2	-.1461853	-1.62	0.104
$\alpha$ D3	-.2719628	-3.04	0.002
$\alpha$ D4	.3592083	4.0	0.00
$\alpha$ D5	.0725621	0.81	0.420
$\alpha$ D6	.22967	2.54	0.011
$\alpha$ D7	-.3085304	-3.43	0.001
$\alpha$ D8	-.4169538	-4.60	0.000
$\alpha$ D9	.673009	7.54	0.000
$\alpha$ D10	-.0542212	-0.61	0.544
$\alpha$ D11	1.586824	17.62	0.000
$\alpha$ D12	.0847772	0.95	0.343
$\alpha$ D13	-.2904446	-3.24	0.001
$\alpha$ D14	-.5024548	-5.53	0.000
$\alpha$ D15	-.0315122	-0.35	0.725
$\alpha$ D16	-.0032141	-0.04	0.972
$\alpha$ D17	.0165131	0.18	0.853
$\alpha$ D18	-.0514177	-0.58	0.565
$\alpha$ D19	-.0932618	-1.04	0.297
$\alpha$ D20	-.0932618	-1.04	0.297
$\alpha$ D21	-.0044418	-0.05	0.960
$\alpha$ D22	-.0535924	-0.60	0.549
$\alpha$ D23	.0249744	0.28	0.781
$\alpha$ D24	-.1028614	-1.15	0.249
$\alpha$ D25	-.0245935	-0.27	0.785
$\alpha$ D26	.2578112	2.85	0.004
$\alpha$ D27	.1141909	1.28	0.202
$\alpha$ D28	1.306758	14.54	0.000
$\alpha$ D29	-.1170848	-1.31	0.190
$\alpha$ D30	-.312008	-3.48	0.001
$\alpha$ D31	-.3085768	-3.26	0.001
$\alpha$ D32	-.2292413	-2.65	0.008
$\alpha$ D33	.1259899	1.32	0.187
$\alpha$ D34	-.2224344	-2.46	0.014
$\alpha$ D35	.1139825	1.28	0.201

$\alpha$ D36	.2240508	2.51	0.012
$\alpha$ D37	-.3614189	-3.96	0.000
$\alpha$ D38	.1360947	1.49	0.137
$\alpha$ D39	.2322271	2.56	0.011
$\alpha$ D40	.1431146	1.58	0.115
$\alpha$ D41	.1431146	1.58	0.115
$\alpha$ D42	-.0718734	-0.80	0.422
$\alpha$ D43	.411755	4.56	0.000
$\alpha$ D44	.0961656	1.07	0.283
$\alpha$ D45	-.2093553	-2.34	0.019
$\alpha$ D46	-.2093553	-2.34	0.019
$\alpha$ D47	-.2093553	-2.34	0.019
$\alpha$ D48	.2654228	2.71	0.007
$\alpha$ D49	.3008151	3.30	0.001
$\alpha$ D50	.2528208	2.80	0.005
$\alpha$ D51	-.2118971	-2.37	0.018
$\alpha$ D52	.0286508	0.32	0.749
$\alpha$ D53	-.0076215	-0.08	0.932
$\alpha$ D54	-.1578637	-1.75	0.081
$\alpha$ D55	-.269576	-2.98	0.003
Cons	0.8079151	14.07	0.00

As can be seen from Table 2, the independent variables provide reasonable explanatory power as indicated by R- square value 0.61. Although market reform dummy coefficient is weak positive but is statistically significant that shows financial market reforms have improved the worse situation but as this sector is badly suffering from financial distress, it needs more intra firm management efforts. Firm specific effect has been found in analysis as evident from t-value of dummies coefficient. If static trade off theory holds, significant positive slope coefficients are expected for profitability, tangibility and size explanatory variables. Analysis evidences that there is significant negative slope coefficient of profitability, size but positive slope coefficient only for tangibility of assets. There is no support for static trade off theory from textile sector of Pakistan.

If pecking order theory holds, significant negative slope coefficient for profitability is expected and significant positive slope coefficients for growth and tangibility are expected. Analysis show the significant negative slope coefficient for profitability and

significant positive slope coefficient for tangibility as expect by theory but significant negative slope coefficient for growth against the theoretical expectations. There is some support for pecking order theory from textile sector of Pakistan. The expected and observed relationships have been shown at table 3 & 4

**Table 3**

**Expected and Observed relationship between the variables:  
Based on Theory Static Trade off**

<b>Determinants</b>	<b>Expected relationship with leverage</b>	<b>Observed relationship with leverage</b>	<b>Statistical significance</b>
Profitability	Positive	Negative	Significant
Tangibility	Positive	Positive	Significant
Size LN (sales)	Positive	Negative	Significant

**Table 4**

**Expected and Observed relationship between the variables:**

### Based on Pecking order theory

<b>Determinants</b>	<b>Expected relationship with leverage</b>	<b>Observed relationship with leverage</b>	<b>Statistical significance</b>
Profitability	Negative	Negative	Significant
Tangibility	Positive	Positive	Significant
Growth	Positive	Negative	Significant

Theoretically, all companies are exposed to certain risk attached to its operations; this type of risk is known as business risk which remains the concern of lenders. Financial risk is associated with the use of debt by companies. Business risk depends on number of factors (Brigham, Gapenski) like for example, (1) demand for firm's product (2) sales price variability- firm's product are exposed to highly volatile market (3) input cost variability – firm's input costs are highly uncertain (4) ability to adjust output prices for changes in input costs (5) ability to develop new product in a timely, cost effective manner- the faster the product become obsolete, the greater a firm's business risk. (6) The extent to which costs are fixed-operating leverage. The business risk of the firm usually reflects the probability that the firm will go into bankruptcy, with an inverse relationship between the level of business risk of the firm and its leverage (Bradley, Jarrell and Kim, 1984). Proxies that are usually used to reflect the firm's business risk include: the standard deviation of the percentage change in operating income (Titman and Wessels, 1988); standard deviation of the first difference in sales over 5 years, scaled by the average value of the firm's total assets over the same period (Wiwattanakantang, 1999); variability of the return on assets over available time period (Crutchley and Hansen, 1989; Booth et al., 2001). Financial risk

further increases the risk level of firm if it is exposed to debt financing. If the operating profits decrease due to either decrease in sales or increase in operating expenses, return on equity will decrease more as compared to unleveled firm. Financial risk leads to financial distress. Financial distress occurs when promises to creditors are broken or honored with difficulty. Sometimes financial distress leads to bankruptcy. In times of financial distress there may be lower capital investment and R&D spending, loss of key employees, suppliers find new clients etc. Considering business and financial risk, risk proxies percentage change in sales, operating expense to gross sales and return on assets has been used in this study.

**Table 5**

**Table Showing the Measures for Business and Financial Risks**

Title	Gross Sales	(*)Operating Expenses (Including CGS) to Gross Sales	Percentage change in sales	Return on Assets	Leverage
Average	1102.32	1.08	46.09	0.00	0.82
Standard Deviation	448.8	0.56	119.32	0.16	0.43

(\*) Data did not allow the separation of operating expenses from CGS.

If we look at table 5, the average and standard deviation of ROA, Percentage change in sales and operating expense (including cost of goods sold) to gross sales, industrial units

are not capable of seeking loan either from bank or market, up to the extent of 82 percent, in some cases even more than that. Despite inefficient utilization of debt, how it became possible? For that matter, it is necessary to further explore the ways and means of possibility of seeking loan. Upon review of literature of financial markets it revealed that all borrowing is from banks. In seventies, government's decision of nationalization of Pakistan's banking sector provided political control over the entire financial sector and this structure persisted until late nineties. State Bank of Pakistan's regulatory and supervisory role was weaker. Pakistan Banking Council created for operational control of banks. The Federal government retained the right to select the members of the Pakistan Banking Council (PBC) and through the PBC, it controlled over the appointments of board members of individual banks. In this way political control over the banking sector was strengthened. In Pakistan industrialists and land lards have strong political influence. Cheema (1999) shows that during the 1980s and early 1990s the rate of interest on long-term loans was only 40% of the open market price of capital, which constituted a significant subsidy for the industrial firms. Subsidized credit continued to provide essential state-created incentives for corporate growth during the eighties and nineties. State created incentives significantly watered down the Pakistani corporation's need to mobilize equity finance through capital markets. This pattern of corporate finance has reduced the incentive to mobilize capital through equity markets, which in turn might be the reason for underdevelopment of capital markets in Pakistan.

Government issued amendments ordinances in May 1997; that includes the State Bank of Pakistan Act, 1956, Banking Companies Ordinance, 1962, and Banks Nationalization Act, 1974. These amendments gave full and exclusive authority to the State Bank of

Pakistan to regulate the banking sector. The Securities and Exchange Commission of Pakistan (SECP) was established under the Act of Parliament in 1997. The SECP is an autonomous body. It started operations from January 1999. Since July 1, 2002, State Bank of Pakistan (SBP) and SECP jointly agreed upon that, SECP would perform supervisory functions for Non-Bank Financial Institutions (NBFIs), including investment banks, discount houses and housing finance companies. So, other than commercial banks and DFIs, all companies come under the supervision of the SECP. The 1997 Act gives the SECP responsibility (1) regulating the issue of securities; (2) regulating the business of stock exchanges and other security markets; (3) supervising depository and clearing houses; (4) registering stock brokers and sub-brokers; (5) regulating investment schemes and funds; (6) preventing fraud in securities markets; (7) regulating share acquisition and mergers/take-over of companies; and (8) regulating the issues of securities. Upon independence of SECP operations as autonomous body from January 1999 as regulator of Non- banking financial institutions strengthened the financial market reforms as SBP already working as an independent body in DFIs and Commercial banks. Once it is proved statistically that market reforms have impact on determinants of debt policy, it is considered pertinent to further investigate the determinants of debt policy in the context of pre and post financial sector reforms separately by each segment analysis to pinpoint the variables. Hence data is divided into two groups Pre reform 1995-1999 and post reform 2000-2004.

### **Pre-Financial Sector Reforms Analysis**

**Table 6****Descriptive Statistics (1995-1999)**

Variable	Observations	Mean	Std. Dev	Minimum	Maximum
Leverage	880	82	35	0.01	3.1
Tangible Assets	880	0.59	0.21	0.04	1.0
Size-Ln(Sales)	880	6.09	1.19	0.79	9.15
Growth	880	0.17	1.23	-0.99	13.89
Profitability	880	-0.027	0.13	-1.66	0.7

Descriptive statistics show industry is badly clutched in debt trap where there is on average 81 percent debt ratio with standard deviation of 35 percent. Growth on average is only 17 percent whereas during this period of 1995-99 industry sustained losses on average around 3 percent of total assets.

**Table7**

**Fixed Effect (Ordinary Least Square Dummy variable) Model  
(1995-1999)**

No. of Observations	880
R-squared	0.65
Adjusted R-squared	0.59
F(117 ,757)=11.81	Prob>F=0.0000

Variables	Coefficients	t-values
Tangible	.2965521	4.99
Size	-.0122982	-1.31
Growth	-.0127162	-1.98
Profitability	-.8527885	-11.05
$\alpha$ D1	.4682897	4.62
$\alpha$ D2	-.0973133	-0.97
$\alpha$ D3	-.2551793	-2.55
$\alpha$ D4	.1626572	1.61
$\alpha$ D5	.1684891	1.68
$\alpha$ D6	.1575624	1.57
$\alpha$ D7	-.2182896	-2.16
$\alpha$ D8	-.3371508	-3.32
$\alpha$ D9	.714361	7.13

$\alpha$ D10	.0107797	0.11
$\alpha$ D11	.7953232	7.86
$\alpha$ D12	.0209118	0.21
$\alpha$ D13	-.2289789	-2.29
$\alpha$ D14	-.2455824	-2.37
$\alpha$ D15	.0256306	0.26
$\alpha$ D16	.0704384	0.70
$\alpha$ D17	.0129102	0.13
$\alpha$ D18	.1330749	1.34
$\alpha$ D19	.0413353	0.41
$\alpha$ D20	.0685582	0.69
$\alpha$ D21	.0248361	0.25
$\alpha$ D22	.2421013	2.41
Cons	.6594322	9.36
And more		

Profitability coefficient shows strong statistically significant relationship and explain reasonable portion of debt. Negative coefficient (-0.85) between profitability and debt show that debt increases when profitability decreases and 85 percent debt is explained by negative profitability. This is the worst situation of lending to the textile industry.

As can be seen from Table (7), the independent variables provide reasonable explanatory power as indicated by R- square value 0.65. Firm specific effect has been found in analysis as evident from t-value of dummies coefficient. If static trade off theory holds, significant positive slope coefficients are expected for profitability, tangibility and size explanatory variables. Analysis evidences that there is significant negative slope coefficient of profitability, size but positive slope coefficient only for tangibility of assets. There is no support for static trade off theory from textile sector of Pakistan. However, there is some support for pecking order theory from textile sector of Pakistan.

### **Post-Financial Sector Reforms Analysis**

**Table 8****Descriptive statistics 2000-2004**

Variable	Observations	Mean	Std. Dev	Minimum	Maximum
Leverage	880	82	0.51	0.04	4.79
Tangible Assets	880	0.58	0.19	0.06	1.0
Size-Ln(Sales)	880	6.32	1.54	0.26	10.61
Growth	880	0.12	0.41	-0.89	8.0
Profitability	880	0.026	0.17	-1.87	1.51

Descriptive statistics show industry in on average still has 81 percent debt burden with standard deviation of 51 percent. Growth on average is only 12 percent whereas during this period of 2000-04 industry improved in assets utilization and earned a profit on average around 3 percent of total assets. This improvement may be attributed to the financial sector reforms.

**Table 9**

**Fixed Effect (Ordinary Least Square Dummy variable) Model  
(For the period 2000-2004)**

No. of Observations	880
R-squared	0.74
Adjusted R-squared	0.70
F(117 ,761)=18.92	Prob>F=0.0000

Variables	Coefficients	t-values
Tangible	.6072086	7.93
Size	-.0729014	-8.07
Growth	-.0676245	-2.75
Profitability	-.234893	-3.9
$\alpha$ D1	.7594282	6.03
$\alpha$ D2	-.1519616	-1.21
$\alpha$ D3	-.1966783	-1.57
$\alpha$ D4	.5764206	4.62
$\alpha$ D5	-.0347829	-0.28
$\alpha$ D6	.2801931	2.20
$\alpha$ D7	-.3466631	-2.77
$\alpha$ D8	-.4007325	-3.16

$\alpha$ D9	.6095784	4.89
$\alpha$ D10	-.1327001	-1.06
$\alpha$ D11	2.327363	18.48
$\alpha$ D12	.1333092	1.07
$\alpha$ D13	-.2799682	-2.24
$\alpha$ D14	-.5598994	-4.45
$\alpha$ D15	-.04957	-0.40
$\alpha$ D16	-.0386119	-0.31
$\alpha$ D17	-.0070227	-0.06
$\alpha$ D18	-.2641527	-2.12
$\alpha$ D19	-.1896903	-1.52
$\alpha$ D20	-.0860582	-0.69
$\alpha$ D21	-.1489243	-1.19
Cons	.8894734	10.88
And more		

As can be seen from Table (9), tangible assets coefficient shows strong statistically significant relationship and explain reasonable portion of debt whereas other independent variables size, growth and profitability do not show strong relationship although they are statistically significant. Positive coefficient (0.61) between tangible assets and debt show that debt increases when tangible assets increase. Thus post reform period analysis improved in a way that debt shifted its strong negative relationship with profitability to a strong positive relationship with tangible assets. Negative coefficient of profitability decreased from 0.85 to 0.23 which changed its strong relationship with debt to weaker relationship with debt and improved its weaker relationship with tangible assets (coefficient 0.29) to strong relationship with debt (0.61). This improvement can be attributed to the financial market reforms.

The independent variables provide reasonable explanatory power as indicated by R-square value 0.74. Firm specific effect has been found in analysis as evident from t-value of dummies coefficient. If static trade off theory holds, significant positive slope coefficients are expected for profitability, tangibility and size explanatory variables.

Analysis evidences that there is significant negative slope coefficient of profitability, size but positive slope coefficient only for tangibility of assets.

There is no support for static trade off theory from textile sector of Pakistan. But there is some support for pecking order theory from textile sector of Pakistan.

#### **4. Conclusions**

This study contributes towards a better understanding of financing behavior of textile sector of Pakistan in ten years from 1995 to 2004 through investigating the effect of pre and post financial market reforms on determinants of corporate debt policy and explores the evidences for static trade off theory and Pecking order theory in financing decisions of Textile Sector of Pakistan. The Analysis depicts, that reforms have statistically significant effect on debt policy. Findings of this study contribute towards a better understanding of financing behavior of textile sector of Pakistan in ten years from 1995 to 2004. During the period of 1995-99 industry sustained losses on average around 3 percent of total assets whereas during the period of 2000-04 industry improved in assets utilization and earned a profit on average around 3 percent of total assets. The post reform period analysis also improved in a way that debt shifted its strong negative relationship with profitability to a strong positive relationship with tangible assets. Negative coefficient of profitability decreased from 0.85 to 0.23 which changed its strong negative relationship with debt to weaker negative relationship with debt and improved its weaker positive relationship with tangible assets (coefficient 0.29) to strong relationship with debt (0.61). Although market reform dummy coefficient is weak positive but is statistically significant that shows financial market reforms have improved the worse situation but as this sector is badly suffering from financial distress, it needs more intra firm management efforts. Results show that on average this industry remained under the debt burden of 82 percent of its assets during the whole period of analysis. This study show on average, the industry in the last ten years earned nothing. This study explored the evidences for static trade off theory and Pecking order theory. On the basis of capital structure theories and literature review of existing research work, hypothesis

were developed and tested. Analysis gives no support to static trade off theory for textile sector of Pakistan. However, there is some support for pecking order theory. The industry must realize that the cost associated to debt is the reason of financial distress. This cost of distress increases when firm uses more debt and is unable to meet interest and principle payments. Analysis show lending was neither professionally granted by Banks and development Financial Institutions nor debt was professionally employed in the firms. Operating expenses and cost of goods are much higher that is major reasons of financial distress. The performance of this sector has a strong impact on the national economy. Unless such measures are taken which efficiently utilize the resources, reduce the operating expense and cost of good, due success cannot be achieved in the present scenario.

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