

# Impact of Capital Structure on Firm Financial Performance: A Case Of The Pakistani Engineering Firms Listed On KSE

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## **Fahad Najeeb Khan (Corresponding author)**

M.Phil Scholar at Quaid-i-Azam School of Management Sciences, Quaid-i-Azam University, Islamabad, Pakistan. Email: [fahad\\_najeeb83@yahoo.com](mailto:fahad_najeeb83@yahoo.com). Contact: +923348818051. Address: Room no 91, Hostel no 4, Quaid-i-Azam University, Islamabad, Pakistan.

## **Ghulam Shabir Khan Niazi**

Assistant Professor at Quaid-i-Azam School of Management Sciences, Quaid-i-Azam University, Islamabad, Pakistan. Email: [gskniazi@qau.edu.pk](mailto:gskniazi@qau.edu.pk).

## **Tayyaba Akram**

M.Phil Scholar at Quaid-i-Azam School of Management Sciences, Quaid-i-Azam University, Islamabad, Pakistan. Email: [tayyaba.akram1@hotmail.com](mailto:tayyaba.akram1@hotmail.com).

## **Abstract**

The purpose of this study is to empirically investigate the relationship between capital structure and profitability of engineering firms listed on Karachi stock exchange of Pakistan. The study uses four years data i.e. 2006-2009 for these firms. The study uses regression analysis as a research methodology. Capital structure is measured by three financial ratios i.e. short-term debt to total assets ratio, long-term debt to total assets ratio, and total debt to total assets ratio. Profitability in this study is measured by return on investment (ROI) and return on equity (ROE). Findings indicate that short-term debt, long-term debt, and total debt are significantly and negatively related to profitability measured by ROI. However, the relationship of short-term debt and total debt with profitability measured by ROE is insignificantly negative and the relationship of long-term debt with ROE is positive but not significant. This is the first

study which investigates the relationship between capital structure and profitability of the engineering sector of Pakistan.

**Keywords:** Capital structure, Short-term debt, Long-term debt, Total debt, Profitability, Return on investment, Return on equity, Engineering firms.

## 1. Introduction

Capital structure (CS) is the mixture of equity and debt used by a firm to finance its assets. It is also called financial structure. Capital structure is a very important concept in corporate finance because returns to different stakeholders need to be maximized (Modigliani & Miller, 1958). Capital structure play an important role in determining cost of capital which ultimately effect the firm profitability. Due to the importance of cost of capital (interest plus dividends) in capital budgeting decisions, it is required to establish an optimal capital structure that maximize returns and minimize cost of capital. The shareholders wealth maximization goal of financial management state the firm should maintain an optimal capital structure that maximize the firm value and minimize the cost of capital (Weston & Brigham, 1990). The capital structure theory (Harris & Raviv, 1991) indicates that a firm establish a target debt ratio based on the trade-offs between benefits and costs of equity versus debt. Considerable research (Modigliani & Miller, 1963; Myers & Majluf, 1984; Kinsman & Newman, 1999; Jensen & Meckling, 1976; Berger & Patti, 2002; Abor, 2005; Ebaid, 2009; Salehi & Biglar, 2009; Harris & Raviv, 1991; Shoib & Gohar, 2010) have been done on capital structure but there is no agreement on what exactly is an optimal capital structure.

The funds generated through capital structure are invested by the firm in assets which are used to

generate revenues. If these assets are efficiently used then the firm will earn profit which is the basic purpose of any business. Kinsman and Newman (1999) (as reported by Ebaid, 2009) mention that examining the relationship between capital structure and firm profitability is important for several reasons. First, average debt level for firms is showing an increasing trend, requiring an explanation of the effect of CS on profitability. Second and most important reason is to study the relation between CS and stockholders wealth, since stockholders wealth maximization is the basic purpose of financial management.

The purpose of this paper is to empirically test the relationship between CS and profitability of engineering firms listed on Karachi stock exchange (KSE) of Pakistan. Almazan and Molina (2005) and Bradley, Larrel and kim (1984) (as reported by Amjed, 2007), examined that firms in a particular industry establish similar capital structures. Certain variables force firms to behave in a similar fashion in an industry which leads to industry specific capital structure. This study is very important for engineering firms of Pakistan as it will help these firms to make effective capital structure decisions and determine a level of capital structure that maximize their profitability and shareholders wealth. The study will also help the creditors and shareholders of engineering firms of Pakistan to know how effectively their money is being utilized.

The rest of the paper is structured as: second section gives the literature review, third section state the data, sample and methodology, fourth section contains the empirical results, fifth section discussion, and sixth section conclusion and recommendations.

## 2. Literature Review

Since Modigliani and Miller (1958) pioneer work, the relationship between CS and performance is an important issue in finance. Modigliani and Miller (1958) argued that in the absence of market imperfections and no taxes, no bankruptcy costs, the total value of the firm and the cost of capital (COC) are independent of its CS i.e. no matter what is the mix of financing the firm value and the COC remains the same. Modigliani and Miller (1963) review their previous paper and include taxes in their model. They argued that the interest payments on debt is tax-deductible expense which reduce the amount of tax to pay, so the optimal capital structure of the firm is 100% i.e. there is no equity in the firm CS. This means that the firm's value increases as debts increases.

However, the assumptions of Modigliani and Miller does not hold in the real world situation but it motivate many researchers to study the relationship between CS and profitability. For example, Jensen and Meckling (1976) presented agency costs theory. They have developed the well known agency costs hypothesis i.e. high leverage decreases the agency costs of outside equity and increases firm value by motivating managers to act in the best interest of stockholders. The researchers further state that ownership and control separation in firms may result in manager's inefficiency and they may fail to maximize the firm value. Jensen and Meckling (1976) define agency costs as the costs incurred by shareholders and creditors in order to monitor the behavior of the management. They argued that high leverage reduces agency costs because managers have the threat of liquidation from creditors and they work efficiently which ultimately results in the firm value maximization.

Similarly, the other two dominant theories, the pecking order theory and the trade-off theory were developed. The "pecking order" theory presented by Myers and Majluf (1984) suggest that firms will first

rely on an internal source of fund such as retained earnings, in case of no information asymmetry, then they will go for debt and lastly they will issue shares for further funding requirements. Thus, according to the pecking order theory, profitable firms that retained most of their earnings are expected to have less debt in their CS. Consequently, negative association could be expected between debt level and profitability. The trade-off theory which combine tax concept given by Modigliani and Miller (1963), bankruptcy costs concept given by Baxter (1976) and agency costs concept given by Jensen and Meckling (1976) can be used to determine the optimal CS. When the debt level increases, the bankruptcy and agency costs eventually become significant. The point at which the marginal bankruptcy/agency costs equal the marginal tax-shield benefits, the share value is maximized and cost of capital is minimized. At this point there is an optimal CS. Thus, according to the trade-off theory (as reported by Ebaid, 2009), firms with larger profits have larger income to shield and thus should borrow more to save tax. Consequently, a positive relationship between CS and profitability could be expected. Trade-off hypothesis proposed that firm should have an optimal CS based on balancing between the costs and benefits of debt.

Only few studies are carried out regarding the said topic in the developing countries and the results of these studies are mixed i.e. some show positive relationship while some shows negative relationship. For example, Abor (2005) found significant positive association between short term debt and profitability measured by return on equity (ROE), significant negative relationship between long-term debt and profitability, and significant positive relationship between total debt and profitability of Ghanaian firms. Ebaid (2009) studied the relationship between CS and performance of Egyptian firms.

Findings indicate a significant negative relationship between short-term debt and performance measured by return on investment (ROI) of Egyptian firms, no relationship between long-term debt and performance, and a significant negative relationship between total debt and performance. Amjed (2007) argued that short term debt has significant positive relationship with the profitability (ROE) while long term debt has negative relationship with the profitability in the textile sector of Pakistan. However, no significant association between total debt and profitability in the textile sector of Pakistan was found. It is because of the fact that short term debt have positive relationship and long term debt have negative relationship with profitability and they combine result is no association with profitability. Abor (2007) examined the relationship between debt level and profitability of small and medium-sized enterprises (SMEs) in South Africa and Ghana. Findings indicate that short-term debt and total debt is negatively related to gross profit for both SMEs of South Africa and Ghana. The researcher further reported that long term debt has a significant positive relationship with gross profit.

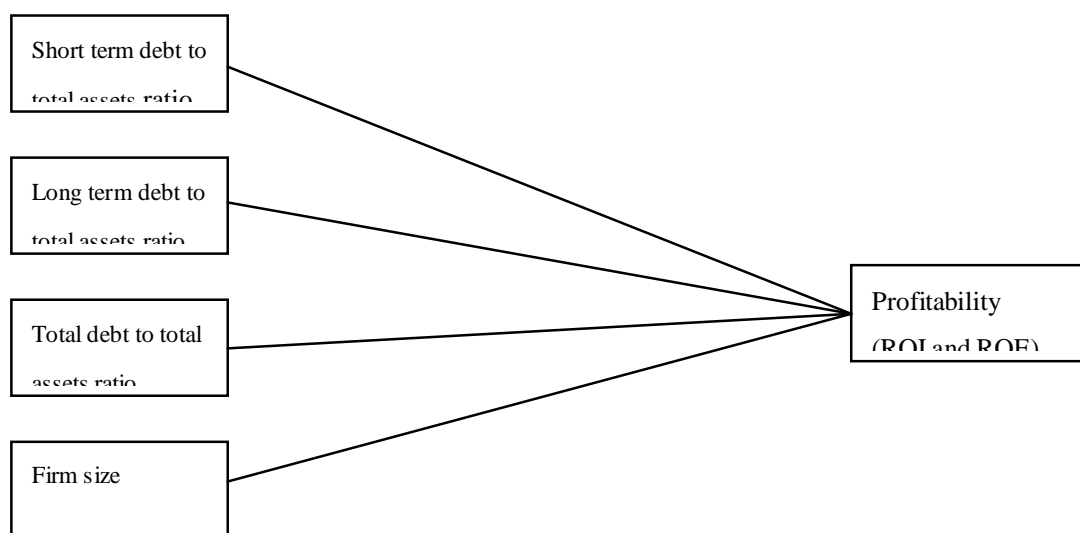
Similarly, Salehi and Biglar (2009) observed direct relationship between debt to assets ratio and profitability of Iranian firms. Profitability is measured by ROE and ROI. They reported that profitable Iranian firms have less debt in their CS. Berger and Patti (2002) tested the agency cost hypothesis and conclude that high leverage ratio or low equity to capital ratio was associated with higher profit efficiency in the banking industry.

Research indicate that the size of the firm also impacts profitability. For instance, Eljelly and Abuzar (2004) studied a sample of Saudi Arabian companies and a strong direct relationship was observed between firm size and profitability. Abor (2005) mentioned that the firm size is positively

related to profitability. Similarly, Zubairi and Baig (2010) reported that profitability of the automobile firms in Pakistan is significantly and positively related to the size of the firm.

The above literature indicates that few studies have studied the relationship between CS and its impact on financial performance in developing countries. In a Pakistani context, Shoib and Gohar (2010) examine the relationship between an optimal CS and its impact on bank performance. However, their study is based on the financial sector of Pakistan specially banks. Therefore, the current study empirically study the relationship between CS and financial performance in the non-financial sector with focus on engineering firms of Pakistan listed on KSE. Based on the related literature, the following research framework has been proposed.

### Schematic Diagram



### 3. Methodology

### **3.1. Sample and Data**

The sample for this study consists of 33 listed firms on Karachi stock exchange of the engineering sector of Pakistan. There are 38 listed engineering firms on Karachi stock exchange but five firms were not considered for this study because of incomplete data and negative equities in capital structure of these firms. The data is obtained from the publication of SBP i.e. Balance sheet analysis of joint stock companies listed on KSE for the period 2006-2009.

### **3.2. Variables Defined**

The study uses profitability as dependent variable and individual component of capital structure as independent variables. Profitability is operationalized by two commonly used accounting based measures i.e. return on investment (ROI) and return on equity (ROE). ROI in this study is computed as net profit before tax divided by total assets. ROE is computed as net profit before tax divided by total stockholders equity.

Capital structure is measured by the following three financial ratios:

- a) Short-term debt divided by total assets
- b) Long-term debt divided by total assets
- c) Total debt divided by total assets

Short term debt is defined as all debt that have a maturity period of one year or less i.e. which is to be paid within one year. Long-term debt include those debts whose maturity period is more than one year. Total debt equals short-term debt plus long-term debt. Assets are defined as all assets at their book values.

Another independent variable firm size is used as a control variable. Firm size is measured by



logarithm of total assets. This measure as a proxy for firm size is most commonly used by researchers (Eljelly & Abuzar, 2004; Abor, 2005 & 2007; Ebaid, 2009).

### 3.3. Hypotheses

Various hypotheses are developed to study the impact of CS on firms profitability in the engineering sector of Pakistan.

First hypothesis is;

Ho: There is positive relationship between short term debt and ROI

H1: There is negative relationship between short term debt and ROI

Second hypothesis;

Ho: There is positive relationship between long term debt and ROI

H1: There is negative relationship between long term debt and ROI

Third hypothesis;

Ho: There is positive relationship between total debt and ROI

H1: There is negative relationship between total debt and ROI

Fourth hypothesis;

Ho: There is negative relationship between short term debt and ROE

H1: There is positive relationship between short term debt and ROE

Fifth hypothesis;

Ho: There is positive relationship between long term debt and ROE

H1: There is negative relationship between long term debt and ROE

Sixth hypothesis;

Ho: There is negative relationship between total debt and ROE

H1: There is positive relationship between total debt and ROE

Seventh hypothesis;

Ho: There is negative relationship between size of the firm and ROI

H1: There is positive relationship between size of the firm and ROI

Eight hypothesis;

Ho: There is negative relationship between size of the firm and ROE

H1: There is positive relationship between size of the firm and ROE

### **3.4. Regression Equations**

The regression equations used in the study are given here;

$$1. ROI_{i;t} = \alpha + \beta_1 STD_{i,t} + \beta_2 SIZE_{i,t} + e$$

$$2. ROI_{i;t} = \alpha + \beta_1 LTD_{i,t} + \beta_2 SIZE_{i,t} + e$$

$$3. ROI_{i;t} = \alpha + \beta_1 TD_{i,t} + \beta_2 SIZE_{i,t} + e$$

$$4. ROE_{i;t} = \alpha + \beta_1 STD_{i,t} + \beta_2 SIZE_{i,t} + e$$

$$5. ROE_{i;t} = \alpha + \beta_1 LTD_{i,t} + \beta_2 SIZE_{i,t} + e$$

$$6. ROE_{i;t} = \alpha + \beta_1 TD_{i,t} + \beta_2 SIZE_{i,t} + e$$

Where:

$ROI_{i;t}$  = Net profit before tax divided by total assets of firm i in time t;

$ROE_{i;t}$  = Net profit before tax divided by total equity of firm i in time t;

$STD_{i,t}$  = Short term debt divided by total assets of firm  $i$  in time  $t$ ;

$LTD_{i,t}$  = Long term debt divided by total assets of firm  $i$  in time  $t$ ;

$TD_{i,t}$  = Total debt divided by total assets of firm  $i$  in time  $t$ ;

$SIZE_{i,t}$  = log of total assets for firm  $i$  in time  $t$ ; and

$e$  = Error term

## 4. Empirical Results

### 4.1 Descriptive Statistics

The descriptive statistics in order to look at the nature of the data are given in table 1. A total of 132 observations for 33 firms of engineering sector are recorded during the study period of 2006-2009. The mean (median) short term debt to total assets ratio is 0.4790(0.5100) which shows that a significant amount of assets of engineering firms of Pakistan is financed by short term debt. This may be due to the easy availability of short term financing or limited long term sources of financing. The minimum value of STD recorded during the study period 2006-2009 is 0.0800 and maximum is 0.8900. The average (median) of long term debt to total assets is 0.0672(0.0300) which is very low. This may be due to the underdeveloped nature of long term debt Pakistani market. The average (median) total debt to assets is 0.5436(0.5600) which depicts that the engineering industry is moderately leveraged. The average firm size measured by log of total assets is 3.3330 with minimum 1.9500 and maximum 4.3900. The mean (median) return on investment (ROI) is 8.7697 %( 6.5000%) for four years period and it shows a reasonable performance of the firms. The average (median) value of second profitability measure return on equity (ROE) is 19.7053 %( 17.9000%) that shows a good performance of using owner's funds to

generate profits. Large variations are observed for both ROI and ROE during the study period of 2006-2009.

Table 1. Descriptive statistics of the variables

Variables	Mean	Standard deviation	Median	Range	Observations
STD	0.4790	0.1664	0.5100	0.0800-0.8900	132
LTD	0.0672	0.1197	0.0300	0.0000-0.7400	132
TD	0.5436	0.1691	0.5600	0.1100-0.9000	132
Firm size	3.3330	0.5564	3.2950	1.9500-4.3900	132
ROI %	8.7697	10.9528	6.5000	-26.9000-44.8000	132
ROE %	19.7053	22.6804	17.9000	-73.0000-70.6000	132

Note. STD = Short term debt to assets ratio. LTD = Long term debt to assets ratio

TD = Total debt to assets ratio. ROI = Return on investment. ROE = Return on equity.

#### 4.2. Regression Analysis

Regression results are presented for each equation separately in order to compare the different financing options.

**4.2.1. Equation 1.** Table 1 contains the results of the first regression equation. The first equation contains the relationship between short-term debt and profitability measured by ROI by keeping firm size as a control variable. Empirical results indicate that there is significant negative relationship between short-term debt and ROI. The beta coefficient for short term debt is (-13.5135) is negative and significant at the 95% confidence level indicating that one percent increase in short term debt decrease ROI by 13.5135 percent. The possible reason may be the probability that the firms will be unable to meet their

short term obligations and will become technically insolvent that contribute negatively to profitability measured by ROI. These findings are in line with the pecking order theory i.e. profitable firms initially rely on an internal source of fund such as retained earnings, then they will turn to debt if additional finances are needed and finally they will issue equity (Myers & Majluf, 1984). These results are also consistent with the Ebaid (2009) findings. The first null hypothesis is rejected at the 5% significance level as the p-value is  $0.0160 < 0.05$ . The beta coefficient for firm size is 4.9112 which are positive and significant at the 5% significance level indicating that large firms of engineering sector of Pakistan are more profitable. The null hypothesis is also rejected in this case as the p-value is  $0.0036 < 0.05$ . The R square and adjusted R square measure the percent variation in the dependent variable explained by the independent variables. The values of both R square (0.0949) and adjusted R square (0.0809) are very low indicating that there are other factors that contribute to the profitability of firms.

$$ROI_{i;t} = -1.1263 -13.5135(STD_{i,t}) + 4.9112(SIZE_{i,t}) + e$$

Table 2. Short term debt to assets ratio and ROI

Variables	Coefficients	Standard error	t statistic	P-value
Intercept	-1.1263	5.9688	-0.1887	0.8506
STD	-13.5135	5.5383	-2.44	*0.016
Firm size	4.9112	1.6559	2.9659	0.0036
R square				
=	0.0949			
Adjusted R square				
=	0.0809			

Note. STD = Short-term debt to assets ratio.

\*P<0.05.

**4.2.2. Equation 2.** The empirical results in table 3 indicate a significant negative relationship between long-term debt and profitability measured by ROI. The beta coefficient for long-term debt is (-15.5225) negative and significant at the 5% level indicating that one percent increase in long-term debt will reduce ROI by 15.5225%. The reason for such relationship may be the more expensive nature of long-term debt. Long-term debt adds certain financial distress costs that impact profitability negatively. These findings are in line with the pecking order theory. The second null hypothesis is rejected because the p-value is less than the significance level i.e.  $0.0465 < 0.05$ . Again there is significant positive relationship between the firm size and ROI. It shows that as firm size increases, profitability also increases. Again the values of R square (0.0819) and adjusted R square (0.0677) are very low indicating that there are other factors that influence the profitability of engineering firms in Pakistan.

$$ROI_{i,t} = -5.2650 - 15.5225(LTD_{i,t}) + 4.5236(SIZE_{i,t}) + e$$

Table 3. Long term debt to assets ratio and ROI

Variables	Coefficients	Standard error	t statistic	P-value
Intercept	-5.2650	5.6370	-0.9340	0.3520
LTD	-15.5225	7.7222	-2.0101	*0.0465
Firm size	4.5236	1.6606	2.7240	0.0073
R square	0.0819			
Adjusted R square	0.0677			

Note. LTD = Long-term debt to assets ratio.

\*P<0.05.

**4.2.3. Equation 3.** The regression results are shown in table 4. The results show a significant negative

relationship between total debt of engineering firms and their profitability (ROI). The coefficient beta for total debt is (-21.3103) significantly negative at the 5% level state that one percent increase in total debt will reduce ROI by 21.3103 percent. The negative relationship may be due to the costly nature of total debt. Certain costs are associated with total debt that contributes negatively to the firm's profitability. These results are in line with the pecking order theory and findings of Ebaid (2009). The third null hypothesis is rejected as the p-value is less than the significance level of 5% and the data support the alternative hypothesis. The beta coefficient of firm size is (5.2472) positive showing a significant positive relationship between firm size and ROI. The values of R square (0.1601) and adjusted R square (0.1471) are reasonable indicating the variation in the dependent variable ROI caused by the independent variables total debt and firm size.

$$ROI_{i;t} = 2.8648 - 21.3103(TD_{i,t}) + 5.2472(SIZE_{i,t}) + e$$

Table 4. Total debt to assets ratio and ROI

Variables	Coefficients	Standard error	t statistic	P-value
Intercept	2.8648	5.8289	0.4915	0.6239
TD	-21.3103	5.2581	-4.0528	*0.0001
Firm size	5.2472	1.5980	3.2837	0.0013
R square				
=	0.1601			
Adjusted R square				
=	0.1471			

Note. TD = Total debt to assets ratio.

\*P<0.05.

**4.2.4. Equation 4.** The results of the fourth regression equation are given in table 5. The empirical results

indicates a negative relationship between short-term debt and profitability measured by ROE as the beta coefficient for short-term debt is (-0.7021) negative but the relationship is not significant at the significance level of 5%. The forth null hypothesis is do not rejected as the p-value is greater than the significance level i.e. 0.9522>0.05. Up to some extent these results are in line with Ebaid (2009) findings. The control variable firm size in this case is again positively related to the profitability (ROE) as the beta coefficient for firm size is (10.0093) positive. The value of R square (0.0601) and adjusted R square (0.0455) are very low showing the influence of factors other than short-term debt and firm size on ROE.

$$ROE_{i;t} = -13.3197 - 0.7021(STD_{i,t}) + 10.0093(SIZE_{i,t}) + e$$

Table 5. Short term debt to assets ratio and ROE

Variables	Coefficients	Standard		
		error	t statistic	P-value
Intercept	-13.3197	12.5953	-1.0575	0.2923
STD	-0.7021	11.6869	-0.0601	*0.9522
Firm size	10.0093	3.4943	2.8645	0.0049
R square				
=	0.0601			
Adjusted R square				
=	0.0455			

Note. STD = Short term debt to assets ratio.

\*P>0.05.

**4.2.5. Equation 5.** Table 6 contains the results of the regression equation 5. The results indicate a positive relationship between long-term debt and ROE as the beta coefficient for long-term debt is (6.0073) but the relationship is not significant at the 5% significance level. These results are in line up to some extent



with the trade-off theory. The fifth null hypothesis is do not rejected as the p-value is greater than the significance level i.e.  $0.7109 > 0.05$ . The firm size is again positively related to profitability (ROE). The value of R square (0.0611) and adjusted R square (0.0465) is again very low showing the variation in the dependent variable ROE by the independent variables long-term debt and firm size.

$$ROE_{i;t} = -14.0128 + 6.0073(LTD_{i,t}) + 9.9953(SIZE_{i,t}) + e$$

Table 6. Long term debt to assets ratio and ROE

Variables	Coefficients	Standard error	t statistic	P-value
Intercept	-14.0128	11.8045	-1.1871	0.2374
LTD	6.0073	16.1710	0.3715	*0.7109
Firm size	9.9953	3.4775	2.8743	0.0047
R square	0.0611			
Adjusted R square	0.0465			

Note. LTD = Long term debt to assets ratio.

\* $P > 0.05$ .

**4.2.6. Equation 6.** The empirical results presented in table 7 shows an insignificant negative relationship between total debt and profitability (ROE) of engineering firms listed on KSE. The beta coefficient for total debt in table 7 is (-1.3757) negative indicating the negative relationship between total debt and ROE. The sixth null hypothesis is do not rejected as the p-value is greater than the significance level i.e.  $0.9051 > 0.05$ . Again these results are in line with the pecking order theory. Firm size is again positively related to ROE as its beta coefficient is (10.0357) positive. Values of R square (0.0602) and adjusted R

square (0.0456) is again very low.

$$ROE_{i,t} = -12.9962 - 1.3757(TD_{i,t} + 10.0357(SIZE_{i,t}) + e$$

Table 7. Total debt to assets ratio and ROE

Variables	Coefficients	Standard		
		error	t statistic	P-value
Intercept	-12.9962	12.7678	-1.0179	0.3106
TD	-1.3757	11.5176	-0.1194	*0.9051
Firm size	10.0357	3.5002	2.8671	0.0048
R square				
=	0.0602			
Adjusted R square				
=	0.0456			

Note. TD = Total debt to assets ratio.

\*P>0.05.

In summary, the overall capital structure has negative relationship with the profitability of engineering firms listed on Karachi stock exchange meaning that an increase in the debt in the capital structure decreases the profitability of these firms. This may be due to the fact that that profitable firm's use retained earnings as their first source of financing, then they use debt and equity as their second and third source of financing. This overall result is consistent with the pecking order theory , findings of Abor (2007), findings of Ebaid (2009).

## 5. Discussion

As already stated by the results and the support for the first alternative hypothesis, there is significant negative relationship between short-term debt and profitability measured by ROI of

engineering listed firms on Karachi stock exchange. The stated relationship in the alternative hypothesis is proven by the regression results and the main reason behind such relationship is that firms with more short-term debt carries a negative image as they may not be able to meet their short-term debt and become technically insolvent which contributes negatively to their profitability. The negative relationship between long-term debt and ROI is also proven in the second alternative hypothesis. The possible reason for such relationship is the more costly nature of long-term debt that negatively affect profitability of firms.

The third alternative hypothesis is also supported which describe that there is negative relationship between total debt and ROI. The reason for this is simple i.e. both short-term and long-term debt has negative relationship with ROI, total debt has also negative relationship with ROI.

The data do not provide sufficient evidence to conclude that there is significant positive relationship between short-term debt and profitability measured by ROE which is the fourth alternative hypothesis of this study. The reason may be the short maturity period of short-term debt which impacts profitability negatively. The fifth alternative hypothesis is also not supported and the relationship between long term debt and ROE is positive but not significant. This provides partial support for the trade-off theory which state that profitable firms use more long-term debt to shield their profit and take tax advantage. There is negative but insignificant relationship between total debt and ROE and the sixth alternative hypothesis is also not supported. The reason is that debt carries certain costs with it which negatively affect profitability.

The seventh and eight alternative hypotheses are supported indicating that firm size is positively related to profitability measured by both ROI and ROE. The reasons for more profitability of large firms

of engineering sector of Pakistan are the use of more productive resources, well known, more experienced and professional management.

## 6. Conclusion and Recommendations

This paper examine the relationship between CS and profitability of the firms of engineering sector of Pakistan listed on KSE for the period 2006-2009. The empirical results indicate that short term debt, long term debt, and total debt has significant negative relationship with firm profitability measured by ROI. This provides support for the pecking order theory. However, short term debt, long term debt, and total debt has no significant relationship with profitability measured by ROE of engineering firms. The relationship of short term debt and long-term debt with ROE is negative but insignificant provide support for the pecking order theory. The relationship of long term debt and ROE is positive but not significant and provide partial support for the trade-off theory. The firm size of engineering firms listed on Karachi stock exchange is positively and significantly related to profitability indicating that large firms of engineering sector of Pakistan are more profitable.

Based on the findings of this study, it is recommended that the KSE listed engineering firms of Pakistan should use more equity in their capital structure in order to enhance their profitability. It is further recommended that the study should be conducted over a longer period of time with large sample size.

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