



International Journal of Advance Research, IJOAR .org
Volume 2, Issue 2, February 2014, Online: ISSN 2320-9127

DETERMINANTS OF CAPITAL STRUCTURE OF INDIAN TEXTILE INDUSTRY— AN EMPIRICAL ANALYSIS

Mr. N. Suresh Babu * and Prof. G.V. Chalam**

ABSTRACT

This article empirically investigates the factors determining capital structure of textile industry in Indian context. The data was taken from secondary data source named as “Industry; financial aggregates and ratios” (PROWS) of center for monitoring Indian economy (CMIE) covering the period from 1997-98 to 2010-11 (14 years). The empirical Results shows that the variables of size, growth, risk, non-debt tax shield and liquidity are negatively related with leverage and profitability and tangibility are positively related with leverage. Profitability, tangibility and liquidity are statistically significant determinants of capital structure. While size, growth, risk, and non-debt tax shield are statistically insignificant determinants of capital structure. This results generally consisting of pecking order theory (POT) predictions as well as previous research papers.

Keywords:

Capital Structure, Leverage, Pecking Order Theory, Textile Industry.

* Research scholar Dept. of Commerce and Business Administration, Acharya Nagarjuna University, Nagarjuna Nagar, A.P., India. E-mail: babu40806@gmail.com

** Professor, Dept. of Commerce and Business Administration, Acharya Nagarjuna University, Nagarjuna Nagar, A.P., India.
E-mail: chalam.goriparthi@gmail.com

Determinants of Capital Structure of Indian Textile Industry– An Empirical Analysis

INTRODUCTION

The financial decision set by management is very important in determining the optimal capital structure. Because it has an impact on long term corporate profits, firm's valuation and capital budgeting decisions. Capital structure describes the proportionate relationship between debt and equity. While debt is majorly made up of long term loans such as debentures, equity includes paid up share capital, share premium, reserves, and surplus or retained earnings. So, a company can finance its investments by debts and/ or equity. Several theories put forward on this subject, after the landmark studies of Modigliani and Miller (1958, 1963) that established capital structure irrelevance and tax shield advantages. Amongst the several theories advanced to explain capital structure of firms, Static Trade-off Theory (STT) and Pecking Order Theory (POT) are the most influential theories on corporate leverage. The STT presumes that firms set up a target debt ratio and try to achieve it. This target would be a trade-off between the cost and the benefit of debt, that is, bankruptcy cost against tax benefits. This theory also recognizes that target debt ratio may vary from firm to firm depending on size, growth, risk and profitability by Harris and Raviv, 1991. A strong challenger of the trade-off model has emerged in the form of the Pecking order theory put forwarded by Myers (1984) and Myers and Majluf (1984). According to this theory, firms prefer a sequencing of financing due to: i) incongruity of information between company insiders and outsiders and ii) existence of asymmetric information between a company's insiders and outsiders affect the choice between internal and external finance, and between new issue of debt and equity. The outcome of this theory is that firms prefer internal sources to external financing of any short, debt or equity. If external financing is needed, they should issue the safest securities first, then the risky debt and, at last, external equity. These theories suggest that the firms select capital structure depending on the various costs and benefits associated with debt and equity financing. The empirical work in this area has lagged behind the theoretical work, particularly in developing countries. If we look at the Indian private corporate sector capital structure, we can see that the relationship between a firm's financial leverage and

its profitability, size, tangibility, growth, risk, non-debt tax shield and liquidity in Indian textile industry.

Textile sector plays a key role in the national economies besides providing support to various economic growth indicators like GDP, exports, employment and foreign exchange earnings etc. India is one of the major producers of cotton and has a sound textile industry. Today India is the third largest producer of cotton, and has the second largest spinning capacity (7.6% of total Asian capacity) in Asia after China constitutes 5% of the global spinning capacity.

Indian textile sector has gradually ventured into the production of fairly high quality counts, hosiery, garments and other value-added items. India is operating a big integrated textile industry consist of different products like cotton spinning (yarn), cotton weaving (cloth), cotton fabric, fabric processing, towels and apparels. The textile sector continues to be the main stay of Indian's exports comprising 60% of total exports and contribution of gross domestic product is around 3% and this is steadily increasing and also represents the principal employment-generating avenue in the organized and large scale industrial segment. Performance of this segment has a powerful influence on state economy. Investment of this segment mainly depends on Bank loan.

OBJECTIVE OF THE PAPER:

The main objective of the present paper is to investigate empirically the impact of profitability, size, tangibility, growth, risk, non-debt tax shield and liquidity on leverage of Textile industry in India and testing Packing order theory on the observed relationship order in to analyze their consistency.

More specifically, the following objectives of the study:

- (i) To find out the determinants of the financial leverage in Indian Textile industry.
- (ii) To study relationship between leverage and its determinants.

HYPOTHESES:

The objective of the researcher in present study is to test packing order theory that provides positive as well as negative relationship between leverage and different factors, so the following hypotheses have been developed according to the above said theory:

H₁: Profitability should have a negative impact on leverage.

H₂: Size should have a negative impact on leverage.

H₃: Tangibility should have a negative impact on leverage.

H₄: Growth should have positive impact on leverage.

H₅: Risk should have a negative impact on leverage.

H₆: Non-debt tax shield should have a negative impact on leverage.

H₇: Liquidity should have a negative impact on leverage.

Literature Review

In this section, the relevance and remarkable empirical studies carried out in foreign countries and in India till 2013 have been reviewed briefly. Most capital studies are in developed economy Such as Radian and Zingales (1995) (the G-7 Countries), Burgman (1996) (The U S), Bevan and Danbolt (2002) (the U K), Antonious et al (2002) (the U K, Germany and France), Hall et al (2004) (European SME's), Ashtray (2005) (Australia), Akhtar and Oliver (2009) (Japan).

There are few studies that offer evidence from developing countries such as Booth et al (2001) (Brazil, Mexico, India, South Korea, Jordan, Malaysia, Pakistan, turkey and Zimbabwe), Pandas (2001) (Malaysia), Bhaduri(2002), (India), Chen(2004) (China), Comet and Nobanee (2004) (Jordan), Alsakran (2001) (Saudi Arabia) and Buferna et al (2005)(Libya). In addition, some capital structural studies have used cross country comparisons between developed and developing countries such as Deesomsak et al (2004) (Thailand, Malaysia, Singapore and Australia), Supanvanig (2006) (Jordan, Honkong, Singapore, Korea, Thailand, Malaysia, Taiwan and Philippines), Kim et al (2006) (The U S and Korea), Antoniou et al (2006) (France, Germany and the UK).

This study based on **Bhat, Ramesh (1980)** studied the impact of size, growth, business risk, dividend policy, profitability, debt service capacity and the degree of operating leverage on the leverage ratio of the firm. Business risk (earning instability), profitability, dividend payout and debt service capacity were found to be significant determinants of the leverage ratio.

Marsh (1982) observed that positive relation between firm size and debt ratio and fixed assets and debt ratio and negative relation between risk and debt ratio. They concluded that the timing and market condition were different for debt issue and equity issue. The firm's past history and market condition heavily influence the choosing between debt and equity financing.

Myers and Majluf (1984) found that the firm size has a positive relation with capital structure. While profitability may have either a negative or positive relation. A positive relation between profitability and capital structure is consistent with the static trade off theory. Whereas it's negative relation supports the pecking order theory.

Titman and Wessels (1988) incorporated eight independent variables, viz., and collateral value of asset, non-debt tax shield, growth, product uniqueness, industry classification, size, volatility, and profitability as determinants of capital structure. They found that the product uniqueness and profitability were statistically significant and negatively related to leverage ratio. Their empirical estimate for product uniqueness supported that the firm that could potentially impose high cost on their customers, workers and suppliers in the event of liquidation had lower debt ratios.

Harris and Raviv (1991) concerning industry characteristics and capital structure. They found that leverage increased with fixed assets, non-debt tax shields, growth opportunities, and firm size and decrease with volatility, advertising expenditure, research and development expenditure, bankruptcy probability, profitability and uniqueness of the product.

Rajan and Zingales (1995) focused on four factors as determinants of capital structure, viz.; tangibility of assets, investment opportunities (growth), firm size and profitability. The authors found that the tangibility of assets and the size were positively related to leverage and growth opportunities and profitability were negatively related to leverage and statistically not significant. They also observed that firm in which the state had a majority ownership appeared to have higher leverage.

Ram Kumar Kakani (1999) found that the leverage ratio is positively related with the collateral value of the assets, size of the companies and that it is negatively related with the profitability and non-debt tax shields.

Ravinder Vinayek and Ravi Kumar Gupta (2002) found that the negative relationship between return on investment and short-term debt and higher sales growth rates were associated with a stronger negative impact of return on assets on the use of both short-term and long-term debt. Firm size was positively associated with debt ratios. Dividend payments, asset composition and operating leverage were not found to be related to use debt.

Booth et al (2001) analyzed capital structure choice of firms in 10 developing countries (India, Pakistan, Thailand, Malaysia, Turkey, Zimbabwe, Mexico, Brazil, Jordan and Korea) by using both firm specific attributes and macroeconomic indicators. Profitability was found the most successful independent variable and negatively related to leverage. In overall, the size and tangibility were observed to be positively related with leverage ratio. The results of risk variable were mixed. all three measure of leverage ratio vary negatively with the equity market capitalization; except for the long-term market-debt ratio, the debt ratios vary positively with the proportion of liquid liabilities to GDP. The authors concluded that the debt ratios in developing countries seem to be affected in the same way and by the same types of variables that are significant in developed countries however in developing countries They also noted that the origin of the country was as important as size to determine the leverage. However, their study had shed light on capital structure in developing countries.

Ozkan (2001) found that the profitability, liquidity, non-debt tax shield and growth opportunities on leverage were observed negative while, the size was found positively related to leverage with limited support.

Bhaduri and Saumitra N (2002) investigated the Indian corporate sector from 1989 to 1995. They found that the coefficients on the growth factor were significant positive to the total borrowings, which indicates the fact that growth opportunities add value to the firm and thus increase leveraging capacity. While, collateral value and size have a negative but insignificant relationship with borrowing. Finally, there was strong evidence supporting industry effects in explaining observed variations in capital structure across firms.

Mohan Sahoo S and Omkarnath G. (2005) found that non-debt tax shields, asset structure, firm size and profitability of the LPLCOs were highly significant factor that determines firm's total debt in capital structure. Among these four variables, non-debt tax shields negatively related to total debt, while all others are positively related.

Mallikarjunappa T and Carmeltia Goveas (2007) found that debt service capacity, and liquidity have inverse relationship with the debt-equity ratio, while non-debt tax shields and Business risk have direct relationship with the debt-equity ratio.

Santi Gopal Maji and Santan Kumar Ghosh (2007) suggested that size was positive association between equity and debt capital. Profitability was significant negative association with debt ratio. Tangible Assets found to be positive and statistically significant with leverage and not disentangle the relationship between dividend and leverage.

Inder Sekhar Yadav et al (2010) found that cost of borrowing, the cost of equity, size of firm, collateral value of assets and profitability are the major determinants of capital structure of corporate firms in India and also found to be significant indicating a movement towards the optimal level of leverage ratio.

Battacharjee BJ (2010) found that liquidity and growth of the firm have significant influence on debt equity ratio.

Liaqat Ali (2011) found that the variables of size, non-debt tax shields, and tangibility have highly significant positive relationship with leverage, while growth and profitability have highly significant negative relationship debt ratio.

MohanRaj V (2011) found that tangibility was inversely related with leverage and non-debt tax shield proves to be statistically significant capital structure decisions and size of the firm had negatively relationship with leverage and the liquidity played important role in determining capital structure.

Amsaveni and Gomathi (2012) found that business risk and liquidity are negatively related to the leverage, while tangibility, growth, size, non-debt tax shields exhibit positive relationship leverage. Hence, the result is partially supportive of the pecking order and trade off theory.

Palvannan and Sekhar (2013) found that the factors such as size, growth, earning risk, Non-debt tax shields, business risk, debt service capacity and leverage are determined the capital structure of co-operative sugar mills and all these variables have significantly contributing to debt equity.

Data and Methodology

Source of Data:

The present study is based on secondary data collected from the corporate database (PROWS) of the Centre for monitoring Indian economy (CMIE) and then various issues of magazines and journals,

working papers and newspapers were also accessed for the relevant.

Period of study:

This Study covers a period of 14 years from 1997-98 to 2010-2011.

Statistical Tools:

An evaluation of factors determining capital structure of Indian pharmaceutical industry based on the following statistical tools was used: Summary Statistics, Correlation Analysis, multiple regressions Analysis, “F” test, “P” test and Analysis of variance (ANOVA) and SSPS-20 software is used for the analysis.

Ordinary least square (OLS) Regression Model:

The following Regression model has been established:

$$LV = \beta_0 + \beta_1 (\text{PRO}) + \beta_2 (\text{SIZ}) + \beta_3 (\text{TANG}) + \beta_4 (\text{GRO}) + \beta_5 (\text{RISK}) + \beta_6 (\text{NDTS}) + \beta_7 (\text{LIQ}) + \epsilon$$

Where β_0 = Constant's coefficient, β_1 - β_7 = regression coefficients for independents variables
LEV = Leverage, PRO= Profitability, SIZ= Size, TANG= Tangibility, GRO= Growth, RISK= Risk, NDTS= Non-debt tax shield, LIQ= Liquidity, ϵ = Error Term

Determinants of Variables' Explanation:

Leverage: The most commonly used measure of financial leverage i.e., Debt-equity Ratio is used as dependent variable. The debt-equity ratio is computed as the ratio of long term debt and equity consist of share capital and reserves. Book values figures have been used to measure both debt and equity. The same measurement used by Mohan Raj (2011) in their analysis. It is calculated as: Leverage (LEV) = Long term debts / net worth.

Profitability is defined as earnings before interest, taxes and dividend and divided by book value of assets. This measure has been used by Titman and Weasels (1988), Oaken (2001), Mohan Shoos and Omkarnath (2005), Mallikarjunappa and Carmelite Goveas (2007) and Ali (2011). The pecking-order theory postulates that firms with higher profits (high internally generated funds) prefer to borrow less because it is easier and more cost effective to finance from internal fund sources. So, as per this theory, there will be a negative relation between leverage and profitability. In contrast, trade-off theory suggests that this relationship would be positive. Since profitable firms are less likely to go bankrupt, and hence can avail more debt at cheaper rates of interest. Profitability is calculated as: Profitability (PRO) = EBDITA/Total Assets.

Firm size is measured by taking the natural logarithm of the total assets. The same measurement used by Marsh (1982), Mohan Sahoo and Omkarnath (2005), and Ali (2011). The trade-off theory expects a positive relation between leverage and firm size. Since larger firms are likely to be more diversified, have more stable cash flows; lower bankruptcy risk, and have relatively easier access to credit markets. Firm size has been found to be a positive determinant of leverage. However, with respect to the pecking order theory, larger firms are expected to have lower information asymmetries making equity issues more attractive, the relationship between firm size and leverage should be negative. The size of the firm can be calculated either by log of sale or by log of assets. The researcher in this study measured the firm's size by log of total assets. So the firm's size is calculated as: Size (SIZ) = Log of total assets.

Tangibility is measured as a ratio of net fixed assets divided by total assets. The same Proxy used by Marsh (1982), Harris and Raviv (1991), Rajan and Zingales (1995), Booth et al (2001), Mohan Sahoo and Omkarnath (2005), Mallikarjunappa and Carmeltia Goveas (2007), Inder Sekhar Yadav et al (2010),Mohan Raj (2011) and Ali (2011). Since tangible assets are used as collateral, firms with large amount of fixed assets can borrow on favorable terms by providing the security of these assets to the lenders. Therefore, a high ratio of fixed assets-to-total assets should have a positive impact on firm leverage. Empirical as well as theoretical studies generally predict a positive relation between leverage and asset tangibility. So the tangibility of fixed assets can be calculated as: Tangibility (TANG) = Net Fixed Assets / Total Assets.

Growth is measured as the change in total Sales between two consecutive years divided by previous year total Sales. The same measurement used by Titman and Wessels (1988), Mohan Sahoo and Omkarnath (2005). Growth opportunities are viewed as intangible assets of firm. Firms with significant future growth opportunities are likely to face difficulties in raising finance from debt market because intangible assets are not fully collateral stable. Thus, firms with high intangible growth opportunities will use more of equity rather than debt in their capital structure. However, pecking order theory suggests that firms with high growth opportunities are anticipated to have higher information asymmetries, and are expected to have more of debt and less of equity in their capital structure. It is calculated as: Growth (GRO) = Change in total sales/ Total sales (S-S-t/S-t)

Business Risk is defined as Absolute variation in profitability. This measure has been used by Marsh (1982), Titman and Wessels (1988), Booth et al (2001). The level of risk is said to be one of the primary determinants of a firm's capital structure. The tax shelter-bankruptcy cost theory of capital structure determines a firm's optimal leverage as a function of business risk. Given agency and Bankruptcy costs, there are incentives for the firm not to fully utilize the tax benefits of 100% debt within the static framework model. Both agency and bankruptcy cost theories suggest the negative relation between the capital structure and business risk. It is calculated as: Risk= Absolute variation in profitability.

Non-debt tax shield is defined as a ratio of total annual depreciation to total assets. The same measurement used by Titman and Wessels (1988), Ozkan (2001), Inder Sekhar Yadav (2010), and Ali (2011). Non-debt tax shields such as tax deduction for depreciation and investment tax credits are considered to be the substitutes for tax benefits of

debt financing. Therefore non-debt tax shields are expected to have negative impact on leverage. It is calculated as: Non- debt tax shield (NDTS) = Depreciation / Total assets.

Liquidity is defined as current assets divided by current liabilities. The same measurement used by Rajan and Zingales (1995), Ozkan (2001), Mallikarjunappa and Carmelia Goveas (2007), Mohan Raj (2011). There are two different opinions on the association between liquidity and capital structure: First view implies a positive significant relation that is consistent with trade off theory. Companies with more liquidity (more current assets) tend to use more external borrowing, because of their ability in paying off their liabilities. Second view points to a negative significant relation that is consistent with the pecking order theory, arguing that companies with more liquidity will decrease external financing, relying on their internal funds. Thus, liquidity ratios may have a mixed effect on the capital structure decisions. It is calculated as: Liquidity (LIQ) = current assets / current liabilities.

DATA ANALYSIS AND INTERPRETATION:

Table -1: Descriptive Statistics of Textile industry in India

variable	N	Minimum	Maximum	Mean	Std. Deviation
LEV	14	.52	.71	.6185	.04685
PRO	14	.06	.11	.0763	.01275
SIZ	14	4.78	5.30	4.9791	.18954
TANG	14	.36	.44	.4057	.02583
GRO	14	-.03	.33	.1010	.09668
RISK	14	-.02	.02	.0023	.01160
NDTS	14	.03	.04	.0358	.00350
LIQ	14	.76	1.13	.9010	.09298

Source: Author's calculation from CMIE Prowess Database.

The table -1 shows descriptive statistics of textile industry in India. The results are as follows. First, the mean of leverage is 0.62 times with the standard deviation of 0.47 times. The maximum value of leverage is 0.71times and the minimum value of leverage is 0.52 times. Second, the mean of profitability is 7.63% with the standard deviation of 12.8%. The maximum value of profitability is 11% and the minimum of profitability is 6%. Third, the mean of size is 4.98 with the standard deviation of 0.189. The maximum value of size is 5.30 and the minimum of size is 4.78. Fourth, the mean of

tangibility is 0.406 with the standard deviation of 0.026. The maximum value of tangibility is 0.44 and the minimum of tangibility is 0.36. Fifth, the mean of growth is 10.1% with the standard deviation of 9.67%. The maximum value of growth is 33% and the minimum value is -3%. Sixth, the mean of risk is 0.23% with the standard deviation of 1.16%. The maximum value of risk is 2% and the minimum value is -2%. Next, the mean of non-debt tax shields is 3.58% with the standard deviation of 0.35%. The maximum value of non-debt tax shield is 4% and the minimum value is 3%. Finally, the mean of liquidity

is 0.901 with the standard deviation of 0.093. The maximum value of liquidity is 1.13 and the minimum

value of liquidity is 0.76.

Table -2: Pearson Correlation coefficients of Textile industry in India

variable	LEV	PRO	SIZ	TANG	GRO	RISK	NDTS	LIQ
LEV	1							
PRO	-.500	1						
SIZ	-.567*	.436	1					
TANG	.319	-.225	-.236	1				
GRO	.015	.202	.605*	.005	1			
RISK	-.396	.759**	.359	.054	-.107	1		
NDTS	.673**	-.034	-.530	.452	-.112	.085	1	
LIQ	-.875**	.673**	.435	-.087	.007	.475	-.517	1

*. Correlation is significant at the 0.05 level (2-tailed).
 **. Correlation is significant at the 0.01 level (2-tailed).
Source: Author's calculation from CMIE Prowess Database

Table-2 indicates correlation matrix of the variables used in the current study. It indicates that Profitability is negatively correlated with leverage with coefficient value as -0.500. It accepts the consistency with packing order theory. Size also shows a negative correlation with coefficient value as -0.567 and accepts the packing order theory while the tangibility shows a positive correlation with leverage shows 0.319 values of coefficient and rejects packing order

theory. Growth shows positive and Risk shows negative correlation with leverage showing 0.15 and -0.396 respectively values of coefficient and accepts packing order theory, non-debt tax shield also shows positive correlation with leverage showing 0.673 values of coefficient, while liquidity shows negative correlation with leverage showing -0.875 and accepts packing order theory in the firms of textile industry of India.

Table 3: Model Summary of Textile industry in India

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.969	.940	.870	.01691

Data Source: Centre for monitoring India economy(January2005 and June 2012)

Table 4: ANOVA of Textile industry in India

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.027	7	.004	13.406	.003
	Residual	.002	6	.000		
	Total	.029	13			

Source: Author's calculation from CMIE Prowess Database

Table 5: Regression Coefficients of Textile industry in India						
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	Beta	Std. Error	Beta			
.1	(Constant)	1.048	.387		2.710	.035
	PRO	3.368	1.572	.916	2.142	.076
	SIZ	-.061	.059	-.248	-1.036	.340
	TANG	.944	.391	.520	2.413	.052
	GRO	-.044	.119	-.091	-.373	.722
	RISK	-1.553	1.169	-.385	-1.328	.232
	NDTS	-4.351	3.475	-.325	-1.252	.257
	LIQ	-.667	.163	-1.324	-4.095	.006
Source: Author's calculation from CMIE Prowess Database						

Estimated Ordinary least square (OLS) Regression Model:

$$LEV = 1.048 + 0.916(PRO) - 0.248(SIZ) + 0.520(TANG) - 0.091(GRO) - 0.385(RISK) - 0.325(NDTS) - 1.324(LIQ)$$

ANALYSIS:

The overall regression analysis shown in table 3 and 4 indicates number of observation as 14 relating to the textile industry in India. The overall statistical fitness of the regression model is indicated by Prob > F = 0.003 which means that the model is fit. The R² indicates that 94% variation in leverage is explained by profitability, size, tangibility, growth, risk, non-debt tax shield (depreciation) and liquidity, while the remaining 6% is explained by unobserved factors. The adjusted-R² is 7% lower than the R² and is indicated as 87%.

Profitability:

The table 5 shows a positive relationship between profitability and leverage with the coefficient value as 0.916 significant at 5% with P-value as 0.076. It shows that a one unit reduce in profitability will increase the leverage by 0.916. The positive relationship between profitability and leverage rejects the first hypothesis and also consistent with the Pecking order theory, but it supports Trade-off theory, which states that there is a positive relationship between profitability and leverage. This finding is also consistent with the same findings by

Bhat, Ramesh (1980), Mohan Sahoo and Omkarnath (2005), Bhattacharjee (2010), And Mohan Raj (2011). Positive relationship between profitability and leverage indicates that more profitable firms in textile industry in India uses higher amount of debt.

Size:

The table 5 also shows another negative relationship between firm's size and leverage with coefficient value as -0.248 insignificant with P-value as 0.34. It shows that a one unit increase in firm's size will reduce the leverage by 0.248. This negative relationship between both variables accepts the 2nd hypothesis and also consistent with pecking order theory. It is also consistent with the similar finding of the following researchers; Bhat, Ramesh (1980), Booth et al (2001), Bhaduri and Sumitra (2002, 2002a), Mallikarjunappa and Carmeltia Goveas (2007), Bhattacharjee (2010), Inder Sekhar Yadav et al (2010), Mohan Raj (2011), Anurag Pahuja and Anu Sahi (2012), and Palvannan and Sekhar (2013). It means that the firms with large size use less leverage in their capital structure.

Tangibility:

Table 5 indicates a positive relationship between firm's tangibility of fixed assets and leverage with coefficient value as 0.520 significant at 5% level with P-value as 0.052. It shows that a one unit decrease in tangibility of fixed assets will increase the level of leverage by 0.520. This positive relationship between

both variables rejects the 3rd hypothesis and also consistent with Pecking order theory, but it supports Trade-off theory. This theory contends that firm's with tangible assets assists are, the greater will be its ability to issue secured debt. This limits the ability of managers to appropriate the wealth of debt-holders. Thus, it is expected that firms with greater amounts of fixed assets would issue more debt, than firms with less amount of fixed assets. It is consistent with the same findings by Marsh (1982), Myers and Majluf (1984), Harris and Raviv (1991), Rajan and Zingales (1995), Kakani (1999), Ravinder Vinayek and Ravi Kumar Gupta (2002), Mohan Sahoo and Omkarnath (2005), Inder Sekhar Yadav et al (2010), Ali (2011), Anurag Pahuja and Anu Sahi (2012), Amsaveni and Gomathi (2012), and Palvannan and Sekhar (2013).

Growth:

A negative relationship is observed between growth and leverage as indicated in table 5 with the coefficient value as -0.091 insignificant level with P-value as 0.722. It rejects the 4th hypothesis as well as consistent with Pecking order theory, but it supports Agency cost theory. This shows that a one unit increase in growth will result in decrease in leverage by 0.091. This relationship between both variable is consistent with the following researcher's findings; Bhat, Ramesh (1980), Titman and Wessels (1988), Rajan and Zingales (1995), Ozkan (2001), Ravinder Vinayek and Ravi Kumar Gupta (2002) and Mallikarjunappa and Carmeltia Goveas (2007). In their point of view, equity controlled firms have associated with this agency relationship is likely to be higher for firms in growing industries, which have more flexibility in their choice of future investments. Thus, expected future growth should be negatively related to the long-term debt levels.

Risk:

Table 5 shows a negative relationship between risk and leverage with coefficient value as -0.385 insignificant with P-value as 0.232. This indicates that a one unit increase in risk will also decrease leverage by 0.385. This negative relationship between both variables accepts the 5th hypothesis and also consistent with packing order theory. The above relationship is consistent with the similar findings by Marsh (1982), Titman and Wessels (1988), Harris and Raviv (1991), Booth et al (2001), and Amsaveni and Gomathi (2012). This shows that firms are more likely to use internal source of financing rather than debt, because of the uncertainty about the future economic and financial performance of the firms.

Non-debt Tax shield:

The table 5 shows a negative relationship between non-debt tax shield (depreciation) and leverage with coefficient value as -0.325 insignificant with P-value as 0.257. This shows that one unit decrease in non-debt tax shield can cause increase in the level of leverage by 0.325. This accept the 6th hypothesis and also consistent with packing order theory which explains the same a negative relationship between both of these variables. This finding is also consistent with the following researchers; Titman and Wessels (1988), Harris and Raviv (1991), Kakani (1999), Inder Sekhar Yadav et al (2010), and Palvannan and Sekhar (2013). This relationship indicates that firms in textile industry sector with low level tax shield can be deducted from the taxable income tend to use low debt than use internal source of financing.

Liquidity:

The table .5 shows a negative relationship between liquidity and leverage with coefficient value as -1.324 significant at 1% with P-value as 0.006. This shows that one unit increase in liquidity can cause decrease in the level of leverage by -1.324. This accept the 7th hypothesis and also consistent with packing order theory which explains the same a negative relationship between both of these variables. This finding is also consistent with the following researchers; Rajan and Zingales (1995), Ozkan (2001), Mallikarjunappa and Carmelita Goveas (2007), Mohan Raj (2011) and Amsaveni and Gomathi (2012). This relationship of liquidity with leverage is somewhat puzzling. It indicates that firms in textile industry sector, uses less debt than internal source finance, when decreasing liquidity also decreases the long-term debt ratio.

FINDINGS:

It can be observed from the analysis that 3 factors (profitability, tangibility and liquidity) are statically significant out of the 7 above. Size, risk, non-debt tax shield, and liquidity are consistent with the pecking order theory (POT) and as well as with the similar findings of previous researchers. The researchers concluded that the textile sector should mostly follow pecking order theory and should preferably use internal funds for financing needs, while for making leverage decision. The authors should consider profitability, tangibility, and liquidity are the important factors that determine the leverage in textile industry sector of India and having significant impact on leverage in this sector.

Conclusions and Suggestions:

The researcher conclude that the textile industry sector of India use packing order theory for their long term financing decision. Out of 7 variables only 3 are significant (profitability, tangibility and liquidity). It means that the firms in textile industry sector should keep in mind because these factors determine the leverage decision in this sector. The remaining four factors, Size, growth, risk and non-debt tax shield, are insignificant and do not play any role in the determination of leverage in textile industry sector of India.

The suggestion for the firm's textile industry sector of India is that they should preferably use internal source of financing to meet their long term investment decision and should use leverage by considering the profitability, size, tangibility and growth factor of these firms. These factors play an important role in the determination of leverage for the firms in textile industry sector of India. The authors also suggest that the future researcher should determine the other industry that may impact the leverage in capital structure.

References:-

- [1] Amsaveni.R and Gomathi.S, "Determinants of capital structure; A study of the pharmaceutical industry in India," *Indian journal of finance*, vol.6 (3), (2012).
- [2] Bhaduri, Sumitra. N, "Determinants of capital structure choice: A study of the Indian corporate sector", *Applied financial economics*, Vol.12, PP.655-665, (2002).
- [3] Bhaduri, Sumitra. N, "Determinants of corporate borrowing: Some evidence from the Indian corporate structure," *Journal of Economics and Finance*, Vol.26 (2), PP.200-215, (2002a).
- [4] Bhat, Ramesh Kumar, "Determinants of Financial Leverage: Some further evidence," *Chartered Accountant*, Vol.29, PP.451-456, (1980).
- [5] Booth L., Aivazian V, Demircuc – Kunt. A and Maksimovic. V, "Capital structure in Developing countries," *Journal of finance*, vol.12, pp.87-130, (2001).
- [6] Harris, M. and Raviv, A., "The Theory of Capital Structure," *Journal of Finance*, Vol.46 (1), pp. 297-355, (1991).
- [7] Inder Sekhar Yadav, Panindra Goyari and Naresh Kumar Sharma, "Determinants of Capital Structure of Corporate Firms; Panel data Evidence from India," *Asian Economic Review*, Vol.52 (2), pp.331-355, (2010).
- [8] Liaqat Ali, "The Determinants of Leverage of the listed Textile Companies in India," *European Journal of Business and management*, ISSN 2222-1905 ([paper] ISSN 2222-2839 (online), Vol.3 (12). pp.54-59, (2011). Available online at www.iiste.org
- [9] Mallikarjunappa T and Carmelita Goveas, "Factors determining the capital structure of pharmaceutical companies in India," *The ICAFI journal of applied finance*, vol.13 (11), pp.56-72, (2007).
- [10] Marsh P, "The choice between equity and debt: An empirical study," *journal of finance*, vol.37 (1), pp.121-144, (1982).
- [11] Modigliani.F and miller, M, "The cost of capital, corporation finance and the theory of investment," *The American economic review*, vol.48 (3), pp.261-29, (1958).
- [12] Modigliani, F and miller, M, "Corporation income, taxes and the cost of capital; a correction," *The American economic review*, vol.53 (3), pp.337-347.
- [13] Mohan Raj, "Determinants capital structure decision in India manufacturing industries: An empirical analysis," *International journal of research in computer application and management*, vol.1 (8), pp.139-142, (2011).
- [14] Mohan Sahoo S and Omkarnath G, "Capital Structure of Indian private corporate sector: an empirical analysis," *The ICAFI Journal of Applied Finance*, Nov (2005), pp.40-56, (2005).
- [15] Myers SC, Majluf NS, "Corporate Financing and Investing Decisions When Firms have Information that Investors do not have," *Journal of Financial Economics*, Vol.13, pp.187-221, (1984).
- [16] Ozkan Aydin, "Determinants of Capital Structure and Adjustment to Long Run target: Evidence from UK Company Panel Data," *Journal of Business and Accounting*, Vol.28, pp.175-198, (2001).
- [17] Palvannan. A and Sekhar. M, "Factors Determining Capital Structure of Co-operative Sugar industry in Tamil Nadu- An empirical study," *Indian Streams Research Journal*,(2230-7850) Vol.3 (3), pp.1-8, (2013). Available online at www.isrj.net .
- [18] Rajan G.R and Zingales L, "What Do We Know About Capital Structure? Some Evidence from International data," *Journal Finance*, Vol.50, pp.1421-1460.
- [19] Ram Kumar Kakani, "The determinants of capital structure - An econometric analysis," *Finance India*, vol.13 (1), pp.51-69, (1999).
- [20] Santi Gopal Maji and Santanu Kumar Ghosh, "Determinants of capital structure of Indian companies: pecking order (or) trade-off Hypothesis," *ICFAI journal of applied finance*, vol.13 (5), pp.5-16, (2007).

[21] Titman S and Wessels R, "The Determinants of Capital Structure Choice," *Journal of Finance*, Vol.43, pp.1-19, (1988).