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Relationship Between Capital Structure and Financial Performance of Selected Textile Industry In India

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ABSTRACT

Firm's performance is significantly affected by various factors and capital structure is one of the significant factors among them. Lot of empirical studies has been done to explore if there is any (Positive, negative or no relation) relation between firm s performance and capital structure and these studies produced mixed results. The capital structure is a very important subject in the field of financial management because it partly affects its financial performance. Determining the optimal Capital Structure is aimed at increasing the profit earning capacity of the firm.Capital structure is one of the most complex areas of financial decision making due to its interrelationship with other financial decisions variables. Capital structure is the composition of debt and equity capital that comprise a firm's financing its assets and can be rewritten as the sum of net worth plus preferred stock plus long-term debts. Hence the researchers has made an attempt to analysis the relationship between capital structure and financial performance of selected textile industry in India.

KEYWORDS*:* Gross Profit (GP), Net Profit (NP) Return on Equity (ROE), Return on Net worth (RONW) and Earnings Per Share (EPS)

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INTRODUCTION

The term 'structure' has been associated with the term 'capital'. The term 'capital' may be defined as the long term funds of the firm. Capital is the aggregation of the items appearing on the left hand side of the balance sheet minus current liabilities. In other words capital may also be expressed as follows Capital= Total assets- Current Liabilities. Empirical relationship between capital structure and performance of the selected large scale companies in Indian textile industry during the study period is analyzed.. This study has been conducted to analyze the relationship between capital structure and performance of the selected textile industry in India.

NEED FOR THE STUDY

There is a need to study the industries internal efficiency which ultimately shall determine the overall industrial development in future. Hence the present study is attempted to offer a detailed investigation of capital structure and its impact on the performance of the textile industry in India. The importance of textile products in the modern life is so obvious that no other manufactured product possesses such diversity of use. However, poor profitability is one of the challenges faced by textile industry. Under utilization of capacity, higher cost of production, industrial disputes and the performance of financial management are the factors that can be attributed to poor profitability of the industry. Some research studies have been undertaken to empirically investigate the design of capital structure of textile industry at the state level and a few studies relating to individual mills. But no study has been exclusively conducted to analyze the pattern of capital structure of textile industries. In this context an attempt has been made to investigate the design of capital structure of large scale companies in Indian textile industry for a period of ten years from 2003-04 to 2013-14.

PURPOSE OF THE STUDY

The study investigated the relationship between capital structure and financial performance of Textile Industries of Listed companies in India

OBJECTIVES

The primary purpose of the present study is to obtain a true insight into the capital structure and profitability of Indian textile industry. For carrying out the study, the following specific objectives have been set.

1. To examine the relationship between capital structure and financial performance of selected textile companies.

2. To offer suggestions for improving the capital structure and profitability of selected companies in Indian textile industry.

LIMITATIONS OF THE STUDY

(a) The entire study is based on secondary data and, thus, findings may vary to some extent.

(b) Since our sample units include the companies, which are located in different regions and hence geographical constraints may handicap our study to some extent.

(c) The study is confined only to those companies which are listed on the Bombay Stock Exchange (BSE).

REVIEW OF LITERATURE

Younus et.al[1] attempted to identify the impact between capital structure and performance in which core area is the financial performance of sugar companies listed on Karachi Stock Exchange, Pakistan (KSE Pakistan). The data were utilized from company's financial reports, annual reports and state bank of Pakistan (SBP) Financial review for the period of six years (2006-2011). There was weak positive correlations in gross profit and capital structure (. 059) and also had a weak positive correlation in net profit and capital structure variables (. 033) and also showed the low financial cost in the companies. The results showed that there was a weak positive correlation between capital structure and financial performance.

Kavita Rani[2] investigated the impact of capital structure (Debt, Equity ratio) on financial performance measured by EPS, Return on Investment, Capital Turnover, Debt to Net Worth, Net Profit Ratio, Return on Capital Employed and Return on Equity. On the basis of objectives the data from mainly three sectors were taken from 2003-2012 of 60 listed companies taken from automobile, electronic and metal industries. The analysis was done by applying correlation and regression statistics. The findings indicated that the capital structure has a no significant impact on financial performance in the automobile sector on the other hand electronic and metal sector had shown that financial performance was significantly affected by capital structure.

Birundu, and Mwangi,[3] studied the effect of capital structure on the financial performance of SMEs in Thika sub-county, Kenya. The study was conducted on 40 SMEs which were in operation for the five years 2009 to 2013, using multiple linear regression. The study was found that there was no significant effect of capital structure, asset turnover and asset tangibility on the financial performance of SMEs in Thika sub country, Kenya, especially the non-existence of a significant relationship

between ROA and capital structure would tend to support the pecking order theory of capital structure which argues that there did not exist an optimum leverage for firms.

STUDY PERIOD

Study period for the study was held in accordance with the data availability. Secondary data published by CMIE was available for the sample companies under the selected sectors of textile industry for the period from 2003-04 to 2013-14 only.

SAMPLE SIZE AND SAMPLING METHOD

Textile industry in India is broadly categorized in to 27 sectors. The study covers only 15 major sectors. Keeping in view of the scope of the study, it is decided to include all the textile companies under Indian textile industry working during the years 2003 -2004 to 2013- 2014. But, owing to several constraints such as the non-availability of financial statements or the non-working of a company in a particular year and merger and acquisition etc., it is compelled to restrict the number of sample companies to 109.The exhaustive list of textileindustry in India from CAPITALINE was cross checked with CMIE database to sort out companies to fit in as the sample for the study.The comprehensive list of companies prepared from the database was modified by sorting out the firms using the following criteria.

I.   Those were not in operation for a year during the period of study.
II. Those were in operation but non-availability of data for the whole study period.
III. Those that were merged with another company during the period of study.

Hence, Capitaline and CMIE databases proved to be complimentary to finalize the sample for the study. It is worth mentioning that the firms are selected on the basis of companies listed in Bombay Stock Exchange as on 2014.

Table: 1 Sector-wise Distribution of Sample companies

S.No	Sector of the Textile Industry	No of companies	Percentage
1	Cotton Yarn 100%	8	7.34%
2	Cotton Yarn Open Ended Spinning	6	5.50%
3	Hosiery Knitwear	6	5.50%
4	Processing	9	8.26%
5	Jute Yarn	3	2.75%
6	Man Made PPFY	4	3.67%
7	Rayon	2	1.83%
8	Readymade Apparel	14	12.84%
9	Silk	1	0.92%
10	Socks	3	2.75%
11	Spinning Cotton Blended	4	3.67%
12	Spinning Synthetic Blended	5	4.59%
13	Texturising	18	16.51%
14	Textile Machinery	8	7.34%
15	Weaving	18	16.51%
	Total no of firms	109	100%

Source: Compiled from the CMIE Database

GROSS PROFIT MARGIN WITH CAPITAL STRUCTURE

An attempt has been made to examine the relationship between debt equity ratios with Gross profit of selected large scale companies in the Indian textile industry over the period 2003-4 to 2013-14. The linear regression model fitted keeping Gross Profit as the dependant variable is as follows:

$$GP = \alpha + \beta \, (D/E) + e$$

Where,

GP - Gross profit,

D/E - Debt equity ratio

α, β - Parameters to be estimated (intercept and regression co-efficient respectively) and

e - Error term.

Analysis on the relationship between Gross profit and debt equity ratio of the selected large scale companies in the Indian textile industry is presented in Table:2.

Table: 2Regression Analysis for Gross profit margin on Debt equity

Model Summary					
Sector	**R**	**R Square**	**Adjusted R Square**	**Beta**	**Significance**
Readymade apparel	.088	0.008	-0.075	0.088	0.77
Spinning Cotton Blended	.116	0.013	-0.48	0.116	0.88
Cotton yarn 100%	.141	0.02	-0.143	0.141	0.74
Cotton yarn open ended spinning	.946	0.894	0.868	0.946	0.004*
Hosiery knitwear	.330	0.109	-0.114	-0.33	0.52
Jute yarn	.978	0.957	0.914	0.978	0.13
Man made PPFY	.999	0.998	0.998	-0.999	0.001*
Processing	.090	0.008	-0.134	-0.09	0.82
Socks	.529	0.28	-0.441	0.529	0.65
Spinning Synthetic Blended	.561	0.314	0.086	0.561	0.33
Textile Machinery	.759	0.576	0.505	0.759	0.029*
Texturising	.454	0.206	0.157	-0.454	0.058*
Weaving	.492	0.242	0.195	-0.492	0.038*
Dependent Variable: Gross Profit Ratio					

Source: Computed by the Researcher from the CMIE Database

Among the 13 sector considered in this analysis, 5 sectors viz., cotton yarn open spinning, manmade ppfy, textile machinery, Texturising and weaving have exhibited that capital structure is a significant variable in determining the gross profit. On cotton yarn open ended spinning industry and textile machinery there was a positive impact of the capital structure on gross profit. Man madeppfy, Texturising and Weaving sectors have indicated negative impact of the capital structure on gross profit. In case of other sectors, there is no significant relationship between capital structure and gross profit ratio.

NET PROFIT MARGIN WITH CAPITAL STRUCTURE

Regression analysis of profitability i.e. net profit margin of the selected large scale textile companies during the study period is made through a linear regression model fitted to test debt equity ratio with net profit margin is as follows.

$$NP = \alpha + \beta\,(D/E) + e$$

Where,

NP - Net profit,

 D/E - Debt equity ratio

α, β - Parameters to be estimated (intercept and regression co-efficient respectively) and

e - Error term.

Relationship between debt equity ratio and Net profit of the selected large scale companies in the Indian textile industry is presented in Table: 3

Table: 3 Regression Analysis for Net profit margin on Debt equity

Model Summary					
Sector	**R**	**R Square**	**Adjusted R Square**	**Beta**	**Significance**
Readymade apparel	.094	0.009	-0.074	0.09	0.75
Spinning Cotton Blended	.238	0.057	-0.415	-0.24	0.76
Cotton yarn 100%	.257	0.066	-0.09	0.26	0.54
Cotton yarn open ended spinning	.736	0.542	0.428	-0.74	0.10
Hosiery knitwear	.509	0.259	0.073	-0.51	0.30
Jute yarn	.978	0.957	0.914	0.98	0.13
Man madeppfy	.991	0.982	0.974	-0.99	0.009*
Processing	.164	0.027	-0.112	-0.16	0.67
Socks	.344	0.118	-0.763	0.34	0.78
Spinning Synthetic Blended	.203	0.041	-0.278	-0.20	0.74
Textile Machinery	.760	0.577	0.507	0.76	0.029*
Texturising	.507	0.257	0.211	-0.51	0.032*
Weaving	.580	0.337	0.295	-0.58	0.012*
Dependent Variable: Net Profit Ratio					

Source: Computed by the Researcher from the CMIE Database

Among the 13 sector considered in this analysis, 4 sectors, viz., Man Made ppfy, Textile Machinery, Texturising and Weaving have exhibited that there is a significant dependence of Net profit on the capital structure in these sectors. Analysis of regression coefficients indicate that the sectors of Man Made ppfy, Textile Machinery, Texturising have shown a negative relationship between Net profit and capital structure while weaving sector alone has indicated positive impact. In case of other sectors, there is no significant relationship between capital structure and Net profit.

RETURN ON EQUITY WITH CAPITAL STRUCTURE

Regression analysis for the third variant of profitability i.e. Return on Equity on capital structure of the selected large scale textile companies during the study period has been attempted through a linear regression model fitted to test the dependence of Return on Equity on capital structure. The regression model is as follows.

$$ROE = \alpha + \beta \, (D/E) + e$$

Where,

ROE-Return on Equity

D/E - Debt equity ratio,

α, β - Parameters to be estimated (intercept and co-efficient respectively) and

e - Error term.

Table: 4Regression Analysis for Return on Equity on Debt equity Ratio

Model Summary					
Sector	**R**	**R Square**	**Adjusted R Square**	**Beta**	**Significance**
Readymade apparel	.107	0.011	-0.071	-0.11	0.72
Spinning Cotton Blended	.258	0.067	-0.4	-0.26	0.74
Cotton yarn 100%	.550	0.303	0.187	0.55	0.16
Cotton yarn open ended spinning	.615	0.379	0.223	-0.62	0.19
Hosiery knitwear	.864	0.747	0.683	-0.86	0.026*
Jute yarn	.602	0.363	-0.274	-0.60	0.59
Man madeppfy	.914	0.836	0.754	-0.91	0.09
Rayon	1.000	1	.	-1.00	.
Socks	.784	0.614	0.228	0.78	0.43
Spinning Synthetic Blended	.448	0.201	-0.066	-0.45	0.45
Textile Machinery	.750	0.563	0.49	-0.75	0.032*
Texturising	.274	0.075	0.017	-0.27	0.271
Weaving	.517	0.268	0.222	-0.52	0.028*
Dependent Variable: return on equity					

*- Significant at 5% level Source: Computed by the Researcher from the CMIE Database

Analysis of the regression Return on Equity on debt equity ratio of the selected large scale companies in the Indian textile industry reveal that among the individual sector, Hosiery Knitwear, textile machinery, and weaving have shown a significant dependence of Return on Equity on capital structure in these sectors. However all these three sectors have indicated a negative relationship of capital structure on Return on Equity. In case of other sectors there is no significant relationship between capital structure and Return on Equity ratio.

RETURN ON NET WORTHWITH CAPITAL STRUCTURE

Regression analysis of the fourth variant of profitability i.e. Return on Net worth on capital structure of the selected textile companies during the study period is taken up through a linear regression model with Return on Net worth as the dependant variable is as follows.

$$RONW = \alpha + \beta \ (D/E) + e$$

Where,

RONW-Return on Net worth

D/E - Debt equity ratio,

α , β - Parameters to be estimated (intercept and regression co-efficient respectively) and e - Error term.

Table: 5 Regression Analysis for Return on Net worth on Debt equity

Sector	R	R Square	Adjusted R Square	Beta	Significance
Readymade Apparel	.109	0.012	-0.07	0.11	0.78
Spinning Cotton Blended	.309	0.095	-0.357	0.31	0.50
Cotton Yarn 100%	.457	0.209	0.077	0.46	0.01
Cotton Yarn Open Ended Spinning	.621	0.385	0.231	-0.62	0.71
Hosiery Knitwear	.118	0.014	-0.233	-0.12	0.02
Jute Yarn	.934	0.872	0.744	-0.93	0.48
Man Made PPFY	.793	0.629	0.444	-0.79	0.01
Processing	.101	0.01	-0.131	-0.10	0.05
Socks	.682	0.466	-0.069	0.68	0.99
Spinning Synthetic Blended	.156	0.024	-0.301	-0.16	0.84
Textile Machinery	.685	0.469	0.381	-0.69	0.21
Texturising	.011	0	-0.062	0.01	0.64
Weaving	.554	0.307	0.263	-0.55	0.02*
Dependent Variable: Return on Net Worth					

Source: Computed by the Researcher from the CMIE Database

The regression analysis of Return on Net worth on capital structure of the selected companies in the Indian textile industry revealed that among the individual sector considered, Weaving sector alone has exhibited significant but a negative relationship between Return on Net worth and capital structure. In case of other sectors, there is no significant relationship between capital structure and Return on Net worth.

EARNINGS PER SHARE WITH CAPITAL STRUCTURE

The regression analysis of the fifth variant of profitability i.e. Earnings per share on capital structure of the selected textile companies during the study period has been attempted through a

linear regression model with Earnings per share as the dependant variable. The regression model is as follows.

EPS = α + β (D/E) + e ,Where,

EPS- Earnings per share

D/E - Debt equity ratio,

α , β - Parameters to be estimated (intercept and co-efficient respectively) and

e - Error term.

Table: 6 Regression Analysis for Earnings per Share on debt equity ratio

Model Summary					
Sector	R	R Square	Adjusted R Square	Beta	Significance
Readymade apparel	.042	0.002	-0.081	-0.04	0.89
Spinning Cotton Blended	.260	0.068	-0.399	0.26	0.74
Cotton yarn 100%	.581	0.337	0.227	-0.58	0.13
Cotton yarn open ended spinning	.199	0.04	-0.2	-0.20	0.71
Hosiery knitwear	.167	0.028	-0.215	0.17	0.75
Jute yarn	.999	0.998	0.996	-1.00	0.027*
Man madeppfy	.823	0.677	0.515	-0.82	0.18
Processing	.249	0.062	-0.072	-0.25	0.52
Socks	.928	0.862	0.723	0.93	0.24
Spinning Synthetic Blended	.253	0.064	-0.248	0.25	0.68
Textile Machinery	.435	0.19	0.055	-0.44	0.28
Texturising	.127	0.016	-0.045	-0.13	0.62
Weaving	.093	0.009	-0.053	0.09	0.71
Dependent Variable: earnings per share					

Source: Computed by the Researcher from the CMIE Database

Among the individual sectors, Jute Yarn sector alone has exhibited significant but a negative relationship of Earnings per Share with capital structure. In case of other sectors, there is no significant relationship between Earnings per share and capital structure.

FINDINGS

- Among the 13 sector considered in this analysis, 5 sectors viz., cotton yarn open spinning, manmade ppfy, textile machinery, Texturising and weaving have exhibited that capital structure is a significant variable in determining the gross profit.

- Weaving sector alone has indicated positive impact. In case of other sectors, there is no significant relationship between capital structure and Net profit.

- Hosiery Knitwear, textile machinery, and weaving have shown a significant dependence of Return on Equity on capital structure in these sectors.

- Weaving sector alone has exhibited significant but a negative relationship between Return on Net worth and capital structure

- Among the individual sectors, Jute Yarn sector alone has exhibited significant but a negative relationship of Earnings per Share with capital structure

SUGGESTION

- In examining the study found lack of association between leverage and profitability, and liquidity. Hence, that the financial managers need to focus on issues like changes in tangible assets, growth prospects and tax advantage while taking decision on financial leverage.

- It is suggested that the selected companies can also increase the profitability by improving the operating efficiency through producing better quality textiles.

CONCLUSION

Indian textile industry is an independent and self reliant industry. It has large and potential domestic and international market. But the industry is highly fragmented industry depending on cotton. The study has analyzed the capital structure and profitability position of 109 textile companies across 15 selected sectors of Textile industry in India, some of the important ratios were used to measure the financial performance of selected companies. Based on the above analysis the overall performance of the major sectors and the individual companies were assessed. This is an attempt identify and study the movement of key financial parameters and their relationship with financial performance of textile industry. The sample of 109 companies spread across 15 major sectors were included for study for the period of 2003 to 2014. The data have been taken from the figures supplied by CMIE database. This chapter presents analysis of data and related discussions on and profitability of selected sectors and individual companies of the textile industry in India.

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