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IMPACT OF CAPITAL STRUCTURE ON RETURN ON ASSETS OF SELECTED PRIVATE SUGAR COMPANIES IN TAMIL NADU

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Abstract:

Indian agricultural sector is in big trouble due to several factors such as lack of technology, rain, financial needs and government policy etc. It affects sugar company's profitability and development. The study of capital structure is the need of an hour. Capital structure decision has a major impact on the sustainability and profitability of the firm. The capital structure is a foundation of the business and most significant discipline of company's operations. Everything from its first sales to its investment plan on the road begins with the way it finances operate. Finance is needed for day to day activities, in addition to that profitability is a key factor contributing to the survival of companies. Therefore, the capital structure can have an impact on firm's profitability. The ability of an organization to meet needs of their shareholders is closely related to the capital structure. So, this paper will analyze the relationship between capital structure and profitability. This paper investigated the impact of capital structure on return on assets of selected private sugar companies in Tamil Nadu have used for this study which covers a period of 11 years from 2009-2020. Necessary statistical tools have been used to establish the relationship between the dependent variable and independent variables. This study examines the growth in fixed asset, leverage and operating profit with significant relationship with ROA.

Key Words: ROA, Leverage, Operating Profit, Inventory Turnover Ratio, Intrinsic Value of Shares

Introduction:

Profit is vital for the value of the business. Profit consists of two words, profit and ability. The borrowing capacity of the company is also determined by the profit. Thus, it is considered as an important factor in determining the capital structure of the company. Capital structure plays an important role in the financial decision making to increase the firm value and efficiency of a company. It is a difficult task for managers to decide on a capital structure that can reduce risk and cost, maximize profits and increase shareholders wealth. Capital structure and profitability are positively associated (*Myers 1984*). Profitability is the ability to make a profit, it is a key factor contributing to the survival of the companies, and it's also considered to be a major factor affecting the reputation of the company. The higher profitability of the firms implies higher debt capacity and lowers the risk to the debt holders. Internal funds are not enough to financial needs of the firm, in prefer debt financing to equity shareholders (Myers 1984),Does not matter the size or purpose of the business or the companies it is operate; the purpose of a company is always to make profitability. So, this study made an attempt to investigate study of Impact of capital structure on return on assets of selected private sugar companies in Tamil Nadu. In this study sample size of selected five private sugar companies in Tamil Nadu, this study ROA is used as a dependent variable and Leverage, Current ratio, inventory turnover ratio, growth in fixed assets, asset structure, intrinsic value of shares, operating profit are used as a independent variables. This study will indentify the profitability and impact of the capital structure on return on assets of selected private sugar companies in Tamil Nadu. Hence, in this study used correlation to find the relationship between profitability ratios. Regression used to find the association of dependent and independent variables.

Research Objectives:

- To identify the profitability of selected sugar companies in Tamil Nadu
- To find out the relationship between capital structure and profitability.

Literature Reviews:

Bala Sundram Nimalathasan (2004) found D/E ratio positively and strongly associated with profitability ratios except ROCE and ROI. D/A ratio positively and strongly associated to OPR, NPR and ROCE, CG ratio positively correlated to GPR and NPR. Capital structure of the enterprise will be unsound producing adverse impact on its profitability and capital structure has a great impact profitability ratio except ROCE and ROI.

Deepanjali Babu Mazumber (2017) examines the Companies with increasing ROA and profitability of the company is increasing. These companies are not using optimum capital structure. The firms under

consideration have moderate debt- equity composition in their capital structure and have focus on improving their existing capital structure .So, that the companies can enjoy the benefits of leverage.

Ata Taken, Jubiliy Navaprabha (2015) analyzed negative relationship exists between OPM with TDER, TADR and FDR. There is a positive relationship between OPM and ICR. There exist negative relationship between ROCE with TDER, TADR and FDR. ROCE has a positive and strong relationship with ICR. There is also a Negative relationship exists between ROA with TADR and FDR. ROA has a positive relationship with TDER and ICR. There is a no significant impact of capital structure on ROA. Thus capital structure has a great impact on financial performance of the Indian steel Industry.

Saad Riaz (2015) found that TDR have negative significant impact on financial performance (ROA). Negative and significant influence of DER on ROA. Convey that if short term debt is used as a source of financing for firms assets, the financial performance evaluated by ROA has decreased. The firms that are financially secured to pay their finance cost also have sound degree of profitability. ROA is used as the measure of financial performance. DER and LTDA affect the ROA positively, though the influence of these to variables are not significant, the financing decisions or capital structure has an impact on the profitability of firms.

Sushil Kalyani, Neeti Mathur (2017) examines Debt equity ratio, log assets, degree of financial leverage and dividend pay-out has insignificant relationship with ROA. Log assets, degree of operating leverage and growth of assets are significant variables influence with ROA. Positive way while in case of net profit ratio, degree of financial leverage, log sales, has significant relationship. Capital structure varies from company to company and affected by various microeconomic as well as macroeconomic factors like companies dividend policies, management decisions, price earnings ratios, government, polices, tax rates, inflation, recession directly or indirectly. This can provide the base find impact of capital structure on their profitability.

Methodology:

This study utilized a secondary data which have been collected from the articles, related website of the companies during the sample period from 2009 to 2020.

Regression Model:

The Multiple Regression models have been followed to test the empirical relationship between the leverage and characteristics of the firm.

$$Y= a+b_1X_1+b_2X_2+b_3X_{3+}b_4X_4+b_5X_5+b_6X_6 \text{.....} (1)$$

Table of Variables:

Table 1

Variables	Definition	Abbreviation	Types of Variables
Return on assets	Net income/ Total assets	ROA	Dependent
Leverage	Total debt / Total equity	LEV	Independent
Current ratio	Current assets / Current liabilities	CR	Independent
Inventory turnover ratio	Cost of goods sold/ Average inventory	ITR	Independent
Growth in fixed assets	Total fixed assets – Accumulated depreciation	GFA	Independent
Assets structure	Fixed assets / Current assets	AST	Independent
Intrinsic value of shares	Intrinsic value business / No. of outstanding shares	IV	Independent
Operating profit	Revenue – operating costs	OP	Independent

Results of the Study:

Results of the Correlation:

Table 2

Variables	R	R^2
Leverage	0.674	0.454276
Current ratio	-0.190	0.0361
Inventory turnover ratio	-0.046	0.002116
Growth in fixed asset	0.805	0.648025
Asset structure	-0.291	0.084681
Intrinsic value	-0.117	0.013689
Operating profit	0.480	0.2304

The table 2 above represents the relationship between the various independent and dependent variable used in this study. Growth in fixed assets and operating profit has strong positive association with ROA. Leverage has a positive association with ROA. Whereas the variables like current ratio, inventory turnover ratio, asset structure, intrinsic value of shares have negatively associated with ROA. Therefore, we concluded that all selected variables were related to profitability in sugar companies during this study period.

Results of the Regression:

Table 3: Regression model for capital structure and ROA

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.910[a]	.828	.812	.9123280
a. Predictors: (Constant), Intrinsic value, Growth in Fixed Assets, Inventory turnover ratio, Asset structure, Leverage				

Hence, the value of R^2 is calculated to identify the impact of the leverage ratio on return on assets. The R^2value is 0.828. This means that the leverage ratio contributes to determine 82.8% of the ROA. The remaining 17.2% are affected by other factors not considered for this study.

Table 4: ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	216.209	5	43.242	51.952	.000[b]
	Residual	44.946	54	.832		
	Total	261.156	59			
a. Dependent Variable: Return on asset						
b. Predictors: (Constant), Intrinsic value, Growth in Fixed Assets, Inventory turnover ratio, Asset structure, Leverage						

ANOVA tests whether the regression model is valid. The F-figures are 51.952, which is very high and has a significant value of less than 5%, indicating that the testing of ANOVA is very important and that this model is valid from the given estimates.

Table 4: Regression Coefficients of Select Sugar Companies

Variables	**Model**
(constant)	
Unstandardized Co-efficient	1.475
Standard error	0.445
T-value	3.317
P-value	**0.02**
(Leverage)	
Unstandardized Co-efficient	-0.039
Standard error	0.012
T-value	-3.185
P-value	**0.02**
(Inventory turnover ratio)	
Unstandardized Co-efficient	0.109
Standard error	0.045
T-value	2.418
P-value	**0.019**
(Growth in fixed asset)	
Unstandardized Co-efficient	0.007
Standard error	0.001
T-value	9.412
P-value	**0**
(Asset structure)	
Unstandardized Co-efficient	-0.032
Standard error	0.004
T-value	-7.173
P-value	**0**
(Intrinsic value of shares)	
Unstandardized Co-efficient	-0.004
Standard error	0.001
T-value	-3.073
P-value	**0.003**

The table above shows the regression result used to check the correlation between the independent variable (LEV, ITR, GFA, AST, and IV) and the dependent variables (ROA). The result represents a positive significant relationship between capital structure and all profitability ratios (Albert Amponsah Addae and Et al., 2013). Mule and Mukras (2015) applied Tobin's Q ROA as profitability indicates in their study to test the impact of leverage on profitability. The regression co-efficient growth in fixed asset with ROA. Firms with higher growth options and higher liquidity fluctuations have incentive to reduce debt in their capital structure over time. The regression co-efficient leverage and asset structure with ROA. Rajan and Jingles (1995) if a firm offers more fixed assets the agency costs of debt can be reduced because it is easier to combine fixed assets. The

regression co-efficient ROA have significant related with leverage (Allen and Mizuno, 1989). Inventory turnover ratio has significant with ROA.

Conclusion:

This study has investigated the impact of capital structure on profitability in selected sugar companies in Tamil Nadu. For this purpose 5 private sugar companies have been selected as study samples from Tamil Nadu and data have been collected (2009-2020) and processed using statistical analysis. This study was found that the R values has significant between leverage and ROA (0.674), growth in fixed assets highly positive with ROA (0.805), moderate relationship between operating profit and ROA(0.480), current ratio(-0.190), inventory turnover ratio(-0.046), asset structure (-0.291), intrinsic value of shares (-0.117) have negatively correlated with ROA. This study found positive relationship between capital structure and profitability. Capital structure (leverage) has impact on the profitability (ROA) of selected private sugar companies in Tamil Nadu. Results of previous studied conducted Khalid Ashraf and Khurshad Ali (2013) which their found a relationship between capital structure and profitability.

Results of the Analysis:

Variables	Correlation	Regression
Leverage	Correlated	Significant
Current ratio	No correlation	Insignificant
Inventory turnover ratio	No correlation	Significant
Growth in fixed asset	Correlated	Significant
Asset structure	No correlation	Significant
Intrinsic value	No correlation	Significant
Operating profit	Correlated	Insignificant

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