PDUAMT Business Review, Volume VII, 2025, pp.169-175
ISSN: 2582-113X

CAPITAL STRUCTURE AND PROFITABILITY OF SMALL AND MEDIUM ENTERPRISES- AN EMPIRICAL STUDY

Dr. Jugal Kumar Boro*

*Assistant Professor, Department of Accountancy, B.H. College

Abstract

In India, MSMEs' contribution to total exports is very significant—it contributed 45.03% in 2021–22. Moreover, MSMEs accounted for more than 29% of the national GDP in 2021–22, reflecting their vital role in economic development. The progress of MSMEs has a positive impact on the advancement of the nation's economy. This study examines the relationship between capital structure and profitability and the impact of capital structure on the profitability of Small and Medium enterprises (SMEs). Financing decisions, being a crucial aspect of firm management, require an appropriate mix of debt and equity to efficiently finance the firm's assets. A number of factors influence the capital composition of these enterprises, particularly the availability and accessibility of funds. Financial data were collected from the financial statements of 10 small and medium enterprises for the period 2021–22 to 2022–23. Using multiple correlation and regression analysis, the study found that capital structure variables have a measurable influence on profitability. Specifically, while the debt-equity ratio shows a weak positive relationship with profitability, the debt-total capitalization ratio exhibits a stronger and statistically significant positive association. However, the findings are based on a limited sample size and a narrow geographic scope (Kamrup district, Assam), which may restrict the generalizability of results. Wider inference therefore requires more representative and longitudinal data across different regions and enterprises.

Keywords: Capital structure, Profitability, MSME, Debt-equity ratio, Return on Equity

JEL Classification: G32, L25, L26, M13, O16

Introduction

Capital structure refers to the association of various long-term forms of financing, such as debentures, preference share capital and equity share capital. There should be a proper mix of owned and borrowed capital in financing the firm's assets. A financing decision is a crucial one for a firm. Every firm should aim to achieve the optimum capital structure. An optimum capital structure is the combination of owned and borrowed capital that leads to the maximum worth of the enterprise. A firm may raise its fund requirements from different owned and borrowed sources. The capital composition decision is significant since it has an effect on the profit-making capability of the enterprises.

The Micro, Small and Medium enterprise sector (MSMEs) has a substantial role in the economy all over the world. In India, MSMEs contribute a large proportion to total exports (i.e., 45.03% in 2021-22) and 29.9 % contributed to the GDP in 2021-22. The progress of MSMEs has a positive impact on the advancement of the nation's economy. However, financial resources are a critical hindrance to the progression of this sector. A number of factors have an influence on the capital composition of these enterprises. One of them is the availability and accessibility of those sources of capital to these enterprises. Hence, it is very essential to know whether the firm's performance is influenced by its capital structure or not.

Review of literature

Sultan and Adam (2015) conducted a study titled "The effect of capital structure on profitability: an empirical analysis of listed firms in Iraq" to test the impact of capital structure on profitability among listed Iraqi firms by using a multiple regression analysis model. According to the researchers, capital structure has a significant positive effect on profitability.

Taqi et al. (2016) surveyed the effect of the capital structure of selected trading companies on the profitability of the companies in India and their study found that the capital structure of a company's influence on its performance. The researchers concluded that equity and long-term debt enhance the performance of a company.

Singh and Bagga (2019) did a study among 50 listed in the National Stock of India and measured the influence of capital structure on profitability by using correlation, regression analysis, etc. by selecting some profitability indicators (dependent variables) and capital structure indicators (independent variables). The researcher found that higher the total debt in the capital structure results lower the return on assets, while a decrease in equity results in a decrease in return on assets and vice-versa.

Chang et al. (2019) revealed that a substantial negative connection between leverage and profitability and a positive relationship between growth and financial leverage, which indicates that profitability is associated with leverage and the lower the leverage the higher the profitability of the firm.

Thanh et al. (2021) studied the effect of capital structure on the profitability of companies in emerging markets by using capital structure variables (long-term debt to assets ratio, short-term debt to assets ratio, debts to assets ratio, etc.) and profitability variables, i.e., return on equity. The study revealed that profitability has a positive association with debt-to assets ratio and has a impact of firm size and revenue growth on profitability. Moreover, the researcher found that the long-term debt-to-assets ratio has a negative effect on the profit-making capability of the firm.

Kokeyeva et al. (2022) conducted a study among 230 SMEs in Kazakhstan during 2015–2019. The study revealed that has a substantial effect on the capital structure decision of industry nature and a negative impact of debts on the return of enterprises.

Objective of the study

- To study the effect of capital structure on profitability of small and medium enterprises.

Research Questions

(1) Does the debt-to-equity ratio and the enterprise's return on equity have a significant relationship?

(2) Does the debt-to-equity ratio and the enterprise's return on capital employed have a significant relationship?

(3) Does the debt-total capitalisation ratio and the enterprise's return on equity have a significant relationship?

(4) Does the debt-total capitalisation ratio and the enterprise's return on capital employed have a significant relationship?

Significance of the Study

The rationale behind this study arises from the pivotal role that capital structure decisions play in determining the financial health and profitability of enterprises, particularly in the Micro, Small and Medium Enterprises (MSME) sector. MSMEs constitute the backbone of the Indian economy, contributing significantly to employment generation, exports and GDP. However, despite their importance, MSMEs often face persistent challenges in accessing adequate and affordable finance.

Understanding the relationship between capital structure and profitability is essential for these enterprises, as an inappropriate mix of debt and equity can adversely affect their cost of capital, liquidity position and overall sustainability. This study therefore seeks to empirically examine how different financing patterns especially debt-equity and debt-total capitalisation ratios affect profitability indicators such as Return on Equity (ROE) and Return on Capital Employed (ROCE) among SMEs.

The significance of this study lies in the following aspects:

1. Practical Insight for SME Managers: It provides empirical evidence that can help SME owners and managers make informed financing decisions to achieve an optimal capital structure that enhances profitability and firm value.
2. Guidance for Financial Institutions: The findings can assist banks and other lending institutions in understanding how leverage levels influence SME performance, helping them design more suitable and flexible credit products for this sector.
3. Policy Implications: Policymakers can use the insights to formulate financing and support schemes that improve MSMEs' access to capital while maintaining their financial stability.
4. Academic Contribution: The study adds to the growing body of literature on capital structure and firm performance, particularly within the Indian MSME context, where empirical research remains relatively limited.
5. Regional Relevance: By focusing on enterprises registered under the DICC, Kamrup (Assam), the study sheds light on financing challenges and patterns in a regional setting, offering a base for comparative studies across other states and regions.

In essence, this research bridges the gap between theoretical finance models and practical decision-making in SMEs, providing valuable insights that can enhance both business performance and economic development.

Research methodology

Data have been gathered from the annual report of 10 private limited companies for a period of 2 years (2021-22 and 2022-23) that are registered in DICC of Kamrup (Assam) as small and medium enterprises. Out of 10 companies, 5 are small and 5 are medium enterprises. After collecting data, statistical tools such as correlation and regression have been applied to analyse the data.

To test the effect of capital structure on profitability, the following profitability and capital structure indicators are selected:

Table 1: Selected variables for the study

Capital structure ratio (Independent variables)
(1) Debt-Equity ratio
(2) Debt-assets ratio
Profitability ratio (Dependent variables)
(1) Return on Equity
(2) Return on capital employed

Source: *Author's self-construct*

Capital structure variables (Independent variables)

(1) Debt-to-equity ratio: The debt-to-equity ratio is a useful tool for assessing how much debt financing an entity has employed. This shows the appropriate claims made by outsiders and owners against the enterprise's assets. Higher debt-to-equity ratios signify a higher use of debt financing. Conversely, a lower debt-to-equity ratio indicates that the enterprise's capital structure contains a smaller proportion of loan funds. It is calculated as follows:

$$\text{Debt} - \text{equity ratio} = \frac{\text{Total debt}}{\text{Total shareholders' equity}}$$

(2) Debt-Total Capitalisation ratio: The debt-total capitalisation ratio establishes a relationship between debt and the total capitalisation of the firm. It measures the firm's financial leverage. It is calculated as follows:

$$\text{Debt} - \text{Total Capitalisation ratio} = \frac{\text{Long-term Debt}}{\text{Total Capitalisation}} \times 100$$

Profitability variables (Dependent variables)

(1) Return on equity: The net income returned, expressed as a proportion of shareholders' equity, is called the return on equity. A firm's profitability is determined by the amount of profit it generates from the capital provided by its owners. It is calculated as follows:

$$\text{Return on Equity} = \frac{\text{Net income}}{\text{Shareholders' equity}} \times 100$$

(2) Return on Capital Employed: The connections between the firm's capital and profit are established by the return on capital employed. This is the most widely used primary ratio to measure the overall profitability of a firm. The formula used to determine the return on capital employed is as follows:

$$\text{Return on capital employed} = \frac{\text{Net Profit}}{\text{Capital Employed}} \times 100$$

Findings and Discussion

(1) *Correlation Analysis:* Correlation analysis is used to test the relationship between the capital structure and profitability of an enterprises.

Table 2: Correlation analysis

Variables	Debt-Equity ratio	Debt-Total capitalisation ratio	Return on Equity	Return on capital employed
Debt-Equity ratio	1	0.875** (.000)	0.021 (0.536)	-0.017 (0.632)
Debt-Total Capitalisation ratio	.0875** (.000)	1	0.561 (0.039)	0.436 (0.046)
Return on Equity	0.012 (0.536)	0.561 (0.039)	1	0.901 (0.021)
Return on capital employed	-0.017 (0.632)	0.436 (0.046)	0.901 (0.021)	1

*** Correlation is significant at the 0.01 level*

Source: *Author's own computation*

From the above table 2, it is seen that there is a positive correlation (r = 0.021) between the debt-equity ratio and return on equity, which is statistically insignificant (p = 0.536) > 0.05. However, as observed in Table 1, there is a low degree of negative correlation between the debt-equity ratio and the return on capital employed, which is also insignificant (p = 0.632 > 0.05). The correlation between debt-total capitalization ratio and return on equity shows a positive degree of correlation (r = 0.561), which is significant. Moreover, there is a positive degree of correlation (r = 0.436) between the debt-total capitalisation ratio and the return on capital employed, which is also significant.

(2) *Regression Analysis:* To know the impact of capital structure on profitability of the enterprises regression analysis is used.

Model 1:

Return on Equity (y) $=\beta_0+\beta_1 D/E+ \beta_2 D/A$

Table 3: Coefficient

Variables	Coefficient	Coefficient
Constant	β_0	29.25
Debt -Equity Ratio (D/E)	β_1	0.0573
Debt-Total Capitalisation ratio	β_3	0.0921

Source: *Author's own computation*

Table 4: Model Summary

R	R Square	Adjusted R Square	Stand. Error of estimate
0.771	0.254	0.098	4.825

Source: *Author's own computation*

From the table 4, it is seen that R square value 0.254. This indicates that 25.4 percent of variation in return on equity is explained by capital structure (independent variables- debt-equity ratio, debt-total capitalisation ratio) of an enterprise. While remaining 74.6 percent variation on return on equity of the enterprises is explained by other factors.

Model 2:

Return on Capital Employed (y) =β_0+β_1D/E+ β_2D/A

Table 5: Coefficient

Variables	Coefficient	Coefficient
Constant	β_0	25.79
Debt -Equity Ratio (D/E)	β_1	0.0822
Debt-Total Capitalisation ratio	β_3	0.0628

Source: *Author's own computation*

Table 6: Model Summary

R	R Square	Adjusted R Square	Stand. Error of estimate
0.419	0.158	0.074	6.972

Source: *Author's own computation*

The above table 6 shows that the R square value is 0.158. This indicates that 15.8% of the variation in return on capital employed is explained by the capital structure (independent variables: debt-equity ratio, debt-total capitalisation ratio) of an enterprise. While the remaining 74.6% of the return on capital employed by an enterprise is explained by other factors.

The findings indicate that capital structure does influence profitability, though the extent varies across indicators. A higher debt-total capitalization ratio tends to enhance returns to equity and capital employed, suggesting that moderate leverage can improve financial performance by utilizing debt effectively.

However, the study also implies that capital structure alone cannot fully explain SME profitability. Other potential influences include:

- Managerial efficiency and cost control practices
- Market competitiveness and firm size
- Access to technology and innovation capacity
- Macroeconomic conditions, policy support and credit availability
- Operational risk and working capital management

These factors, though beyond the scope of this limited study, warrant further investigation in broader, multi-year analyses.

Conclusion

The present study explores the relationship between capital structure and profitability among Small and Medium Enterprises (SMEs) in the Kamrup district of Assam. The findings indicate that the debt-to-equity ratio has a weak positive correlation with return on equity (ROE) and a

negative correlation with return on capital employed (ROCE), though both relationships are statistically insignificant. In contrast, the debt-total capitalisation ratio exhibits a significant positive relationship with both ROE and ROCE, implying that moderate leverage can enhance profitability when debt is effectively utilised.

The regression results further reveal that capital structure variables (debt-equity ratio and debt-total capitalisation ratio) explain 25.4% of the variation in ROE and 15.8% of the variation in ROCE, suggesting that while capital structure plays an important role in determining profitability, other factors such as managerial efficiency, operational scale, market conditions and access to finance also have substantial influence.

However, the study's conclusions should be interpreted with caution due to its methodological limitations. The analysis is based on a small sample of only ten enterprises confined to a single district (Kamrup, Assam) and a short two-year period (2021–22 to 2022–23). Such a limited and region-specific dataset restricts the generalizability of findings to the wider MSME population in India. The results, therefore, provide indicative rather than conclusive evidence of the capital structure profitability relationship.

Future research should expand the sample size to include multiple regions and industries over a longer period to obtain a more representative understanding of how capital structure decisions affect profitability across diverse MSME contexts. Incorporating qualitative dimensions such as managerial attitudes toward risk, access to credit facilities and industry-specific financial constraints could further enrich the analysis.

References

Chang, C., Batmunkh, M., Wong, W., & Jargalsaikhan, M. (2019). Relationship between capital structure and profitability: Evidence from four Asian Tigers. *Journal of Management Information and Decision Sciences*, *22*(2), 55–65.

Kokeyeva, S., Hajek, P., & Adambekova, A. (2022). Small firms' capital structure and performance. *Economic Studies Journal*, *31*(4), 128–144.

Rod, V. (2014). Accounting practices of MSMEs in Quezon Province, Philippines. *Journal of US-China Public Administration*, *11*, 911–922.

Saseela, B. (2020). Accounting practices and organisational performance: Evidence from small and medium scale enterprises in Sri Lanka. *Indian Journal of Finance and Banking*, *4*(1), 69–75.

Singh, N., & Bagga, M. (2019). The effect of capital structure on profitability: An empirical panel data study. *Jindal Journal of Business Research*, *8*(1), 65–77.

Sultan, A., & Adam, M. (2015). The effect of capital structure on profitability: An empirical analysis of listed firms in Iraq. *European Journal of Accounting, Auditing and Finance Research*, *3*(2), 61–78.

Taqi, M., Ajmal, M., & Pervez, A. (2016). Impact of capital structure on profitability of selected trading companies of India. *Arabian Journal of Business and Management Review*, *6*(3), 1–15.

Thanh, H., Uong, T., & Nguyen, C. (2021). The impact of capital structure on firm's profitability: A case study of rubber industry in Vietnam. *Journal of Asian Finance, Economics and Business*, *8*(7), 469–476.

Accounting for Management. (2018, July 20). *Accounting theory and concepts*. http://www.accountingformanagement.com/accountingtheory-and-concepts

****