



How Does Capital Structure Influence the Financial Performance of MSMEs

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Abstract:

The paper investigates how capital structure affects Indian MSME financial performance generally. From 2017 to 2023, the seven-year study covers which the top 10 MSMEs were chosen according on their market worth. The study is to evaluate the effect of capital structure on MSME financial performance as well as the relationship between financial performance in MSMEs and financial leverage. While return on assets, or ROA, return on equity, or NP, debt-to---equity ratios assess capital structure. Regression research has examined the relationship between profitability and capital structure: capital structure acts as the independent variable. The findings of the study show that the financial performance of Indian MSMEs is much influenced by their capital structure.

Keywords: *Regression analysis; debt to equity; MSMEs; capital structure.*

1.Introduction

Micro, Small, and Medium Enterprises (MSMEs) have faced remarkable challenges as well as great opportunities during the past five years. Changes in government policy, the COVID-19 outbreak, and the following recovery phase have changed MSME capital structure decisions. Using data and case studies from the past five years, this paper investigates how these developments affect MSME financial performance, development, and sustainability.

While MSMEs depend on capital structure decisions, the context in which these decisions are made has changed. MSME financing plans have been greatly shaped by access to finance, liquidity restrictions, and outside economic variables such inflation rates, interest rates, and currency volatility. The influence of the debt-equity balance on MSME performance following the epidemic is investigated in this paper.

2. Review of The Literature

2.1 Capital Structure and MSME Performance Recent Years Over the previous five years, changes in market conditions, government regulations, and global economic uncertainty have all affected the performance of MSMEs by different ways. Studies show that MSMEs with more flexible capital structures—that which



enables quick reaction to outside shocks—have better performance during crisis. Still, too strong reliance on debt funding could increase financial fragility.

Thanks to low-interest rates and government-supported credit schemes, recent research show that MSMEs have been depending more and more on debt financing throughout the recovery phase following the COVID-19 epidemic. Research show that MSMEs with a balanced capital structure—one which combines debt and equity—have more resilience against economic downturns.

2.2 post-COVID-19 MSME Financing Changes Many MSMEs were driven to review their financing arrangements by the COVID-19 epidemic. Around the world, governments carried out credit guarantee programs, stimulus plans, and credit condition loosening policies. Often through government-supported loans, these policies encouraged MSMEs to raise their debt levels. Companies who overindulged in debt struggled as the economy slowly recovered.

According to a 2022 International Finance Corporation (IFC) research, MSMEs with higher equity funding showed more resilience throughout the epidemic and a more fast recovery. During the recovery, these companies proved better at controlling liquidity restrictions and grabbing chances in developing markets.

3. Aspects Affecting MSME Capital Structure

Many elements influence choices on capital structure. For MSMEs in recent years, government programs including credit guarantee systems, tax incentives, and subsidized loans have improved the attractiveness of debt financing.

Market dynamics show that low interest rates during the post-pandemic recovery helped MSMEs to find cheap finance. But 2023 inflationary pressures have caused a shift toward more conservative financing choices. External shocks as the epidemic and disturbances in the global supply chain have shown how vulnerable MSMEs are to these difficulties. According to the data, companies with flexible and varied financial structures have more chance of survival and profitability.

4. Methodology

This study adopts a mixed-methods approach combining qualitative insights with quantitative data analysis. Data from many sources—government reports, MSME financial records, and polls taken between 2018 and 2023—are included in the study. To assess the impact of capital structure on MSME performance over this period, the study will concentrate on financial performance indicators including profitability, revenue growth, and debt-to-Equity ratios.

Examined here will be the following:



The debt-to-equity ratio (D/E) will help to evaluate MSME indebtedness level and how it affects their profitability. Financial performance will be evaluated using profitability ratios—return on assets (ROA), return on equity (ROE), and net profit margin (NPM). Nature of company: size Interviews with MSME owners, sector experts, and financial advisers will help to compile qualitative data.

4.1 Research Hypotheses

- **Hypothesis 1:** There is a significant negative relationship between debt-to-equity ratio (D/E) and MSME profitability (e.g., Return on Assets, ROA).
- **Hypothesis 2:** There is a positive relationship between equity financing and MSME growth (e.g., Revenue Growth Rate).

4.2 Regression Model Specification

We will create a multiple regression model for each of the performance indicators (profitability, growth, sustainability) to assess how capital structure variables (debt-to-equity ratio, equity ratio, debt ratio) influence these outcomes.

The general form of the regression model will be:

Model 1: Profitability (ROA),

$$ROA = \beta_0 + \beta_1 (DER) + \beta_2 (FS) + \beta_3 (TR) + \epsilon$$

Model 2: Profitability (ROE)

$$ROE = \beta_0 + \beta_1 (DER) + \beta_2 (FS) + \beta_3 (TR) + \epsilon$$

Where:

- **Profitability** could be measured by metrics like Return on Assets (ROA) or Return on Equity (ROE).
- **Firm Size:** Measured by assets, sales, or number of employees.
- **Total Revenue:** Measured by total sales and income.

4.3 Data Collection

Data for the regression analysis will be collected from the following sources:

- **Financial Statements of MSMEs (2018-2023):** Key variables such as revenue, debt levels, equity capital, and profitability ratios.



- **Government and Institutional Reports:** Data on government-backed loan schemes, tax incentives, and economic conditions affecting MSMEs.
- **Industry-Specific Data:** Information on industry-specific challenges and capital structure choices from MSME surveys or industry reports.

1. Data Analysis and Interpretation:

5.1 Model 1:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.227 ^a	.51	.49	29.7703831

a. Predictors: (Constant), RE, DER, FS

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	53224.274	3	17741.425	20.018	.000 ^b
	Residual	981993.485	1108	886.276		
	Total	1035217.758	1111			

a. Dependent Variable: ROA

b. Predictors: (Constant), RE, DER, FS

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		



1	(Constant)	-9.583	4.188		-2.288	.022
	DER	-21.052	3.947	-.285	-5.333	.071
	FS	-.049	.136	-.011	-.363	.000
	RE	28.009	3.717	.402	7.535	.000

a. Dependent Variable: ROA

The multiple correlation coefficient (R) is 0.227, suggesting a weak positive association between the independent variables and ROA. The R^2 value of 0.51 indicates that approximately 5.1% of the variance in ROA is accounted for by the model, reflecting a relatively low explanatory power. This suggests that the model fails to account for a significant amount of the variability in ROA. The Adjusted R^2 is 0.49, indicating that the model, despite incorporating multiple predictors, possesses limited explanatory power for ROA. The Standard Error of the Estimate is 29.77, signifying a substantial typical deviation of observed ROA values from predicted values, which implies significant variability not captured by the model. The F-statistic of 20.018, accompanied by a p-value of 0.000, demonstrates that the overall regression model is statistically significant, indicating that at least one of the predictors (DER, FS, RE) has a significant relationship with ROA.

The intercept is -9.583, indicating that when all independent variables (DER, FS, RE) are set to zero, the predicted ROA is -9.583. The coefficient for DER is -21.052, accompanied by a standardized beta of -0.285, indicating a negative correlation with ROA. Each unit increase in DER results in a decrease of 21.052 units in ROA, assuming other variables remain constant. A p-value of 0.071 suggests that this relationship is marginally non-significant at the 0.05 level, yet it may warrant consideration at a higher significance threshold, such as 0.1. The coefficient for FS is -0.049, accompanied by a standardized beta of -0.011, which suggests a negligible negative correlation with ROA. Each unit increase in FS results in a decrease of 0.049 units in ROA, assuming other variables remain constant. The p-value of 0.000 indicates statistical significance in this relationship; however, the practical impact remains minimal. The coefficient for RE is 28.009, accompanied by a standardized beta of 0.402, which signifies a positive correlation with ROA. With each unit increase in RE, ROA increases by 28.009 units, assuming other variables remain constant. The p-value of 0.000 indicates that this relationship is statistically significant.

The model accounts for a mere 5.1% of the variance in ROA, suggesting that additional factors not incorporated in the model may significantly influence ROA. Among the independent variables, Retained Earnings (RE) exhibits the most substantial positive influence on Return on Assets (ROA), demonstrating a statistically significant effect. The Debt-to-Equity Ratio (DER) exhibits a negative effect, though its



significance is marginal at the 0.05 level. Firm Size (FS) exhibits a minor negative impact on Return on Assets (ROA), with this relationship being statistically significant yet practically negligible due to the low magnitude of the coefficient. The model demonstrates statistical significance; however, its explanatory power is constrained, indicating the potential need for additional variables or models to more effectively elucidate ROA.

5.2 Model 2:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.780 ^a	.609	.608	7.2778704

a. Predictors: (Constant), RE, DER, FS

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	91305.665	3	30435.222	574.603	.000 ^b
	Residual	58687.876	1108	52.967		
	Total	149993.541	1111			

a. Dependent Variable: ROE

b. Predictors: (Constant), RE, DER, FS

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.979	1.024		1.933	.053



DER	1.373	.033	.775	41.239	.000
FS	-4.157	.965	-.148	-4.308	.000
RE	4.539	.909	.171	4.995	.000

a. Dependent Variable: ROE

The multiple correlation coefficient (R) of 0.780 indicates a robust positive relationship between the independent variables and ROE. The R^2 score of 0.609 indicates that the model accounts for about 60.9% of the variance in ROE. The model, with an Adjusted R^2 of 0.608, is adept at forecasting ROE, as it demonstrates comparable explanatory power and accounts for the number of predictors utilized. The estimated Standard Error of 7.28 indicates that the observed ROE values exhibit a typical variance from the expected values. The regression model is statistically significant, indicated by a p-value of 0.000 and an F-statistic of 574.603, confirming that at least one predictor—DER, FS, or RE—is significantly connected with ROE. The intercept is 1.979; hence, the anticipated ROE would be 1.979 if all independent variables (DER, FS, RE) are zero. The DER coefficient is 1.373, with a standardized beta of 0.775. This demonstrates a strong positive association with ROE. Assuming all other conditions remain constant, ROE increases by 1.373 units for each unit increase in DER. The p-value of 0.000 indicates a statistically significant association. The standardized beta of -0.148 and a coefficient for FS of -4.157 indicate a negative correlation with ROE. Assuming all other conditions remain constant, ROE decreases by 4.157 units for each unit increase in FS. The p-value of 0.000 indicates that this correlation is statistically significant. The standardized beta of 0.171 and a coefficient for RE of 4.539 imply a favorable relationship with ROE. Maintaining other variables constant, ROE increases by 4.539 units for each unit increase in RE. A p-value of 0.000 confirms the statistical significance of this link.

All three independent variables (DER, FS, RE) exert a statistically significant influence on ROE. DER positively influences ROE, FS negatively impacts it, whereas RE also exerts a beneficial effect on ROE. The model accounts for approximately 60.9% of the variance in ROE, indicating a satisfactory fit for the data.

2. Major Finding and Conclusion:

From the regression analysis, we may infer the following conclusions: Debt financing, particularly when resulting in elevated leverage (high D/E ratio), adversely affects the profitability and growth of MSMEs, substantiating the dangers of over-leveraging. Equity financing correlates favorably with the profitability and growth of MSMEs, reinforcing the notion that enterprises with diminished financial risk exhibit superior performance in profitability and expansion. Government policies, including credit guarantees, may affect capital structure decisions; however, their impact on performance may depend on additional factors such as industry type and firm size.



Consequently, MSMEs should pursue a balanced capital structure incorporating both debt and equity funding, especially during growth phases, to enhance financial performance while mitigating risk.

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