

A Study on the Firm-Level Determinants of Capital Structure for Micro, Small and Medium Enterprises Using Financial Disclosures in India

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Abstract: The study was carried out based on financial disclosure, which has been analyzed to investigate the effect of different factors on the capital structure of micro, small and medium enterprises in India. Using the empirical data from the CMIE Prowess database (which includes 1524 SMEs for the period 2006-13) and listed SME samples, the study shows the variable definitions, descriptive statistics, trends of debt ratio and correlation matrices. The study highlights that with the assumption that the relationship between leverage and growth and tangibility is small and insignificant, the growth, profitability and liquidity and also scale and the non-debt tax shield support the pecking order argument. The percentage of the short-term debt ratios in the other categories of ratios to total debt was around 77% during the period between 2014 and 2019. Listed SME leverage decreased by 44.44%, from 0.90 in FY18 to 0.50 in FY24. The average between the measures of leveraging and profitability was negative: -0.054. Reportedly, SMEs are much more reliant on their internal financing and short-term loans due to the lack of assessment information on the lenders' part to extend long-term financing to SMEs, with a lack of transparency in the financial status of the borrowers. The final finding from the research is the need to look at structural conditions in policy solutions to overcome SME's financial constraints.

Keywords: Capital Structure, SME Financing, Leverage, Pecking Order Theory, Financial Constraints, Short-Term Debt Management

1. Introduction

The capital structure decisions of MSMEs in their business play a unique role in the study of corporate finance due to the presence of the high level of information asymmetry, limited access to the public market and heavy reliance on internal finance. While being a very intrinsic part of the Indian economy, MSMEs have a unique approach towards financing compared to that of the bigger companies. The primary aim of the study is to analyze the financial position of the small & medium-sized businesses (SMEs) in India. This paper examines the changes in various financial ratios of SMEs as well as changes in the debt structure in the period from 2006 to 2013 by analyzing the data of their financial statements collected from the database of the Center for Monitoring the Indian Economy (CMIE), PROWESS [1]. The empirical studies conducted in the Indian context have always indicated a bias towards the use of internal funds rather than external funding, which is well in line with the pecking order theory (POT) propounded by Myers and Majluf [2]. The results indicate that the pecking order theory of capital structure is supported and, in addition, that even in India, most of the SMEs are in the pecking order situation, as they are less inclined towards external funding as compared to internal funding. The results show that level of profitability, liquidation, non-debt tax shield and size are supporting the POT (higher levels of the explanations accounted for higher levels of POT) [4]. It is assumed that SMEs in India are stigmatized with information asymmetry due to their small size and concentration in the hands of a few people who are managers [5]. This paper deals with liquidity, leverage and their determinants of Indian MSMEs based on their financial disclosures, which are publicly available.

2. Literature Review

The analysis employed was the empirical research, which was taken from three studies. The CMIE Prowess (2006 to 2013) information by Kumar and Rao [7] has been analyzed to come up with 1524 SMEs. Main findings revealed that SME companies have an excessive level of debt, especially in the form of short-term debt major sources of which are trade credit and bank loans. The major determinants of SMEs' capital structure are the age of the firm, profitability of the firm and tangibility and liquidity through the use of hierarchical regression analysis. Singh, Pillai and Rastogi [8] conducted a study on 82 listed SMEs of the periods 2015, 2018 and 2019 with the help of pooled OLS, fixed effects and two-stage least squares regression. The findings show that profitability, liquidity, the non-debt tax shield and size are the explanatory variables that favor the POT. But listed SMEs' growth and tangibility are not associated with the POT. Kanojia, Aggarwal and Bhargava [9] conducted a study of 428 SMEs that were listed from the years 2014 to 2018. These studies in totality give an idea of the applicability of POT to different sample sizes of Indian SMEs for different methods. The study has been done with the reference of various theories of capital structure and the result finally came up with a significant result in line with the pecking order theory, which states that SMEs use profit so as to ease their debt level and in emerging organizations, there arises a greater requirement of funds; hence, debt is used.

3. Methodology

The research approach used in this research is secondary data research, which is taken from related previous studies/researches. Examples of data sources are peer-reviewed academic publications, reports in the Center for Monitoring Indian Economy (CMIE) Prowess database and working papers. Thematically the study is structured in four categories that consecutively define the variable, provide some descriptive statistics, present trends of the debt ratios and give correlation matrices. The statistical background comes from official financial disclosure data of samples of listed SMEs from the BSE & NSE SME Platform, or SMEScape. Primary data was not collected. The research is confined within the boundaries due to a lack of public finance disclosure of unlisted businesses, where a bulk of businesses in the Indian economy are small- to medium-sized enterprises (MSMEs).

4. Results and Analysis

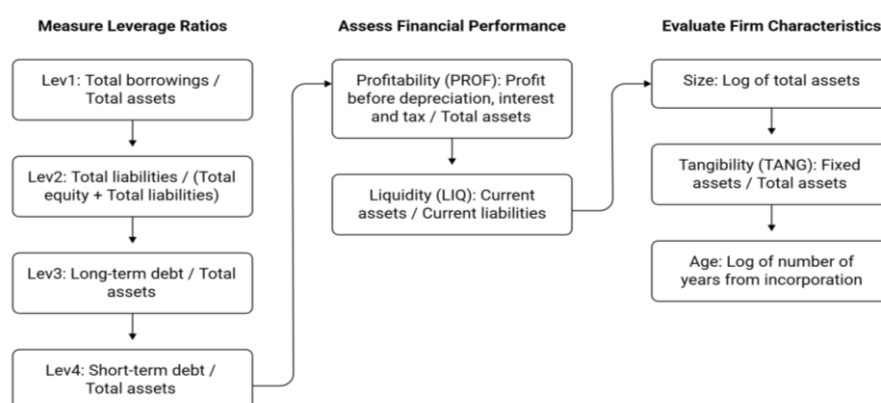


Fig 1: Description of Variables Used in Capital Structure Analysis [1]

Table 1: Descriptive Statistics of Capital Structure Variables for Indian Manufacturing SMEs [2]

Variable	Mean	Standard Deviation	Minimum	Maximum	VIF
Lev1	0.394	0.221	0.000	1.608	—
Lev2	0.572	0.198	0.008	0.983	—

Lev3	0.112	0.133	0.000	0.712	—
Lev4	0.282	0.179	0.000	0.941	—
Profitability (PROF)	0.087	0.112	-0.748	0.486	1.608
Size	4.382	1.638	0.845	9.572	1.132
Tangibility (TANG)	0.663	0.350	0.048	2.732	1.438
Age	2.814	0.897	0.693	4.913	1.083
Liquidity (LIQ)	1.763	1.281	0.178	9.146	—

Table 2: Debt Ratio Decomposition for Indian SMEs (2014–2019) [14]

Component	Average Value	Percentage of Total Debt Ratio
Long-Term Debt Ratio (LTDR)	0.216	56.99%
Short-Term Debt Ratio (STDR)	0.764	206.20%
	0.980	—

Table 3: Debt/Equity Ratio Trend for Listed SME Companies (FY18–FY24) [12]

Fiscal Year	SME Debt/Equity Ratio	BSE 200 Debt/Equity Ratio	Difference
FY18	0.90	0.70	+0.20
FY24	0.50	0.60	-0.10
Change	-0.40	-0.10	-0.30
Percentage Change	-44.44%	-14.29%	—

Table 4: Correlation Coefficients Between Profitability and Leverage Measures [1]

Leverage Measure	Correlation with PROF	Strength	Direction
Lev1	-0.043	Very Weak	Negative
Lev2	-0.022	Very Weak	Negative
Lev3	-0.039	Very Weak	Negative
Lev4	-0.092	Weak	Negative
Lev5	-0.072	Weak	Negative
	-0.054	Very Weak	Negative

Table 5: Summary of Determinant Relationships with Leverage [4]

Determinant	Expected Relationship (POT)	Observed Relationship	Support for POT
Profitability	Negative	Negative	Supported
Liquidity	Negative	Negative	Supported
Non-Debt Tax Shield	Negative	Negative	Supported
Size	Positive	Positive	Supported
Growth	Positive	Insignificant	Not Supported
Tangibility	Positive	Insignificant	Not Supported

Table 6: Coefficient of Variation and Range Analysis of Leverage Measures for Indian MSMEs (Derived from Table 2)

Variable	Mean	Standard Deviation	Coefficient of Variation (%)	Minimum	Maximum	Range
Lev1 (Total Borrowings/Total Assets)	0.394	0.221	56.09	0.000	1.608	1.608
Lev2 (Total Liabilities/Total Equity + Liabilities)	0.572	0.198	34.62	0.008	0.983	0.975
Lev3 (Long-Term Debt/Total Assets)	0.112	0.133	118.75	0.000	0.712	0.712
Lev4 (Short-Term Debt/Total Assets)	0.282	0.179	63.48	0.000	0.941	0.941
Profitability (PROF)	0.087	0.112	128.74	-0.748	0.486	1.234
Size	4.382	1.638	37.38	0.845	9.572	8.727
Tangibility (TANG)	0.663	0.350	52.79	0.048	2.732	2.684
Age	2.814	0.897	31.88	0.693	4.913	4.220
Liquidity (LIQ)	1.763	1.281	72.66	0.178	9.146	8.968

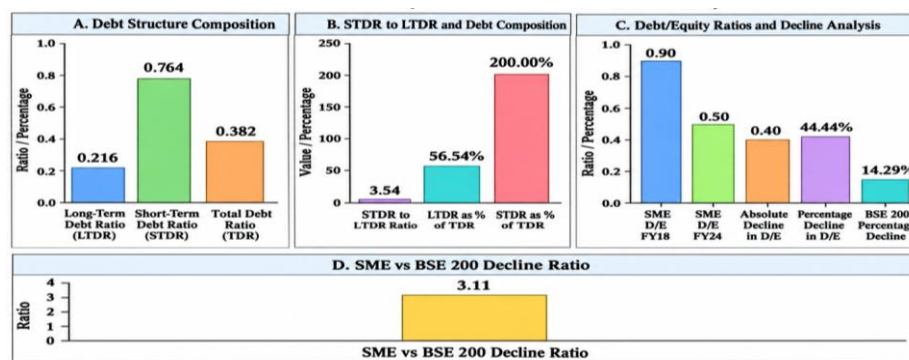


Fig 2: Debt Structure Composition and Credit Access Analysis for Indian MSMEs (Derived from Tables 3 and 4)

5. Discussion

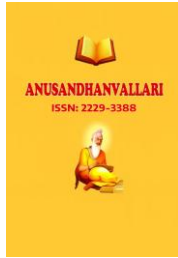
Empirical studies do provide a great deal of support for the pecking order hypothesis of the choice of capital structure by Indian SMEs. The results indicate that profitability, liquidity, non-debt tax shield and size are all important factors in determining the POT. But, when it comes to listed SMEs in favor of POT, there is no growth and tangibility [10]. A shocking truth is, maybe the Indian SMEs are dependent on short-term financing and this may be reflected in their debt profile. The average contribution to the TDR from LTDR was 23% for the years 2014-2019 and the contribution from STDR was up to 77% during the same time period [11]. There has been a significant evolution in the financing technique of the listed SMEs, with an increase in the leverage position from FY18 (0.90) to FY24 (0.50). The net profits in FY24 for the sample of SME companies amounted to Rs 342 for every Rs 100 that they earned in FY18. The correlation study also serves as another example of the benefits the POT can be used for, it has made clear that profitability measures have been negatively correlated with all leverage measures. As reported in [13], the correlation coefficient of the dependent and independent variables has been achieved between +0.706 and -0.248. It was found that the study is a confirmation of the presence of information asymmetry faced by the Indian SMEs, as it indicates that they are only constrained by financial resources. From the study it is concluded that overall, the financing of SMEs is still at a nascent stage in India and some new horizons need to be explored for financing the problems faced by Indian SMEs.

6. Conclusion

This present study aimed to find out the answers to the driver of capital structure at the firm level through secondary data of published scholarly empirical studies on Indian MSMEs. Several conclusions from the data can be drawn and it can be noted that the pecking order theory is a good framework to understand Indian SMEs' funding decisions. The POT has a positive relation with size, non-debt tax shield and profitability, as well as liquidity. On the other hand, negligible value is observed for the relation between the POT and leverage/growth as well as tangibility. According to a debt composition study, a significant part of their debts is short-term debt (STDR) in general, which is normally 77% of the debt ratio. In FY24, the total value of the listed SMEs decreased (-44.44%) from FY18, from 0.90 to 0.50. This was dramatically different than the 14.29% decline in the major BSE companies (enterprises of BSE-200). But the notion of collateral lending comes into question with the insignificance of tangibility. Therefore, it can be concluded from research that the lack of access to long-term capital markets, financial transparency and information asymmetry are hurdles to achieving the optimum capital structure of the Indian MSMEs.

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