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A Study on the Macroeconomic and Institutional Determinants of Capital Structure for Micro, Small and Medium Enterprises in India

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Abstract: This research examines the various institutional and macroeconomic variables that affect the capital structure of micro, small and medium enterprises in India using the available empirical data. The analysis focuses on the cyclicality of leverage, the role of collateral and the effect of macroeconomic regimes on leverage adjustment based on the CMIE Prowess database and World Bank Enterprise Survey (2022) and firm-level panel studies of Indian SMEs for the period of 1999-2023. The study finds that in India SMEs are countercyclical and in the case of big companies, it is procyclical. Indian company leverage is correlated with GDP growth, inflation and real interest rates. These variables influence procyclically the Indian company leverage and collateral, which has a significant impact on SME leverage procyclically. However, around 97% of informal non-agricultural enterprises remain beyond the reach of institutional finance, as per the Enterprise Survey of the World Bank, which covered 6,383 SMEs. The research found institutional factors that play a significant role in SME's financing outcome are collateral, creditor rights and financial market development. The research concludes that there is a need for context-specific policy interventions to improve the outcomes of the capital structure of Indian MSMEs, where policies can eliminate the role of collaterals and open doors to formal finance.

Keywords: Capital Structure, MSMEs, Macroeconomic Determinants, Institutional Finance, Leverage Adjustment, Collateral Constraints.

1. Introduction

Mainly the capital structure decisions of micro, small and medium-sized enterprises (MSMEs) differ from the macro-level variables and institutional structure, which affect the large enterprises [1], [2]. Understanding the impact of these external factors on financing behavior is highly necessary in the Indian context, where the number of MSMEs has approximately 120 million employees and contributes to providing nearly 29% of the Indian GDP [3], [4]. There has been a lack of research on small business leverage's cyclicality [1]. The gap has begun to be addressed by the empirical research [5], [6]. This paper is an analytical study of the leverage cyclicality of two groups of companies, namely small and medium companies (SMEs) and big companies, from the years 1999-2019 [1]. Further, our study has explored the speed of response of the financially flexible and restricted firms in either the higher or lower macroeconomic regime when it comes to changing their leverage [2]. We found that the macroeconomic indicators, such as GDP growth, inflation, real interest rate and security market developments, are significant determinants of firm leverage [2]. The institutional factors add to these impacts [13]. In this study, secondary data published by sources was used to study the macroeconomic and institutional determinants of the capital structure of Indian MSMEs [9], [10]. In most of the emerging economies, access to external finance is one of the most important points hindering the development and investment ability of Micro, Small and Medium Enterprises (MSMEs) [7], [8].

2. Literature Review

Here the analysis is done from three empirical research studies. Joshi [1] has investigated the leverage cyclicality of the big and SMEs in India from the fiscal year 1999 to 2019. Contrary to the existing literature, our finding is that for large companies leverage is procyclical, while for SMEs it is countercyclical. Altin and

Çelik [2] studied the effects of macroeconomic regimes under different scenarios of high and low macroeconomic regimes on the leverage adjustment of Indian, Chinese, Brazilian and South African enterprises. They determined that the impact on SMEs' leverage was procyclical, whereas the impact on big firms' leverage was countercyclical. Altaf and Shah [3] examined the sensitivity towards the determinants of the capital structure of capital-intensive MSMEs in different macroeconomic conditions. The DPF estimations for derived upper and lower regimes indicated from the DPTE model indicate that firms adjust their leverage when the macroeconomic variables get into the upper and lower regimes. Collectively, all the studies reveal that the role of macro and institutional characteristics is important to the capital structure decision-making of SMEs in India. The attention of this book is on the capital structure dynamics of Indian MSMEs, providing some empirical evidence to gain a better understanding of the financial practices while in an entrepreneurial environment.

3. Methodology

The research approach used in this research is secondary data research, which is taken from related previous studies/researches. Data sources include peer-reviewed journal publications, working papers, the CMIE Prowess database and the World Bank Enterprise Survey (2022), which comprised 6,383 SMEs in India. The examination is made up of four subject areas: the use of the institutional aspects of collateral, formal credit availability, the effects of financial development and the cyclicality and macroeconomic regimes. Firm-level panel studies, official financial disclosure information for listed samples of SMEs and other statistical information provide the basis. There was no primary data collection. The scope of the research is limited by the lack of public financial disclosure data for unlisted businesses by a major share of businesses in the Indian economy that are small and medium-scale enterprises (MSMEs).

4. Results and Analysis

Table 1: Leverage Cyclicality of Indian SMEs and Large Firms (FY1999–FY2019) [1]

Sl. No.	Firm Category	Leverage Cyclicality	Collateral Impact on Leverage
1	Indian SMEs	Countercyclical	Significant procyclical impact
2	Large Firms	Procyclical	Countercyclical impact

Table 2: Macroeconomic Determinants of Firm Leverage in Emerging Economies [2]

Sl. No.	Macroeconomic Variable	Effect on Indian Firm Leverage	Effect on Chinese Firm Leverage	Effect on Brazilian Firm Leverage
1	GDP Growth	Negative	Negative	Positive
2	Security Market Development	Significant	Significant	Significant
3	Inflation Rate	Significant	Significant	Significant
4	Real Interest Rate	Significant	Significant	Significant

Table 3: Access to Formal Credit for Indian MSMEs [17-18]

Sl. No.	Indicator	Value	Source
1	SMEs surveyed in World Bank Enterprise Survey (2022)	6,383	World Bank Enterprise Survey
2	Informal non-agricultural enterprises lacking institutional credit	~97%	NCEUS
3	MSMEs with access to formal credit	~20%	Climate Policy Initiative
4	Estimated credit gap in MSME sector	INR 20–25 lakh crore	Climate Policy Initiative

Table 4: Descriptive Statistics of Leverage for Indian MSMEs [9,10]

Sl. No.	Variable	Mean	Standard Deviation	Minimum	Maximum
1	Total Debt Ratio	0.37	—	—	—
2	Total Leverage	0.41	0.10	0.02	0.73

Table 5: Percentage Change in MSME Leverage During Economic Crisis (2008–2015) [19]

Sl. No.	Indicator	Value	Percentage Change
1	Leverage ratio pre-crisis	Baseline	—
2	Leverage ratio post-crisis	—	+12%
3	Return on assets coefficient	-0.032 ($t = -4.12$, $p < 0.01$)	—

Table 6: Institutional Factors Affecting MSME Capital Structure [1, 12]

Sl. No.	Institutional Factor	Effect on Capital Structure	Source
1	Collateral requirements	Significant constraint on debt access	Joshi (2025)
2	Creditor rights enhancement	Smaller firms shift toward debt financing	Creditor Rights Study (2025)
3	Financial development	Increases SME access to finance	Shodhganga
4	Information asymmetry	Confirmed existence in Indian SMEs	Calcutta University

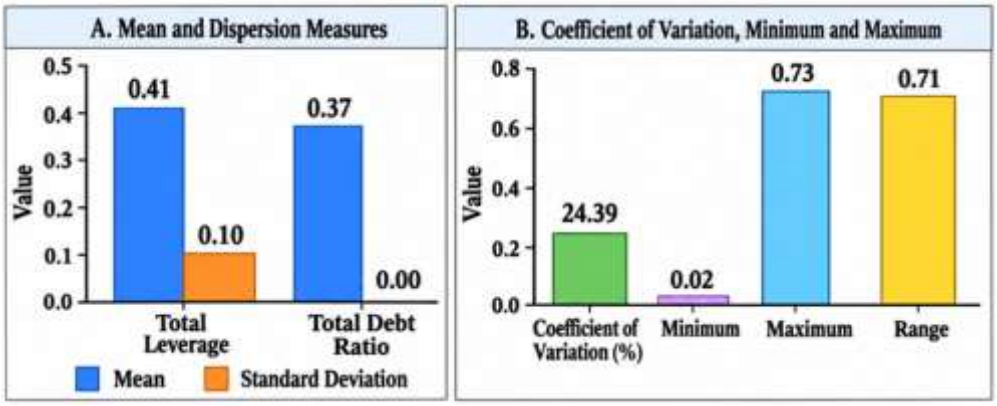


Fig 1: Descriptive Statistics of Leverage Measures for Indian MSMEs [9]

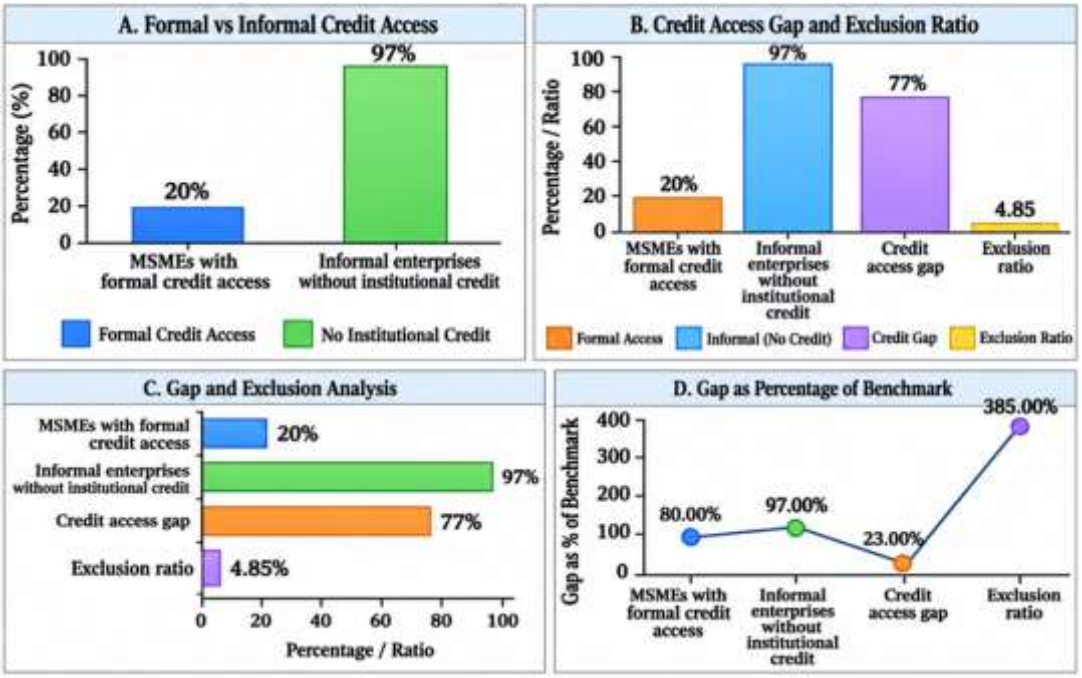


Fig 2: Credit Access Gap Analysis for Indian MSMEs

Sources: Climate Policy Initiative. (2025).

5. Discussion

The empirical result indicates that institutional and macroeconomic factors represent an important factor affecting the decisions of MSME capital structure in India [3], [4]. What is even more unexpected is that the finding that "leverage is countercyclical for SMEs and procyclical for large firms" [1] would suggest that there is "opposite cyclicality of the impact of firm size and collateral on leverage. The macroeconomic regime study shows that macroeconomic variables—including GDP growth, security market development, inflation and real interest rate—are important factors influencing corporate leverage [2]. It's also key at the institutional level [13], [12]. On formal credit, MSMEs only have 20% access, while 97% of informal non-agricultural enterprises do not have access to the institutional credit [7], [8]. Overall, all these findings suggest that institutions and macroeconomic conditions both influence the financing preference of Indian MSMEs [5], [6] and they

collectively influence the preference hierarchy—internal funds followed by short-term debt [9], [10]. The result shows that "the existing SMEs use more unsecured debt and the newly added SMEs use more long-term debt and secured debt, reflecting firm-specific growth opportunities".

6. Conclusion

This study focused on the institutional and macroeconomic factors that are affecting the capital structure of MSMEs; it was based on secondary data that have been collected from various empirical studies that are published. It is revealed that Indian SME leverage is countercyclical, whereas for big enterprises it turned out to be procyclical and there is a huge procyclical influence on SME leverage. Macroeconomic factors like real interest rate, GDP growth and inflation rate play a role in business leverage, among which GDP growth is negatively correlated with the leverage of Indian firms. At the institutional level, it is found there is an estimated credit gap of INR 20-25 lakh crore and only 20% of MSMEs access formal credit and 97% of informal non-agricultural businesses are without access to institutional credit. The descriptive data shows that the average of total leverage is 0.41 and the average total debt ratio of the Indian manufacturing SMEs is 0.37. On average, leverage ratios of MSMEs increased by 12% during the 2008 global financial crisis, indicating the growing financial vulnerabilities of the MSME. The paper suggests that policy interventions will have to bolster creditor rights and access to formal financing and eliminate the collateral constraints to boost MSMEs' capital structure outcomes.

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