Study on

# Determinants of Access to Formal Credit by Micro, Small & Medium Enterprises in India

**submitted to**

**NITI Aayog, Government of India**



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# Foreword

Micro, Small and Medium Enterprises (MSME) sector in India plays a pivotal role in thriving economic development of the country. It not only contributes considerably to generating large employment opportunities especially in the unskilled segments, but also helps in industrialisation of urban and rural areas, and thus, reduces regional disparities. The sector has exhibited consistent high growth during the last few years and moreover contributes largely to country's exports, industrial output, overall GDP and employment. However, despite the important role played by the sector in the economic growth of the country and being expected to play an equally important role in Government's many ambitious projects such as 'Make in India' and 'Start-up India', the sector faces several structural and policy challenges. Out of which, one of the key challenges for the sector is access to credit. Against this backdrop, the study "Determinants of Access to Formal Credit by Micro, Small & Medium Enterprises in India" conducted by NILERD analyses the key factors (financial and non-financial) that influence the access to credit by MSMEs using the survey data. The study covered 288 MSME firms from five labour intensive industries in six states.

The study finds that majority of firms (44 per cent) revealed bank loan is the most preferred source of finance, however, a high interest rate, high collateral rate in getting bank loans and lengthy and complex processes are the most important reasons for not applying for bank loans. The study also reveals that majority of the enterprises are not aware of the existing government schemes. Econometric results suggests that while factors such as number of business units, proportion of exports to the total turnover and collateral credit scheme have positive impacts on the access to bank credit, other factors such as high interest rate, high collateral rate, lengthy and complex process and unfavourable terms & conditions in getting bank loans have negative impact on the access to bank credit by MSMEs. There are various initiatives by the Government of India to facilitate credit and overall development of the MSME sector. However, the sector still face certain constraints such as availability of adequate and timely credit, high cost of credit, collateral requirements etc. Therefore, efforts should be made for easing of credit policies and providing a reasonable interest and collateral rates that suit the start-up entrepreneurs in the sector. Awareness programmes to reach the enterprises, administrative and structural reforms for case of doing business, creating an environment for joint MSME ventures to partner with global businesses to enhance innovation and reduce over dependency on credit needs to be initiated in big way.

I hope policymakers, industrialists, and economists alike will find this report interesting and useful.

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# <u>Acknowledgements</u>

# **Contents**

# Executive Summary

This study aims to assess the bank credit finance to Micro, Small and Medium Enterprise (MSME) sector in India and identifies and estimates factors that have significant impact on the demand for credit by MSMEs. It has been reported that out of MSME's total finance demand, about 78 per cent of that comes either from self-finance or from informal sources, and the reaming 22 per cent comes from formal finance (RBI, 2010). Within formal finance, around 92 per cent of credit comes from banks and government financing agencies and the remaining per cent of credit comes from non-financial institutions. It has been argued that the lack of adequate and timely access to finance has been the biggest challenge for the MSME sector in India. The Reserve Bank of India's Report of Working Group on Rehabilitation of Sick MSMEs (2007) indicates that lack of adequate and timely access to working capital finance is one of the key reasons for sickness of the sector. The Ministry of Micro, Small and Medium Enterprises in its Annual Report, 2015-16 pointed out a similar reason that non-availability of adequate or timely finance is the major problem in the growth of MSME sector.

In view of the above backdrop, the present study tries to assess the current scenario of formal credit to MSME sector using the secondary data published by various ministries, Government of India and financial institutions. An attempt has been made to identify and estimates factors that determine the demand for bank credit by MSMEs by using the field survey data. The literature suggests that there are both demand side and supply side factors that influence the credit availability of MSMEs (Fletcher, 1995; Cole et al., 2004; Beck et al., 2008b; de la Torre, Martinez Peria and Schmukler, 2010; Bruns and Fletcher, 2008). In this study, a holistic approach has been followed of mixing up of demand side factors (financial and non-financial) along with policy factors that determine the bank credit to MSMEs. The limitation of the study is that it does not cover supply side factors that are supposed to be collected through collating the information on lenders' view. Nevertheless, the findings of the study capture the perceptions of enterprises on credits and effective uses of government policies in the ground and may be useful for lenders and policy makers to revisit their investment plan and policies accordingly.

The key findings of the study are given below.

*Current Credit Scenario*

- The assessment of current credit scenario of MSME sector based on available secondary data suggests that advances to MSMEs to adjusted net bank credit have not grown consistently over the periods; instead it has slowed down during 2012 and 2013.

- The ratio of advances to micro and small enterprises to adjusted bank credit was 13.3 per cent in March 2010 and increased further to 14.8 per cent in the immediate next year. However, the ratio slowed down in 2012 and 2013 owning to decline in GDP growth rate and financial constraints.

- The current credit scenario of MSME sector also reflects that Government's credit to the sector under various schemes has also been slowed down in the recent years. The data shows that Government's expenditure on Credit Guarantee Fund Trust for MSE (CGTMSE) was on an average Rs. 159 crore per annum during the period between 2007-08 and 2010-11 which has declined substantially to Rs. 46 crore during the next four years (2011-12 to 2014-15).

- Similarly, Government's credit to MSME sector under Credit Linked Capital Subsidy Scheme (CLCSS) which is meant for technological upgradation has slowed down in the period from on an average Rs. 6.5 lakh between 2009-10 and 2011-12 to Rs. 6.0 lakh between 2012-13 and 2014-15.

*Determinants of Credit*

- The econometric estimation using the survey data suggest that the entrepreneurs who have more number of business units have more chances of demand for credit to further expand their business.

- The second factor which has positive impact on demand for credit is the proportion of exports to the total turnover.

- Collateral-free guarantee scheme is the third factor which has a positive and significant impact on the demand for credit. This result suggests that government should put more focus on expanding the awareness programmes of the government schemes to ensure that entrepreneurs get maximum benefits out of each scheme.

- Factors that negatively impact the demand for credit are high interest rate and high collateral rate. The study finds that both these factors are statistically significant

suggesting that easy interest rate and collateral rate policies need to be perused which will encourage MSMEs to apply for formal credit from financial institutions.

- The lengthy and complex process in getting bank loans and unfavourable terms & conditions for bank loans have negative impact on the demand for credit. Therefore, the process for applying for bank loans should be made easier and convenient.

*Other Findings*

- The survey data also explains that majority of MSMEs from textile and apparel industry have reported the percentage share of exports in their total turnover is around 60 per cent which has increased monotonously over the period due to comparative cost advantages.

- At the time of starting the business and during the course of business, MSMEs used money from different sources such own fund/retained earnings, bank loan, NBFC, money lenders and friends and relatives. Out of these sources, 44 per cent of firms revealed that bank loan is the most preferred source of finance. The maximum percentage of firms (70 per cent) from apparel industry has said in favour of bank loan.

- In the case of effectiveness of government's credit policies, a question was asked to firms related to entrepreneurs' knowledge about the Credit Guarantee Fund Trust Scheme for MSMEs (CGTMSE). Surprisingly, it was observed that merely 24 percent of firms knew about the scheme. And merely 6.25 per cent of firms have applied for collateral-free loan through CGTMSE.

The findings of the study indicate that there is a need for enhancing and widening the credit facilities to MSMEs in India. Policy factors such as high interest rate and high collateral rate must be fixed at a reasonable level which would encourage small enterprises to apply for credit facilities. Besides this, the study found that there is lack of efforts in delivering the benefits of government schemes to the last mile as very less percentage of firms are aware about the government's credit schemes. Accordingly, while designing new policies, special fund needs to be allocated for campaigning at the district and Panchayat levels to create public awareness about the government schemes on credit facility. Although ease of doing business in India is increasing very fast, it is still far behind the developed countries, which needs to be improved through brining administrative and structural reforms

that will enable entrepreneurs especially newcomers to succeed in establishing and running MSMEs. Access to advance technology and innovation in the production process must be strengthened to enable the MSME units to be globally competitive.

# Chapter 1

# Introduction

## 1.1 Background

Micro, Small and Medium Enterprises (MSMEs) contribute significantly to the development of the global economy, particularly in the developing ones (Dalberg, 2011). It has been reported that more than 95 per cent of enterprises across the world are SMEs, accounting for approximately 60 per cent of private sector employment (Ayyagari et al., 2011). A report of World Bank[1] suggests that out of 162.8 million formal SMEs, more than 59 per cent are located in emerging economies and the contribution of these enterprises to these economies is significant in terms of output and employment. It is estimated that formal SMEs contribute up to 45 per cent of total employment and up to 33 per cent of national income (GDP) in emerging economies. These numbers are significantly higher when informal SMEs are included.[2]

MSME sector has emerged as a highly vibrant and dynamic sector of the Indian economy over the last five decades (The Ministry of MSME, GoI)[3]. According to the MSME Ministry, the sector consists of any enterprises, whether proprietorship, Hindu undivided family, association of persons, cooperative society, partnership or undertaking or any other legal entity, by whatever name called, engaged in production of goods pertaining to any industry specified in the first schedule of Industry Development & Regulation Act, 1951 and rendering services, subject to limiting factor of investment in plant and machinery and equipments as noted below.

| Manufacturing Sector | | Service Sector | |
|---|---|---|---|
| (i) | micro enterprise, if investment in plant and machinery does not exceed twenty-five lakh rupees; | (i) | micro enterprise, if investment in equipment does not exceed ten lakh rupees; |
| (ii) | small enterprise, if investment in plant and machinery is more than twenty-five lakh rupees but does not exceed five crore rupees; or | (ii) | small enterprise, if investment in equipment is more than ten lakh rupees but does not exceed two crore rupees; or |
| (iii) | medium enterprise, if investment in plant and machinery is more than five crore rupees but does not exceed ten crore rupees; | (iii) | medium enterprise, if investment in equipment is more than two crore rupees but does not exceed five crore rupees. |

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[1] MSME Country Indicator, IFC, World Bank, 2014
[2] IFC: Scaling-up SME Access to Financial Services in the Developing World, 2010
[3] Annual report, 2014-15, the Ministry of MSME, Government of India.

The MSME sector contributes significantly to India's GDP, employment and exports despite the fact that 94 per cent of them are unregistered.[4] The Ministry of MSME has reported that the sector accounts for 45 per cent of Indian industrial output and 40 per cent of exports. As per the data published by the Ministry of MSME[5], there are in total 361.76 lakh MSMEs, out of which 198.74 lakh come under unregistered sector (**Table 1.1**). The data also show that about 50 per cent of the registered MSMEs and more than 60 per cent of the unregistered MSMEs are found in rural areas. The sector however lacks leadership of women who own merely 7 per cent of MSMEs enterprises.

<p align="center"><span style="color:blue">**Table 1.1: Size of MSME Sector (in lakh)**</span></p>

| Sl. No. | Characteristics | Registered Sector | Un-Registered Sector | EC- 2005* | Total |
|---|---|---|---|---|---|
| 1 | Size of Sector | 15.64 | 198.74 | 147.38 | 361.76 |
| 2 | No. of Rural Units | 7.07 | 119.68 | 73.43 | 200.18 |
| 3 | No. of Women Enterprises | 2.15 | 18.06 | 6.40 | 26.61 |

Source: Annual Report 2015-16, Ministry of MSME, Government of India. * EC = Economic Census, 2005

The sector manufactures over 6,000 products ranging from traditional to high-tech items in addition to providing a wide range of services. The leading industries with their respective shares are depicted in **Figure 1.1**. Industries that are having highest share in MSME sector are retail trade, except of motor vehicles & motorcycles; repair of personal & household goods (39.86 per cent) followed by manufacture of wearing apparel; dressing & dyeing of fur (8.75 per cent) and manufacture of food products & beverages (6.94 per cent). The least contribution comes from industries such as Manufacture of Textiles and Manufacture of fabricated metal products, except machinery & equipment's share with 2.33 and 2.34 per cent respectively.

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[4]Registered Enterprises: MSMEs that file business information such as investment, nature of operations, manpower with district industry centers (DICs) of the State/Union Territory are considered as registered enterprises; Unregistered Enterprises: MSMEs that do not file business information with district industry centers (DICs) of the State/Union Territory; The data on enterprise output performance are not adequately tracked by the government agencies.
[5] Fourth All India Census of MSMEs, 2006-07 and Economic Census, 2005, CSO, Government of India

**Figure 1.1 Leading Industries MSME Sector**
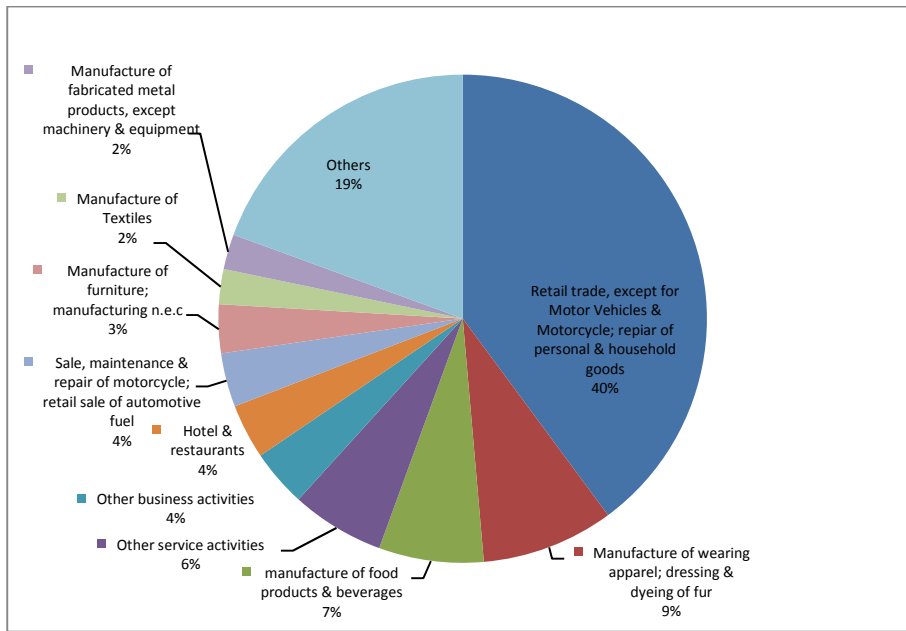


Source: Annual Report 2014-15, Ministry of MSME, Government of India

Not only the sector produced a wide range of products, it has recorded high growth during the period 2007-08 to 2014-15. The number of units of MSME registered a constant growth rate around 11 per cent every year till 2010-11. The highest growth (18.45 per cent) was recorded in 2011-12, whereas during year 2012-13 and 2013-14 growth rate was slowed down to around 14 per cent and 12 per cent respectively. But it again jumped to 17 per cent in 2014-15.

In consequent upon a considerable increase in the size of MSME sector, it has contributed significantly to GDP, employment and exports. The contribution of MSME sector to India's GDP is reported in **Table 1.2**. The share of manufacturing MSME in the total GDP was consistently more than 7 per cent during the period 2006-07 and 2012-13. While the contribution of manufacturing MSMEs to GDP slowed down during 2006-07 to 2012-13, the share of services MSMEs to GDP improved gradually during the same period. The contribution of services MSMEs to GDP was 27.4 per cent in 2006-07 which improved to 30.5 per cent in 2012-13. Overall, the share of these two sectors in total GDP increased from 35.13 per cent in 2006-07 to 37.54 per cent in 2012-13. The contribution of manufacturing MSMEs to total manufacturing output was a whopping 42.02 per cent in 2006-07, however it slowed down to 37.33 per cent in 2012-13.

**Table 1.2: Contribution of MSME Sector to GDP (at 2004-05 prices)**

| Year | Share of MSME Sector in total GDP (%) | | | Share of MSME Manufacturing output in total Manufacturing Output (%) |
|------|-------------------------------|--------------------------|-------|------------------------------------|
| | Manufacturing Sector MSME | Services Sector MSME | Total | |
| 2006-07 | 7.73 | 27.4 | 35.13 | 42.02 |
| 2007-08 | 7.81 | 27.6 | 35.41 | 41.98 |
| 2008-09 | 7.52 | 28.6 | 36.12 | 40.79 |
| 2009-10 | 7.45 | 28.6 | 36.05 | 39.63 |
| 2010-11 | 7.39 | 29.3 | 36.69 | 38.5 |
| 2011-12 | 7.27 | 30.7 | 37.97 | 37.47 |
| 2012-13 | 7.04 | 30.5 | 37.54 | 37.33 |

Sources:  1. Fourth All India Census of MSME, 2006-07, 2. National Accounts Statistics (2014), CSO, MoSPI
3. Annual Survey of Industries, CSO, MoSPI

As in the case of GDP, MSMEs sector has played an equally important role in creating employment opportunities, especially at the low-skilled level. It employs close to 40 per cent of India's workforce. The employment trend of MSME sector is illustrated in **Figure 1.2**. Employment in the MSME sector was 805 lakh in 2006-07 which increased to 921 lakh in 2009-10 and further to 1,114 lakh in 2013-14. The figure also shows the trends of number of working enterprises from 2006-07 to 2013-14. Employment per unit of enterprise remained within the range of 2.2 – 2.4.

**Figure 1.2 Employees contribution of SSI+MSMEs in India**
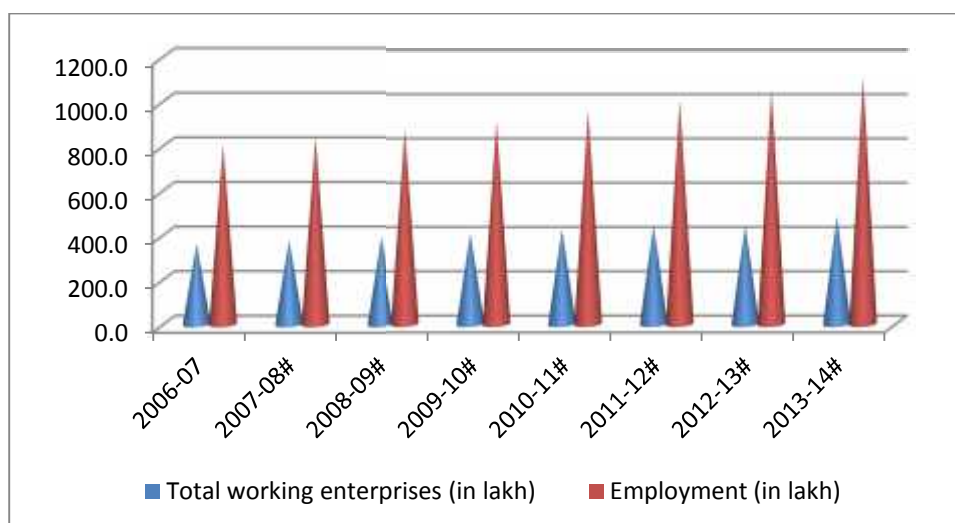


# Projected
Source: MSME Annual Report, 2014-15

Other than GDP and employment, MSME sector also plays a vital role in the overall growth of India's total exports. The contribution of MSME sector to India's total exports is reported in **Table 1.2**. The table shows that MSME sector contributed 34 per cent of total exports in 2001-02 which declined to 26.1 per cent in 2008-09 owing to financial crisis and slowing down of demand from India's major external trading partners. But, thereafter the share of MSME has picked up again recording 36.7 per cent in 2013-14.

**Table 1.2: The Share of MSME Sector and India's Merchandise Exports (Rs. crore)**

| Year | Total Exports | Exports from MSME Sector | Percentage share of MSME Sector in Exports |
|------|---------------|--------------------------|--------------------------------------------|
| 2001-02 | 209018 | 71244 | 34.0 |
| 2002-03 | 255137 | 86013 | 33.7 |
| 2003-04 | 293367 | 97644 | 33.2 |
| 2004-05 | 375340 | 124417 | 33.1 |
| 2005-06 | 456418 | 150242 | 32.9 |
| 2006-07 | 571779 | 182538 | 31.9 |
| 2007-08 | 655864 | 202017 | 30.8 |
| 2008-09 | 840755 | 219227 | 26.1 |
| 2009-10 | 945534 | 229227 | 27.2 |
| 2010-11 | 1142644 | 340507 | 29.8 |
| 2011-12 | 1260735 | 408478 | 32.4 |
| 2012-13 | 1403875 | 485740 | 34.6 |
| 2013-14 | 1803164 | 551319 | 36.7 |

Source: Directorate General of Commercial Intelligence & Statistics (DGCI&S) and Compiled from data given by the Ministry of MSME; Ministry of Commerce and Industry, Government of India

The above analysis suggests that MSME sector plays a significant role in the economic development of the Indian economy. It contributes significantly to output, employment and exports. Besides that, the Fourth All India Census of MSME Sector indicates that around 55.34 per cent of the total working enterprises are in rural areas which would cause a favourable distribution of income and wealth and in turn would reduce regional disparities. Moreover, it is the MSME sector that can help realize the target of the

proposed National Manufacturing Policy of raising the share of manufacturing sector in GDP from 16 per cent at present to 25 per cent by the end of 2022. The sector is also expected to play an important role in various initiatives such as 'Startup India'[6] 'Make in India'[7] undertaken by the Central Government recently. However, despite the critical role played by the MSME sector, it faces multiple constraints that threaten to inhibit the realization of its full potential and thereby derailing the sector's growth trajectory.

Ayyagari et al. (2005) suggests that multiple growth constraints in the MSME sector can be largely linked to inadequate access to finance. Recent research around the developing world also provides evidence that SMEs face greater financing obstacles than large firms (Beck & Kunt, 2006). The Report of Working Group on Rehabilitation of Sick MSMEs (2007) by RBI also finds lack of adequate and timely access to working capital finance as one of the key reasons for sickness of the sector. **Table 1.3** shows the outstanding formal bank credit to micro and small enterprises in India. It indicates that over the years the amount is increasing. However the MSME Census (2007) indicates that only 5 per cent of enterprises in the sector had access to some form of formal finance, while over 92 per cent of the units lacked access to any form of institutional finance.

### Table 1.3 Outstanding Bank Credit to Micro & Small Enterprises

(Rs. crores)

| Year | Public Sector Banks | Private Sector Banks | Foreign Banks | All Scheduled Commercial Banks |
|------|---------------------|----------------------|---------------|-------------------------------|
| 2005 | 67800 | 8592 | 6907 | 83498 |
| 2008 | 151137 | 46912 | 15489 | 213538 |
| 2010 | 278398 | 64534 | 21069 | 364001 |
| 2012 | 395976 | 105085 | 19839 | 520900 |

**Source:** Reserve Bank of India for respective years

Studies on financing pattern in the MSME census suggest that MSMEs prefer self-financing, which not just includes the savings of the entrepreneurs, but also the finance availed from friends, family and relatives. Therefore, the pertinent questions arise here that why MSMEs in India are not going for formal bank loans? Why only 5 per cent of MSME units were able to access the formal bank loans? Is it because of the policies or because of the

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[6] The details about the policy may be seen at http://startupindia.gov.in/
[7] The details about the policy may be seen at http://www.makeinindia.com/home

tough procedures or is it because of formal banks asked for collateral? Do the MSME units have any other sources of credit? What are the other factors that act as bottlenecks to growth and expansion of the MSME units? To address these questions a thorough research on the financial and non-financial constraints of the MSME units in India needs to be carried out.

In view of the above background, the present study tries to investigate the factors that influence demand for credit among the MSMEs in India. The existing literature suggests that there are both demand side and supply side factors that influence the credit availability of MSMEs (Fletcher, 1995; Cole et al., 2004; Beck et al., 2008b; de la Torre, Martinez Peria and Schmukler, 2010; Bruns and Fletcher, 2008).

In this study, an attempt has been made to follow a holistic approach of mixing up of demand side factors along with policy factors that determine the bank credit to MSMEs. The caveat of this study is that supply side factors that are supposed to be collected through collating the information on lenders' view have not been covered under this study. Nevertheless, the findings of the study capture the perceptions of enterprises on credits and effective uses of government policies in the ground and may prove useful for lenders and policy makers to revisit their investment plan and policies accordingly.

**1.2 Objectives of the Study**

The study examines the following specific objectives:

(i) To analyse the current scenario of access to formal credit by Micro, Small and Medium Enterprises in India

(ii) To identify various factors that influence participation of MSMEs in the formal credit markets

(iii) To empirically examine various financial and non-financial factors that influence the access to formal credit by MSMEs.

(iv) To outline suitable policy suggestions for the improvement of MSME sector.

The analysis of the above objectives has been carried out by using both secondary and primary data. The secondary data have been collected from various sources such as RBI, the Ministry of MSME, Government of India and various other published sources. For primary survey, a structured questionnaire has been used to collect the field level information.

**1.3 Chapterization**

The proceeding chapter outlines the current scenario on the access to formal credit by MSMEs in India. Chapter 3 attempts to identify the factors that influence directly or indirectly the availability of demand for credit by MSMEs and followed by methodology of analyzing the determinants of credit. In chapter 4, the study empirically examines the factors that affect access to credit by MSMEs and the final chapter concludes the study with policy suggestions.

## Chapter 2

## Access to Formal Credit by Micro, Small & Medium Enterprises in India

### 2.1 Introduction

Adequate and timely access to credit is one of the most important inputs for any business. This is equally applicable while setting up of an MSME unit by an entrepreneur. Micro, small or medium business owners are generally first-time entrepreneurs with very little capital or without capital, who need not only technical, marketing and managerial support but also the much needed seed capital to start a business. Many MSME units also need additional capital for technology up-gradation, capacity expansion, and marketing and for imports and exports. Banks in India have been providing financial facilities to numerous businesses through their branch offices, regional offices across the length and breadth of the country[8].

The Government of India has undertaken various policies to facilitate credit and for overall development of MSME sector. Some of the key policies are: (1) Prime Minister's Employment Generation Programme (PMEGP), Udyog Aadhaar Memorandum (UAM), Framework for Revival and Rehabilitation of MSMEs, A Scheme for Promotion of Innovation, Rural Industry and Entrepreneurship (ASPIRE); Micro, Small and Medium Enterprises Development (Amendment) Bill, National Manufacturing Competitiveness Programme (NMCP) and E-governance and Digital initiative, etc. The PMEGP scheme was launched in 2008-09 with the merging of the erstwhile Prime Minister's Rojgar Yojana (PMRY) and Rural Employment Generation Programme (REGP) schemes under Khadi & Village Industries Commission (KVIC), which is a statutory organization under the aegis of the Ministry of MSME. The main objective of the PMEGP scheme was to facilitate bank loan maximum up to Rs. 25 lakh to MSMEs under manufacturing sector and up to Rs. 10 lakh to that under business/services sector. Minimum age of the beneficiary should be above 18 years and should contribute 5 per cent of the project cost in case of he/she belongs to SC/ST and 10 per cent for others. In order to encourage the Start up India entrepreneurship, ASPIRE was launched by the Ministry on 16th March, 2015. Under this policy, it was proposed to set up a

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[8] See Sub- Group on Flow of Private Sector Investments for MSME Sector.

network of technology centres and incubation centres to accelerate entrepreneurship and also to promote start-ups in rural and agriculture based industry. For this, a fund of Rs. 210 crore was allocated. To improve the ease-of-doing-business, the MSME ministry introduced a path-breaking registration system UAM on 18th September, 2015. This online registration system replaces the filing of Entrepreneurs' Memorandum (EM part-I & II). Filling up of a simple one-page UAM on http://udyogaadhaar.gov.in instantly gives a unique Udyog Aadhaar Number (UAN). The government has also introduced major initiatives in the area of e-governance and digitalisation to improve the efficiency and productivity of the sector. Under this programme, movement of e-files has been started and digitalisation of existing physical files for converting the same into electronic files has been completed. Ensuring the growth of Small Scale Sector at a healthy rate and making them competitive within and at international level, the Government of India introduced a National Competitiveness Programme in the 2005-06 Budget. Although various schemes were introduced to develop micro and small enterprises, many of them have either shut down or not been able to grow due to various reasons. In order to revive the sick enterprises, the Ministry of MSME has notified a Framework for Revival and Rehabilitation of MSMEs on 29th May, 2015. Under this framework any enterprise can seek revival and rehabilitation benefit through a committee constituted by banks with representatives from State Governments, experts and others.

Literature on MSME related studies indicates that not many studies have estimated the credit gap for the MSME sector in India. However, the National Commission on Enterprises in the Unorganised Sector (NCEUS) had estimated the credit gap only for micro enterprises at 73 per cent as on March 2012 – the terminal year of the 11th Five Year Plan, with the caveat that the number of such unorganized micro enterprises was estimated at 70 million with an average credit off-take of 1.23 lakh per enterprise. This is in contrast with the MSME sector which is estimated to have 32.2 million enterprises with an average credit off-take of 7.16 lakh at the end of March, 2012, based on scheduled commercial banks' data on the number of MSME accounts.

## 2.2 Access to Finance by MSME Sector

Access to adequate and timely credit at a reasonable cost is the most critical problems facing the sector. The major reason for this has been the high risk perception among the banks about this sector and the high transaction costs for loan appraisal. A report suggests that, while the quantum of advances from the public sector banks (PSBs) to the MSEs has increased over the years in absolute terms, from Rs.46, 045 crore in March 2000 to Rs.1, 85,208 crore in March 2009, the share of credit to the MSME sector in the Net Bank Credit (NBC) has declined from 12.5 per cent to 10.9 per cent during the same period. Similarly, there has been a decline in the share of micro sector as a percentage of NBC from 7.8 per cent in March 2000 to 4.9 per cent in March 2009.[9] As mentioned earlier, the main reasons for low availability of bank finance to this sector are high risk perception of the banks in lending the MSEs and high transaction costs in processing of loan applications of MSEs.

The flow of gross bank credit to micro and small enterprises sector from 2000-01 to 2014-15 is given in **Table 2.1**.

### Table 2.1: Flow of Non-food Gross Bank Credit Outstanding to Micro & Small Enterprises Sector from 2000-01 to 2014-15

| Year | Gross Bank Credit (GBC) | | Credit to Micro and small enterprise sector | | Micro & Small enterprises credit (% of GBC) |
|---|---|---|---|---|---|
| | Rs. Crore | Growth rate (%) | Rs. Crore | Growth rate (%) | |
| 2000-01 | 429162 | 14.4 | 56002 | 6.0 | 13.0 |
| 2001-02 | 482749 | 12.5 | 57199 | 2.1 | 11.8 |
| 2002-03 | 620055 | 28.4 | 60394 | 5.6 | 9.7 |
| 2003-04 | 728422 | 17.5 | 65855 | 9.0 | 9.0 |
| 2004-05 | 999788 | 37.3 | 74588 | 13.3 | 7.5 |
| 2005-06 | 1404840 | 40.5 | 91212 | 22.3 | 6.5 |
| 2006-07 | 1801240 | 28.2 | 117910 | 29.3 | 6.5 |
| 2007-08 | 2204801 | 22.4 | 132698 | 12.5 | 6.0 |
| 2008-09 | 2601825 | 18.0 | 168997 | 27.4 | 6.5 |
| 2009-10 | 3040007 | 16.8 | 206401 | 22.1 | 6.8 |
| 2010-11 | 3667400 | 20.6 | 210200 | 1.8 | 5.7 |
| 2011-12 | 4289745 | 17.0 | 236657 | 12.6 | 5.5 |
| 2012-13 | 4869563 | 13.5 | 284348 | 20.2 | 5.8 |
| 2013-14 | 5529602 | 13.6 | 348194 | 22.5 | 6.3 |
| 2014-15 | 6002952 | 8.6 | 380028 | 9.1 | 6.3 |

**Source:** RBI

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[9] T.K.A.Nair (2010), Prime Minister's Task Force for MSME – Report of January 2010, Government of India, Chapter VI, Section 6.7

It is observed that there has been constant double-digit growth in Gross Bank Credit (GBC) outstanding to micro and small enterprises sector between 2004-05 and 2014-15 except in a few years. While there is an increase in credit to small enterprises sector in absolute terms, the percentage of small enterprises credit to GBC has come down significantly from 13 per cent in 2000-01 to 5.5 per cent in 2011-12 before picking up slightly to 6.3 per cent in 2014-15. In other words, the credit to small enterprises has not grown in commensurate with the growth of gross bank credit.

The ratio of advances to micro and small enterprises to adjusted net bank credit is depicted in **Figure 2.1** below. The advances to micro and small enterprises to adjusted bank credit were 13.3 per cent in March 2010 and increased further to 14.8 per cent in the immediate next year. However, the ratio slowed down in 2012 and 2013 owning to decline in GDP growth rate and financial constraints. Due to recovery of the economy, the ratio of advances to adjusted net bank credit has again picked up recording 14.4 per cent in 2014.

**Figure 2.1: Advances to Micro & Small Enterprises by Public Sector Banks (Percentage of Adjusted Net Bank Credit)**
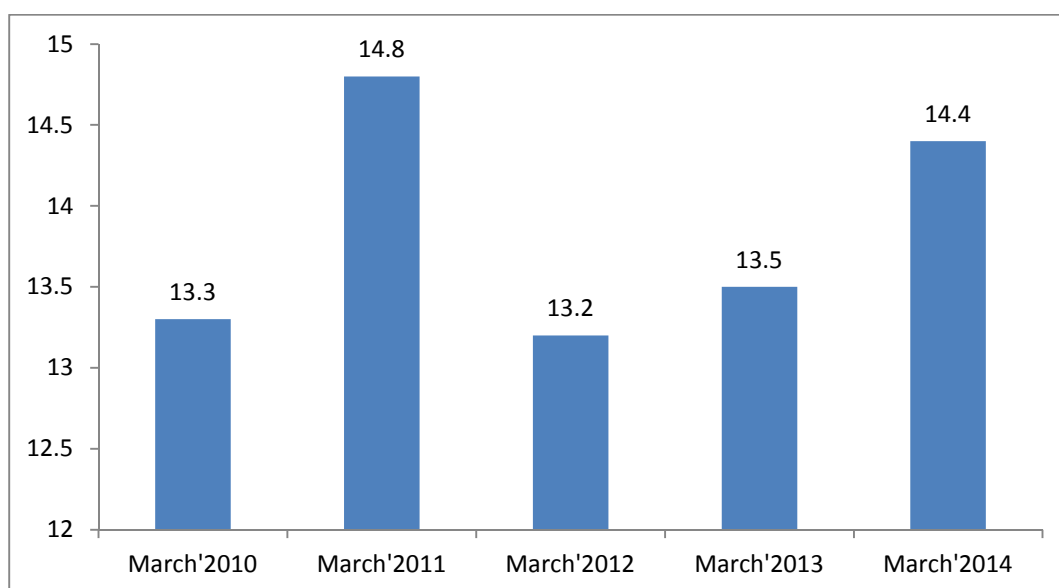


**Source:** Economic Survey, Government of India

The MSMEs primarily rely on bank finance for their operations, and as such, ensuring timely and adequate flow of credit to the sector has been an overriding public policy objective. Over the years there has been a significant increase in credit extended to this sector by the banks (**Table 2.2 and Figure 2.2**).  Table 2.2 shows the outstanding credit to MSME

sector for the last four years. At the end of March 2011, the total outstanding credit provided by all scheduled commercial banks (SCBs) to the MSE sector stood at Rs.4,78,527 crore in March 2009 as against Rs. 3,62,290 crore in March 2010 registering an increase of 32 per cent as compared to 41.4 per cent increase in the immediate preceding year.

### Table 2.2: Outstanding Credit to the MSE Sector by SCBs

| Year | Public Sector Banks | | Private Sector Banks | | Foreign Banks | | All Scheduled Commercial Banks | |
|---|---|---|---|---|---|---|---|---|
| | in Million | Rs. Crore | in Million | Rs. Crore | in Million | Rs. Crore | in Million | Rs. Crore |
| March 2008 | 3.97 | 151137 | 0.82 | 46912 | 0.07 | 15489 | 4.85 | 213539 |
| March 2009 | 4.12 | 191408 | 0.68 | 46656 | 0.06 | 18063 | 4.85 | 256128 |
| March 2010 | 7.22 | 276319 | 1.13 | 64825 | 0.16 | 21147 | 8.51 | 362291 |
| March 2011 | 7.40 | 369430 | 1.72 | 88116 | 0.19 | 20981 | 9.30 | 478527 |

**Source:** RBI

### Figure 2.2: Trends in Growth of Outstanding Credit to SMEs (%)
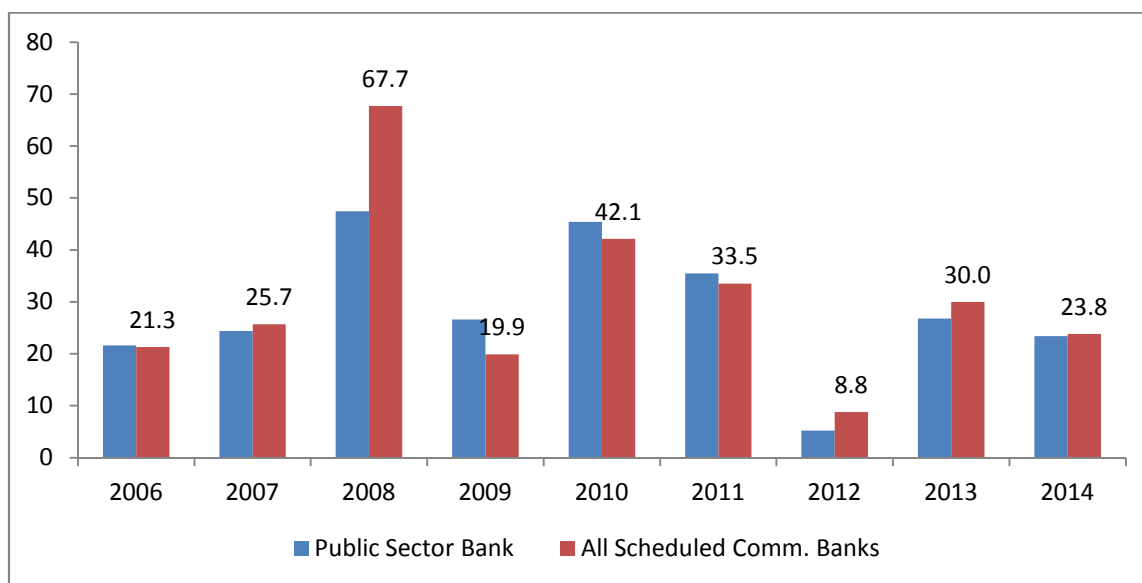


**Source:** The Ministry of MSME

Figure 2.2 shows the trends in growth rate of outstanding credit to micro and small enterprises during the period 2006 to 2014. Outstanding credit from all commercial banks recorded the highest growth in 2008 and slowed down since then and reached the lowest growth rate of 8.8 per cent in 2012. Growth of outstanding credit from all commercial bank to MSME again picked up in 2013 recording 30 per cent growth and subsequently 23.8 per cent growth in 2014.

Slowing down of bank credit to MSME sector in the recent years has also been reflected in disbursement of fund under government's credit schemes for MSME sector namely Credit Guarantee Fund Trust for MSE (CGTMSE) and Credit Linked Capital Subsidy Scheme (CLCSS). **Figure 2.3** shows that Government's expenditure on CGTMSE was on an average Rs. 159 crore per annum during the period between 2007-08 and 2010-11. And it has declined substantially to Rs. 46 crore during the next four years (2011-12 to 2014-15). Similarly, Government's credit to MSMEs under Credit Linked Capital Subsidy Scheme (CLCSS) which is meant for technological upgradation has also been slowed down in the recent years. **Figure 2.4** indicates credit received by per MSME unit under CLCSS during the period 2007-08 and 2014-15. On an average each MSME unit had received Rs. 7.4 lakh credit during 2011-12 which declined to Rs. 5.4 lakh in the immediate next year. Although it improved to Rs. 7.0 lakh during 2013-14, declined again to Rs. 5.5 lakh during 2014-15.

**Figure 2.3: Government Expenditure on CGTMSE Scheme (in Rs. Crore)**
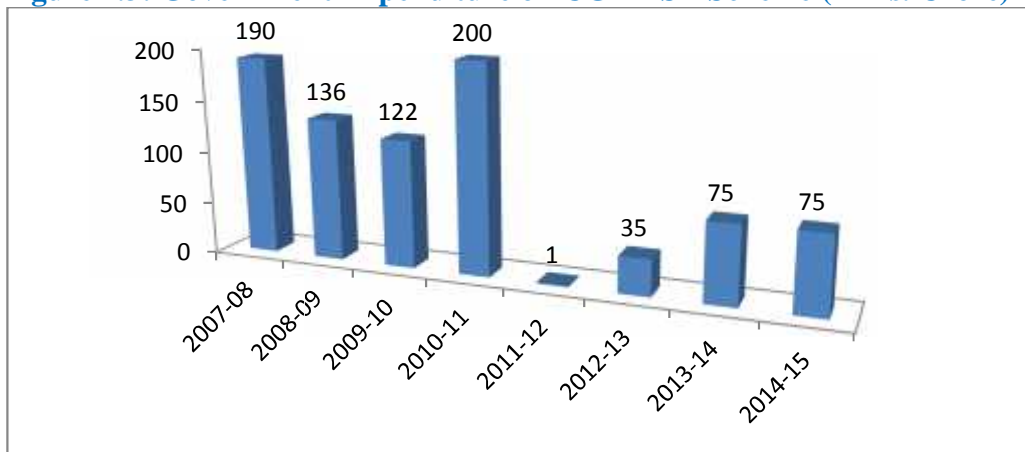


Source: Compiled from MSME at a Glance 2016, the Ministry of MSME

**Figure 2.4: Per Capita credit received by beneficiary in the Credit Linked Capital Subsidy Scheme (CLCSS) (in Rs. Lakh)**



Source: Compiled from MSME at a Glance 2016, the Ministry of MSME

## 2.3 Finance Gap in the MSME Sector

Despite the increase in financing to MSMEs in the recent years, there is still a considerable institutional finance gap of Rs. 20.9 trillion ($418 billion) (IFC, 2012). After exclusions in the debt demand (62 per cent of the overall demand) and the equity demand (from MSMEs that are structured as proprietorship or partnership), there is still a demand-supply gap of Rs. 3.57 trillion ($ 71.4 billion), which formal financial institutions can viably finance in the near term. This is the demand-supply gap for approximately 11.3 million enterprises. Although a large number of these enterprises have already received some form of formal finance, they are still significantly underserved with only 40-70 percent of their demand being met currently.

With appropriate policy interventions and support to the MSME sector, a considerable part of the currently excluded demand can be made financially viable for the formal financial sector. Of the viable and addressable demand-supply gap, the debt gap is Rs. 2.93 trillion ($58.6 billion) and the equity gap is Rs. 0.64 trillion ($12.8 billion). The micro, small, and medium enterprise segments respectively account for Rs. 2.25 trillion ($45 billion), Rs. 0.5 trillion ($10 billion) and Rs. 0.18 trillion ($3.6 billion) of the debt gap that is viable and can be addressed by financial institutions in the near term (IFC, 2012).[10]

The equity gap in the sector is a combined result of demand-side challenges such as the legal structures of enterprises, as well as supply-side gaps, such as lack of investment funds focused on MSMEs. The equity requirements for the MSME sector are concentrated in the growth-stage enterprises (about 70 per cent).

**Table 2.3** indicates the outstanding credit of scheduled commercial banks according to occupation by end of March 2014. Among the different occupational category, agriculture comprises maximum number of accounts (around 69 million which is 49.7 per cent of the total number of accounts) along the credit limit of Rs. 11,80,531 crore. The finance category comprises minimum number of accounts with credit limit of Rs. 70,5,055 crore and outstanding credit of Rs. 4,29,533 crore. Industry which comprises merely 2 million of accounts, received maximum credit limit Rs. 41,30,687 crore which is 43.4 per cent of the total credit disbursed.

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[10] International Finance Corporation, 2012: Micro, Small and Medium Enterprise Finance in India

**Table 2.3: Outstanding Credit of Scheduled Commercial Banks according to Occupation by March 2014**

| Occupational Category | No. of Accounts (million) | Credit Limit (Rs. crore) | Amount Outstanding (Rs. crore) |
|---|---|---|---|
| Agriculture | 69 (49.7) | 1180531 (12.4) | 841847 |
| Industry | 3 (2.2) | 4130687 (43.4) | 2616258 |
| Transport Operators | 2 (1.5) | 209082 (2.2) | 129694 |
| Professional and Other Services | 3 (2.2) | 676806 (7.1) | 470437 |
| Personal Loans | 50 (35.8) | 1445291 (15.2) | 1017100 |
| Trade | 7 (4.7) | 955975 (10.1) | 574033 |
| Finance | 1 (0.4) | 705055 (7.4) | 506754 |
| All Others | 5 (3.5) | 206019 (2.2) | 125959 |
| **Total** | **139 (100.0)** | **9509445 (100.0)** | **6282082** |

**Source:** RBI
Note: Figures in parentheses are percentage share.

Table 2.4 describes the population-wise bank credit and percentage share according to occupation of March 2014. The table shows that population-wise highest bank credit (Rs. 50.8 crore) under agriculture has been allocated to the rural area followed by semi-urban and urban area. In contrast, under industry occupation, the highest distribution of bank credit has been allocated to urban areas and metropolitan cities and less to rural and semi-urban areas. The distribution of occupational-wise bank credit shows that under agriculture, rural and semi-urban areas have received highest percentage of bank credit of 38 and 33.3 per cent respectively (Table 2.5). Under industry, metropolitan cities have received a mammoth 78.8 per cent of bank credit followed by 14.8 per cent by urban area and a paltry 1.4 and 1.8 per cent by rural and semi-urban areas respectively. In the case of different category of services, metropolitan cities and urban sectors have received highest percentage of bank credit than rural and semi-urban areas, suggesting that bank credit to services sector has been concentrated mainly in the urban areas.

**Table 2.4: Population Group-wise Bank Credit (Percentage Share) in 2014**

| Occupation | Rural | Semi-Urban | Urban | Metropolitan | All-India |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| Agriculture | 50.8 | 32.5 | 11.5 | 2.3 | 12.2 |
| Industry | 11.2 | 23.4 | 38.6 | 51.4 | 41.9 |
| Transport Operators | 1.4 | 1.8 | 2.6 | 2.4 | 2.2 |
| Professional and Other Services | 2.4 | 4.1 | 7.2 | 8.8 | 7.3 |
| Personal Loans | 15.4 | 25.9 | 23 | 11.6 | 15.8 |
| Trade | 15.6 | 9.1 | 11.2 | 9.6 | 10.4 |
| Finance | 1.4 | 1.2 | 3.4 | 11.4 | 7.8 |
| All Others | 1.8 | 1.9 | 2.5 | 2.5 | 2.4 |
| **Total** | **100.0** | **100.0** | **100.0** | **100.0** | **100.0** |

### Table 2.5: Occupation-wise Bank Credit (Percentage Share) in 2014

| Occupation | Rural | Semi-Urban | Urban | Metropolitan | All-India |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| Agriculture | 38.0 | 33.3 | 15.4 | 13.3 | 100.0 |
| Industry | 1.6 | 4.9 | 14.8 | 78.7 | 100.0 |
| Transport Operators | 5.7 | 9.8 | 18.7 | 65.9 | 100.0 |
| Professional and Other Services | 3.2 | 6.4 | 16.7 | 73.7 | 100.0 |
| Personal Loans | 8.8 | 18.2 | 26.2 | 46.8 | 100.0 |
| Trade | 14.2 | 10.8 | 20.8 | 54.2 | 100.0 |
| Finance | 0.8 | 1.2 | 6.6 | 91.4 | 100.0 |
| All Others | 5.1 | 9.5 | 18.9 | 66.5 | 100.0 |

**Source:** RBI

In view of the above discussion on bank credit scenario at the national level, it is pertinent to analyse the credit scenario at the micro level particularly in the case of small borrowers who borrow money from the bank for start-up business and other activities. The credit scenario of small borrowers by occupation-wise is reported in **Tables 2.6 and 2.7** below.

**Table 2.6** shows that total number of bank accounts possessed by small borrowers stood at 109.3 million as of March 2014. Maximum number of bank accounts of small borrowers belong to agriculture sector (59.69 million) followed by personal loan services (35.19 million). It corroborates the credit limits of these two sectors with highest amount of Rs. 3,67,209.3 and Rs. 2,23,434.3 crore respectively. Across different regions, rural and semi-urban sectors have received highest credit within the agriculture sector which is in contrast to credit received by industry and services sectors. The distribution of credit to small borrowers across different sectors and regions are illustrated in **Table 2.7**. The table shows that credit limit in agriculture consists of 55.58 per cent which is highest as compared to other sectors. Industry's share in credit to small borrowers is merely 1.32 per cent, suggesting that there is a need of strengthening the credit outreach to small borrowers in order to achieve high growth in the manufacturing sector.

**Table 2.6: Population group-wise Outstanding Credit of Small Borrower Accounts of Scheduled Commercial Banks according to Occupation, March 2014 (Rs. crore)**

| Occupation | Rural | | | Semi-Urban | | |
|---|---|---|---|---|---|---|
| | No. of Accounts (in millions) | Credit Limit | Amount Outstanding | No. of Accounts (in millions) | Credit Limit | Amount Outstanding |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Agriculture | 33.14 | 190395.7 | 179030.0 | 20.85 | 137265.5 | 132059.3 |
| Industry | 0.62 | 3051.4 | 2369.5 | 0.38 | 2319.0 | 1794.1 |
| Transport Operators | 0.11 | 1099.8 | 784.8 | 0.16 | 1594.4 | 1260.1 |
| Professional and Other Services | 0.74 | 3993.9 | 3186.0 | 0.58 | 3576.4 | 2838.2 |
| Personal Loans | 3.98 | 27723.5 | 21818.1 | 6.04 | 45331.5 | 35581.0 |
| Trade | 2.03 | 10166.1 | 8059.9 | 1.54 | 8865.7 | 6936.5 |
| Finance | 0.17 | 1051.6 | 802.5 | 0.11 | 664.8 | 501.1 |
| All Others | 0.99 | 4184.8 | 3047.0 | 0.84 | 2780.8 | 2249.0 |
| Total | 41.78 | 241666.7 | 219097.6 | 30.50 | 202397.9 | 183219.3 |
| Occupation | Urban/Metropolitan | | | All-India | | |
| | No. of Accounts (in Millions) | Credit Limit | Amount Outstanding | No. of Accounts (in millions) | Credit Limit | Amount Outstanding |
| | 7 | 8 | 9 | 10 | 11 | 12 |
| Agriculture | 5.69 | 39548.1 | 35468.2 | 59.69 | 367209.3 | 346557.5 |
| Industry | 0.53 | 3340.3 | 3224.1 | 1.53 | 8710.7 | 7387.6 |
| Transport Operators | 0.82 | 5485.6 | 3302.1 | 1.08 | 8179.7 | 5347.0 |
| Professional and Other Services | 0.78 | 5098.3 | 3787.2 | 2.10 | 12668.6 | 9811.5 |
| Personal Loans | 25.17 | 150379.3 | 68661.5 | 35.19 | 223434.3 | 126060.6 |
| Trade | 1.30 | 7948.7 | 6042.6 | 4.88 | 26980.5 | 21038.9 |
| Finance | 0.07 | 585.6 | 426.8 | 0.34 | 2302.0 | 1730.4 |
| All Others | 2.59 | 4248.6 | 3461.7 | 4.42 | 11214.1 | 8757.7 |
| Total | 36.95 | 216634.5 | 124374.2 | 109.23 | 660699.1 | 526691.1 |

**Source:** RBI

**Table 2.7: Distribution of Population group-wise outstanding credit of small borrower accounts of scheduled commercial banks according to occupation March 2014 (%)**

| Occupation | Rural | | | Semi-Urban | | |
|---|---|---|---|---|---|---|
| | No. of Accounts (in Millions) | Credit Limit | Amount Outstanding | No. of Accounts (in Millions) | Credit Limit | Amount Outstanding |
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Agriculture | 79.33 | 78.78 | 81.71 | 68.36 | 67.82 | 72.08 |
| Industry | 1.49 | 1.26 | 1.08 | 1.25 | 1.15 | 0.98 |
| Transport Operators | 0.25 | 0.46 | 0.36 | 0.52 | 0.79 | 0.69 |
| Professional and Other Services | 1.77 | 1.65 | 1.45 | 1.92 | 1.77 | 1.55 |
| Personal Loans | 9.53 | 11.47 | 9.96 | 19.81 | 22.4 | 19.42 |
| Trade | 4.86 | 4.21 | 3.68 | 5.06 | 4.38 | 3.79 |
| Finance | 0.4 | 0.44 | 0.37 | 0.35 | 0.33 | 0.27 |
| All Others | 2.37 | 1.73 | 1.39 | 2.75 | 1.37 | 1.23 |
| **Total** | 100 | 100 | 100 | 100 | 100 | 100 |
| Occupation | Urban / Metropolitan | | | All-India | | |
| | No. of Accounts (in Millions) | Credit Limit | Amount Outstanding | No. of Accounts (in Millions) | Credit Limit | Amount Outstanding |
| | 7 | 8 | 9 | 10 | 11 | 12 |
| Agriculture | 15.41 | 18.26 | 28.52 | 54.65 | 55.58 | 65.8 |
| Industry | 1.43 | 1.54 | 2.59 | 1.4 | 1.32 | 1.4 |
| Transport Operators | 2.21 | 2.53 | 2.65 | 0.99 | 1.24 | 1.02 |
| Professional and Other Services | 2.1 | 2.35 | 3.05 | 1.92 | 1.92 | 1.86 |
| Personal Loans | 68.12 | 69.42 | 55.21 | 32.22 | 33.82 | 23.93 |
| Trade | 3.53 | 3.67 | 4.86 | 4.46 | 4.08 | 3.99 |
| Finance | 0.18 | 0.27 | 0.34 | 0.31 | 0.35 | 0.33 |
| All Others | 7.02 | 1.96 | 2.78 | 4.05 | 1.7 | 1.66 |
| **Total** | 100 | 100 | 100 | 100 | 100 | 100 |

**Source:** calculated

The distribution of bank credit and number of accounts to small borrowers by gender groups across different sectors is illustrated in **Table 2.8**. While small borrowers from Male group have 76.5 per cent of bank accounts, Female groups have only 20.9 per cent of the same. Further, the table shows that the percentage share of male groups in bank accounts is consistently higher than that of female groups across different sectors such as rural, semi-urban, urban and metropolitan. Similar result is also found in the case of loan outstanding by gender groups, where the male groups have received significantly higher credit than female

groups. In order to achieve gender parity in manufacturing and services sectors, it is necessary and pertinent to promote and encourage women entrepreneurship in the country.

**Table 2.8: Distribution of Population Group-wise Outstanding Credit of Small Borrowers' Accounts of Scheduled Commercial Banks according to Broad Category of Borrowers (%)**

| Population group | Individual | | | | Others | |
|---|---|---|---|---|---|---|
| | Male | | Female | | | |
| | No. of Accounts | Amount Outstanding | No. of Accounts | Amount Outstanding | No. of Accounts | Amount Outstanding |
| Rural | 77.9 | 78.7 | 19.2 | 18.5 | 2.8 | 2.7 |
| Semi-urban | 72.1 | 73.1 | 25.0 | 24.1 | 2.9 | 2.8 |
| Urban | 72.5 | 71.3 | 23.7 | 23.7 | 3.8 | 5.1 |
| Metropolitan | 81.8 | 78.4 | 16.8 | 17.2 | 1.4 | 4.5 |
| All-India | 76.5 | 75.7 | 20.9 | 21.0 | 2.7 | 3.2 |

**Source:** RBI

The credit scenario of small borrowers across different regions in the country is reported in **Table 2.9**. Total amount outstanding to small borrowers stands at Rs. 1,17,010 crore as on March 2013 which is merely 9.4 per cent of the total outstanding in the country suggesting an urgent need for improving the credit scenario of small borrowers. The outstanding credit to small borrowers also varies widely across regions. While the Southern region has recorded a whopping 47.94 per cent of outstanding credit to small borrowers, the north-eastern region registered merely 3.43 per cent. On the other hand, Eastern region, Central region and Western region have recorded 10.75, 14.25 and 10.73 per cent of credit respectively to small borrowers during the same period.

**Table 2.9: State and bank-wise Deposits and Credit (total credit and credit of small borrower accounts) of Scheduled Commercial Banks, March 2013**

| Region/State/Union Territory | | Deposits | | Total Credit | | Of which: Credit to Small Borrowers | |
|---|---|---|---|---|---|---|---|
| | No. of Offices | No. of Accounts | Amount | No. of Accounts | Amount Outstanding | No. of Accounts | Amount Outstanding |
| Northern Region | 3,934 | 40.6 | 280276 | 3.4 | 290414 | 2.1 | 15103(5.2) |
| North-Eastern Region | 615 | 9.1 | 55293 | 1.2 | 17872 | 0.8 | 4012 (22.5) |
| Eastern Region | 3,309 | 49.3 | 230339 | 3.6 | 117221 | 2.8 | 12577 (10.7) |
| Central Region | 3,925 | 53.1 | 235418 | 3.7 | 96078 | 2.7 | 16677 (17.4) |
| Western Region | 3,053 | 37.9 | 333949 | 3.0 | 341254 | 2.1 | 12551 (3.7) |
| Southern Region | 6,364 | 80.9 | 389305 | 11.7 | 385273 | 9.0 | 56090 (14.6) |
| **All-India** | **21,200** | **270.9** | **1524580** | **26.6** | **1248112** | **19.3** | **117010 (9.4)** |

**Note:** Number of accounts in million, deposits and credit in Rs. Crore. Figures in parentheses indicate percentage of total credit amount outstanding.
**Source:** RBI

To sum up, access to adequate and timely credit at a reasonable cost is the most crucial problems facing the MSME sector in India. The main reason for this has been the high risk perception among banks about this sector and high transaction costs for loan appraisal. The available data shows that while there is an increase in credit to small enterprises sector in absolute terms over the period, the percentage of small enterprises credit to gross bank credit (GBC) of scheduled commercial banks has come down significantly. The ratio of advances to MSME by public sector banks to adjusted net bank credit also has not increased consistently over the period. In view of the above described current credit scenario of MSME sector and constraints they face, in the next two chapters the present study has identified and estimated key factors that affect the credit availability to the sector by using appropriate statistical tools.

# Chapter 3

# Methodology

The MSME sector contributes in a major way to the economic development of India. Despite maximum number of MSMEs being unregistered, the sector has expanded at the rate of double-digit during the past one decade. Although there are ample opportunities for the sector to grow faster and achieve its full potential, several economic and environmental factors are impeding its high growth prospects. Besides poor infrastructure and inadequate market linkages, lack of adequate and timely access to finance has been the biggest challenge and key constraint of growth of MSME sector.[11] In India, about 78 per cent of MSMEs are either self-financed or get funds from informal sources[12] for start-up activities, but later on when they gradually expand their business they require funds from formal sources such as banks. However, MSMEs find it difficult to get credit from formal financial institutions as these institutions have limited exposure to the sector due to higher risk perception and scanty immovable collateral.

Existing studies have found that both demand and supply side factors that influence the credit availability of MSMEs (Fletcher, 1995; Cole et al., 2004; Beck et al., 2008b; de la Torre, Martinez Peria and Schmukler, 2010; Bruns and Fletcher, 2008). Demand-side factors such as firm characteristics, owner characteristics, absence of the appropriate managerial skills, inadequate collateral, and high risk of loan defaults, among other factors influence the bank credit to MSMEs. Similarly, there are supply side factors such as high transaction costs, regulatory/market requirements, and lack of understanding of the nature and operations of MSMEs by the banks, which also have played major role in determining bank credit to MSMEs.

In this study, a holistic approach is used of mixing up of demand side factors along with policy factors that determine the bank credit to MSMEs by using the primary survey data. Some of the demand side and policy factors examined in this study are given below:

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[11] Report on "Micro, Small and Medium Enterprise Finance in India", IFC, World Bank, November, 2012

[12] It includes use of personal sources, especially savings and re-investment of profits, loans and grants from the social network of family and friends, liquidation of family assets, reciprocal asset usage arrangements, informal operating leases, rotating savings and credit institutions and money lenders.

- Firm characteristics (Age, size, registered/unregistered, business information)
- Owner characteristics (qualification, experience, network with bank/business community)
- Policy factors (interest rate, collateral, application procedures etc.)
- Market information (related to various government incentives/policies to avail bank loan)

The study uses a probit model to estimate the determinants of the demand for credit by MSMEs in India. The probit model is estimated as:

$$P[Y_i = 1 \mid X_{1i}......X_{ki}; \textsf{s}_0......\textsf{s}_k] = P[Y^*_i > 0 \mid X_{1i}......X_{ki}; \textsf{s}_0......\textsf{s}_k] = \Phi(\textsf{s}_0 + \sum_{k=1}^{K} \textsf{s}_k X_{ki}) \quad (1)$$

The observable outcomes of the binary choice problem are represented by a binary indicator variable $Y_i$ that is related to the unobserved dependent variable $Y^*_i$ as follows:

$$Y_i = 1 \text{ if } Y^*_i > 0 \tag{2}$$

$$Y_i = 0 \text{ if } Y^*_i \leq 0 \tag{3}$$

Where $\Phi(.)$ is the cumulative distribution function of the standard normal distribution.

Basically, the coefficients from the output of a probit model are not interpreted like linear regression model. The marginal effect in the probit regression model measures the *ceteris paribus* effects of changes in the regressors affecting the features of the outcome variable.

These marginal effects in the probit model are *not* the same as the regression coefficient. Marginal effects for continuous variables measure the instantaneous rate of change. The model for marginal effects for continuous independent variables is given below.

$$\frac{\partial P[Y_i = 1 \mid X_{1i}.....X_{ki}; \textsf{s}_0....\textsf{s}_k]}{\partial X_{ki}} = \frac{\partial P[Y^*_i > 0 \mid X_{1i}....X_{ki}; \textsf{s}_0....\textsf{s}_k]}{\partial X_{ki}} = \textsf{s}_k \Phi(\textsf{s}_0 + \sum_{k=1}^{K} \textsf{s}_k X_{ki}) \quad (4)$$

In the case of binary independent variables, marginal effect measures discrete change, i.e. the predicted probabilities change, as the binary independent variable changes from 0 to 1. For example, the discrete change in a regressor $X_{ki}$ that takes the values $\{0, 1\}$. The model for marginal effects of binary independent variables is given below.

$$
\frac{\Delta_{X_{ki}} P[Y_i = 1 | X_{1i}.....X_{ki}; \mathsf{S}_0....\mathsf{S}_k]}{\partial X_{ki}} = \frac{\Delta_{X_{ki}} P[Y^*_i > 0 | X_{1i}....X_{ki}; \mathsf{S}_0....\mathsf{S}_k]}{\partial X_{ki}}
$$
$$
= \mathsf{S}_k \Phi(\mathsf{S}_0 + \sum_{l=1}^{K} \mathsf{S}_l X_{li} + \mathsf{S}_k + \sum_{l=k+1}^{K} \mathsf{S}_l X_{li}) - \mathsf{S}_k \Phi(\mathsf{S}_0 + \sum_{l=1}^{K} \mathsf{S}_l X_{li} + \sum_{l=k+1}^{K} \mathsf{S}_l X_{li})
$$

(5)

Here in the probit model, the dependent variable is demand for credit i.e. if the industry needs the credit for business, then it is 1, otherwise 0. Both continuous variables and discrete variables are taken as independent variables. Some of the independent variables are: (1) continuous variables namely age of entrepreneurs, number of years in business, number of business units of entrepreneurs and total exports as per cent of total turnover and (2) discrete variables namely high interest rate, high collateral rate, lengthy and complex process, unfavourable terms & conditions, banks take more time to deliver loans, enterprises have knowledge about collateral-free credit guarantee schemes (CGTMSE) and enterprises have applied for the CGTMSE.

The theoretical relationship between the dependent variable (credit demand) and some of the independent variables is explained below.

### A. Firm Characteristics

#### (1) Firm Size

A firm's size is generally measured in different ways, most notably in terms of asset size, annual sales or turnover. It has been argued that the bigger the firm; more is the credit availability from the bank (Cole, Goldberg and White, 2004; Cole, 2008). In contrast, smaller firms are more prone to insolvency than large firms because they are generally less diversified on the production and distribution side and are more likely to face constraint of getting credit from formal financial institutions (Behr and Guttler, 2007). Therefore, it is expected that firm size positively affects credit availability of MSMEs.

*(2) Firm's Age*

A firm's age could affect the perception of lenders to extend credit to it. Older firms are perceived to be more credit-worthy because they have an established track record and are relatively stable and less risky than newer firms. They are also less opaque and relatively easy for a lender to scrutinise and monitor before disbursing the credit to the firm. The empirical literature suggests that banks tend to be attracted to older, more established and financially stable firms (Haynes, Ou and Berney, 1999). Therefore, the age of a firm is expected to have a positive impact on its borrowing from financial institutions.

*(3) Firm's Profitability/Financial Stability*

It has been argued that the past financial performance or profitability of a firm is an important indicator of its ability and capacity to repay a loan (Berry et al., 1993). Therefore, the better is the firm's profitability, more is its chance of credit availability from the financial institutions. Lenders usually expect that a firm with greater profitability will be able to repay debts out of its profits. Bruns and Fletcher (2008) pointed out that, "past profitability shows the firm's past operational success and thus provides tangible representations of the competence of the SMEs". Another factor which influences the credit availability is firm's financial stability which is measured in terms of the ratio of debts to assets or the ratio of debts to equity (Berry et al., 1993 and Cole et al., 2004) or the ratio of a firm's *cash assets to total assets* (Cole, 2008). With better financial stability, the firms have more chances to get credit from the financial institutions.

**B. Owner's Characteristics**

*(1) Owners' Educational Attainment*

Owner's educational qualification is considered as an important factor which positively influences the firm's business and therefore credit availability. MacRae (1991) found that the major difference between high growth and low growth of small firms was influenced by the education, training and experience of managers and owners. Even small firm owners with strong managerial competences are also likely to attract, develop and retain workforce with strong managerial talent (Martin and Staines, 1994) which in turn positively influence the firm's financial position and credit availability.

*(2) Owners' Business Experience*

Like firm owner's educational qualifications, No. of years of business experience is expected to impact positively on the demand for credit. Firms with more experienced owners are expected to be more credit-worthy than less experienced ones because of the former's expertise in the firm's area of business. A study by Fletcher (1995) found that trading experience of the borrower is considered as the most important factor for lending to small businesses.

### C. Policy Factors

*(1) Interest Rate*

Amonoo et al. (2003) suggest that the debate on whether high interest rates affect demand for credit is inconclusive. There are two main schools of thought on impact of interest rate on credit demand. The first school argued that high interest rates encourage adverse selection of loan seekers (Weiss, 1981; Stiglitz, 1989 and Besley, 1994). Those who take high risk and get their loans approved with high interest rate are probably the ones who usually could not repay the loans. Generally, new firms or starters do not take more risk borrowing money from banks with high rate of interest. Therefore, high interest rates have negative impact on demand for credit by firms. In contrast, the second school of thought state that high interest rates do not affect demand for credit. Aryeetey et al. (1994) find that the high interest rates were not a major concern for SME borrowers because they get money from bank at a reasonablly low rate of interest as compared to market interest rate.

*(2) Collateral for Loan*

As a part of financial rules, the lenders use collateral as one of the conditions for lending to firms. Collateral is defined either in the form of business or personal assets in order to reduce the risk of lending. It is perceived that collateral does not seem to be a major constraint for big firms to get credit from financial institutions. However, small business borrowers, especially young and inexperienced firms are probably the lots who suffer from getting loans from banks due to lack of collateral in the forms of real estate, cash and other liquid assets. Therefore, it is expected that high collateral has negative impact on MSME's demand for credit.

*(3) Government Policies*

The Government of India has undertaken various policy initiatives in the past with the aim at improving the growth prospects of MSME sector. For easier credit availability to MSMEs, the Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE)[13] was introduced by the Government of India in 2000. The aim of this policy was to facilitate the availability of bank credit without the hassles of collaterals/third party guarantees to the first generation entrepreneurs to realise their dream of setting up a unit of their own. Therefore, it is expected that government policies have positive impact on access to credit-availability by MSMEs.

Based on the above theoretical explanations, the study presents below a summary table of explanatory variables with expected sign that are estimated in the Probit regression model (**Table 3.1**).

**Table 3.1: Expected Sign of the Explanatory Variables in Probit Regression Model**

| Independent Variables | Dependent Variable: Demand for credit |
|---|---|
| Size of the firm | Positive |
| Age of owner | Positive/Negative |
| Age of firm | Positive/Negative |
| Number of business units of entrepreneur | Positive/Negative |
| Total exports (as % of total turnover) | Positive |
| High interest rate | Negative |
| High collateral demanded | Negative |
| Lengthy and complex process | Negative |
| Unfavourable terms and conditions | Negative |
| Banks take more time to deliver | Negative |
| Enterprises have knowledge about the CGTMSE | Positive |
| Enterprises have applied for  the CGTMSE | Positive |

**Source:** NILERD

The study uses survey data for probit regression estimation.  Since most of the required data on whether the MSME unit had applied for a loan or not, where do they market their products, do they need collateral for applying loan, do they know about credit schemes of the government, and so on and so forth are not available from secondary data sources, a

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[13] http://www.cgtmse.in/about_us.aspx

primary survey was indispensable. In order to collect the micro level information on credit and different characteristics of MSME, a sampling procedure was followed in this study.

*Sampling Technique*

The study uses purposive sampling technique (also known as judgmental sampling) for data collection. It is a non-probability sampling procedure in which the judgment of the researcher is used to select cases that make up the sample to enable him to answer his research questions and meet his research objectives (Saunders et al., 2007). Such samples may not always be representative. The purpose of this study is to examine the factors that influence the access to credit availability by MSMEs particularly labour intensive enterprises and export oriented enterprises. Accordingly, a field survey has been undertaken on selected labour intensive MSMEs. The selected Micro, Small and Medium enterprises falling into the broad categories of industries as per National Industrial Classifications (NIC) are given below.

1. Spinning, weaving and finishing of textiles (NIC group-131)
2. Manufacture of wearing apparel (NIC group-141)
3. Manufacture of footwear (NIC group-151)
4. Manufacture of furniture (NIC group -310)
5. Manufacture of sports goods (NIC group-323)

The survey has been carried out in the selected industrial clusters in different states based on purposive sampling method. The sample size of the study is given in **Table 3.2.**

**Table 3.2: Industries and States selected for Sample Survey**

| Industries | States | Name of States/Cities | Clusters (1 from each state |
|---|---|---|---|
| Spinning, weaving and finishing of textiles (NIC group-131) | 2 | Tamil Nadu (Chennai), Haryana (Panipat) | 2 |
| Manufacture of wearing apparel (NIC group-141) | 2 | Punjab (Ludhiana), Tamil Nadu (Chennai) | 2 |
| Manufacture of footwear (NIC group-151) | 2 | Uttar Pradesh (Agra), Tamil Nadu (Chennai) | 2 |
| Manufacture of furniture (NIC group -310) | 2 | Delhi (Kirtinagar & Tilak Nagar), Gujarat (Ahmedabad ) | 2 |
| Manufacture of sports goods (NIC group-323) | 2 | Punjab (Jalandhar), Uttar Pradesh (Meerut) | 2 |

# Chapter 4

# Determinants of Access to Bank Credit by MSMEs

## 4.1. Introduction

There is a consensus among researchers and policy makers across the globe that MSMEs are one of the key pillars of economic development of a country. A healthy MSME sector contributes widely and prominently to the development of a country through creating more jobs and reducing poverty by empowering the bottom of pyramid. It plays a pivotal role in generating large employment opportunities at a comparatively lower capital cost than large industries. It also helps in industrialization of rural and backward areas, thereby helping in reducing regional imbalances and equitable distribution of national income and wealth. Sustained and healthy growth of this sector is imperative for inclusive growth, since it is difficult to imagine the overall increase of per capita income of the nation without the development of the MSME sector.

Apart from the MSMEs' significant contribution to the growth and employment, they are considered as the backbone of the 'growth of business' of an economy. They act as the main players in the supply chains for larger industries and in the process they strengthen their own human and technological capital (ACCA, 2010). Therefore, in order to achieve a sustainable progress and growth of economy, MSMEs must embrace new technology and innovation for which sufficient credit availability needs to be ensured. Provision of adequate supply of credit encourages sustainable development of entrepreneurship and, thereby, helps in coming out from MSMEs (Ahirrao and Chaugule, 2010; Bharti and Shylendra, 2011; Kiiru, 2007; Rosengard, 2004). Unfortunately, the access to bank credit is considered one of the major obstacles that have impeded the growth performance of SMEs (Ayyagari et al., 2005).

According to the World Bank Report (2010),[14] about 365 million to 445 million MSMEs are located in the emerging markets, of which approximately 85 per cent suffer from credit constraints. Only 15 per cent can either fully access the credit they need or do not need it because they are able to finance themselves through internal capital or informal sources of

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[14] Peer S., T. Goland and R. Schiff (201), "Two Trillion and Counting – Assessing the Credit Gap for Micro, Small and Medium-Size Enterprises in the Developing World'', IFC, World Bank

finance. Further, in respect to regional variation in access to finance by MSMEs, the report found that Latin America stands in rank one (approximately 60 per cent), followed by Central Asia and Eastern Europe (approximately 45 per cent). By contrast, more than 85 per cent of the MSMEs in East Asia, South Asia, and Sub-Saharan Africa are un-served or underserved.

In case of India, many studies have also found that lack of bank credit availability remains one of the main bottlenecks of MSME sector (Ministry of MSME, 2010; FICCI, 2011; Planning Commission, 2012). Based on supply of credit data, the Sub-Group on Flow of Private Sector Investments for MSME Sector found that credit gap for the MSME sector is 62 per cent at the beginning of the 12th Plan period, which is expected to decline to 43 per cent by March, 2017.[15] Nevertheless, the issue of credit availability to the MSME sector continued to remain top of the policy agenda for the government. The sector is expected to play a huge role in fulfilling the 'Make in India' and 'Start-Up India' initiatives by enabling the government to achieve the goal of high growth and job opportunities for youths.

There are many studies (Kohli, 1997; Eastwood and Kolhi, 1999; Nikaido et al., 2012) that have tried to identify the determinants of bank loans for small enterprises. Some of the crucial factors affecting the access to institutional credit are identified as firm size, collateral, past record of informal borrowings, status of registration, education and gender of the owner of an enterprise etc. Kohli, 1997; Eastwood and Kolhi, 1999 use panel data over the period 1965-78 and Nikaido et al., 2012 uses unit level NSSO data on unorganized manufacturing enterprises. Sharpe (1990) found that high interest rate reduces the probability of getting a loan. Stiglitz and Weiss (1981) found that, when banks increase collaterals for loans, credit constraints can occur. Fernando, Chakraborty and Mallick (2002) revealed that, for small businesses, owner's characteristics may be the most important determinant of the credit decisions of banks. In view of the above background, the present study investigates empirically the factors that influence demand for credit in small and medium scale enterprises.

Before discussing the econometric findings of the study, it is necessary to discuss the basic statistics related to sources of credit finance, firm and owner characteristics, and the

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[15] http://planningcommission.nic.in/aboutus/committee/wg_sub_pvtsec_MSME.pdf

performance of selected MSME firms. This will give us fair amount of ideas and reasons to explain the econometric results.

## 4.2. Descriptive Statistics

The primary survey covers MSME firms from five labour intensive industries based on purposive sampling method. The total sample size consists of 288 firms across six different states.

### Table 4.1: Types of Firms by State

| State | Spinning, Weaving and Finishing Textile | Wearing Apparel | Footwear | Furniture | Sports Goods | Total |
|---|---|---|---|---|---|---|
| Gujarat | 28 (63.64) | | | 26 (31.71) | | 54 (18.75) |
| Haryana | 16 (36.36) | | | | | 16 (5.56) |
| Punjab | | 30 (55.56) | | | 29 (50.00) | 59 (20.49) |
| Tamil Nadu | | 24 (44.44) | 23 (46.00) | | | 47 (16.32) |
| Uttar Pradesh | | | 27 (54.00) | 32 (39.02) | 29 (50.00) | 88 (30.56) |
| Delhi | | | | 24 (29.27) | | 24 (8.33) |
| Total | 44 (100) | 54 (100) | 50 (100) | 82 (100) | 58 (100) | 288 (100) |

**Table 4.1** shows the number of sample firms covered under five labour intensive industries. For textile industry, we have covered 28 firms from Gujarat and 16 firms from Haryana. In total, 44 firms have been surveyed for textile sector. In the case of apparel sector, total 54 firms have been covered. Out of which, 56 per cent firms are covered from Punjab and rest from Tamil Nadu. For footwear industry, the sample size is 50, out of which 27 firms are covered from Uttar Pradesh and the rest from Tamil Nadu. Our sample for coverage of furniture industry is 82 firms, out of which 26 firms are from Gujarat, 32 firms from Uttar Pradesh and 24 firms from Delhi. For sports industry, total 58 firms are covered, out of which, 50 per cent each surveyed from Uttar Pradesh and Punjab.

Based on above sample size, the basic statistics of firms across five categories of labour industries are reported in **table 4.2**. Out of the total 288 firms, nearly 86 per cent firms are registered and the remaining are unregistered firms. The least number of registered firms

is reported in the case of furniture industry across the firms. The results also show that 99 per cent of the firms are owned by male members and the average age of owners is 50 years. In order to understand the future business plan of firms, a question was asked to firm owners as to whether they have any proposal for expanding their business in future. Overall, 67.7 per cent of the firm owners have reported that they would like to expand their business in the next couple of years.

**Table 4.2: Descriptive Statistics**

| Variable | Textile | Apparel | Footwear | Furniture | Sports goods | Total |
|---|---|---|---|---|---|---|
| Registered Firms (%) | 97.7 | 92.6 | 98.0 | 57.5 | 98.3 | 85.7 |
| Male Owners (%) | 97.7 | 100.0 | 100.0 | 98.8 | 100.0 | 99.3 |
| Average Age of Owners | 48 | 49 | 52 | 45 | 57 | 50 |
| Plan to expand business in the next couple of years, Yes (%) | 52.3 | 88.9 | 68.0 | 58.0 | 73.2 | 67.7 |

Turnover and export performance of MSMEs over the period 2012 to 2014 are reported in **Table 4.3.** We found that total turnover has increased continuously during this period in three out of five categories of industries; these are textile, footwear and furniture. The percentage of exports to total turnover has increased continuously only in two industries such as textile and apparel. In the case of footwear and sports goods industries, export has declined between 2012 and 2013 and either remained constant or declined between 2013 and 2014. In the case of furniture industry, export as percentage of total turnover has declined between 2012 and 2013 and remained constant between 2013 and 2014. Our results reflect the overall trend of the country's total exports which has slowed down in the recent years owing to economic recession prevailing in many developed countries. Nonetheless, the most important conclusion could be drawn from the results is that the average exports' share of all the firms stands out at more than 60 per cent of their turnover suggesting that the growth of these firms is heavily exports-led due to comparative cost advantages.

## Table 4.3: Turnover and Export Performance of MSMEs

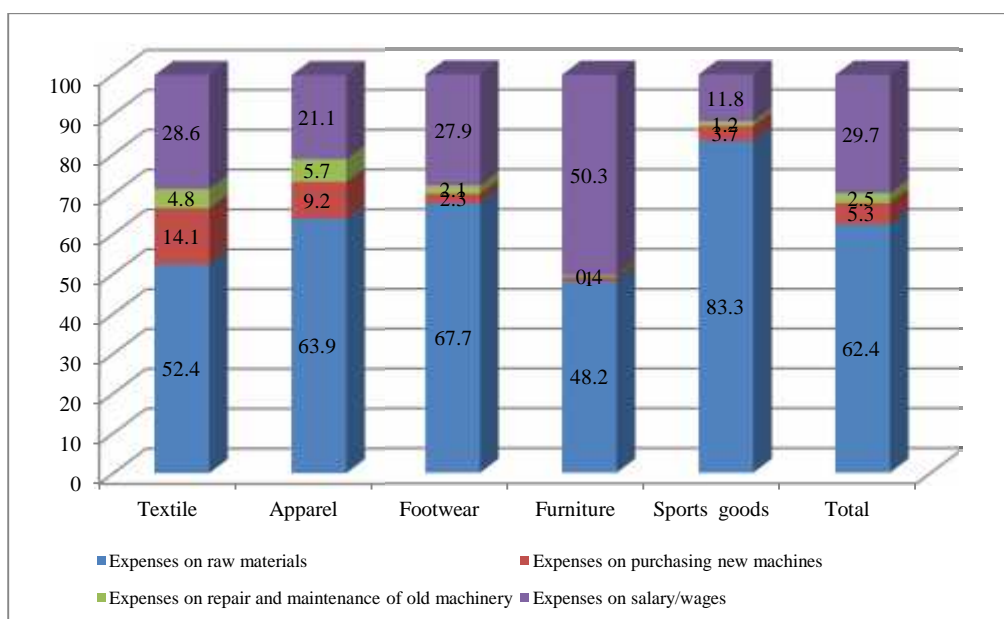| Variable | Textile | Apparel | Footwear | Furniture | Sports goods | Total |
|---|---|---|---|---|---|---|
| Average turnover in 2014 (Rs. lakh) | 1191 | 532 | 723 | 31 | 749 | 622 |
| Average turnover in 2013 (Rs. lakh) | 1037 | 458 | 624 | 29 | 638 | 545 |
| Average turnover in 2012 (Rs. lakh) | 989 | 490 | 555 | 28 | 676 | 512 |
| Exports as per cent of turnover in 2014 | 53.6 | 86.0 | 56.6 | 50.0 | 53.8 | 60.4 |
| Exports as per cent of turnover in 2013 | 34.7 | 82.8 | 57.7 | 50.0 | 54.4 | 59.5 |
| Exports as per cent of turnover in 2012 | 26.5 | 76.2 | 56.0 | 55.0 | 54.8 | 57.8 |

The trend of operating expenses and its compositions for all the five labour intensive firms are reported in **Table 4.4** and **Figure 4.1**. Unlike total turnover, the total operating expenses of all the five labour intensive firms show an increasing trend over the period (Table 4.4). Operating expenses of all the firms increased by 14.2 per cent between 2012 and 2013 and further by 32.2 per cent between 2013 and 2014. Across five types of firms, while textile firms recorded highest percentage increase in operating expenses (62.9 per cent) in 2014, sports goods recorded lowest increase (12.7 per cent) during the same period. Overall, all the firms have registered increase in operating expenses during the period 2012 and 2014.

## Table 4.4: Operating Expenses (% Change)

| Variable | Textile | Apparel | Footwear | Furniture | Sports goods | Total |
|---|---|---|---|---|---|---|
| Percentage changes in Operating expenses ( 2013-2014) | 62.9 | 45.1 | 16.5 | 17.6 | 12.7 | 32.2 |
| Percentage changes in Operating expenses (2012-2013) | 13.6 | 14.1 | 11.2 | 2.3 | 14.5 | 14.2 |

The composition of operating expenses across different types of firms is illustrated in **Figure 4.1**. The figure shows that firms spend more in raw materials and the proportion of spending in raw materials is 48.2 per cent for furniture, 52.4 per cent for textile, 63.9 per cent for apparel, 67.7 per cent for footwear, 83.3 per cent for sports goods. The second item on which firms spent more is salary/wages. The results show that it varies from minimum 11.8 per cent in the case of sports goods to maximum 50.3 per cent for furniture firms.

**Figure 4.1: Composition of Operating Expenses in 2014 (%)**



Textile: Expenses on raw materials 52.4, Expenses on purchasing new machines 14.1, Expenses on repair and maintenance of old machinery 4.8, Expenses on salary/wages 28.6

Apparel: 63.9, 9.2, 5.7, 21.1

Footwear: 67.7, 2.3, 2.1, 27.9

Furniture: 48.2, 0.4, 50.3

Sports goods: 83.3, 3.7, 1.2, 11.8

Total: 62.4, 5.3, 2.5, 29.7

Legend: ■ Expenses on raw materials  ■ Expenses on purchasing new machines  ■ Expenses on repair and maintenance of old machinery  ■ Expenses on salary/wages

**Table 4.5** explains different sources of finance availed by MSMEs at the time of starting their business. Since firms availed loans from multiple sources, the percentage distribution of responses given in the table may not add up to hundred. The results indicate that bank loan is the single major source of finance for all five types of firms. However, it varies from one industry to another. While around 70 per cent of firms from apparel industry have reported bank loan as the main source of finance, only, 18.3 per cent of firms from furniture industry have expressed the similar view. For all industries, only about 44 per cent of firms have reported bank loan as the main source of finance during the start of business. This indicates that around 60 per cent of firms do not think that bank loan is the main source of finance. Our findings are different from the MSME Census (2007) results wherein it is mentioned that only 5 per cent of enterprises in the sector had access to some form of formal finance. Since our study covers mostly registered firms (86 per cent), in contrast to MSME Census's findings of 92.6 per cent unregistered firms, the percentage of MSMEs that availed bank credit is expected to be higher. In the case of other sources of finance such as own fund, money lenders and friends and relatives, only about 5 per cent of firms have reported in favour of these sources.

## Table 4.5: Responses of Firms on Sources of Finance (%)

| Sources of Finance | Textile | Apparel | Footwear | Furniture | Sports goods | Total |
|---|---|---|---|---|---|---|
| Own fund/Retained Earning | 11.4 | 5.6 | 4.0 | 3.7 | 1.7 | 4.9 |
| Bank loan | 47.7 | 70.4 | 32.0 | 18.3 | 65.5 | 44.4 |
| Non-Banking Finance Companies | 2.3 | | 2.0 | | | 0.7 |
| Money lender | 4.5 | 3.7 | 2.0 | 9.8 | 5.2 | 5.6 |
| Friends & relatives | 4.5 | 1.9 | 12.0 | 2.4 | 3.4 | 4.5 |

Note: Blank in the table indicates no response.

**Table 4.6** explains the amount of loan required by MSMEs in further expansion of their business in future. Retained earnings and bank loan remained the leading sources of finance for most of the firms for expanding their business in future. The results are also in the expected line of theory when the firms start growing. The dependency on borrowing money from relatives or money lenders starts declining due to the size of business and amount of capital required for running it.

## Table 4.6: Average Amount of Loan required for Business Expansion (Rs. lakh)

| Sources of Finance | Textile | Apparel | Footwear | Furniture | Sports goods |
|---|---|---|---|---|---|
| Retained Earning | 308 | 280 | 297 | 4 | 200 |
| Bank loan | 349 | 234 | 335 | 6 | 207 |
| Non-Banking Finance Companies | 90 | | 340 | | |
| Money lender | 1 | 1 | 2 | 1 | |
| Friends & relatives | 5 | 2 | 5 | 1 | 2 |

Note: Blank in the table indicates no response.

The interest rate and collateral rate on different sources of finance are given in **Tables 4.7a and 4.7b**. The interest rate of bank loan is varied from 11 per cent to 13 per cent. As expected, the rate of interest charged by money lenders is much higher than the bank rates as has been reported by all types of firms. In the case of collateral rates, most of the firms have not given their response. The responses reported in Table 4.7b suggest that collateral rates are multiple times higher than bank rates and it is not only found in the case of bank loans but also in the case of money lenders and friends and relatives.

**Table 4.7a: Interest Rate on different Sources of Finance**

| Source | Textile | Apparel | Footwear | Furniture | Sports goods |
|---|---|---|---|---|---|
| Bank loan | 13.4 | 11.6 | 11.6 | 11.8 | 11.0 |
| Non-Banking Finance Companies | 15.0 | | 9.0 | | |
| Money lender | 19.0 | 28.0 | 17.0 | 18.0 | 17.0 |
| Friends & relatives | 12.0 | 13.0 | 12.1 | 14.0 | 14.0 |

Note: Blank in the table indicates no response.

**Table 4.7b: Collateral Rate on different Sources of Finance**

| Source | Textile | Apparel | Footwear | Furniture | Sports goods | Total |
|---|---|---|---|---|---|---|
| Bank loan | 111.8 | 129.2 | 94.8 | 75.0 | | 109.0 |
| NBFC | | | | | | |
| Money lender | | 100.0 | | | | 100.0 |
| Friends & relatives | | | 77.5 | | | 77.5 |

Note: Blank in the table indicates no response.

**Table 4.8** shows the demand for credit by MSMEs for the expansion of business in three years and percentage of firms which required formal credit for the same. On an average more than 50 per cent of the firms have reported that they need formal credit for the expansion of their business.  But the responses vary from firm to firm. While 78.3 per cent of the firms from apparel industry have reported the need for credit, about 51 per cent of firms from furniture industry have viewed the same. The table also shows the loan amount outstanding till March 2014 across firms from five industries. It is found that loan outstanding is more in footwear industry and less in sports goods.

**Table 4.8: Credit required for the Expansion of Business**

| Variable | Textile | Apparel | Footwear | Furniture | Sports goods |
|---|---|---|---|---|---|
| Percent of enterprises need credit for expansion of business | 56.0 | 78.3 | 56.7 | 51.2 | 60.9 |
| Loan outstanding till date (Rs. lakh) | 260.0 | 141.0 | 380.0 | 7.5 | 92.7 |
| Credit needed for further expansion of business in the next 3 years (Rs. lakh) | 894.0 | 793.0 | 270.0 | 41.6 | 393.0 |

**Table 4.9** explains why the firms do not want to apply for bank loans. Majority of firms have cited five reasons which are reported in the table. The reasons are high interest rate, high collateral demand, lengthy and complex process, unfavourable terms & conditions and banks takes more time to deliver. Majority of the firms (35.9 per cent) have reported that bank charges high interest rate followed by high collateral demand (23.4 per cent) and lengthy and complex process (19.4 per cent). However, the study finds mixed responses across all firms. While high interest rate is the main factor as has been reported by firms such as textile, footwear, furniture and sports goods, high collateral rate charged by banks is the main reason as has been viewed by majority of firms in apparel industry. Some of the firms such as textile, footwear and furniture have reported that lengthy and complex process and unfavourable terms & conditions are also key factors that deter firms to apply for loans in the banks.

**Table 4.9: Reasons for not applying for Bank Loans**

| Variable | Textile | Apparel | Footwear | Furniture | Sports goods | Total |
|---|---|---|---|---|---|---|
| | *Average (per cent)* | | | | | |
| High interest rate | 32.0 | 23.3 | 40.0 | 59.3 | 15.6 | 35.9 |
| High collateral demanded | 24.0 | 26.7 | 30.0 | 23.3 | 14.1 | 23.4 |
| Lengthy & complex process | 24.0 | 5.0 | 28.3 | 31.4 | 4.7 | 19.4 |
| Unfavorable terms & conditions | 8.0 | 8.3 | 35.0 | 17.4 | 3.1 | 14.7 |
| Banks take more time to deliver | 4.0 | 18.3 | 8.3 | 10.5 | 4.7 | 9.4 |

In the present study, an attempt has been made to collect information on whether firms are aware about the government schemes on credit. In this regard, a question related to a popular scheme such as Credit Guarantee Fund Trust Scheme for MSMEs (CGTMSE) was asked from respondents. The responses of the firms are reported in **Table 4.9**. The survey results indicate that very few percentage of firms have knowledge about CGTMSE. The highest percentage of firms from apparel industry (41.67 per cent) reported that they have knowledge about the scheme, followed by 38 per cent from textile industry and 35 per cent from footwear industry. Only 2.33 per cent of the firms from furniture industry have reported that they are aware about the scheme. It suggests that awareness programme of the government policies must be strengthened and it is ensured that it reaches every nook and corner of the country.

**Table 4.10: Knowledge about the Credit Guarantee Fund Trust Scheme for MSMEs**

| Variable | Textile | Apparel | Footwear | Furniture | Sports goods | Total |
|---|---|---|---|---|---|---|
| Per cent of enterprises have knowledge about the CGTMSE | 38.00 | 41.67 | 35.00 | 2.33 | 15.63 | 24.06 |
| Percent of enterprises have applied for the CGTMSE | 10.00 | 13.33 | 8.33 | 1.16 | 1.56 | 6.25 |

Overall, the above discussion suggests that the growth of MSMEs is mainly driven by higher exports owning to comparative cost advantages of these firms as compared to large firms. Bank loan is considered to be the single major source of finance as compared to other sources of finance. However around 60 per cent of the firms do not think that bank loan is the only source of finance. The study also finds that the rate of interest charged by the money lenders is much higher than that of bank rates as has been reported by majority of firms. In the case of collateral rates, the results show that it is multiple times higher than bank rates. Most importantly, the study finds that many MSMEs have little knowledge about the credit schemes launched by the government implying that the awareness campaign of the government policies needs to be strengthened. In view of the above findings, in the next section, the study examines the factors that affect access to credit by MSMEs empirically.

## 4.3. Empirical Results and Discussion

In the previous chapter, a discussion was carried out on the relationship between the access to credit availability and various economic and policy factors using a theoretical framework. Some of these factors are: firm and firm owner's characteristics, policy factors and market information. This section analyses the relationship between the dependent variable (credit demand) and independent variables empirically using probit regression model. The results of the study are reported in **Table 4.11**. The detailed results are reported in Appendix

The results indicate that there is a positive and significant relationship between the demand for credit and size of the firm. This implies that the bigger the firm; chances are the more to get credit from the bank. Our findings corroborate the findings of the earlier studies (Cole, Goldberg and White, 2004; Cole, 2008). In the case of age of entrepreneur, the study

finds that the coefficient is negative and not statistically significant. Another factor which has no significant impact on demand for credit is the number of years of experience in business.

Other factors which are found to have statistically significant impact on demand for credit are total exports (per cent of total turnover), high interest rate, high collateral rate, lengthy and complex process, unfavourable terms & conditions, bank take more time to deliver, and knowledge about CGTMSE.

**Table 4.11: Determinants of demand for credit (Probit Regression Model)**

| Variables | Coefficient | Std. Err. | Marginal effect (dy/dx) | Std. Err. |
|---|---|---|---|---|
| *Dependent variable: Demand for credit (1=Yes, 0=No)* | | | | |
| Size of the firm | 0.504** | 0.224 | 0.192** | 0.085 |
| Age of owner | -0.126 | 0.295 | -0.048 | 0.112 |
| Age of firm | 0.134 | 0.095 | 0.051 | 0.036 |
| Total exports (as % of total turnover) | 0.004* | 0.002 | 0.002* | 0.001 |
| High interest rate | -0.474*** | 0.181 | -0.182*** | 0.069 |
| High collateral demanded | -0.394** | 0.182 | -0.153** | 0.071 |
| Lengthy and complex process | -0.402** | 0.208 | -0.156* | 0.082 |
| Unfavourable terms & conditions | -0.434* | 0.231 | -0.170* | 0.091 |
| Banks take more time to deliver | -0.668** | 0.275 | -0.261** | 0.105 |
| Enterprises have knowledge about the CGTMSE | 0.373* | 0.211 | 0.136* | 0.073 |
| Enterprises have applied for the CGTMSE | 0.894** | 0.454 | 0.274*** | 0.098 |
| Constant | 0.683 | 1.052 | | |
| LR chi2 | 75.18*** | | | |
| Predicted demand for credit | 0.622 | | | |
| Number of observations | 288 | | | |

Note: * significant at 10% level, ** significant at 5% level, *** significant at 1% level

The result implies that the chances of availing some form of formal credit increases if the proportion of exports to total turnover goes up. In the case of policy factors, the study finds marginal effect of high interest rate and high collateral rate is negative and statistically significant at 1 per cent and 5 per cent significance level respectively. As per the theoretical argument, high interest rate offered by the banks either has negative or no influence on demand for credit. Our results show that one percentage point increase of bank interest rate leads to decline in probability of getting loan from the bank due to high risk of repaying the loan at higher rate of interest. High collateral rate discourages MSMEs particularly new firms to get loan from banks, therefore it negatively impacts the demand for credit. Other policy and administrative factors such as lengthy and complex process, unfavourable terms &

conditions and bank takes more time to process the applications, also negatively impact the demand for credit.

The results show that the sign of all the three variables is negative and statistically significant. It implies that policy and administrative procedures in India are still not conducive for ease of doing business and getting credit from banks. Although India has done exceptionally well in these spheres recently, sustaining the positive momentum is a challenge. The impact of market information on demand for credit has been examined by using a dummy variable for whether enterprises have knowledge about collateral-free credit guarantee schemes (CGTMSE) or not. The results show that the coefficient of CGTMSE is positive and statistically significant. It implies that access to public information on various schemes launched by the government have positive impact on the access to credit by MSMEs.

Overall, the empirical results suggest that factors such as size of the firm, exports, government policies such as interest rate and collateral rate, administrative procedures such as lengthy and complex process, taking more time to process the loan and having knowledge about the government schemes are some of the key determinants of the demand for credit by MSMEs in India. The results suggest that there is a need for enhancing and widening the export capabilities of MSMEs and transforming them into globally competitive enterprises through developing global technologies and innovation. This will in turn help the enterprises grow faster and get easy access to formal credit. Improving the ease of doing business through administrative and structural reforms is necessary and paramount, which would help the entrepreneurs especially the newcomers to succeed. Since the level of global competitiveness has gone up significantly, to make the Indian MSMEs globally competitive, India should create an environment for MSME joint ventures to enable them to partner with the global business farms and evolve to the global levels on innovation, and adapting to new technologies which would reduce the over-dependency of MSMEs on formal bank credit and allow them to sustain in the long run.

# Chapter 5

## Conclusions and Policy Suggestions

The Union Budget 2015-16 has set the tone of policy agenda for improving the MSME sector in the country by allocating Rs. 20,000 crore for Mudra Bank to enhance credit for SMEs, another Rs. 1,000 crore for supporting start-ups and a new National Skills Mission to spur job creation in the sector. The Government of India has also under taken various policies to facilitate credit and overall development of MSME sector. Some of the key policies are: (1) Prime Minister's Employment Generation Programme (PMEGP), Udyog Aadhaar Memorandum (UAM), Framework for Revival and Rehabilitation of MSMEs, A Scheme for Promotion of Innovation, Rural Industry and Entrepreneurship (ASPIRE), Micro, Small and Medium Enterprises Development (Amendment) Bill, National Manufacturing Competitiveness Programme (NMCP) and E-governance and Digital initiative etc. These policy changes came in the backdrop of growing importance of the sector in the overall development of the economy. According to the Ministry of MSME, the sector accounts for 45 per cent of Indian industrial output and 40 per cent of exports. With 3.6 crore units spread across the country that employ 11.14 crore people, MSME have a contribution of 37.5 per cent to the country's GDP. Despite the significant contributions of the MSME sector to the Indian economy, as pointed out by PM's Task Force Report (2010), the sector continues to face certain constraints such as availability of adequate and timely credit, high cost of credit, collateral requirements, access to equity capital and rehabilitation of sick enterprises, etc. There are also other non-financial constraints that are impeding the growth prospects of the sector. As a result of this unfriendly business environment, small entrepreneurs have not been able to succeed and are pushed towards the informal and unregistered segment. And, this segment is growing faster than the organised segment. At present, the sector is having 95 per cent of unregistered enterprises. This trend must be reversed as it is not sustainable.

Against the above backdrop, an attempt has been made in this study to assess the factors that influence the demand for credit by MSMEs. The literature suggests that there are both demand side and supply side factors that influence the credit availability to MSMEs. In this study, an attempt has been made to follow a holistic approach of mixing up of demand side factors along with policy factors that determine the bank credit to MSMEs.

The study uses both secondary and primary data for the analysis. The secondary data are used to analyse the current status of access to credit by MSME sector. All these information are collected at the aggregate level, sectoral level, regional level, state level and gender-wise. The primary survey data are used to analyse factors that determine demand for credit by MSME sector and also being used to analyse the performance and sources of finance by MSMEs. For this, a field survey has been carried out on five labour intensive industries in ten manufacturing clusters across five states in India.

The current credit scenario of MSME sector suggest that advances to MSMEs to adjusted net bank credit have not grown consistently over the periods; instead it has slowed down during 2012 and 2013. It was 13.3 per cent in March 2010 and increased further to 14.8 per cent in the immediate next year, but slowed down thereafter in 2012 and 2013. Slowing down of credit flow to MSME sector is also visible in various government schemes. The data shows that Government's expenditure on CGTMSE was on an average Rs. 159 crore per annum during the period between 2007-08 and 2010-11 which has declined substantially to Rs. 46 crore during 2011-12 to 2014-15. Similarly, Government's credit to MSME sector under CLCSS has also been slowed down during 2012-13 and 2014-15.

The econometric results of determinants of credit using the survey data suggest that the entrepreneurs who have more number of business units have more chances of demand for credit to further expand their business. Other two factors that have positive impact on demand for credit are the proportion of exports to the total turnover and Collateral-free guarantee scheme. This result suggests that government should put more focus on expanding the awareness programmes of the government schemes to ensure that entrepreneurs get maximum benefits out of each scheme.

Factors that negatively influence demand for credit are high interest rate and high collateral rate. Further, both these factors are statistically significant suggesting that easy interest rate and collateral rate policies need to be perused which will encourage MSMEs to apply for formal credit from financial institutions. The study also finds that lengthy and complex process in getting bank loans and unfavourable terms & conditions for bank loans have negative impact on the demand for credit. Thus, the process for applying for bank loans should be made easier and convenient.

The results suggest that there is a need for enhancing and widening credit facilities to MSMEs in India. Policy factors such as high interest rate and collateral rate must be fixed at a reasonable rate which would help enterprises to have an easy access to credit facilities.

Besides this, the awareness programmes of various government schemes must be strengthened and widened so that it would reach every nook and corner of the country. Improving the ease of doing business through administrative and structural reforms is necessary and paramount which would enable the entrepreneurs, especially newcomers to succeed in establishing and running MSMEs. Since the global competitiveness level has gone up significantly, to make the Indian MSMEs globally competitive, India should create an environment for MSME joint ventures to enable MSMEs to partner with their global businesses and evolve to global levels on innovation, adapting to new technologies which would reduce the over-dependency on formal bank credit and allow the enterprises to sustain in the long run.

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# Appendix

. probit credit lnsizef lnage lnyear_busi per_ex high_int_rate high_col_demand process term_cond time_deliver
> know_cgtmse app_cgtmse

Iteration 0:   log likelihood = -215.36373
Iteration 1:   log likelihood = -178.14415
Iteration 2:   log likelihood = -177.77423
Iteration 3:   log likelihood = -177.77304
Iteration 4:   log likelihood = -177.77304

```
Probit regression                    Number of obs   =    288
                                     LR chi2(11)     =    75.18
                                     Prob > chi2     =   0.0000
Log likelihood = -177.77304          Pseudo R2       =   0.1745
```

| credit | Coef. | Std. Err. | z | P>\|z\| | [95% Conf. Interval] | |
|---|---|---|---|---|---|---|
| lnsizef | .5044165 | .2238515 | 2.25 | 0.024 | .0656756 | .9431575 |
| lnage | -.1262194 | .2947175 | -0.43 | 0.668 | -.703855 | .4514162 |
| lnyear_busi | .134186 | .0953854 | 1.41 | 0.159 | -.0527659 | .3211379 |
| per_ex | .003952 | .002342 | 1.69 | 0.092 | -.0006382 | .0085422 |
| high_int_r~e | -.4744308 | .181033 | -2.62 | 0.009 | -.829249 | -.1196127 |
| high_col_d~d | -.3935038 | .1822004 | -2.16 | 0.031 | -.7506101 | -.0363975 |
| process | -.4017819 | .2079895 | -1.93 | 0.053 | -.8094338 | .00587 |
| term_cond | -.4342862 | .2309604 | -1.88 | 0.060 | -.8869603 | .0183878 |
| time_deliver | -.6678416 | .2752183 | -2.43 | 0.015 | -1.20726 | -.1284237 |
| know_cgtmse | .3734746 | .2110847 | 1.77 | 0.077 | -.0402437 | .787193 |
| app_cgtmse | .8944861 | .4543761 | 1.97 | 0.049 | .0039253 | 1.785047 |
| _cons | .6827648 | 1.051735 | 0.65 | 0.516 | -1.378598 | 2.744128 |

Marginal effects after probit
    y  = Pr(bor_expans) (predict)
       = .62218556

| variable | dy/dx | Std. Err. | z | P>\|z\| | [ 95% C.I. ] | | X |
|---|---|---|---|---|---|---|---|
| lnsizef | .1917194 | .08496 | 2.26 | 0.024 | .025206 | .358233 | .097465 |
| lnage | -.0479737 | .11198 | -0.43 | 0.668 | -.267459 | .171511 | 3.87385 |
| lnyear~i | .0510016 | .03627 | 1.41 | 0.160 | -.02008 | .122083 | 2.91709 |
| per_ex | .0015021 | .00089 | 1.69 | 0.091 | -.000239 | .003243 | 24.3777 |
| high_i~e* | -.1820894 | .06925 | -2.63 | 0.009 | -.317811 | -.046368 | .359375 |
| high_c~d* | -.1527234 | .07125 | -2.14 | 0.032 | -.292378 | -.013069 | .234375 |
| process* | -.156459 | .08187 | -1.91 | 0.056 | -.316913 | .003995 | .19375 |
| term_c~d* | -.1698074 | .09114 | -1.86 | 0.062 | -.348433 | .008818 | .146875 |
| time_d~r* | -.26136 | .10488 | -2.49 | 0.013 | -.466918 | -.055802 | .09375 |
| know_c~e* | .1364291 | .07323 | 1.86 | 0.062 | -.007099 | .279958 | .240625 |
| app_cg~e* | .274126 | .09795 | 2.80 | 0.005 | .082153 | .4661 | .0625 |

 (*) dy/dx is for discrete change of dummy variable from 0 to 1