Access to Finance and Economic Performance: An Analysis of Firms in Micro, Small and Medium Enterprise (MSME) Sector in India, 1970 - 2010

Thesis submitted to the Jawaharlal Nehru University
in partial fulfillment of the requirements
for the award of the degree of
DOCTOR OF PHILOSOPHY

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2017

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Dated: 22nd March, 2017

DECLARATION

The thesis entitled "ACCESS TO FINANCE AND ECONOMIC PERFORMANCE: AN ANALYSIS OF FIRMS IN MICRO, SMALL, AND MEDIUM ENTERPRISE (MSME) SECTOR IN INDIA, 1970 - 2010", submitted by me for the award of the degree of Doctor of Philosophy (PhD) of Jawaharlal Nehru University, is my original work to the best of my knowledge and has not been submitted for any other degree of this University or any other Institution.

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RECOMMENDATION

We recommend that this thesis be placed before the examiners for evaluation.

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Dedicated to Dearest BAPA and MAA …..

Late Shri Sanatan Nayak

and

Shreebani Panda

In the fond memory of his act of giving everything of his to us.…….
For his simplicity.…….
For his act of large investment in our education.…….
For his belief in education, knowledge and wisdom.…….
For his excellence in Mathematics, Physics, Odiya and English Literatures.……
And for his vast knowledge of Veda Shastra and Sanskrit language.……

and

For her belief in honesty, self-confidence, perseverance and integrity.……
For she fights in life by swimming against the current through her sheer strength of endurance.…….

My source of inspiration.……

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However, this is an inadequate tribute to Bapa, given his depth of knowledge

And also a shallow dedication to Maa, given the level of dedication she has to her work…

Is Small really Beautiful???????????

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ACKNOWLEDGEMENTS

Working on this thesis for a period of more than seven years, however, not continuously during which period I was almost in fragile condition because of many reasons, I could put efforts on the thesis to its end because of the sheer inspirations I get from my parents from their effortless honesty and dedication towards their work despite the fact that life has given many obstructions on their way and their unwillingness to stop believing on me despite of my indefinite number of prolonged break/inactivity out of work on this thesis. However, I had no idea that I would be submitting the PhD thesis only with the memories of my Bapa. He was always a healthy person but has suddenly become memory of my life.

The constant support and guidance of my supervisor Prof. Praveen Jha is the much needed sufficient condition for the happening of this thesis by giving me ample scope, liberty and encouragement for expressing my ideas in the thesis. He has guided and has given direction to make the arguments of the findings more clear, refine and concise. I am deeply touched by his time; patience and tolerance levels; genuine care, concern and generous attitude towards me. I express my sincere regards and gratitude to Prof. Praveen Jha.

During the early stages of this thesis, the discussions with Prof. C. P. Chandrasekhar and Prof. Vikash Rawal regarding definitional issues of MSMEs and on methodological approach to the data have given more clarity to deal with the issues and objectives of the thesis. I gratefully acknowledge them for clarifying my doubts on these issues. The soundness of academic atmosphere of Centre for Economic Studies and planning, generated by the presence of qualities like profoundness of intelligent mind combining

with their down to earth approach of the professors and faculties, has given great opportunity to understand and appreciate economics in much better way and to undertake research. I express my sincere reverence to each one of my teachers in the Centre.

The constructive comments and suggestions of Prof. Arup Mitra of IEG, New Delhi and Dr. Jesim Pais of ISID, New Delhi on the draft of the thesis are very useful to me. I am grateful to them for their invaluable time they have given to me.

The members of administrative office of the CESP, past and present, have worked for the welfare and are always ready to help the students of the Centre. I am thankful to them. Their contributions, particularly Sen Sir, Rajeev, Rajesh, Prem and other new members, have been important.

In writing this thesis, I have drawn significantly on the resources and space of the Library of Jawaharlal Nehru University. It has given the required congenial environment for me in developing the thesis in its various stages over the years. Its contributions are immense and gratefully acknowledged. I express my sincere thanks to the Librarian and staffs of the Library.

The help of friends is very crucial in this journey. I am thankful to Nancy and Partha da, for their motivation in the earlier stage; Bijoyata and Silpa for being part of the process; Rashmi Bahu for her care when I fell sick; Akhil for the editorial assistance; Avanindra for his comments on the draft of thesis; and Chandan Bhai for his sincere help. I would like to make special mention of Krishna for his continuous support in terms of instructions as and when I required when I was extracting and processing the data of the

NSSO and the ASI using the STATA statistical software and further discussion of results of this process.

I am privileged to be part of '*Amrut Nilaya'*, my beloved, sweet and wonderful home. I am deeply indebted to my Badkha Bapa (Grand Pa) Late Shasi Bhusan Nayak and Mama (Grand Maa) Late Jagynasini Nayak; my parents; brother Amrit and Ashish; and sisters- Sudha nani, Abha nani and Kunu nani. Ashish, my brother has literally walked my path along with me in this journey when I could not stand alone till the completion of this thesis. They have been consistent source of inspiration and I express my deepest gratitude for their unconditional love, unfailing support, patience and encouragement that has kept me going. All my family members are very keen to see the completion of this thesis.

Certainly, this acknowledgement is an inadequate token of my earnest appreciation for all of them.

If, after all this support, there are still errors and shortcomings in the work, I am solely responsible.

Motiniva Nayak

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List of Acronyms

ANBC	Adjusted Net Bank Credit
ASB	All Scheduled Commercial Bank
ASI	Annual Survey of Industry
CEA	Central Electricity Authority
CF	Cash flow
CGTSI	Credit Guarantee Fund Trust for Small Industries
CIF	Chief Inspector of Factories
CMSMEs	Census of Micro Small and Medium Enterprises
CRAR	Capital to Risk-weighted Asset Ratio
CSO	Central Statistical Organisation
DIC	District Industries Centre
DMEs	Directory of Manufacturing Establishments
EC	Economic Censuses
FA	Fixed asset
FB	Foreign Bank
GDP	*Gross Domestic Product*
GoI	Government of India
GPM	Gross value of Plant and machinery
GVA	Gross Value Added
LPE	Law of Proportional Effect
MSEs	Micro and Small Enterprises
MSMED	Micro, Small and Medium Enterprises Development
MSMEs	Micro, Small and Medium Enterprises
NABARD	National Bank for Agricultural and Rural Development
NB	Nationalised Bank
NBC	Net Bank Credit
NDMEs	Non-Directory Manufacturing Establishments
NHB	National Housing Bank
NIC	National Industrial Classification
NMSE	Non Micro and Small Enterprise
NPA	Non-Performing Asset
NSSO	National Sample Survey Organisation
OAEs	Own Account Enterprises
OECD	Organization for Economic Cooperation and Development
OS	Outstanding loan

OSCB	Other Scheduled Commercial Banks
RBI	Reserve Bank of India
RoA	Return on Asset
RRB	Regional Rural Bank
SACP	Special Agricultural Credit Plans
SBIA	State Bank of India and Associates
SEDF	Small Enterprise Development Fund
SFCs	State Finance Corporation
SIDBI	Small Industry Development Bank of India
SIDCs	State Industrial Development Corporations
SMEs	Small and Medium Enterprises
SSI	Small Scale Industries
UFS	Urban Frame Survey
UMS	Unorganised Manufacturing Survey
UNIDO	United Nation Industrial Development Organisation
USA	United States of America

CHAPTER - 1

INTRODUCTION

1.1 Introduction

The access to finance of Micro, Small and Medium Enterprises (MSMEs, hence forth) has gained more importance in recent time. It receives a crucial place in the work of development economist and economic policy makers. MSMEs are more dynamic. It is a crucial part of all industrial activity and has been contributing significantly in most economies around the world, whether developing, emerging, and developed.

The definition of MSMEs varies across countries. The classification schemes have considered enterprise's total assets or gross plant and machinery or level of employment or output etc. as the basis for classifying MSMEs. However, whatever the definition we may consider, the development of these types of enterprises has become crucial for the development of the economy. MSMEs play a critical role in providing employment, scope for creativity, new area of business, and breeding and development of entrepreneurship. Hence, MSMEs play an essential role in building the economy.

The economic growth, which is inclusive in nature that reaches to the majority of people, becomes a key component to poverty alleviation. MSME is backbone of global economic activity. In their endeavor to improve the performance and sustainability of local entrepreneurs, MSMEs can go a long way in achieving this kind of growth and development. [WBCSD, 2004]

Both in developed and developing countries, MSMEs consist of large chunk of manufacturing production. In developing countries, they are instrumental for generation of large scale employment opportunity, exploitation of latent resources, both human and material, rural industrialization, assure egalitarian allocation and dispersion of national income and thereby, reducing regional disparity through development. Hence, they can create a path to alleviate poverty. However, they face many of the traditional problems such as - lack of financing, marketing problem, underutilization of capacity, poor project planning. The integration of economies with liberlisation of market has brought a significant increase in competition. This is giving ample scope for the entry of foreign

firms and to imports easily. With this, large domestic firms are strengthening more and more. They are eventually taking over traditional, local MSME markets.

1.2 MSME Sector in India

Statistical data proclaim the significance of the MSME sector as the backbone of the Indian economy. The MSMEs is the second biggest employment providing sector after agriculture. "There are about 51 million MSMEs in India in 2014-15, providing employment to 117 million people. The MSME sector contributes 7% of India's GDP in 2012-13, generating 38% of manufactured output (Annual Report of Ministry of MSME, 2016)", (see Table – 1.1 & 1.2).

Table 1.1: Performance of MSME, Employment and Investments

Year	Total Working Enterprises	Employment	Fixed Asset
	Lakh numbers	Lakh persons	Rs. Crore
2006-07	361.76*	805.23*	868543.79*
2007-08#	377.36	842	920,459.84
2008-09#	393.7	880.84	977,114.72
2009-10#	410.8	921.79	1,038,546.08
2010-11#	428.73	965.15	1,105,934.09
2011-12#	447.64	1011.69	1,182,757.64
2012-13#	467.54	1061.4	1,268,763.67
2013-14#	488.46	1114.29	1,363,700.54
2014-15#	510.57	1171.32	1,471,912.94

Notes: based on the data of Fourth Census of MSMEs, augmented with data sets of EC, 2005 and Growth rate observed during Fourth(1998) and Fifth(2005) Economic Census, the performance of the sector is summarized. # - Projected. * - the data of EC (2005) has been added

Source: Annual Report 2015-16, GoI, Ministry of Micro, Small and Medium Enterprises.

Table 1.2: Contribution of MSME Sector in GDP and Output at 2004-05 prices

Year	Gross Value of Output of MSME Manufacturing Sector (in RS. Cr)	Share of MSME Sector in Total GDP(%)			Share of MSME Manufacturing output in total Manufacturing Output(%)
		Manufacturing MSME	Services MSME	Total	
2006-07	1198818	7.73	27.4	30.5	42.02
2007-08#	1322777	7.81	27.6	35.41	41.98
2008-09#	1375589	7.52	28.6	36.12	40.79
2009-10#	1488352	7.45	28.6	36.05	39.63
2010-11#	1653622	7.39	29.3	36.69	38.5
2011-12#	1788584	7.27	30.7	37.97	37.47
2012-13#	1809976	7.04	30.5	37.5	37.33

Notes:# - Projected, based on Fourth All India Census of MSME 2006-07, National Account Statistics (2014), CSO, MoSPI, and Annual Survey of Industries, CSO, MoSPI.

Source: Annual Report 2015-16, GoI, Ministry of Micro, Small and Medium Enterprises.

The liberalization of Indian economy may have offered scope for growth of Indian Industry particularly MSMEs, but it also offered a new set of threats. They are facing severe competition both in domestic and international markets. Under such circumstances, better technology, quality of product and modern management techniques are needed to remain competitive in market. Investment is much needed in the required areas to become more productive and competitive. Thus**,** access to finance is very important for MSMEs in India.

1.3 Raising finance challenges MSMEs

Financial constraints faced by firms are mainly explained by imperfection in capital market. Distortions in capital market are seen especially discriminating against MSMEs. Capital costs for this sector is higher because of market imperfections in the availability of information between firms (borrowers) and lenders.

The credit decision of banks is based on the proper information of borrower. But there is asymmetry of information between lender (suppose banks) and borrowers in the credit market. Banks face challenges in acquiring information about the credit risk of the borrower, as borrowers have more information about the project than the lenders have (Myres & Majluf, 1984). Thus, *information asymmetries* may prevent lenders from observing the true nature of borrowers.

In the credit decision, there are two aspects that the banks consider, the interest rate and the credit risk of the loan. Interest rate itself affects the credit risk. Lenders can raise the risk premium (the interest rate) on loan. According to Stiglitz & Weiss (1981), it may lead to adverse selection by "increasing the probability of default by attracting riskier borrowers (Wagenvoort & Meier, 2003)" and moral hazard by "encouraging riskier behavior of borrowers (Wagenvoort & Meier, 2003)". Because of both of these, when interest rate is raised the lender's expected payoff would start diminishing. This is because of higher defaults. Therefore, "with the presence of information asymmetry in the market for loans and costly monitoring, banks would not use interest rates alone to equate demand and supply, but would ration credit (Thampy, 2010)".

The degree of information asymmetry may be reduced through two mechanisms. These are the provision of collateral as part of the debt contract and the development of close working relationship between the lender and the borrower.

The "availability of sufficient collateral can reduce the adverse selection problem (Binks & Ennew, 1996)" as well as moral hazard problems. The low risk borrowers with appropriate levels of collaterals can signal their status. If the bank takes the collateral of manager, "it can provide an incentive to ensure that managers will perform to the best of their ability in undertaking the project (Binks & Ennew, 1996)". However, if only collateral is used to know status of the project, unavailability or limited in supply of collateral may cause failure of viable project in obtaining funds (Binks & Ennew, 1996).

The nature of relationship between lender and borrower influence the kind of information available to a bank. From the point of view of the bank, "the relationship provides the basis for understanding customer needs for resources and identifying the most appropriate ways of meeting those needs (Binks & Ennew, 1996)". It is also needed that the firms should be cooperative in providing appropriate information to bank in time.

Having mentioned that, MSMEs could be more vulnerable to credit rationing[1]. This is because firstly, banks are the dominant channel of formal external finance to MSMEs since most of the firms in this sector cannot access the capital markets for finance. Secondly, the presence of information asymmetries in the credit market affects MSMEs more in accessing this source of external finance than larger enterprises. "Information asymmetry becomes more pronounced in case of loans to the MSME sector as this sector is considered more opaque (Thampy, 2010)". This may be because of the fact that they have less credit history. Information regarding them is not easily accessible because they face less rigorous reporting requirement. "They may be more reluctant to be fully open about their business structure, growth opportunities and strategic orientation. Finally, in most of the cases, they have less collateral that could shield creditors from the harmful effects of adverse selection and moral hazard (Wagenvoort & Meier, 2003)".

[1] "*Credit rationing means that firms do not get as much credit as they want, although they are willing to pay the going market interest rate and meet other conditions set by lenders"*(Wagenvoort& Meier, 2003)

The external finance tends to be more expensive for MSMEs than for the large ones (Wagenvoort & Meier, 2003). “Transaction cost in bank lending shows economies of scale with respect to loan size. The fixed cost of lending, such as administrative cost and the costs of collecting information about the borrower are not proportional to the size of the loan. This makes small loans more expensive than large loans (Mohan, 2002)”. Thus, the unit transaction costs for MSMEs are higher than those for large firms.

“The MSME firms have *lower profitability* and hence banks are reluctant to lend them (Thampy, 2010)”. The banks are averse to lend MSMEs as they do not consider them as attractive and profitable undertakings (Thampy, 2010). MSMEs are also regarded as *high-risk borrowers* because of their low capitalisation, insufficient assets, and high mortality rates.

1.4 Financial requirement of the MSME and its adequacy

Access to finance is essential for the growth of the sector. However, access to finance by itself does not lead to better performance of MSMEs. It is the inability to access or for that matter the restricted availability of finance can inhibit their performance. Limited access to external finance, often reported by MSMEs, could unduly restrict employment and growth in the Indian Economy.

Small scale industry and inadequacy of finance are two terms that invariably go together in any discussion about the small scale enterprise sector. This phenomenon remains unchanged for more than four decades. Committees headed by Abid Hussain, P.J.Nayak, S.L.Kapur, S.P.Gupta, S.S.Kohli and A.S.Ganguly are some of the official committees those have gone into the problems of inadequate finance faced by the sector in the past few decades.

According to the Final Report of Fourth All India Census of MSMEs, there are around 214.38 lakh MSME units in India, out of which, only 15.64 lakh units are registered and rest are unregistered. However, only 8.78 percent of the units in total MSMEs have outstanding loan from institutional and non-institutional sources, among them 12 percent are registered units and 7 percent are unregistered units (see Table 1.3). Thus, the coverage of both institutional and non-institutional finance is not satisfactory. Even it is

also found; there is decline in the number of units having outstanding loan in 2006-07 compared to 2001-02 (see Table 1.3).

Table 1.3: MSME Units having Outstanding Loan

Economic Parameters	Total No. of enterprises		No. of units having outstanding loan	
	2001-02	2006-07	2001-02	2006-07
Total Sector	105.2	214.38	7.77(**7.39**)	18.83(**8.78**)
Registered Unit	13.7(**13.02**)	15.64(**7.3**)	2.76(**20.1**)	1.86 (**11.89**)
Unregistered Unit	91.5(**86.98**)	198.74(**92.7**)	5.01(**5.48**)	16.97(**6.9**)*

Notes – Over the period data are not comparable as definition has changed,
Figure in parenthesis represents percentage in total.
*: Quick Results of Fourth All India Census of MSMEs 2006-2007, MoMSME, GOI
Source – Third All India Census of Small Scale Industry 2001-2002, MoSSI, GOI
Final report of Fourth All India Census of MSMEs 2006-2007, MoMSME, GOI

According to second CSSI (1987-88), 34.7 percent of units cited that finance problem as the reason for closure of units (Table A1.1 in Appendices to Introduction). According to the third CSSI (2001-02), 57 percent of units in registered sector and 43 percent of units in unregistered sector cited that shortage of capital as the key reason for sickness in the industry (Table A1.2 in Appendices to Introduction). Same kind of information is also available from Fourth CMSME i.e. 48 percent of unit cited that shortage of working capital as the major reason for sickness in the industry (Table A1.3 in Appendices to Introduction). Thus, lack of adequate access to finance may be a major constraint to the economic performance of the micro, small and medium enterprises (MSME) sector of India. If growth of MSMEs is dependent upon access to credit, then generalized implication on the economy is detrimental and significant.

1.5 The Research Issues

A. The above discussion points to credit constraint faced by the MSMEs. This is based on responses or views of firms or results of survey. However, this may not give concrete evidence for finance constraints. Firstly, there can be possibility of overstatement. Secondly, banks may have a justified risk premium in the proposed interest rate. This may be perceived as credit expensive by the firms. The firms may not be willing to borrow at this rate. This cannot be called a situation of finance constraint. But there is every likelihood that firms can report that this affect their businesses (Wagenvoort & Meier, 2003).

In this background, the question that comes in mind - Are MSMEs really facing problem in accessing finance? Has finance constraint in fact impacted Indian MSME economic performance measured in terms of growth of employment, output and fixed asset???

B. Can financing constraints provide reason for the pattern in the size distribution of firms? Can it give an explanation of relation between size, age and growth? The presence of link between access to finance and investment decision and between the kind of investment decision and the final growth of the firm shows a relation between firm's size and growth dynamics of firm. "A Causal relationship is going from liquidity constraint to firm's size through investment and growth. The ability of the firm to weaken the liquidity constraint may be affected by firm's size and age (Fagiolo & Luzzi, 2006)".

Is the relation between firm size, age and growth dependent upon the firm liquidity constraints faced in Indian MSME sector? Or to put it in other words, do "liquidity constraints affect firm size and growth dynamics (Fagiolo & Luzzi, 2006)" of Indian MSME?

C. "The commercial banks are the single most important source of formal external credit to small firms and small businesses usually rely on banks for their credit needs (Hondo & Harada, 2006)". The Indian financial situation is a bank based financial structure. But, the banks are reluctant to extend credits to MSMEs mostly because of higher transaction cost and the higher incidence of non-performing loans. For example, around 58 percent of total priority sector lending in 1969 was extended towards the SSI sector. It is the period when priority sector lending was introduced. This share has been declining continuously; it was 42 percent in 1995. Thereafter, it declined to around 24 percent in 2004. It has declined further but by 2010, it had slightly increased to 32 percent (see table 8.3, chapter - 8).

Here, an attempt to understand trends in commercial bank's credit to MSMEs would be worthwhile. This would provide the real picture of the progress of credit going to the MSME Sector, and would help to understand variations there in and the factors influencing the patterns of MSME credit.

D. In India, it is difficult for Small firms or the MSMEs to access capital market. However, they can access banks to meet their capital need. However, the working capital support provided by commercial banks is not adequate. Thus, it is important to study the roles of public policies, if any, in addressing the finance constraints faced by MSMEs through banks or otherwise.

How the different credit and banking policies are situated in the broader context of macroeconomic policies and changes therein? Have these policies led to easing of financial constraint faced by the MSMEs and increased their access to finance???

1.6 Objectives

1. To analyse the factors affecting and issues there in the access to finance of MSMEs in India from both demand side and supply side based on secondary literature.
2. To examine the level of access to finance of MSMEs in India
3. To examine whether finance constraint have impact on Indian MSME economic performance measured in terms of growth.
4. To understand whether finance constraints provide explanation of relationship of firm's size, age and economic performance measured in terms of growth.
5. To understand the trends in commercial bank's credit to MSMEs.
6. To analyse whether different public policies, particularly financial and banking policies, have led to easing of financial constraint faced by the MSMEs and their increased access to finance.

1.7 Research Question

1. What is the level of access to finance of MSME
2. What is the degree of impact of finance constraints on MSME firm (both on young and old) growth?
3. Is finance constraint more binding as firm size decreases?
4. Can finance constraints be determinant of size, age and growth dynamics of MSMEs?
5. What is the trend of sectoral allocation of bank credit to MSME vis-à-vis non-MSME sector?
6. Does size and performance of banks influence the trends of credit to the MSME sector?

7. Have public policies led to easing of financial constraint faced by the MSMEs?

1.8 Data Source and Methodology

1.8.1 Data sources: The study will be based on data collected from both primary and secondary data source. Primary data sources are NSSO and ASI. The secondary data sources are articles from journals, working paper, conference proceedings, and reports; Census of Micro Small and Medium Enterprises. Data published by RBI in Basic Statistical Returns system, Statistical Tables relating to Banks in India, Trends and Progress of Banking in India and Handbook of Statistics published are also used for the analysis of some objectives.

1.8.1.1 For the purpose of data collection, the manufacturing activity is divided into factory and non-factory sectors. This classification is based on the size of employment in producing units. The factory sector covers all industrial units registered under Sections 2m(i) or 2m(ii) of the Factories Act, 1948. The remaining manufacturing units are covered in the non-factory sector. The former is covered by the *Annual Survey of Industry* annually and the latter is covered by the *follow-up establishment survey on manufacturing survey* once in every five years.

1.8.1.2 The Central Statistical Organization (CSO) of the Department of Statistics in the Ministry of Planning and Programmed Implementation carries out the *Annual Survey of Industry* (ASI) collects the data on the factory units annually. It covers the activity of the establishments engaged in the 'manufacturing processes' including construction, reconstruction and repairing. The ASI covers all industrial units registered under Sections 2m(i) or 2m(ii) *of the Factories Act, 1948* and under the *Bidi and Cigar Workers Act, 1966*, employing 10 or more workers with the aid of power or 20 or more workers without the aid of power. All captive electricity undertakings engaged in generation, transmission and distribution of electricity and not registered with the Central Electricity Authority (CEA) are also covered.

The sampling frame of ASI is based on the lists of registered factories maintained by the Chief Inspector of Factories (CIF) in each state and those maintained by licensing authorities in respect of bidi and cigar establishments and electricity undertakings

(Saluja, 2004). This frame is revised once in three years and updated every year. The ASI factories are categorized into two broad groups referred to as the "census sector" and "sample sector", for the purpose of survey and sample selection. Factories with employment of 100 or more workers constitute the census sector. The residual factories in the frame that is factories with more than 10 workers with power and 20 workers without power but less than 100 workers constitute the sample sector. The census sector, all the electricity undertakings and all the factories located in relatively less industrialised states and union territories for the sample sector are enumerated completely every year. Good number units of the sample sector are also surveyed every year. This is by following a circular systematic sampling with a specific sampling fraction (which varies over year) and this sample design gives the scope for a good number of units being selected for survey every year. This makes it a good source of panel data (Chattopadhyay, Manna, & Chakraborty, 2012).

Data of ASI for the period of 2000-01 to 2010-11 has been used in the study. This choice of time period is described latter.

1.8.1.3 The National Sample Survey Organisation (NSSO) of the Department of Statistics in the Ministry of Planning and Programme Implementation carries out *follow-up establishment survey on manufacturing in the unorganized sector* in every five years. Information on characteristics of the enterprises, fixed assets, employment, operating expenses and receipts, value added etc. was collected from the enterprises surveyed.

The NSS has a long history of collection of data on unorganized manufacture. It has begun with the very first round of NSS. It was in the form of small-scale manufacture and handicrafts as one of its subjects of enquiry. In the NSS rounds of 3rd (1948-49) to 10th (1955-56), 14th (1959-60), 23rd (1968-69) and 29th (1974-75), the data on the small-scale manufacture and handicrafts were collected. These rounds had relied on the list of villages as per the Population Census and list of census enumeration blocks, lists of Urban Frame Survey (UFS) blocks as per the NSSO, as the sampling frame for selection of villages/urban blocks. But the sampling frame was inadequate. A better sampling frame was in need to generate more useful statistics on the unorganized sector.

The economic censuses (EC, hence forth), started in 1977, have fulfilled the above mentioned need of better frame for the conduct of the follow-up survey on non-agricultural enterprises or manufacturing units in unorganized sector. The village and block level information, on number of enterprises/workers as per the EC for selection of villages and urban blocks in the follow-up surveys, has been used by the follow-up surveys on unorganized manufacturing sector done by NSSO. There are seven follow-up surveys (FS) of EC through rounds 33rd (1978-79), 40th (1984-85), 45th (1989-90), 51st (1994-95), 56th (2000-01), 62nd (2005-06) and 67th (2010-11). 33rd is follow-up survey to first EC(1977), 40th and 45th are follow-up to second EC(1980), 51st is the follow up to third EC(1990), 56th and 62nd are follow-up to fourth EC(1998) and 67th is follow up to fifth EC(2005).

The first six surveys have the manufacturing units in the unorganized manufacturing sector as the main subject of enquiry. However, there are minor differences in the coverage. The 33rd round of follow-up survey of unorganized manufacture covered only Own Account Enterprises (OAEs)[2]. In 40th round and 45th round survey on unorganized enterprises only OAMEs and Non-Directory Manufacturing Establishments (NDMEs) are covered. Directory of Manufacturing Establishments (DMEs) are surveyed separately under the technical guidance of CSO. The 51st is an *integrated survey* on unorganized manufacturing covering OAMEs, NDMEs and DMEs, under the guidance of technical guidance of NSSO. So are the 56th round, 62nd round and 67th round. But in addition to unorganized manufacturing, the latest 67th round has trade and other services excluding construction in the survey. So it is called as integrated survey of all unincorporated establishments covering manufacturing, trade and other services excluding construction.

The 51st round survey has covered two-digit codes 20 to 39 and 97 under NIC, 1987. The 56th round survey has covered two-digit codes 15 to 37 under NIC, 1998 and enterprises under cotton ginning, cleaning and baling (NIC 98 code 01405). The 62nd round survey has covered NIC, 2004 2-digit codes 15-37 and enterprises under cotton ginning, cleaning and baling (NIC 2004 code 01405). The 67th round has covered NIC 2008 with 2-digit

[2] Own Account Manufacturing Enterprise (OAME) is an enterprise engaged in manufacturing and/or repairing activities and running without any hired worker. Establishment is an enterprise employing at least one hired worker. Non-Directory Manufacturing Establishment (NDME) is an establishment employing less than six workers. Directory of Manufacturing Establishment (DME) is an establishment with six or more workers.

codes 10-33 in the manufacturing units. This round has also covered enterprises under cotton ginning, cleaning and baling (NIC 2008 code 01632).

Table-1.4, Description of Unorganised Manufacturing Survey (UMS), NSSO

Year of Survey	Unorganized Manufacturing Survey	NSSO Round	Follow-Up To Economic Census	Type Of Establishments	National Industrial Classification
1978-79	First	33rd	First EC-1977	OAMEs	
1984-85	Second	40th	Second EC-1980	OAMEs, NDMEs	
1989-90	Third	45th	Second EC-1980	OAMEs, NDMEs	
1994-95	Fourth	51st	Third EC-1990	OAMEs, NDMEs, DMEs	NIC, 1987
2000-01	Fifth	56th	Fourth EC-1998	OAMEs, NDMEs, DMEs	NIC, 1998
2005-06	Sixth	62nd	Fourth EC-1998	OAMEs, NDMEs, DMEs	NIC, 2004
2010-11	Seventh	67th	fifth EC- 2005	OAMEs, NDMEs, DMEs	NIC 2008

Source: author's own compilation

The data of the period 2000-01(56th round), 2005-06 (62nd round) and 2010-11(67th round) on unorganised manufacturing have been used in the study. The obvious reasons, why the surveys of these periods are considered for the study, are firstly, they have coverage of all three types of enterprises; secondly, there is less difference in NIC classification of manufacturing activities over these surveys from one another compared to the 51st round.

Since the use of ASI data is to get clear idea of access to finance for MSMEs drawn from NSSO data vis-à-vis with large units in ASI, the time periods of ASI data are chosen according to the chosen rounds of NSSO for the study.

The industry by 2-digit product group is considered across the industry groups for the formation of panel data, which are common and have the same or more or less the same nomenclatures in 2-digit NIC-1998, NIC-2004, and NIC-2008.

1.8.1.4 The *Census of Micro Small and Medium Enterprises* (CMSME, hence forth) are published by Development Commissioner (MSME), Ministry of MSME, New Delhi. The definition adopted by this data source is based on the investment in plant and machinery.The present definition of MSEs under Micro, Small and Medium Enterprises

Development (MSMED) Act, 2006 is as follows. It recognized the concept of 'enterprise' to include both manufacturing and service sector.

The enterprises engaged in the manufacture or production, processing or preservation of goods as specified below:

(i) A micro enterprise is an enterprise where investment in plant and machinery does not exceed Rs. 25 lakh;

(ii) A small enterprise is an enterprise where the investment in plant and machinery is more than Rs. 25 lakh but does not exceed Rs. 5 crore; and

(iii) A medium enterprise is an enterprise where the investment in plant and machinery is more than Rs.5 crore but does not exceed Rs.10 crore.

Enterprises engaged in providing or rendering of services as specified below

(i) A micro enterprise is an enterprise where the investment in equipment does not exceed Rs. 10 lakh;

(ii) A small enterprise is an enterprise where the investment in equipment is more than Rs.10 lakh but does not exceed Rs. 2 crore; and

(iii) A medium enterprise is an enterprise where the investment in equipment is more than Rs. 2 crore but does not exceed Rs. 5 crore.

1.8.1.5 Data published by RBI in Basic Statistical Returns system, Statistical Tables relating to Banks in India, Trends and Progress of Banking in India and Handbook of Statistics. The credit to industry, small scale industry (present day MSME) has been used for the early 1970s to the recent period of 2010 from various issues of Basic Statistical Returns system. The characteristics of bank like asset, credit to MSE, NPA out of MSE lending, CRAR are collected from the various issue of Statistical Tables relating to Banks in India and Report on Trends and Progress of Banking in India.

1.8.2 Methodology

1.8.2.1 To begin with, in spite of the availability of census of MSME, why *NSSO data has been chosen*, for the study? The data of Census of MSME does not serve the objectives of the study. The earlier censuses are with reference period 1971-72 and 1987-88. The third census is with reference period 2001-02 and the latest census, data of which

is in public domain, is the fourth census with 2006-07 as reference period. Data on variables required are not available in all the censuses such as data on loan acquired, wage bill are not available in third census and in the earlier censuses. Because of this, two main problems occurred firstly, over time comparison taking account the required variable cannot be made and secondly, a panel of the data of the required variables cannot be prepared with at least more than two time periods. These problems in the census of MSMEs has led to the use of data of Unorganized Manufacturing Survey (UMS, hence forth) of NSSO which serves the objective of the study better by taking care the above mentioned problems.

There is additional benefit in the use of UMS over Census of MSME is that the latter collects the information of units those are only registered with the District Industries Centre (DIC). Rests of the units are not in its account even if they are micro, small and medium size. These units are also taken into account in the UMS along with other units even if they are registered to the DIC provided if they fall into the domain of UMS.

All the more, the use of UMS gives the scope for use of ASI data for comparison which is generating better analysis.

1.8.2.2 How the units of *UMS of NSSO and ASI have been segmented into Micro, Small and Medium units*? This is based on the present definition of MSME under Micro, Small and Medium Enterprises Development (MSMED) Act, 2006.

However, the study is not proposing that the MSMEs drawn from the ASI and NSSO data are 'the MSMEs' that the CMSME, otherwise, would have captured for mentioned periods. The above mentioned definition is referred to get cut off for segmentation of Micro, Small and Medium units in NSSO and ASI data.

Any cut-off or definition is necessarily arbitrary. This is because the structure of economy and technology is changing very fast. Any cut-off won't make justice to the inter-temporal comparison in its full extent. However, we cannot escape this. Yet definitions and cut offs are used to make comparison. This is fact of the life to have some reasonably justified cut-off to make inter-temporal comparison.

The cut-off of definition of MSME of the year 2005-06, as provided by the Ministry of MSME mentioned earlier, has been inflated to get cut-off for the time period 2010-11 and deflated to get cut-off for the time period 2000-01 with wholesale price index for manufacturing product at 2005-06 base year. Accordingly, the calculated cut-off for 2000-01 and 2010-11 has been presented in the Table 1.5. Based on this cut-off, the data of UMS of 56th round, 62nd round and 67th round of NSSO have been segmented into Micro, Small, Medium units. This has been done by applying the cut-off on the value of gross plant and machinery of the firm.

Table 1.5: Cut off for different size of firm based on the official definition of MSME

Type of firm	2000-01	2005-06	2010-11
Micro	<=2080260	<=2500000	<=3176270
Small	> 2080260 to <= 41605203.32	>2500000 to <=50000000	> 3176270 to <= 63525390.63
Medium	> 41605203.32 to <= 83210406.64	>50000000 to <=100000000	>63525391.63 to <=127050781.25
Large	> 83210406.64	>100000000	>127050781.25

Source: own calculation

Similarly, data of the ASI for the respective years have been segmented into Micro, Small, Medium and large units. Along with this, the data of ASI for the period 2004-05 to 2008-09 has been segmented into different size classes to for analysis of the objectives and formation panel data for different size of firms based on the cut-off mentioned in Table 1.6.

Table 1.6: Cut off for different size of firm based on the official definition of MSME

Type of firm	Micro	Small	Medium	Large
2004-05	<=2441406.3	> 2441406.3 to <= 48828125	> 48828125 to <= 97656250	>97656250
2005-06	<=2500000	> 2500000 to <= 50000000	> 50000000 to <= 100000000	>100000000
2006-07	<=2641601.6	> 2641601.6 to <= 52832031.3	> 52832031.3 to <= 105664062.5	>105664062.5
2007-08	<=2768554.7	> 2768554.7 to <= 55371093.8	> 55832031.3 to <= 117014694.2	> 117014694.2
2008-09	<=2939453.1	> 2939453.1 to <= 58789062.5	> 58789062.5 to <= 137583683.4	> 137583683.4

Source: own calculation

1.8.2.3 From the UMS of NSSO, *'age'* variable cannot be generated for firms as no information is available in the schedule of survey. But for ASI, there is information on the 'Year of initial production' in the schedule. The variable 'age' is generated by deducting the 'Year of initial production' from 'survey year'. Based on the 'age' variable, the firms are segmented into 'young', 'old', 'older' and 'oldest'. The cut of age is provided in the Table 1.7. This has been applied for ASI data of the year 2000-01, 2005-06 and 2010-11 and also applied for formation of panel data out of ASI.

Table 1.7: Segmentation of firms from ASI data according to their age

Category of firm	Age limit
young	<=15
old	>15 and <=30
older	>30 and <=50
oldest	>50

1.8.2.4 *Description of important variable*: Gross value of Plant and machinery (*GPM*) is calculated by adding 'asset owned', 'asset hired' and 'net addition to assets owned'.

Fixed asset (*FA*) is total of asset owned and asset hired.

Cash flow(profit) is the profit of firm. Value on this is given in NSSO. For ASI, it is calculated following the definition given in Tabulation Program in the ASI data documents section.

Outstanding loan (*OS*): NSSO - amount of loan taken including interest that is outstanding on the date of survey. ASI – all loans, including short term or long term, interest bearing or not, outstanding according to the books of the factory as on the closing day of the accounting year.

Trade credit – bills receivable; this is amount receivable by the unit on account of goods sold or services or in respect of similar contractual obligations. This is the value against 'sundry debtors' in the balance sheet of the schedule of ASI

Trade debt – bills payable; this includes amounts payable by the unit on account of goods purchased or services received or in respect of similar contractual obligations. This is the value against 'sundry creditors' in the balance sheet of the schedule of ASI.

1.8.2.5 *On Panel data creation from NSS UMS data*: Since because NSS UMS are cross section data by following random sampling procedure, information about same firm in each round of survey cannot be found. To study some of the objectives of the study, panel data is formed on information of average values of the required variable of NIC 2-digit industries which are present in each of round of NSS UMS. Average value of variable of industry means value of variables per firm in the industries. So, these are panel of value of variables per firm in the industry present in the considered states for the period 2000-01 to 2010-11 with gap.

These panels are called as pseudo panel. Such panel is formed by taking the members together into the groups. These members within the group share some common characteristics. The averages within these groups are considered as observations in such panel. There are studies, such as Deaton (1985), Moffitt (1993), Verbeek and Vella (2005), which have used the pseudo panel approach. Here, in this study such panel out of the UMS of NSSO is formed to apply fixed effect panel model on the data of constructed pseudo panels.

While preparing the panel following precautions and steps are followed.

NIC – the firm level data of UMS of 2000-01 is in NIC-2, NIC-3, NIC-4 and NIC-5 digit. For UMS of 2005-06 and UMS of 2010-11, it is only in NIC-5. The NIC-5 is recoded in NIC-2. The concordance of the NIC-2 digit industries, which are considered for preparation of panel, is presented in Table A6 in Appendix A.

States - The states which are considered for panel are presented in Table A7 in Appendix A. These codes are in UMS of 62nd round and 67th round. The code of state of 56th round has been recoded as like the codes of state of 62nd and 67th rounds for making of panel data.

Variables considered – Fixed Asset (FA), Output, Employment (emp), Cash Flow (CF), Outstanding Loan (OS)

Steps for Creation of Panel – After preparation of data set from UMS for each of time period; 2000-01, 2005-06 and 2010-11; by taking above mentioned NIC 2-digit industries across the considered states, three panels are formed such as, NSS_panel_MSE, NSS_panel_Micro and NSS_panel_Small. The steps are followed in the formation of each of panel.

NSS_panel_MSE

1. All firms under the considered 2-digit industries are taken across the considered state.
2. The variables with Rs value has been deflated at 2004 - 05 WPI of manufacturing product for each time period.
3. Average of above mentioned variables per industries is taken for each of considered 2-digit industries. By doing this, we can get observation of the average of different variables for each of industries for each time period taken.
4. These averages of variables are found with different value in each of considered states.
5. By putting together the averages of each of variables for each of industries across considered states and time periods, the panel is formed.

Similarly, NSS_panel_Micro and NSS_panel_Small are formed by considering Micro and Small firms respectively by following the above steps.

1.8.2.6 *On Panel data creation from ASI data*: The purpose of using ASI data is to compare the results and findings of the MSMEs from the NSS UMS with that of the larger MSMEs and large firms in ASI data. ASI data have been considered of same time period as the rounds available for NSS UMS. However, another panel of ASI data for period 2005-09 has been considered to observe changes in results if any found.

As mentioned earlier in section of Data Sources, panel data of firms can be formed from ASI data. The steps followed are mentioned below.

1. The variables are calculated using the tabulation programme.

2. The variables with monetary value are deflated with 2004-05 WPI of Manufacturing products.
3. Two different panels have been formed using ASI data. One is for the period of five years for period 2005 to 2009. It is called as *ASI_panel2*. The other is for the three periods 2001, 2006 and 2011 taken together and it is called *ASI_Panel1*.
4. ASI_panel2 has been formed in three different sets. They are ASI_panel2_Total, ASI_panel2_MSE and ASI_panel2_Medium&Large.
5. ASI_Panel1 has also been formed in three different sets. They are ASI_panel1_Total, ASI_panel1_MSE and ASI_panel1_Medium&Large.

1.8.2.7 *On Panel data of credit of bank to MSE and other characteristics of banks:* This panel is formed for variables like proportion of credit to MSE provided by bank, total asset of the bank, proportion of NPA arising from MSE lending, average return of asset, capital to risk-weighted asset ratio (CRAR). These data are bank-wise. All these variables are either compiled or calculated from the various issues of Statistical Tables Related to Banks and Reports on Trends and Progress of Banking in India published by RBI. The period of the panel data of these characteristics of bank is for the period from 2001 to 2009 since the proportion of NPA arising from MSE lending is available from 2001 and proportion of credit to MSE is available till 2009.

1.8.2.8 *Analysis on Access to Finance for MSME*: As done in five different steps. Firstly, based on evidence available in secondary literature, access to finance for small firms has been analysed irrespective of the fact that they are situated in any part of the part of the world, Secondly, the gap in finance demanded and supplied by MSMEs, particularly in India has been analysed, based on available secondary literature. Thirdly, it has been analysed particularly for India through primary analysis of results from the descriptive statistics and also from empirical use of firm level data in NSS UMS and ASI from 2000-01 onwards till 2011. Fourthly, the amount of credit flowing to the sector has been anaysed. The factors determining the trends of flow of credit to the MSEs have also been looked at. Fifthly, the impact of financial and banking policies on the access to credit and credit flowing to the sector from banks has also been explored.

1.8.2.9 The *primary analysis on Access to Finance for MSME and Economic Performance of MSME* has been done by using descriptive statistics and panel data regression to study the related objectives mentioned earlier.

1. Examination of the level of access of finance of MSMEs in India: as follows

- By comparing the small firms vis-à-vis the large firms using both the NSS UMS data and ASI data.
- The shortage of capital as cited by firms has been analysed by looking into different sizes of firms.
- The variation in level of outstanding loan going to the sector, loan per enterprise, loan as percentage of fixed asset has also been analysed by size of firms.
- Capital structure of firms, by their size and age, has been explored to analyse the access to finance of MSMEs.
- The analysis of flexibility in adjustment of debt ratio as the growth of different sizes of firm changes

The above mentioned exercise is undertaken by analyzing proportion, percentage and growth of respective variables presented in tables and graphs.

2. Impact of finance constraint on Indian MSME economic performance: this has been examined by looking into sensitivity of internal fund, measured by cash flow, and economic performance measured by growth of FA, Employment and output. (For further details refer chapter- 7, Section- 7.3). Here, the analysis is based on results on coefficient of cash flow ratio of panel regression model. A detail of this model is presented in Chapter-7.

3. Analysis on role of finance constraint on the relationship of firm's size, age and economic performance: it is more likely that size and age of firm have weakening effect of finance constraint on the development of firm and gaining access to external finance. This has been done through comparison of level of financial constraint of firm, measured in terms of coefficient of cash flow ratio, and relation of loan ratio to growth of firm,

measured in terms of coefficient of loan ratio, across size class and age group of firm. The exercise is based on the analysis of result of panel regression model.

1.8.2.10 The commercial bank's lending to the MSMEs have been analysed from early 1970s to 2010 through following indicators;

- By looking into trends in priority sector lending of public, private and foreign banks.
- By comparing growth rate of credit to MSME vis-à-vis growth rate of credit to industry and that of total credit.
- By comparing proportion MSME credit vis-à-vis proportion total Industry credit to total bank credit
- The trends in proportion of MSME credit to total Industry credit is also looked into.
- Comparison of allocation of credit to MSME vis-à-vis non-NMSEs in terms of growth rate and proportion to total in aggregate and also in bank-group wise disaggregation.

1.8.2.11 The effect of size and performance of bank on its credit to MSME has been analysed

- through descriptive analysis of trends in share of MSE credit to total bank credit by size group of banks and comparison of changes in trends of proportion of credit going to MSE with the change in performance of bank measured in terms of spread and return on asset by bank group wise and
- through panel regression of impact of bank's characteristics upon its proportion of credit going to MSE (Details on the regression model are available in the chapter - 8).

1.8.2.12 The evidence found in this study, from the primary analysis of data regarding access to finance of MSME and flow commercial bank credit to the sector and from the analysis of existing secondary literatures, has been analysed in the broad context of paradigm shift in financial and baking policies in the Indian Economy.

1.9 Chapter Scheme

With the given background, the thesis has been chaptered as per the issues in following manner.

1. *Introduction*

The chapter has introduced the issue and problem in hand. It is giving the description about issues, objectives, the methodology and data sources used to address the objectives of the study.

2. *Access to Finance and Economic Performance of Small Firms: An Overview*

The title is self-explanatory; it gives a survey of existing literature on the issues in hand. These issues are explanation of the level of access to finance and development of MSMEs through firm specific characteristics, dynamics of growth and size and age of firm in terms of level of access to finance, role of public policies on the access to finance of small firms, impact of financial liberalization on the access to finance, impact of type of financial institutions on the level of access to finance, the influence of relationship between bank and small firms on the latter's access to finance. This study would enable to find out the issues on access to finance of MSMEs and the gaps therein the existing literatures on the role of finance on the growth and development of MSMEs.

3. *Role of MSMEs in Development*

Based on secondary literature, the study has analyzed the role and importance of MSMEs in the process of economic development. The dimensions of importance of the sector are analysed in terms of potential contribution of the sector to income, employment across the world including both developed and developing countries with both theoretical and empirical evidences from different countries, their role in development process especially in developing countries and the evolution and importance of the sector that it has acquired in the Indian Economy.

4. *Public Provisioning and SSI/MSME in India*

Given the developmental role of MSMEs, an analysis of the public provisioning to Small firms (earlier Small Scale Industries (SSI) / recently Micro Small Medium Enterprise (MSME) in India is necessary. "With adequate financial and non-financial resources as well as capacity building, the MSME sector can grow and contribute to economic

development considerably higher than it is doing currently (Intellectual Capital Advisory Services Private Limited, 2012)". In this context, a more elaborate discussion of level of access to finance of the MSME is called for in general and in the context of Indian economy in particular.

5. *Access to Finance for MSMEs*

Based on the review of secondary literature, including official reports and other publication from government and non-government organisations and international institutions on access to finance of MSMEs, the study has analysed the importance of finance, access to finance in the development process especially how it is important and its implications in the development of MSMEs. Towards furthering the understanding, a background on problems of accessing credit market is provided with cause. The dimensions of problem in accessing finance for MSMEs, especially debt finance which are analysed as, firstly, the kind of financial barrier they face whether that is voluntary or involuntary and secondly, inadequacy in access to finance of MSMEs. Access to finance is analysed from both the demand side and supply side. Demand of finance is analysed by size and type of enterprise. The flow of finance to MSMEs is analysed by different sources, further analysis of debt flow is done by different type of financial institution, by size and by type of enterprise. To complement this, a discussion on finance gap, which follows from mismatch of amount demanded and actual amount supplied by the financial institutions, has been looked into by size and type of enterprises. By providing the cause of so and factors for its persistence over time, the access to debt-finance gap has been highlighted and analysed.

It would be better to analyse finance constraint problem of MSMEs in greater details in the context of India by analyzing evidence from data of ASI and NSSO and drawing conclusion regarding this problem through primary analysis of the information from these sources.

6. *Access to Finance (and the Growth) of MSMEs in India: analysis of evidence from the NSSO and the ASI*

Based on primary analysis of unit-level data of NSSO's survey on unorganized manufacturing enterprises and ASI data, the chapter has examined the access to finance

of MSMEs in India by comparing its position vis-à-vis the large firms. The analysis begins with a background of position of small firms in the imperfect capital market. Towards furthering the understanding on access to finance of MSMEs, decomposition of Indian manufacturing sector is made in terms of the size of the firms as a background to the analysis. The extent of access to finance of MSMEs has been analysed by looking into different sizes of firms in terms of shortage of capital as cited by the firms, the level of outstanding loan going to the sector, loan per enterprise, loan as percentage of fixed asset. Access to finance of MSMEs has been explored further by looking into capital structure of firms by their size and age. The analysis of flexibility in adjustment of debt ratio, as the growth of firm changes, has given more details to the discussion of access to finance of MSMEs. The main findings show Micro and Small enterprises are facing difficulties in accessing credit market even they become older, they are dependent more on internal sources of finance to meet their need of working capital and investment.

"The amount of availability of internal finance may limit the investment of a firm if the firm faces external finance constraints (Wagenvoort & Meier, 2003)". It would have negative impact on the economic performance of firms. The empirical test of finance constraints can be of "testing whether financial variables (the amount of available internal funds) have a significant impact on the firm's investment (Wagenvoort & Meier, 2003)" and economic performance like growth in fixed asset, output and employment. In other words, a statistically significant and economically important link between a firm's internal finance and its economic performance would show presence of external finance constraints. It would be better to analyse finance constraint problem of MSMEs in India at firm level using firm level data from ASI and NSSO. This has been dealt in the chapter-7.

7. *Empirical Evidence on Access To Finance and the Economic Performance: Firms in MSMES Sector in India*

The chapter has examined whether the MSE are actually constraint by their inadequate access of finance as they have cited shortage of capital as one of the most important problem. This has been done through an empirical analysis of data from NSSO's survey on unorganized manufacturing enterprises and ASI data on industries. To add to the analysis further, it has looked into role of size and age of firm in weakening the relation

between the finance problem faced by the firm and its economic performance. Two-way fixed effect is applied to the analysis of panel data econometric model. The financial constrains is providing explanation to the dynamics of size and economic performance dynamics. The main findings are Micro and Small firms are financially distressed and constrained by inadequate access to finance, such condition of firm is affecting its economic performance. The ability of the firm to weaken its liquidity constraints and to enhance its access to external financing is a function of its size and age (Fagiolo & Luzzi, 2006).

The analysis of trends and sectoral allocation of commercial bank lending to the MSME sector and impact of size and performance of banks on the credit going to the sector would add to the discussion on the access to finance of the firms in the sector. This has been attempted in the Chapter-8.

8. Commercial Banks Credit to MSMEs in India

The study is about the changes in the credit flowing from the commercial banks to the MSME sector and the technical and methodological factors related to the banks behind such changes. Towards furthering the understanding, the focus is on the trends in share of MSE credit to total credit and share of MSE credit to credit flowing to industry, in the growth of MSE credit in aggregate terms, by bank group wise and bank wise. Share of credit is also analysed in terms of size and performance of the banks. To make the discussion, on the impact of the size and performance of the bank on the credit going to the MSE more comprehensive, the study also makes an empirical analysis on the relationship of share of credit to MSE and bank characteristics.

After providing a background for the study, the flow of discussion of the chapter begins with an elementary analysis on the factors determining the decision of both small and large size banks to lend or not to the MSMEs in the second section. A critical analysis of PSL lending to the sector is presented in section five. Subsequently, an analysis of the performance of the sector has been done as a background for further analysis in the section six. In the section seven, more critical analysis of growth and share of credit to the sector has been attempted firstly, in terms of comparison vis-à-vis total industry in aggregate term and by bank group wise, secondly, in terms of comparison vis-à-vis non-

MSME credit by bank group wise and thirdly, in terms of the size of banks. Section eight takes the analysis further ahead by putting a discussion on the same subject based on the performance of the banks by groups, sizes and the type of performance of banks and finally relating the share of credit with the characteristics of banks econometrically.

The empirical finding is supporting the fact that the better performing banks are not interested in lending to the sector (negative empirical relation between performance of MSE and proportion of credit going to the sector). There are many holes erupted in the PSL system in the recent time as discussed in the chapter-9. These holes are providing enough scope to divert the funds to other projects and places of higher profits and returns.

9. The Role of Public policies in easing finance constraints of MSMEs in India

The chapter has analysed the role and importance of policy in easing the access to finance of MSMEs in India. A background of importance of the sector in the economy and the evidence of inadequate access to finance and finance constraint has been presented to further the understanding of importance of policy in the context. The objective has been pursued by comparing the situations in banking activities as a result of policy shift to liberalized banking from the earlier regulated socialistic one, thereby making analysis of change in development banking, how this change in policy has majorly impacted the objective of banks to earn more profit from its activities and consequential decline in the lending to the sector on the one hand and the inability to access credit of MSEs on the other hand. In the end of the chapter, policy recommendations have been attempted.

10. Conclusion

The chapter has put forward the final findings of the thesis.

CHAPTER - 2

ACCESS TO FINANCE AND ECONOMIC PERFORMANCE OF SMALL FIRMS: AN OVERVIEW

2.1 Introduction

The growth and development of small firm depends upon on adequate and timely availability of finance. An enabling economic environment with better access to finance helps firms, more particularly for MSMEs, to grow and prosper. But many a time, accessing finance has become problematic for them because of financial market friction. The objective of the present chapter is to provide a survey of exiting literature on the determinants of economic performance of the firms, particularly the small firms in the context of different issues on their access of finance. Hence, views of different authors about the access to finance of firms particularly the small firms have been reviewed. The source of the studies reviewed herein includes mostly from journals and working papers.

This study would enable to find out the issues on access to finance of MSMEs and to find out the gaps and some emerging issues from the existing literatures on the role of finance in the growth and development of MSMEs. The literatures on explanation of level of access to finance and development of MSMEs have been surveyed through firm specific characteristics, dynamics of growth, size and age of firm in terms of level of access to finance, role of public policies on the access of finance of small firms, impact of financial liberalization on the access to finance, impact of type of financial institutions on the level of access to finance and the influence of relationship between bank and small firms on the latter's access to finance.

In order to make the review systematic and analytical, review has been divided into sections as follows:

2.2 Review on relationship of growth of firm and size of firms

"Gibrat's law states that the growth rate of a firm is independent of its initial size (Evans, 1987b)". There are a number of studies which have researched on the relationship between the growth and size of firms such as, Evans (1987a), Evans (1987b), Hall (1987), Dunne, Roberts, & Samuelson (1989), Das (1995), Sutton (1997), Harhofft,

Stahl, & Woywode (1998), Liu, Tsou, & Hammitt (1999), Audretsch, Santarelli, & Vivarelli (1999), Heshmati(2001), Honjo(2004) and Yasuda (2005).

The study of Evans (1987a) "examines the relationships among firm growth, firm size and firm age for a sample of manufacturing firms between 1976 and 1982" in the *United States*. Firm growth is found to decrease with firm size in this study. The study of Evans (1987b) examines firm dynamics using a sample of firms operating in 100 manufacturing industries in the *United States*. This study also found that the growth of firm decreases with the size of the firm. The finding of this study also supports the finding of previous study.

The goal of the study by Hall (1987) is to examine explanations of negative relation between firm size and growth and to do more careful modeling of firm dynamics. The study has used "panel data on the publicly traded firms in the *US manufacturing sector*". The negative coefficient on the firm size in the growth rate equation cannot be explained by the measurement error in employment and sample attrition. For the smaller firms, Gibrat's Law is rejected. However, for the larger firms, it is accepted.

The study of Dunne et al.(1989) investigates the patterns of post entry employment growth and failure. It is based on 200,000 plants that entered the *U.S. manufacturing* sector in the 1967-1977 periods. "The post entry patterns of growth and failure vary significantly with observable employer characteristics. Plant failure rates decline with size and age as do the growth rates of non-failing plants. The expected growth rate of a plant depends on the net effect of these two forces. It declines with size for plants owned by single-plant firms but increases with size for plants owned by multi-plant firms (Dunne et al., 1989)".

The study of Das (1995) presents an examination of the patterns of firm growth in the Indian computer hardware industry over 1983-1988 with the result that the size of the firm has negative relation with its growth.

The study of Harhofft et al. (1998) tests prediction on the relationship between legal form, firm survival and employment growth. It has used approximately 11000 West *German firms* from all major sectors of the economy. "The study investigated the age-size effect on firm growth in the fields of construction, trade and service industries as

well as manufacturing. It confirmed the negative effects of size on growth of the firm (Harhofft et al., 1998)".

The study of Liu et al. (1999) uses plant-level data for the *Taiwanese* electronics industry for the period 1990-1994 to investigate the relationship between plant growth, size and age. The hypothesis of independence between plant size and plant growth is rejected. The results show that the effects of size and age on manufacturing plant growth are similar in a newly industrializing economy to their effects in developed countries.

The study of Audretsch et al. (1999) has analysed the link between "survival and growth of firms in each manufacturing industry specifically to their start-up size in Italy by using a longitudinal data base. It is identifying the start-up of new manufacturing firms and their subsequent post-entry performance". The study finds that there is no relation between start-up sizes with survival, the growth rates. There is negative relation between the growth rate of firm and initial size. Supporting the evidence of previous studies, this study also suggests the rejection of Gibrat's Law for small firms in manufacturing sector.

The study of Heshmati (2001) examines the relationship between the size, age and growth rate of firms. The work is based on data of a sample of micro and small firms in *Sweden*. The data covers the period 1993-1998. The growth rate is defined "in terms of the growth of number of employees, sales and assets. The results show that the relationship between the growth, size and age of firms is very sensitive with respect to the method of estimation, functional form and definition of growth and size". Independence between firm size and firm growth is rejected. The study found the firm size is negatively related with the growth of firm in the employment model and both are positively related in the sales models.

The study of Becchetti & Trovato (2002) finds firm growth is independent of the initial size for large firms but firm growth is not independent size of firm for small and medium sized firms when they are financially constraints with difficulty in accessing external finance in a "bank-oriented" financial system.

The study of Elston (2002) analyses the relationship between firm size and growth for Neuer Market firms from its inception in 1997 until 2000. The result of this study says

that smaller firms on the Neuer Market of the *Germany* grew faster than larger firms. The finding of the study of Oliveira & Fortunato (2006) also supports this. It says that "firms that were small and young at the beginning of the sample period exhibited more persistent growth than those that were large and old". The study of Honjo (2004) also rejects the Gibrat's Law. The finding of this study states that "younger and small-sized firms are more likely to grow among the start-ups".

The study of Yasuda (2005) examines the relation between growth, size, age and firm behavior such as R&D activity and subcontracting. The study has used the survey data of 14,000 manufacturing firms in japan with the result of size of firm is negatively related to its growth.

2.3 Growth of firm is a function of its age.

Jovanovic's (1982) theory of firm growth, also called as the theory of firm learning, says the "inverse relationship between growth and age". "A general version of his model predicts that firm growth decreases with firm age when firm size is held constant"(Evans, 1987a). "Firms uncover their true efficiencies over time with a Bayesian learning process (Evans, 1987a)". The studies like Evans (1987a), Evans (1987b), Harhofft et al. (1998), Liu et al. (1999), Heshmati (2001) and Yasuda (2005) have dealt on this theme.

The study of Evans (1987a) also finds that firm growth is found to decrease with firm age. The finding of Evans (1987b) is that firstly, there is negative relation between growth and age of firm, secondly, there is negative relation between variability of growth and age of firm and thirdly, there is negative relation between the probability that a firm fails and age. The positive relationship between age of firm and its growth, found by Das (1995) is opposite to Jovanovic's(1982) theory of firm growth. The study of Harhofft et al. (1998) and Liu et al. (1999) also confirmed the negative effects of age on growth of the firm. The study of Heshmati (2001) finds that the negative relationship between the age and growth of firms predicted by Jovanovic hold in the employment model, but the relation is positive both in asset and sales growth models. The study of Yasuda (2005) also confirmed firm growth is the negative relation between firm size, age and it's growth. The study also found that a positive effect of firm size and age on survivability of firms in general.

2.4 Growth of firms and other firm-specific characteristics

Firm growth is influenced by many other factors like other firm-specific characteristics, apart from firm size and age. In this regard, Heshmati (2001), Becchetti & Trovato (2002), Elston (2002), Honjo (2004), Mateev & Anastasov (2011) are some of the studies surveyed here.

The work of Heshmati (2001) has proposed the model of growth including firm-characteristics variables. The results are *firstly*, indebtedness has negative influence on the growth rate of assets, *secondly*, indebtedness has positive influence on the growth rate of sales, *thirdly*, indebtedness has influence on employment, *fourthly*, log profitability has positive influence on sales growth and *fifthly*, human capital variables show positive influence on firm's growth.

An empirical analysis of the determinant of growth of SME in Italy has been studied by Becchetti & Trovato (2002). The investigation has been done on the basis of a sample including firms between 10 and 50 employees. It has used variables like state subsidies, export capacity and credit rationing along with size and age of firm. The study has provided an empirical test by considering "size and age as potential variables which may significantly affect firm growth". Along with this, it has looked into financial constraint. The results of this study show that "growth of firm is not only affected by size and age but also by financial constraints and access to foreign markets have a significant impact on the growth of small and medium sized Italian firms".

The study of Honjo (2004) has analysed "firm growth as the post-entry performance of new start-up firms". It has used data of manufacturing firms in Japan for the period 1992-1996. It has located and described the factor influencing growth of new firms. The study has analysed the effects of entrepreneur-specific, industry-specific and local characteristics on firm growth along with the firm-specific characteristics. The growth of start-ups firms is also influenced by entrepreneur's age and educational background.

Mateev & Anastasov (2011) investigate the main determinants of growth in SMEs in *transition economies across several Central and Eastern European (CEE) countries*. The research addresses the question whether firm growth can be described in fuller way by

comparing the size-age-growth relation in high-growth firms to slow-growth firms. It uses a panel data analysis for a set of 4561 surviving SMEs in CEE countries. Findings are as follows. Firm growth is dependent on other firm specific characteristics related with its financial structure, future growth opportunities and capital productivity along with factors of size and age. The high-growth firms show a significantly larger sensitivity to size and age compared to slow-growth firms. This indicates that growth in these two types of firms is determined by different firm specific characteristics. Fast-growing firms prefer to use external capital to support their growth whereas slow-growing firm rely more on their internal funds to finance new investments.

2.5 Impact of financial constraints on investment decisions and firm growth.

There are many studies on capital market imperfections focusing on the influence of constraints like inadequate access to finance on decision of investment and growth of firm. Because of this, Small firms are "more constrained to the availability of internal finance". Studies like Fazzari, Hubbard, Petersen, Blinder, & James (1988), Bond & Meghir (1994), Chittenden et al. (1996), Binks & Ennew (1996), Elston(2002), Audretsch & Elston (2002), Becchetti & Trovato, (2002), Carpenter & Petersen (2002), Wagenvoort & Meier (2003), Oliveira & Fortunato (2006) and Lu & Wang (2010), Gautam & Vaidya (2014) have indicated that financial constraints affects small firm growth.

Fazzari et al. (1988) argued that "financial constraints in capital markets affect investment and emphasized that the link between financial constraints and investment varies by type of firm". The study found systemic evidence of "liquidity constraints tend to be more binding as firm size decreases".

Bond & Meghir (1994) investigated the "sensitivity of investment to the availability of internal funds using the hierarchy of finance approach to corporate finance" using firm-level data for dynamic investment models. It uses the Euler equation approach. The empirical investigation uses *U.K.* company panel data to estimate dynamic investment models. The results show firstly, the "excess sensitivity of investment to a measure of cash flow; secondly, there are significant differences in the investment behavior of sub-samples of firms allocated according to their financial policies. When observations where

dividends are low relative to the firm's average payout, the excess sensitivity of investment to cash flow and other financial variables is significantly reduced".

The study of Chittenden et al. (1996) analysed "the financial structure of small firms with an emphasis on growth and access to capital markets". The study is based on a large sample consisting of both listed and unlisted small firms. The findings show that Small firm appears to be "faced with a choice between internal funds, borrowing against collateral or incurring the high costs of stock market flotation". The variety of financial structure observed in practice may reflect rational trade-off of various costs on the part of small firms. *In the case of unlisted small firm, the over reliance on internally available finance and the need of collateral are likely to be important constraints on the growth of firm*. The unlisted dynamic small firms may be "curtailing their growth to match their financial resources".

The study of Binks & Ennew (1996) examines the extent to which growth of firms is adversely affected by the credit constraint they face. It uses data of survey of over 6,000 firms conducted in 1992. The finding is that "credit constraint for growing firms per se is no greater but growth of firms may still experience a credit constraint as a consequence of their relative youth". *Firms with an expectation of growth in the future are facing high finance constraint.* The study suggests that the finance constraint can reduced through better relation of firms with their bank.

The objective of the study, Bigsten et al., (2000), is to examine whether firms in *Africa's manufacturing sector* are finance constraint. To investigate the objective, the study has used direct evidence on firstly, "whether firms had a demand of credit and secondly, whether their demand was satisfied in the formal credit market". This is on the basis of a panel data on manufacturing firms in the manufacturing of six African countries. The findings are as follows. Firstly, *only a quarter of firms, with a demand for credit, obtained a formal sector loan.* Secondly, "*micro or small firms are much less likely to get loan than the large firms" as allocation of credit from is based on expected profits of the firms*. Thirdly, "*outstanding debt is positively related with obtaining further lending"*. Fourthly, the analysis shows that the business of small firms needs to be *more* profitable than the large firms to receive a loan.

The objective of the study of Elston (2002) is to analyse the relation between size and growth of firm for Neuer Markt firms for the period 1997 to 2000. The study suggests firm size and age becomes less important in explaining growth. This result is obtained by controlling for liquidity constraints in the model. It indicates that perhaps it is not firm age but *good access to finance and capital markets helps older firms to achieve high levels of growth.* The *smaller firms grew faster than larger firms* once firm liquidity is controlled in the model.

The study of Audretsch & Elston (2002) investigates relation between liquidity constraints and investment behavior of firms of different sizes in Germany from 1970 to 1986. The methodology of study is to examine the investment behavior of different firm size using the Q theory of investment model. Findings are as follows. Firstly, "medium sized firms appear to be more liquidity constrained in their investment behavior than either the smallest or the largest firms in the study". This suggests that the "*unique German infrastructure designed to assist the small firm has indeed succeeded in alleviating" such liquidity constraints to some extent.* The "specialized institutional structure in Germany provides long-term and competitively priced capital to the SME". Secondly, the emerging competition and internationalism is adding feature to the German financial markets in the 1980s. This is enabling the access to finance for firms of particular size.

Becchetti & Trovato, (2002) presents an empirical analysis of the factor determining the growth of SMEs in Italy. The results of the study suggests as follows. Firstly, "*small surviving firms have higher than average growth potential"*. However, this *potential has restricted by the lack of "external finance* and lack of access to foreign markets". The findings are supporting hypothesis that adequate external finance and internationalization are important factor determining development of firms.

The study of Carpenter & Petersen (2002) investigates the hypothesis of "the growth of small firms is often constrained by the quantity of internal finance". The study tests some predictions such as firstly, "when financing constraints are binding, an additional dollar of internal finance should generate slightly more than an additional dollar of growth in assets" and secondly, "this quantitative prediction should not hold for the relatively

small number of firms which has access to external equity". The study examines the objectives on the basis of a panel data 1600 small firms. It observes *that "the growth of firms is constrained by internal finance"*.

Wagenvoort & Meier (2003) investigates hypothesis of SMEs in Europe face the problem of structural financing problem and whether it obstructs their growth. The study estimates "growth-cashflow sensitivities for firms in different size classes" for the study of its objective. The finding establishes a negative relation between the sensitivity of growth to cashflow and size of firms. It is suggestive of that small and medium firms *face finance constraints. It also obstructs them to exploit their growth in full potential. In each size class, quoted firms face finance constraints lesser than unquoted firms.*

The study of Oliveira & Fortunato (2006) explained the hypothesis of liquidity constraints suffered by firms affect their growth. It uses a large unbalanced panel data set of *Portuguese* manufacturing firms surviving over the period from 1990 to 2001. The study uses a GMM-system of estimating a dynamic panel data model of firm growth. It included cash flow to capture the liquidity constraints. The results of the study show that "smaller and younger firms have higher growth-cash flow sensitivities than larger and more mature firms". It is confirming "financial constraints on firm growth may be relatively more severe for small and young firms". However, this finding can be understood in different way like in a situation where there is no market imperfection, the higher investment/cash flow sensitivity of young and small firm can be a strategy to meet the uncertainty of their growth prospect.

Beck, Demirguc-kunt, & Maksimovic (2005) has examined the influence of financial, legal and corruption problems on firms' growth rates. It has used firm level survey database covering 54 countries. The findings suggest that the above mentioned factor constrained growth of firms depend on the firm size. "Smallest firms are most constrained". Secondly, it is observed the constraining effects of financial, legal and corruption obstacles reduced by the financial and institutional development in the economy. The small firms get the benefit the most. Thirdly, the corruption of bank officials constrains firm growth.

Ayyagari, Demirguc-kunt, & Maksimovic(2006) has done comparative analysis of importance of different features of the business environment. It has used firm level survey data. The finding suggests as follows. Firstly, “firms report many obstacles to growth, but not all the obstacles are equally constraining. Either some of them affect firm growth only indirectly through their influence on other obstacles or not at all”. Secondly, “obstacles related to finance, crime and political instability directly affect the growth rate of firms”. This finding is based on results from regression and Directed Acyclic Graph methodology. It is observed result regarding finance is the more robust on the basis of findings of robustness test.

Carbo-Valverde, Rodríguez-fernández, & Udell (2008) has analysed the issue of “SME investment opportunities depend on the level of financing constraints that firm face”. The study has captured finance constrains through the relationship of investment and bank loan. The results suggest, firstly, “investment is sensitive to bank loans for unconstrained firms” secondly, trade credit predicts investments only for constrained firms, and thirdly, “unconstrained firms use bank loans to finance trade credit provided to other firms”.

Lu & Wang (2010) investigates the relation between firm growth and liquidity constraints in Taiwan by controlling other exogenous variables. It has used a panel data of manufacturing firms of the country for the period 1996 to 2005. To do the analysis, the study has used panel data model with AR (1) in the error term for testing the relation between firm size, growth, and liquidity constraints. The study come out with the result that there is significant positive relation between finance constraint and its growth given other variable. “Smaller firms grow faster, and growth rates exhibit persistence”.

Gautam & Vaidya (2014) studies the impact of finance constraints on the growth of Indian manufacturing firms. By using 2282 *Indian manufacturing firms* in the period 1994 to2009, the Findings of the paper are firstly, finance constraints as a multi-facet firm characteristic, secondly, a negative and significant impact of finance constraints on the growth of firms and thirdly, the growth of firms is persistent over time and it decreases with their size and age.

2.6 Financing constraints have been offered as an explanation for the pattern in the size distribution of firms and the relation between size and growth.

The finance constraint literature can be used in the study of dynamics of firm growth and the deviations from Gibrat's Law. The empirical studies on the effect of financial constraints over firm growth are Kumar, Rajan, & Zingales (1999), Cooley & Quadrini(2001) and Carpenter & Petersen (2002) for the USA; Elston (2002) for Germany; Cabral & Mata (2003) for the Portugal; Desai, Gompers, & Lerner (2003) and Wagenvoort & Meier (2003) for the Europe; Fagiolo & Luzzi (2006) for Italy and Hutchinson & Xavier (2006) for Slovania and Belgium. The studies convey the idea that the relationship between size and growth can also be explained by finance constraints. Finance constraint also offers the explanation for the size distribution of firms.

Kumar et al. (1999) analyses the factor affecting firm size across industries and across fifteen European countries. The findings suggests as follows. Firstly, firms facing larger market are larger. "Capital intensive industries, high wage industries and industries that do a lot of R&D have larger firms". Secondly, at the country level, countries with efficient judicial systems have larger firms. "Institutional development, such as greater judicial efficiency, seems to be correlated with lower dispersion in firm size within an industry. The differences in size between firms in capital intensive industries and firms in industries that use little physical capital diminish". Thirdly, *the "average size of firms in industries dependent on external finance is larger in countries with better financial markets. This suggests that financial constraint limit average firm size"*.

Cooley & Quadrini (2001),Cabral & Mata (2003) and Desai et al. (2003) argue that capital constraints make firm size distribution skewed.

Cooley & Quadrini (2001) examines the hypothesis whether financial constraints give explanation for dependency of firm dynamics on size and age of firms. They explain that the "model with financial frictions can capture the features of the financial behavior of firms. Smaller and younger firms pay fewer debts, take more debt and invest more. They have investments that are more sensitive to cash flows".

Cabral & Mata (2003) propose a simple theory based on financing constraints and explain the pattern of firm growth and its significance of firm size distribution (FSD). Goals of the study are: firstly, to explore some stylized facts and evolution regarding the FSD and secondly, to suggest a theoretical account of the observed stylized facts based on financing constraints. Findings are that "*the distribution of the logarithms of firm size of a given cohort is much skewed to the right at the time of birth and gradually evolves towards a more symmetric distribution"*. Financing constraints provides explanation of the skewness in the size distribution. This observation is found in the young cohorts of firms.

Desai et al. (2003) analyses how institutional environments impact the entrepreneurial environment. The study has analysed measures of entrepreneurial activity such as rates of entry, rates of exit, average firm size, industrial vintage and the skewness of firm-size distributions. This analysis has been done for Europe. It has used a comprehensive database of firms including a variety of private, smaller firms. The results suggests as follows. Firstly, "the institutional environment plays an important role in shaping the nature of industrial activity, particularly the dynamics of new enterprises. Industrial vintage and the skewness of firm-size distributions are also influenced by the institutional variables". Secondly, "the level of skewness and the relative skewness of firm-size distributions for younger firms appear to be a function of fairness and protection of property rights. This result is consistent with capital constraints leading to skewness in firm-size distributions. Thirdly, institutional factors influence both firm entry and growth at later points".

The issue of relationship between size and growth of firm is explained by *financial constraints* has been dealt by the studies like Carpenter, Elston (2002), Wagenvoort & Meier (2003), Fagiolo & Luzzi (2006) and Hutchinson & Xavier (2006).

Carpenter & Petersen (2002) shows "the internal finance theory of growth can help to account for stylized facts of firm growths". The study examines whether the growth of total asset is affected by finance constraints. The study is based on the "model of firm growth with financing constraints" as a function of variables internal finance and Tobin's q. The ratio between cash flow over gross total assets presents the variable of internal

finance. The high sensitivity of growth – cash flow shows financial problem. The result of the study is one to one relationship between the growth of its assets and internal finance is the system of high internal finance constraints of firm. The main limitation of this study is that it is "developed particularly for quoted firms and excludes the smallest firms".

Elston (2002) examines the relation between size and growth of firm in Germany from its inception for the period 1997 to 2000. The model of this study is based on the Hall (1987), Evans (1987a) and Evans (1987b) firm growth specification. This model controls the factors (firm's size and age) related to growth including liquidity constraints measured by cash flow and analyses the influence of finance constraints on the growth of employment. The objective of including liquidity constraint in the model is twofold, first, to "examine the degree to which a firms' growth is impacted by liquidity constraints, second, by holding liquidity constraints constant, the focus can be on the relationship between the firm sizes to growth". Therefore, the study decomposes size effects into "financial" effects and "other" size effects. This analysis allows us "to distinguish whether firm size may promote growth simply because larger firms have better access to capital or larger cash reserves" or whether they are in latter stages of their life cycle where they have advantages of economies of scale and scope. The study finds that age variable loses its statistical significance when cash flow is added in the model. Cash flow, after controlling for size and age, positively affects growth of firms. By controlling for liquidity constraints in the model, it is apparent that firm age becomes less significant in explaining growth. This indicates that perhaps it is not firm age but better access to finance and capital markets that lead older firms to higher levels of growth.

Wagenvoort & Meier (2003) examines the influence of finance constraints on growth of firm in *EU countries* for firms of different sizes. He uses the Carpenter and Petersen's (2002) model in his study. Findings are firstly, high growth – cash flow sensitivities is manifestation of big financial problems, secondly, "Growth – cash flow sensitivity of SMEs are broadly similar across EU countries" and thirdly, "Growth – cash flow sensitivities are higher for unquoted firms than for quoted firms".

Hutchinson & Xavier (2006) has given "new evidence on how SMEs use internal cash flow to fund their growth across the entire manufacturing sector of a leading transition country, *Slovenia* and compare it to an established market economy, *Belgium"*. Methodology used in the study is first differences GMM estimation technique. With this method, the study control "firm specific and sector specific unobserved heterogeneity". The study investigates how growths of "firms are dependent on internal finance for firms of different sizes and looks at the role of external debt, de novo firms and foreign ownership on firm growth". This study has predicted quantitatively the relation between growth and internal finance. The main findings are firstly, "firms in Slovenia are more sensitive to internal financing constraints than their Belgian counterparts", secondly; MSMEs can face obstacles to access external finance.

Fagiolo & Luzzi (2006) investigates whether the relation between size and growth dynamics of manufacturing firms in Italy is influenced by liquidity constraints. The study uses panel data regression and distribution analyses. It estimated firm growth model by pooled OLS taking into account liquidity constraints. The model is estimated using balanced panel data set for the period 1995 – 2000. The findings of the study are firstly, liquidity constraints influence growth negatively if size of firm is controlled, secondly, if liquidity constraint is controlled, small firms grow more and thirdly, "the stronger liquidity constraints, the more size negatively affects firm growth", fourthly, "financial constraints help better explanation of the relationship between firm growth and age, conditional on size".

2.7 The relationship between the firm and its creditor and the issue of availability of credit to firm

Among many other factors, availability of credit depends on the relationship between the firm and its creditor. For example, to cite some studies like Petersen & Rajan (1994) and Berger & Udell, (2006) have dealt on this issue.

Petersen & Rajan (1994) investigates the effect of relation between a firm and its creditors on the availability and cost of funds. The study has used the data of a survey of small firms by the Small Business Administration of *United States*. "The primary benefit of building close ties with an institutional creditor is that the availability of financing

increases". The findings of the study are firstly, "attempts to widen the circle of relationships by borrowing from multiple lenders increases the price and reduces the availability of credit" and secondly, *relationship are "valuable and appear to operate more through quantities rather than prices"*.

Berger and Udell (2006) has suggested conceptual framework to make analysis of issues regarding access to credit and its availability to SME. It has given more importance to lending technologies**.** According to the study, government policies and national financial structures have influence on the accessibility to credit of firms through different channels. "Lending technologies include several transactions technologies plus relationship lending". The study argues that there is a *common over simplification in "the treatment of transactions technologies as a homogeneous group, unsuitable for serving informationally opaque SMEs and a frequent misleading conclusion is that large institutions are disadvantaged in lending to opaque SMEs"*.

2.8 Determinants of access to credit of firms

The studies like Beck, Demirgüç-Kunt, Laeven, & Maksimovic(2006), Beck & Demirguc-Kunt(2006), Fatoki & Odeyemi (2010), Pandula (2011) are example of studies on the issue of the determinants of access to credit.

The study of Beck, Demirgüç-Kunt, Laeven, & Maksimovic (2006) has analysed the results of over 10,000 firms from 80 countries. The result of the data has been used to examine firstly, "how successful a priori classifications are in distinguishing between financially constrained and unconstrained firms", secondly, "the determinants of financing obstacles of firms". The findings suggest as follows. The foreign-owned older and larger firms cite low level financing obstacles. The cross-country deviation in financing constraints faced by firms is explained by institutional development.

Beck & Demirguc-Kunt (2006) analyses the present research on issues on the access to finance by SMEs. The findings of the study suggest as follows. Firstly, "there is substantial evidence on small firms face larger growth constraints. They have less access to formal sources of external finance, potentially explaining the lack of SMEs' contribution to growth". Secondly, "financial and institutional development helps

alleviate SMEs' growth constraints and increase their access to external finance". Thirdly, "specific financing tools such as leasing and factoring can be useful in facilitating greater access to finance even in the absence of well-developed institutions".

The objective of the study of Fatoki & Odeyemi, (2010) is to investigate the determinants of credit approval for new SMEs in *South Africa*. In this study, survey method and self-administered questionnaires were used for data collection. The data was analysed by logistic regression. The results indicate that managerial competencies, business information, networking, location, crime, business size and incorporation are significant determinants of credit approval.

The objective of the study of Pandula (2011) is to examine the factors influencing the access to credit of the SMEs in Sri Lanka. The study tries to add to the knowledge of the factors influencing the access to credit by the SMEs in developing countries, including *Sri Lanka*. The data utilized in this research was obtained from the Investment Climate Survey carried out by the World Bank for Sri Lanka. The hypotheses for the study have been derived utilizing eleven factors which affect credit worthiness which have been identified in the previous research. The finding of the study is that education of the entrepreneur and having membership with business association are associated with access to bank finance.

The factors affecting access to formal credit for small enterprises in the context of India has been studied in Nikaido, Pais, & Sarma (2015) by employing a probit sample selection model. The results suggests that firstly, the likelihood of receiving formal credit is negatively dependent on collateral like the ownership of land may be because high transaction cost associated with this collateral. Secondly, the access to formal credit is positively associated with the firm size, owners' education level, being registered under an agency and being involved in diversified activities.

2.9 On the effect of public policies on easing of financial constraint faced by firms and its impact on their growth

The effect of public policy on the growth of small and medium enterprises has been studied by Honjo & Harada (2006) for Japan. The study of Honjo & Harada (2006) investigate the influence of the public policy and financial structure on the growth of SMEs. It uses a panel data set on firms of SMEs in the Japan. "*It is found that public policy and capital markets exert an influence on firm growth, particularly of younger SMEs*. It can be expected that the improvement of environment for younger SMEs creates innovative start-up and entrepreneurs that stimulate economic growth".

The evidence relating the effects of financial liberalization on the finance constraints in case of small firms is provided by Jaramillo, Schiantarelli, & Weiss (1993) for Ecuador; Harris, Schiantarelli, & Siregar (1994) for Indonesia; Ghosh (2006) for India.

Jaramillo et al. (1993) has analysed a large set of panel data for *Ecudorian firms* to study the "role of capital market imperfections in investment decisions" and investigate "whether the financial reforms introduced in the 1980s in Ecuador succeeded in relaxing financial constraints". Administrative controls on the interest rate have been removed and Directed credit programs has been eliminated or scaled down to facilitate capital accumulation and growth. The findings suggests , firstly, *increasing borrowing costs at the margin and a ceiling on leverage affect small, young firms but not large, old firms*, secondly, *there is no evidence that financial reforms in Ecuador have relaxed these financial constraints*.

The objectives of the study of Harris et al.(1994) are firstly, to discuss the consequences of financial liberalization, secondly, to analyse "whether financial reforms have had an impact on investment and on the allocation of credit" and thirdly, to examine "whether the effects differ depending on the type of firms". To analyse these objectives, the study has used a large panel of *Indonesian manufacturing establishments*. The findings suggest that "*the shift from administrative toward market-based allocation of credit has increased borrowing costs, more particularly for smaller firms"*. However, "the policy shift has benefited firms by giving them widened access to finance".

The study of Ghosh (2006) investigates the question of does financial liberlisation ease the finance constraints faced by firms in *India?* It has used a panel data of 1000 listed manufacturing firms in India for the period 1995-2004. The findings of this study suggest that "*financial liberlisation led to a significant easing of financing constraints in the case of small firms"*.

2.10 Financial Liberalization and Its Impact on Credit and Directed Credit to the Manufacturing Sector, particularly to MSMEs

Sen & Ghosh(2005)has reviewed the impact of Basel I and II norms, dealing with international bank regulation in terms of capital adequacy and supervision, on credit flows to the SMEs and the poor in *India*. The implementation of the Basel norms in India's banking industry has possible pitfalls. This has possible contractionary effects with changing composition of the priority credit. The consequent result is in the drop of proportion of bank credit reaching out to small and medium enterprises which have potentials for repayment capacity as well as growth. The authors also mentioned that the supplementary finance cannot fill the gap in terms of the unfulfilled demand for finance on the part of the SMEs.

Chandrasekhar & Pal (2006) is a study on assessment of outcomes observed from the Indian experience of reform in the financial sector. One of the important outcomes of this policy shift in *India* is that "there is a credit squeeze for the commodity producing sectors and a decline in credit delivery to rural India and small-scale industry" (present day MSMEs).

Gezici (2009) has studied the impact of financial liberalization process on financing constraints faced by manufacturing firms in *Turkey* for the period 1985-2003. The role of internal funds in the investment of firms has been observed under the impact of financial liberalization. The findings suggest that the role of internal funds has not declined during financial liberalization for the sample of all firms. "*The financial liberalization and deepening process did not change the preference of most firms for internal funds as a source of fund for investment"*. The finance constraints of young firms have been eased. But the investment of the young firms in the sample is very sensitive to the amount of internal fund.

The study of Bhattacharjee & Chakrabarti (2013) analyses the reasons underlying the dismal performance of Indian manufacturing sector in the recent time by focusing on the role of the financing factors in manufacturing. The study argues that *the effective cost of debt has increased because of diminishing role of development finance institutions, risk-averse behavior of the banks,* lackluster performance of the new issues market, and concentration of stock market activity and the miniscule size of the corporate debt market.

2.11 Financial institutions (particularly, banks) and credit to the MSMEs

Rao, Das, & Singh (2006) investigate "the trends in sectoral allocation of bank credit to the SSI vis-à-vis the non-SSI sector in the post-reform period in India". By doing so, it has attempted "to understand the variations in the credit to the SSI sector across bank groups and also the influence of the size and performance of banks on credit to the SSI sector". The finding suggests that NPA from SSI credit may be a cause behind continuous decline in SSI loans offered by commercial banks.

Beck (2007) has done survey of the empirical research showing *small and medium enterprises are more constrained by financing and other financial institutional obstacles than large enterprises*. *The mentioned finding is made worse by the weaknesses in the financial systems of many developing countries*. The financial institutions are reluctant to reach out to SME in developing countries because of the difficulties in managing risk and transaction costs involved in lending to these enterprises.

The objective of the study, Beck, Demirgüç-kunt, & Singer (2011), is to analyse the "relationship between the structure of the financial system and the size of its institutions and on access to financial services by enterprises". For the analysis, it has used data from the World Bank and IMF's Financial Sector Assessment Program. It has examined the "relationship between financial structure and firm's access to finance across countries at different levels of GDP per capita, across firms of different sizes and across industries with different needs of external finance". The findings suggest as follows. Firstly, "*the dominance of banks in most developing and emerging countries is associated with lower use of financial services by firms of all sizes. Low–end financial institutions and specialized lenders seem particularly suited to ease access to finance in low-income*

countries. Secondly, no evidence is found regarding that smaller institutions are better in providing access to finance. Larger specialized lenders and larger banks might actually ease small firm's financing constraints".

Chong, Lu, & Ongena (2013) has analysed the issue on whether banking competition has enhance or hinder the financing of small and medium-sized enterprises. It has investigated "how concentration in local banking market affects the availability of credit". The study has used the information of survey on the financing of SMEs in *China* and results from information provided by bank branch. Findings suggest that "lower market concentration and the widespread presence of joint-stock banks have a larger effect on alleviating these constraints than the presence of city commercial banks. The presence of state-owned banks has a smaller effect".

Shen, Shen, Xu, & Bai (2009) has evaluated the influence of factors like bank size, discretion over credit, incentive schemes, competition and institutional environment on credit to SMEs in china. This is based on panel data collected in 2005. The findings of the study suggest that *total bank asset is not a significant factor for banks' decision on SME lending*. The *commercial bank lending to SMEs is rather encouraged by factors like more local lending authority, more competition, carefully designed incentive schemes and stronger law enforcement.*

Uchida, Udell, & Watanabe (2008) has investigated firstly, "whether smaller firms borrow from smaller banks" and secondly, "whether strength of the bank-SME relationship differs by bank size". This study is based on data set of Japanese SMEs. Finding suggests that "larger firms tend to borrow from larger banks and smaller banks have stronger relationships with their borrowers. The former result is not due to larger firms being more transparent in terms of their financial statements. *Small banks' comparative advantage in relationship lending is likely to be universal. Large banks may not necessarily have a comparative advantage in extending transactions-based lending"*.

Berger, Miller, Petersen, Rajan, & Stein (2005) has tried to understand whether small organisations are more efficient to carry out certain tasks than large organisations. This objective is studied with respect to banking industry by using a data set on small-business

lending. The evidence suggests that, "*small banks being better able to collect and act on soft information than large banks. Large banks are less willing to lend to informationally "difficult" credits, such as firms with no financial records*. Large banks lend at a greater distance, interact more impersonally with their borrowers. They have shorter and less exclusive relationships. They do not alleviate credit constraints effectively".

The objective of the study, Beck, Demirgüç-kunt, & Peria (2008), are to examine how banks perceive the SME segment, to "describe the business models that banks have adopted to serve SMEs" and to examine the ratio of total loan going to SLEs. The analysis of these objectives is pursued by using the data of 91 banks from 45 countries. Suggestions of the findings are as follows. Firstly, it is not that banks feel SME as not profitable. Rather, unstable macroeconomic condition and competition in developing and developed countries respectively creates problem in front of bank in extending credit to them. Secondly, "banks have dedicated departments and decentralized the sale of products to the branches. But loan approval, risk management and loan recovery functions remain centralized. Thirdly, *banks are less exposed to small enterprises, charge those higher interest rates and fees and experience more non-performing loans from lending to them compared to large firms*. Fourthly, *banks tend to be less exposed to SMEs, provide a lower share of investment loans and charge higher fees and interest rates in the developing countries*. Fifthly, *lending environment is more important than firm size or bank ownership type in shaping financing to SMEs"*.

Torre, Soledad, Pería, & Schmukler (2010) examines the views like "large and foreign banks are generally not interested in serving SMEs and small and niche banks have an advantage because they can overcome SME opaqueness through relationship lending". The findings suggests as follows. The lending form bank to SMEs is neither a function of relationship lending nor their size and location of the branches. Banks, independent of their size, are supplying credit to SMEs.

2.12 Miscellaneous

The study of Ayyagari, Beck, & Demirguc-kunt (2007) make analysis of the relation between the size of firms in SME sector and the business environment. The study is based on the cross-country database having information of 76 countries**.** This information

is regarding the contribution of the SME sector to total employment in manufacturing and GDP across these countries. Furthering the analysis, the study also relates the "importance of SMEs and the informal economy to indicators of different dimensions of the business environment. Several dimensions of the business environment, such as lower costs of entry and better credit information sharing are associated with a larger size of the SME sector, while higher exit costs are associated with a larger informal economy".

2.13 Perspective

All the empirical studies, doing the analysis of impact of access to finance and finance constraint on Small firm, have been restricted to the United States, the European area and other transition countries (Becchetti & Trovato (2002), Carpenter & Petersen, (2002), Elston (2002), Fagiolo & Luzzi (2006), Hutchinson & Xavier (2006), Lu & Wang (2010), Oliveira & Fortunato (2006), Wagenvoort & Meier, (2003)).

There are very few studies about the Asian countries, except Honjo & Harada (2006) for Japan and Lu & Wang (2010**)** for Taiwan. Particularly in Indian case, there are hardly any studies on the relationship between binding liquidity constraints, other firm's characteristics such as size and age and the growth and economic performance of firm of Indian MSMEs.

However, the studies of Das(1995) and Gautam & Vaidya (2014) are few of the studies in Indian case. But, the former deals on Indian computer hardware industry over 1983-1988 while the latter deals on Indian manufacturing firms in the period 1994 to2009.

Sen & Ghosh (2005) has reviewed the impact of Basel I and II norms on credit flows to the SMEs and the poor in India. Ghosh (2006) investigates whether financial liberlisation reduces financial constraints faced by firms in India. Chandrasekhar is a study on assessment of outcomes observed from the Indian experience of impact of reforms in the financial sector on developmental banking. Bhattacharjee & Chakrabarti (2013) analyses the reasons underlying the dismal performance of Indian manufacturing sector in the recent time by focusing on the role of the financing factors in manufacturing. Rao, Das, & Singh (2006) investigates "the trends in sectoral allocation of bank credit to the SSI vis-à-vis the non-SSI sector in the post-reform period in India". Nikaido et al. (2015) examines the determinants of access to formal credit in India.

However, there is absence of study regarding an analysis of firstly, the relation of financial situation of MSME and their economic performance – whether the performance of MSME is financially constraint and secondly, the behavior of financial institution, particularly banks, towards MSE credit disbursal in the larger context of change in banking and credit policy in India with a focus on the shift in the nature of such policy. In this context, it would be worth making an analysis of role MSMEs in development in Chapter – 3 before going into detailed analysis of access to finance of firms in Indian MSME sector in the subsequent chapters.

CHAPTER- 3

MSMEs AND ECONOMIC DEVELOPMENT

3.1 Introduction

The early industrialization process has begun with Micro and Small size enterprises. The Micro, Small and Medium enterprises (MSMEs) occupies an important place as engines of growth and employment with changes in the industrial structure, development of new markets and improvements in the cost reducing industries. However, the industrialsation process of planned economies is mostly based on large enterprises undertaking, large investments and creating scale economies. Even in such economies, the MSMEs starts providing intermediate goods more efficiently in the late 1970s and early 1980s because of their innovative activities and flexibility. Entrepreneurial activities increase worldwide with the increase in education level, business skills and reduction of job security. This adds to further development of MSMEs.

3.2 Characteristics of SMEs and their Importance in economic development

MSMEs have become a fundamental part of economic processes. They are the engines of growth in the development process. “They play a catalytic role in furthering growth, innovation and prosperity (Dalberg, 2011)”. The potential role of MSMEs in furthering the economic development lies in their following contributions.

*Absorption of surplus labour by **generating employment*****:** The production process employed by MSMEs is more labour intensive. They absorb the surplus labour, generate income and hence, reduce poverty. Small enterprises are generally more common in rural areas than large businesses. Thus they provide much-needed employment in rural areas. “They provide employment opportunities to rural and less skilled masses and cater to their consumption requirements by resorting to indigenous production making using local resources (Madapana & Mohanty, 2015)”.

*Towards **reduction of poverty level:*** Inclusive economic growth that reaches masses can alleviate poverty. MSMEs give scope for improvement of performance of entrepreneur and also sustain local entrepreneurship. “This can help achieve to inclusive growth. A thriving MSME sector is critical to inclusive economic growth and job creation(WBCSD,

2004)". By providing the much needed productive employment opportunity, the sector helps generation of income for the poor people and eventually in the reduction of poverty. "It is through the promotion of small enterprises that individual countries and the international community at large can make progress towards reaching the global target of halving poverty levels (Raynard & Forstater, 2002)".

To the ***rural economic development*****:** They are important for the utilization of other local resources which would otherwise remain idle. They provide a vent for the investments of small savings from proprietors which tend to exists outside the formal banking system (Matambalya, 2000). This is mostly because of their flexible spatial coverage and their strong representation in rural areas. "They are scattered widely throughout the rural area and have a local significance for the rural economy (Tambunan, 2009)". They are vital components of rural economy. This has significant implication for rural economic development.

Towards a more ***equitable distribution of national income*****:** Since their location is more dispersed, they help in making income distribution more equitable. They reduce the economic disparities among different regions. There is ample empirical evidence that countries with a high share of small industrial enterprises have succeeded in making the income distribution more equitable. This is a key contribution in ensuring long term social stability by reducing ex-post distributional pressure and by reducing economic disparities between urban and rural areas.

As a source of ***innovative activity*****: "**They are seedbed for entrepreneurship development, innovation and risk-taking behavior(Little, Mazumdar, & Page(Jr), 1987)". They trigger private ownership, boosts industrial entrepreneurship and entrepreneurial skills. They offer groundwork for long-term growth of the economy. In recent time, "they are also major contributors to innovation in economies through collaboration with the larger corporate sector. They improve their own productivity and performance by improving their own human and technological capital (ACCA, 2010) when they become embedded in the supply chains of larger businesses (Dalberg, 2011)".

By playing above mentioned functions, thereby they act as a *source of change in the market* (Acs & Audretsch, 1988).

They contribute to the ***trade balance through export earnings*** or import substitution.

The development of a ***diversified economic structure*****:** They play an important role in the process of transition of economies from agricultural based to industrial based. They give opportunities for processing activities which can create sustainable livelihoods and enhance the development process. This process provides women a lot of opportunities to play predominant role in such economic activities. "They absorb productive resources at all levels of the economy (Alasrag, 2010)". They facilitate an effective mobilization of resources of capital and skill which might remain unutilized. They support in building up of systemic productive capacities. "They contribute to the creation of resilient economic systems in which small and large firms are interlinked. Such linkages are of increasing importance also for the attraction of foreign investment. Investing transnational corporations seek reliable domestic supplier for their supply chains (Raynard & Forstater, 2002)".

To the ***reduction of level of informal or "black market" activi****ties*: The World Bank's Doing Business report for 2007 indicates that a healthy SME sector corresponds with a reduced level of informal economy.

MSMEs helps in sustaining growth in developing countries: They "assume a key role in industrial development and restructuring(Edinburgh Group, 2012)" when growth becomes stronger. "They get the opportunity to satisfy the increasing local demand for services. This allows increasing specialization. They support larger enterprises with services and inputs (Fjose, Grünfeld, & Green, 2010)".

In addition to above roles, MSMEs have additional roles to play during the transition period. They help in the economic adjustment process from highly concentrated structures of manufacturing process based on mass production methods and relatively inflexible production processes to more flexible production systems. Flexibility as well as "low start-up and operating costs have enabled SMEs to adjust themselves quickly in response to market and economic changes (McKee & Dietrich, 2003)". The new structure includes wider range of consumer services and requires more flexible labour market conditions. They have these unique advantages due to following factors.

- They need lower investments.
- Their smaller size.
- Their comparatively high labour-capital ratio.
- They need a shorter gestation period.
- They are flexible in deciding the price and product with response to the market changes. They respond quickly to change in demand and supply in the market. They focus on relatively smaller markets.

Given the characteristics of SMEs, they are important to almost all economies of the world. They are corner stone of all economies and an essential driver of economic growth, dynamism and flexibility in industrialised as well as developing economies. MSMEs are the engine of powering the constant renewal of the economy as components of productive networks built around large companies or as independent companies specialized in specific technical or commercial niches or as artisanal cottage industrial unit. But they play a critical role in developing countries with major employment and income distribution challenges. They are nursery for the larger firms of the future. They contribute to aggregate saving, investment and output. They involve in the development of appropriate technology.

3.3 Nature of MSMEs and the Definition of Sector

"They are a heterogeneous group, in different organizational structures ranging from proprietorship to corporate, engages in factories to service organisations activities (Venkatesh & Muthiah, 2012)". They are found in spectrum of business activities. On the one end, they are found as the single artisan producing agricultural implements for the village market, tea stall at the corner of street or the internet café in a small town etc., while on the other hand they are found as small sophisticated engineering or software firm selling in overseas markets and a medium-sized automotive parts manufacturer selling to multinational automakers in the domestic and foreign markets. The firms serve different markets such as urban, rural, local, national, regional and international. The firms embody different levels of skills, capital, and technology and growth orientations. They may be in the formal or the informal economy. They differ in their dynamism,

technical advancement and risk attitude. Some are stable in their technology, market and scale. Others are more technically advanced, producing crucial product or service niches.

The definition of MSMEs varies across countries. The classification schemes have considered enterprise's total assets or gross plant and machinery or level of employment or output etc. as the basis for classifying MSMEs. The size employment of firm is usually used to define the firms into different size classes. The EU and a large number of OECD[3] have kept the upper limit in between 200-250 employees for the SMEs. In Japan and the USA, this is 300 employees and 500 employees respectively. "Egypt defines SMEs as having more than 5 and fewer than 50 employees. In Vietnam, they are defined as units having between 10 and 300 employees. The World Bank defines SMEs as enterprise with less than 250 employees (Dalberg, 2011)". The lack of any standard definition of SMEs sector across different countries poses serious challenges when conducting international research into SMEs.

In India, the sector is classified into Micro, Small and Medium based on level of investment in plant and machinery the enterprise. However, each of these segments is extremely heterogeneous. "This is because there are differences in ownership structure, area of operation, type of industry and the stage of development of an enterprise (Intellectual Capital Advisory Services Private Limited, 2012)".Table-3.1shows different types of ownership structures present in Indian MSME sector.

Table 3.1: Ownership Structure of Enterprises in the MSME Sector in India

Ownership Structure in the Sector	
Type of Structure	Share of MSME Enterprises
Proprietorship	94.5 %
Partnership, Cooperatives	1.2 %
Private Limited, Public Limited	0.8 %
Others	3.5 %

Source: Fourth All India Census of MSMEs, 2006-2007.

[3] OECD, 2002, p. 4.

3.4 The MSME Sector in the World Economy

The MSMEs play vital role in the economic development of the world economy. They have been the primary sources of employment creation and output growth. Even though *the contribution made by them varies significantly among countries and different regions of the world. But they contribute around two third of* all businesses in the world. In many regions this proportion is much higher. They contribute substantially to income, output and employment.

They play important roles in developed world. They also play very crucial roles in developing and low-income countries through their significant contributions to both GDP and employment (Dalberg, 2011). To cite Ayyagari, Demirgüç-Kunt, & Maksimovic, (2011), "a World Bank survey of 47,745 businesses across 99 countries revealed that firms with employees between 5 and 250 accounted for 67 percent of the total permanent and full time employment. The evidence suggests that SMEs are vitally important for economic health, in both high-income and low-income economies worldwide. Estimates suggest that more than 95 percent of enterprises across the world are SMEs, accounting for approximately 60 percent of private sector employment (Ayyagari et al., 2011)".

In the industrialised/OECD countries such as the US, Japan, Australia, Germany, French and Canada, MSME are a crucial source of economic growth and technological progress (Thornburg, 1993). The proportion of units of SMEs in Japan's total enterprises is the highest among the developed countries. This is more than 99 percent of total enterprises (EIU 2010).

Table 3.2: Number enterprises, employment and gross value added (GVA) figures for the EU-27 by size classification for 2012

	Micro	Small	Medium	SMEs	Large	Total
Enterprises	92.2	6.5	1.1	99.8	0.2	100
Employment	28.5	20.6	17.1	67.4	32.6	100
GVA	21.2	18.5	18.4	58.1	41.9	100

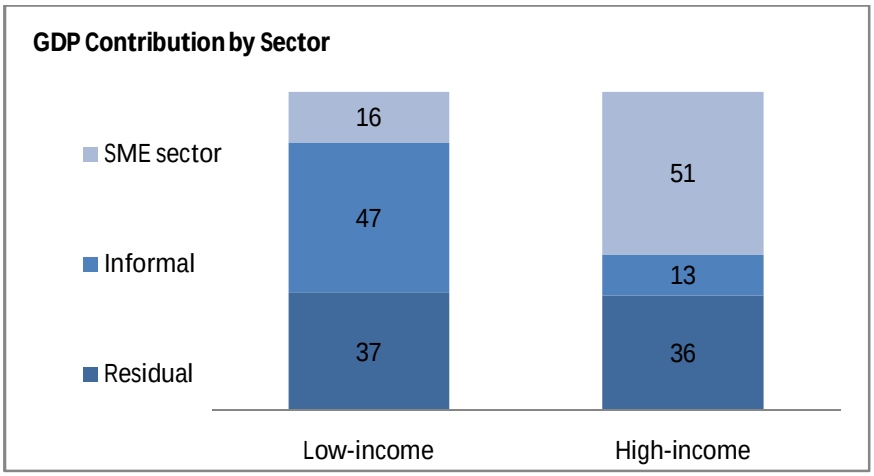
Source: collected from(Edinburgh Group, 2012) *Edinburg Group Research Paper, original source: Wymenga et al. 2012*

As presented in Table-3.2, estimated data for the 27 countries in the European Union for 2012 shows the contribution of SMEs in their economies. They constitute 99.8 percent of all enterprises, generate 67 percent of employment and have a share of 58 percent of

GVA and an important factor in GDP. In Australia, they have a share almost 60 percent of industrial value added in 2009-10 (Australian government 2011). In the USA too, they have a share around 50 percent of US private non-agricultural GDP in 2004. The service sector is contributing 79 percent of SMEs contribution to GDP (United States International Trade Commission, 2010).

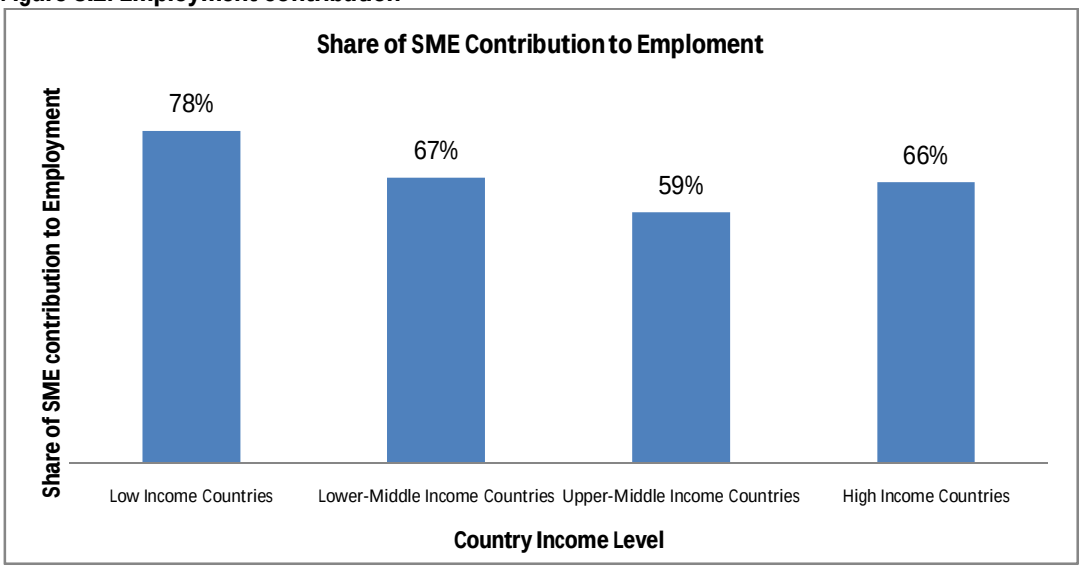
The SMEs produce considerable part of industrial product also in developing countries. SME sector contributes significantly to output and employment in the low income countries. This has been shown in Figure-3.1 and Figure-3.2.

Figure 3.1: GDP Contribution by sector



Source: Ayyagari, Beck, & Demirgüç-kunt, (2003), *"Small and Medium Enterprises across the Globe: A new database", World Bank*

Figure 3.2: Employment Contribution



Source: Aspen Network of Development Entrepreneurs, Using data from Ayyagari et al., (2011), *Small vs. Young Firms Across The World – Contribution to Employment, Job Creation, and Growth, The World Bank.*

More than 90 percent of all firms are micro enterprises in all developing economies. For example in “Morocco, 93 percent of industrial firms are SMEs contributing 38 percent of the production, 33 percent of investment, 30 percent of exports and 46 percent of employment (Edinburgh Group, 2012)”. Similarly in South Africa, 91 percent of formal business entities are SMEs contributing 52-57 percent to GDP and about 61 percent of the total employment. To cite another example from African Countries such as in Ghana SMEs constitute 92 percent of Ghanaian businesses, about 70 percent to GDP and about 80 percent of total employment (Abor and Quartey 2010). Small business is the most promising vehicle of entrepreneurial dynamism in Africa (Elkan, 1988).

Hence, the micro and small enterprises (MSEs) are playing crucial role in the economies of developing and transition economies in generating employment and giving scope for entrepreneurial spirit. They constitute large share of manufacturing product. Both theoretical and empirical arguments and evidence support the importance and potential contribution of the SME sector.

3.4.1 Theoretical Aspects

The technology of MSME is intermediate between highly labour intensive technologies and highly capital intensive of large enterprises. By virtue of its pattern of technology choice, the MSME sector has become good contributor to the overall total factor productivity, to the employment generation and to the distributional equality of an economy. This sector can be the middle path for the dual and inequitable economy with major share of capital in large enterprises and agriculture being the major source of livelihood. MSMEs also play an important role in making growth of inclusive nature. An economy, mostly supported by MSMEs, can lead to a more equitable society. But a society characterized by a dualistic economy with a combination of large amount of large enterprise and large amount of micro enterprise breads a high level of inequality.

All developing countries have a large MSME sector mostly heterogeneous in nature. The heterogeneity is in terms of the goods and services they produce, the entrepreneurial capacity of the owner, the size of the firms etc. The evidence from the countries like Germany, South Korea, Japan etc., which have successful history of MSME sector shows that most large firms have grown out of the MSME sector. The good performing MSME

sector helps in determining the future supply of large firms. This might leads to better economic efficiency because the "large firms with an SME background will be more likely to engage in subcontracting with other MSMEs"[4]. SMEs are associated with dynamism. Therefore, SMEs tend to occupy an important place in the economy.

In a country where the industrial sector dominated by the MSMEs there will be price-lowering and quality improving competition. This is possible because the firms in such sector do not indulge themselves in the monopoly or monopsony pricing and practices. It will lead to better allocation of resources and helps in enhancing social welfare.

SME sector has played strong role in providing subcontractors for large exporting firms. This has been observed strongly after the process of globalization has started. They have emerged as the efficient collaborator with the large firms as subcontractor in the economies which are competing in the world market in labour intensive products. The successes of Japan, Taiwan and Korea are good examples where this sector has emerged as efficient low-cost subcontractors. The MSMES are crucial in the economic development of many of the developed and developing economies.

3.4.2 Empirical Evidence

The successful experience of Taiwan is based on a dynamic MSME sector by producing a society with low level of inequality. Similarly, inequality can be reduced to a great extent if the MSME contributes the economy significantly. This has been observed from the experience of Korean economy during the mid-1970s. During the late 1960s through the 1970s, Colombia had grown significantly with visible decline in urban inequality. This period had coincided with very fast expansion of the manufacturing SME sector. In the recent time, a good example is the experience of China. Here it is observed that the MSMEs are very crucial for the fast growth of the economy. This is through their high share in employment, output, asset and diversification of production structure.

However, there is a high failure and exit rate in this sector. At a certain age, many firms in this sector start to decline. This has negative implication on the security of employment created by these firms. "Also there is an upper limit on the share of GDP

[4]http://elearn.uni-sofia.bg/pluginfile.php/91045/mod_resource/content/1/M2%20EN-BG.pdf

that they can produce. MSMEs are simply not an effective way to produce goods and services characterized by large economies of scale. MSME constitute the better option because their production cost disadvantage is more than offset by the advantages of having a competitive rather than a monopoly price in the market"[5]

This sector always need better support systems. That might be from the government or from their own collective action. Therefore, the MSMEs may not perform to its optimum capacity in the countries with governments of limited competence.

3.5 The role of MSMEs in developing countries

MSMEs are of great importance in developing countries. They account for more than 90 percent of all firms. They are important contributor to employment. But their contribution to employment in low-income countries is more than higher income countries (Ayyagari et al., 2011). "Large mature firms have substantial share of employment; the small mature firms have the largest share of employment in developing economies. Small and mature firms have the largest share of job creation (Ayyagari et al., 2011)". They generate significant domestic and export earnings. SME development emerges as a key instrument in poverty reduction efforts in the developing countries. The importance of MSMEs in the developing countries is mostly because of their strong rural presence.

- Majority of them are present in rural areas and in agricultural related activities. They are part of progressive activities in rural places and often seen as the potential source to create rural employment.
- Their technologies are also more appropriate to "factor proportions and local conditions in developing countries. These conditions are a few raw materials being locally available and scarcity of capital (Tambunan, 2006a)".
- MSMEs give opportunity to mobilize local entrepreneurial spirit and capital. Therefore, this sector gives chance for the development of entrepreneurship.
- MSME becomes a channel for optimum allocation of latent rural resources which might not have used efficiently.

[5] http://elearn.uni-sofia.bg/pluginfile.php/91045/mod_resource/content/1/M2%20EN-BG.pdf

- "MSMEs often achieve rising productivity over time through both investment and technological change (Tambunan, 2006a)". The experience varies across different countries subject to various factors. The conditioning factors are level of economic development, technology and skilled manpower, government policies related to linkages between SMEs and large enterprises.

3.6 Economic Contribution of MSMEs in India

MSMEs have a critical role in the Indian economy being backbone of India's manufacturing sector. India is a capital scarce country. MSMEs are relatively more labour intensive. Hence, they are major source of employment for millions of people. MSMEs solve many national problems such as unemployment, under-employment, under-utilisation of local resources, and shortage of capital and so on. They contribute to reduction of poverty. The main national objectives of development of MSMEs in India are maximization of output, creation of employment opportunities, discouraging rural-urban migration, poverty alleviation, import substitution, mobilization of local resources, building a dynamic entrepreneurial space, contribution to rural industrialization and promoting the use of indigenous technologies.

MSMEs are helping in catalyzing the growth of the economy. They are feeding significantly to the value chain of production both locally and internationally. They are main suppliers to local consumer markets. They are also manufacturers, contractors, distributor, retailers and service providers. Their share in the industrial sector as production units, employment, export and GDP is immense in the country.

MSMEs contribute almost 95 percent of total industrial firms. They contributes 8 per cent to the nation's GDP (Economic Survey, 2009-10), 45% of the industrial output, 40% of exports (Annual report of Ministry of MSME, 2010-11), 50.2million in employment spread over 10.5 million enterprises (fourth census of MSME sector)(see Table-3.3 in the next page). The MSME are performing better than the total industrial sector in terms of growth rate compared to in the recent years. All these information reveals the role of MSMEs in the economic and social development of the country. A dynamic MSME is always very crucial to reduce challenges like unemployment and poverty that the Indian economy is facing.

Table 3.3: Key Statistics on Economic Contribution of MSME

Key Parameters	
Share of	Value
Industrial units	95%
Industrial output	45%
Exports (in value)	40%
Gross Domestic Product (GDP)	8%
Employment (in Millions)	50.2[6]

Note: calculated from the Final Reports Fourth All India Census of MSMEs 2006-2007 for both Registered and Unregistered Sector
Source: Ministry of MSME, Annual Report, 2009-10; RBI

3.7 A Concluding Note

The MSME sector as a whole has grown consistently in Indian economy in the recent time, however, with many constraints leading to less optimum use of scarce economic resources. They face several problems such as lack of adequate and timely access to finance, high cost of credit, lack of collateral require to access credit, limited access to equity capital, procurement of raw materials at a competitive price, issues of storage, designing, packaging and product display, lack of access to global markets, inadequate infrastructure facilities like power, water and roads, low technology and lack of access to modern technology, problems of skilled manpower, labour laws and complicated procedures, absence of a suitable mechanism which enables the quick revival of sick enterprises and measures to close down the unviable entities (GoI, 2010). They cite lack of access to finance is the one of the important challenge they face as discussed in Chapter-1. To put in other way, inadequate access to financial resources may be making these enterprises more fragile and hindering the growth and development of the firms in the sector.

In this background, a critical evaluation of the public provisioning to Small firms (earlier Small Scale Industries (SSI) / recently Micro Small Medium Enterprise (MSME) is necessary. This has been attempted in Chapter - 4.

[6] Calculated from The Final Reports Fourth All India Census of MSMEs 2006-2007 for both Registered and Unregistered Sector.

CHAPTER- 4

PUBLIC PROVISIONING AND SSIs/MSMEs IN INDIA

4.1 The Evolution of Public Provisioning andSmall Scale Industry (SSI) in Indian Economy

The public provision of protecting, promoting and subsidising small scale industries have a long history in India. The end goal of these provisioning is to improve small firms' viability and efficiency. The social and employment consequences of promoting village and small-scale industry is at the heart of Gandhian thought on policy planning and industrial development(Little et al., 1987). The Industrial Policy 1948 advocated that cottage and small scale industries are essential for the efficient use of local resources. It is also required to attain self-sufficiency in the production of certain categories of essential goods.

The Indian economy sets on the path of planned economic development with the establishment of planning commission in the year 1950. The emphasis of the policy for the SSI begins from the Second Five Year Plan.In 1956, the Planning Commission announced its decision about the strategy for development of the Indian Economy in a policy statement titled "the Industrial Policy Resolution 1956". This is based on the Mahalanobis model. It favoured priority to heavy industry. Nevertheless, it also emphasised on the importance of the SSIs. According to the model, SSIs are instrumental in meeting the incremental demand for consumer goods with less capital by generating large employment. Large-scale enterprises are to produce investment good and intermediaries and small-scale enterprises were to be protected against them. In some measure, this policy has continued ever since even if less starkly(Little et al., 1987).

The theoretical justification for the existence of the SSI sector has given by the Mahalanobis model. It would provide consumer goods needed to support workers in the large-scale sector of heavy industries. Thus, the Industrial Policy of 1956 has tried to adopt a combination of labour intensive and capital-intensive methods. Capital-intensive methods are adopted in the capital goods sector while labour intensive methods are adopted in the small-scale sector.

However, what has promoted the government to favour the development of small-scale industry instead of production of consumer goods in large factories using modern methods of mass production? The Karve Committee Report (1956) explains the rationale behind this emphasis on small-scale industry. It is focus on three reasons,

- to avoid technological unemployment
- to increase employment as much as possible through village and small industries
- to lay foundation structure for decentralised society.

The Committee also puts emphasis on the fact that, if production of consumer goods in large factories using modern methods is possible, then it requires a larger gestation period involving a greater expenditure in the training of manpower and building of economic overheads in comparison to cottage and small scale sector where there has been a traditional accumulation of capital and skill. To ignore this historical investment would imply gross wastage of resources at a time when the economy is constrained by capital deficiency resulting from pursuing a path of high growth.

“The small scale units would provide immediate large scale employment, they offer a method of ensuring a more equitable distribution of the national income and they facilitate an effective mobilisation of resources of capital and skill which might otherwise remain unutilised (Hashim, Murthy, & Roy, 2010)”. Secondly, by making available cheap consumer goods to the industrial workers it would prevent the deflection of resources from capital goods sector.

The promotion of Small Scale Industries has been given an important place in the development of industrial sector and public provisioning. The small-scale industry plays important roles, as discussed in the Chapter - 3 in greater details. The state has provided significant place while enacting various industrial policy resolutions. In the successive five year plans, and a well-designed support programmes has been framed and implemented for creating level playing field for the development of small scale industries.

The earlier policies are aimed at positive promotional support. The Third Five Year Plan (1961-66) reserves nine items exclusively for production by this sector. This is extended

to include many more products in the Industrial Policy Resolution 1977. It covers almost all the products that can be produced in the small-scale sector. After that this policy of small industry development continued with minimal changes. In addition to this, quantitative restriction is placed on the output of large firms. The policy statement of 1980 had emphasized on ancillaries. Integrated industrial development between large and small sectors is given the priority. In addition to that, industrially backward areas development programme is accelerated for faster growth of exiting network of SSIs. The reservation of items to be produced by SSI is also increased to its all-time high of 836 numbers with Industrial Policy Resolution 1990.The Industrial Policy Resolution 1992 has mentioned a special Policy Statement for SSI. It primarily emphasizes the goal to make the sector more competitive and viable by delicensing, deregulating, decontrolling and dereservation.

4.2 The Need for Public Provisioning to SSI/MSME

The small firms face obstacles of imperfect factor (capital, land and labour) markets because of their size. The average cost of land is higher for small firms because of the presence of per unit cost of regulatory hurdles in achieving appropriate access to land. The cost of achieving all such regulatory approvals may not differ significantly between large and small plots of land.[7]

The presence of market imperfections in the capital market like lack of information on the part of lenders regarding investment plans of investors leads to higher capital costs faced by Small firms. There are economies of scale in transaction costs in bank lending with respect to loan size. As the loan size increases, the information cost in assessing the small firm's project decrease per unit of loan. As a result, the unit transaction costs for small firms are higher than those for large firms. The risk reducing securities like provision of collateral is usually a problem for small firms.[8]

"The labour market regulations typically distort the price of labour, making it higher for larger firms and lower for small firms in the unorganized sector. Larger firms compensate

[7] Mohan (2002)
[8] Mohan (2002)

for such higher wages by using higher capital intensity in production and employing higher productivity labour. Smaller firms face a higher cost of capital and lower cost of labour than the optimal ratio. It would lead to overall higher cost of unit output through suboptimal production efficiency (Mohan, 2002)".

The above arguments give the theoretical justification for special support policies for small firms. This has given a scope for supportive policies for small firms.

4.3 Policy Measures to Promote Small-Scale Enterprises till late 1980's from independence

The policies promoting protection and import substitution and entrepreneurial skill have received more importance in the 1950s and 1960s. While during 1970s and 1980s, the focus is more on opportunities encouraged initiatives (Garg, 1996). During this period, policies were more focused on ensuring availability of capital, access to technology, quality promotion, infrastructure development, easy access to raw material and marketing support. The efforts of public provisioning in creating congenial environment for the growth and working of SSIs are reflected on the industrial policy pronouncements, the progressive allocations are made in the Five-Year Plans. There is also creation of different promoting and supporting organisations and the nationalization of commercial banks to help SSIs.

The different policy measures to provide special support and protection to the small-scale industries are through the administrative mechanism and various policy measures. The administrative mechanism includes the institutions and organisations to deal with different aspects of SSI such as technology, marketing, raw materials, finance and entrepreneurship which are aimed at providing conducive environment for SSI. Various policy measures includes **incentives** (financial incentives, fiscal incentives, general incentives in backward areas)[9] provided by the governments as support measure and **reservation of products** to be produced by small units. Reservation is mostly to protect the small-scale industries. The eligibility of small firms to take advantage of the various incentives offered is dependent on the definition of SSI/MSME. There are periodic

[9]BalaSubrahmanya (1995)

changes in the investment limit in fixed asset/plant and machinery to qualify as SSI units. There have been periodic changes in the elements of the policy.

4.3.1 Small Scale Industry promotion programs: Infrastructure, Marketing and Industrial Extension Services, preferential procurement

Financial Incentives: SIDBI directly assists for specialised marketing agencies, industrial estates, acquisition of machinery, bills rediscounting and direct discounting scheme etc. State and local government is also providing financial subsidies.[10] SSI sector is treated as an important segment of the priority sector. Directed credit is provided by the banks. The tiny and village industries are given the benefits of availability of credit from banks at concessional rates.

The central and state governments also offer a wide range of services to small scale industries, in addition the financial incentives are offered to these industries. The provisions of infrastructure consist in the form of industrial estates, marketing services and other industrial services including technology development, extension and training.

General incentives like reservation of items for exclusive purchases from SSI, price preference over medium and large-scale units are also presented. Government procures goods and services from this sector on a preferential basis to encourage the promotion of this sector and to reduce the risk of market entry.

The industrial area development authority and district industry centers (DIC, hence forth) undertakes the development of infrastructural facilities for SSIs. The former is restricted to the area where the industrial estates are located and the latter is responsible for outside the industrial estates. These authority and center are responsible for identification and preparation of project, to register small firms for benefits, provision of power, interest and capital subsidies, in providing raw materials, arrangements for the supply of machinery, provision of credit, and equipment, and marketing and extension services. The registration with this agency is voluntary by the firms.

[10] Like interest rate, capital subsidies and water and electricity subsidies and subsidies for the acquisition of land.

Firms encountering financial difficulties can apply DIC to be registered as a 'sick unit'. Such firms will have access to additional benefits and incentives. In many instances, the SFCs and commercial banks refuse to provide credit to projects those are forwarded by the above mentioned agency. The reason put forward by the banks is that their assessment of the proposed project finds it to be of doubtful viability. Many a time, it is being observed that the staffs of small firm promotional agencies are lacking knowledge about technology development, who are supposed to help the firms in their choice of products and technologies. [Little et al., 1987]

These support programes are also thinly spread. It leads to relative ineffectiveness. Large number of small firms is not taking any kinds of assistance from the government. This is because, either they have no knowledge of the existence of the incentive schemes or they have no need of assistance or in some cases, they do not get it. In other case, some stay away from applying because of procedures and formalities associated with the reception of assistance. There are problems in the dissemination of information regarding the programmes. Firms cannot prepare their projects as per the technical and other requirements. They cannot satisfy the institutions on one or the other of the several formalities. "The importance of concessional terms on which the various facilities are given appears to be highly exaggerated, and the government and the aid-giving agencies might lose on this score, perhaps avoidably (Sandesara, 1988a)". [Sandesara, 1988a]

4.3.2 Small Scale Industry and Reservation Policy: Quantitative restriction on the output of large-scale firms

Reservation and protection: This policy reserves economically viable and technically feasible items for exclusive manufacture in the small-scale sector. There is reservation of large number of products exclusively for SSIs. There is quantitative restriction on the output of large-scale firms. The objective of all these promotional measure is to increase the productive efficiency and competitiveness of SSI.

The rationality of this policy is

- Firstly, the advantages of the small scale industries – generation of high employment, industrialisation of rural and backward areas,

- Secondly, to enhance the competitiveness SSI products. This is through reducing disadvantage of mass scale production, economies of scale, wider marketing network, better credit availability and publicity through mass media and advertisements.[11]

The features of reservation policy:

1. The Central Government formulates the reservation policy. It is uniformly applicable to all over the country. A statutory Advisory Committee on Reservation is established to recommends the addition or deletion of products on reservation and changes in nomenclature of products from time to time.
2. It is restricted to manufacturing sector only and not applicable to service sector.
3. Medium or large-scale sector are not allowed to produce the reserved items. However, the medium or large units those are producing the item at the time of reservation are allowed to continue its production. They are not allowed to create new capacity.
4. Creation of new capacity is allowed only in case of units with objective of exporting a minimum of 75 percent of their production.[12]

The policy of reservation has been in existence for well over a long period of time. Sandesara (1988a) is of the view that the performance of the reserved industries might not be better than their counterparts. He argues that the economic health of the small firms also depends on the balance of the demand for and of its products. The reservation increases the demand for the products of the small industry sector by closing the additional supply of competing products produced by the large industry sector. This increases the profits of the small firms inducing additional production both by the established firms and the new entrants. This results in less profit and more losses. Hence, it becomes a question of the rates of increase in the demand for and the supply of the products produced by the small industry sector. Reservation does not seem to have resulted in any special benefit to the firms in the sector.

[11]Rakesh Mohan (2002)
[12]Rakesh Mohan (2002)

4.3.3 Small Scale Industry and Fiscal Incentives

Fiscal incentives mostly comprise tax holidays, tax concessions by central government. Apart from the central government, the state and local governments also provide fiscal incentives (exemption from electricity tariffs).

The central government provides excise tax exemption. States provide exemption from state taxes, mostly sales taxes and turnover taxes on purchases of inputs. These exemptions are usually limited to specific products or are limited in duration. They provide a lower level of implicit subsidy than the excise tax exemption in general. Apart from excise tax exemption, other incentives include preferential pricing policies and various subsidies. The state governments also give additional price preferences at varying rates for purchases. The National Small Industries Corporation does the marketing of small industries' products for public procurement.

Special incentives in backward areas include concession in finance, transport subsidy and income tax incentives. Capital subsidy by the Central Government are also provided to small firms for new industrial projects, for rehabilitation and for expansion projects undertaken in specified backward areas. The state government also provides this kind of subsidies to the new and existing firms located in economically backward districts provided they are not coming under the scheme of the central government.

The state governments also make provision of financial subsidies both within and outside of backward areas. The subsidies on interest payment, capital, water, electricity, acquisition of land and electricity tariff are part of such subsidies.

4.3.4 Long-term finance and directed credit: Small Scale Industry

The study of Sandesara (1988a) is based on the studies of primary survey of small scale units in Bombay, Hyderabad and Jaipur during late 1970's. Based on this data, the study found following results of performance of small firms those are receiving finance assistance.

Table 4.1: Financial and Economic Ratios of Assisted and Non-Assisted Units

City/Year/Industry	Number of Units	Profits to Equity Capital	VA to TA	VA per Worker	Surplus to TA	Surplus per Worker	Wages per Worker	TA per Worker
Bombay(1976-77)	39							
1. Metal Products								
Assisted	8	14.25	0.21	9,198	0.11	4,793	4,073	44,470
Non-Assisted	5	6.46	0.22	6,454	0.04	1,258	4,603	28,891
2.Machinery and Spare Parts	4							
Assisted	9	21.39	0.40	14,090	0.09	3,194	10,582	35,450
Non-Assisted	4	-114.59	0.06	1,088	-0.19	3,530	4,296	18,316
3.Paper and Paper Products								
Assisted	9	-3.19	0.13	5,244	0.04	1,601	3,506	40,433
Non-Assisted	4	42.26	0.23	6,217	0.12	3,279	2,471	27,338
Hyderabad(1977-78)	59							
1. Industrial Fasteners								
Assisted	4	8.62	0.18	9,445	0.10	5,508	3,893	53,476
Non-Assisted	3	20.44	0.31	6,798	0.14	2,969	3,414	21,582
2.Printing Press								
Assisted	2	-8.73	0.36	3,975	-0.03	-299	4,174	10,985
Non-Assisted	6	6.36	0.21	6,147	0.07	2,131	3,784	29,223
3.Chemical and Pharmaceuticals								
Assisted	7	23.90	0.21	11,100	0.14	7,039	3,969	51,820
Non-Assisted	7	24.12	0.32	11,465	0.11	3,905	7,426	35,554
4. Machinery and Spare Parts								
Assisted	14	25.93	0.36	9,348	0.12	3,241	6,044	26,357
Non-Assisted	16	48.31	0.35	9,684	0.13	3,718	5,731	28,006
Jaipur (1978-79)	40							
1. Industrial Fasteners								
Assisted	4	-1.37	0.16	5,520	0.06	2,237	3,270	34,410
Non-Assisted	2	32.20	0.27	12,905	0.17	7,950	4,850	48,032

2. Metal Products								
Assisted	5	20.68	0.28	16,174	0.14	7,776	8,245	57,343
Non-Assisted	9	36.27	0.31	9,062	0.16	4,740	4,164	29,685
3. Electricals and Electronics								
Assisted	3	45.06	0.24	15,990	0.19	12,746	3,184	67,700
Non-Assisted	5	80.23	0.41	9,079	0.27	5,949	2,974	21,878
4.Plastic Products								
Assisted	2	45.48	0.28	27,738	0.24	23,252	4,411	97,989
Non-Assisted	3	5.19	0.19	4,109	0.05	1,192	2,909	22,155
5.Chemicals								
Assisted	4	-15.52	0.15	6,088	.0330	1,138	4,403	41,945
Non-Assisted	3	-12.87	0.10	5,561	.0336	1,812	3,688	54,004

Source: Sandesara (1988a), "Small Industry Development Programmes in India – Efficacy, Explanation and Lessons: Some Field Studies"pp-274-276, In Suri, K. B. (Ed), Small Scale Enterprises in Industrial Development: The Indian Experience, Sage Publication, New Delhi

Table 4.2: Growth Rate of Continuing Assisted and Non-Assisted Units (per cent per annum, Compound)

City/Year/Industry	Number of Units	Total asset	Fixed asset	Equity capital	output	Value added
Bombay(1976-77)	23					
1. Metal Products						
Assisted	7	6.7	1.7	3.6	-1.41	-5.7
2.Machinery and Spare Parts						
Assisted	6	2.5	-0.7	10.2	8.9	4.9
3.Paper and Paper Products						
Assisted	7	16.3	14.0	11.3	9.4	11.2
Non-Assisted	3	16.3	34.2	12.9	14.1	-5.2
Hyderabad(1977-78)	19					
3.Chemical and Pharmaceuticals						
Assisted	2	14.9	1.9	15.6	125.8	*
Non-Assisted	4	3.3	_	-3.0	6.0	5.6
4. Machinery and Spare Parts						
Assisted	8	5.6	8.0	6.5	13.1	12.8
Non-Assisted	5	32.3	16.9	6.7	37.3	33.8
Jaipur (1978-79)	21					
1. Industrial Fasteners						
Assisted	2	3.6	-2.4	-0.9	6.2	0.3
2. Metal Products						

Assisted	2	3.7	-4.5	1.0	20.5	10.5
Non-Assisted	5	9.7	3.0	5.6	14.1	17.0
3.Agricultural Implements						
Assisted	4	4.6	-4.5	8.3	-7.6	-32.4
4.Casting and Rolling						
Assisted	3	12.6	5.1	10.9	23.7	-3.0
5.Chemicals						
Assisted	3	5.3	5.3	16.9	24.8	2.1
Non-Assisted	2	4.2	1.8	-2.6	-16.9	-24.2

Note: * here the growth rate could not be worked because of data problem

Source: Sandesara (1988a), "Small Industry Development Programmes in India – Efficacy, Explanation and Lessons: Some Field Studies"pp-277-278, In Suri, K. B. (Ed), Small Scale Enterprises in Industrial Development: The Indian Experience, Sage Publication, New Delhi

The assisted units have higher labour productivity, higher surplus per worker and higher average wage than non-assisted units in a majority of industries. The non-assisted units have higher profitability, higher capital productivity and higher surplus per unit of capital than the assisted units in most of the cases. These results are mentioned in Table-4.1.The assisted units are making more efficient use of labour and the non-assisted units are making more efficient use of capital.

Moreover, it can be seen from Table - 4.2 that assisted units show positive growth rates on two or more indicators of total assets, fixed assets, equity capital, output and value added. The growth rate of assisted units in three industries is lower and in other two industries, it is lower for them compared to the non-assisted units.

"The policy of directed credit relaxes a binding constraint on small firms, raising investment (Eastwood & Kohli,1999)". This finding is for modern small scale industry. This is based on panel data on 788 modern sector Indian firms during 1965-78 in the study of Eastwood & Kohli(1999). These are used to study the relation between the size of a firm and its financial environment. The study says that the directed credit policies can be effective if the target firms are those with inelastic total supply of fund with most of the external sources credit subject to rationing. "The supplies of external finance are exogenous to investment demand in small firms but endogenous in large firms with respect to investment demand. With improved investment prospects, the small firms have to rely on internal finance at the margin or forego the investment opportunity. But the large firms are able to borrow externally to some extent. The directed credit policy relaxed the external financial constraint on small firms. This appears to have had a substantial effect: gross fixed investment in the small firms in the sample raised from 3.4 per cent of sales in 1965 to 8.7 per cent of sales in 1978. The study estimates that one-third of this rise may be attributed to the policy (Eastwood & Kohli, 1999)".

From the above citation of result of studies on the support policy of state to channel finance to the Small firms, it is observed that they do help the same in their economic performance by relaxing their external finance constraint and thereby increasing investment and growth of the units.

4.3.5Critical appraisal of the public provision to Small scale industry

There is always a case for preferential treatment of this sector by the state. To cite Sandesara (1988a), "there are quite a few areas where small scale production is feasible and where it may be able to hold its own. It is also readily agreed that a vigorous small industry is vital for industrial and economic growth. At the same time, its handicaps are rooted in the very smallness of its operations and, therefore, left to itself the market will not permit this sector to play its rightful role."[13] Government support and assistance is necessary by way of easy access to raw materials, credit and assistance in marketing.

However, following important factors to be borne in mind while going for assisting the sector

(a) The resources with the state are always limited with high opportunity cost and productivity in the alternative uses of these resources. Secondly, the demand for the product from this sector is dependent on the growth of income of agriculture and large industry. So the amount of assistance for this sector should be based on considering these factors.

(b) The small scale industry is an easy entry sector. Moreover, Assistance makes entry easier. This will lead to overcrowding. This may nullify the impact of assistance. Even, it may make assistance counterproductive. The viability and health of the small firms can be adversely affected by easy entry. This is a real challenge to the productive functioning of much needed public provisioning for the sector.

The weakness in government policy is that credit needs of bulk of small producers are not met through the provision of concessional credit by the commercial banks, while a handful of units get this credit. An easy access to credit for meeting the genuine credit needs of all producers is of more importance than the need for concessional credit as such credit needs to be subsidized by someone.

Another weakness is the policy of reservation and also the subsidies available to small firms which fulfill the criteria of employment and capital investment, meaning thereby, a small firm must necessarily remain small in order to avail the facilities. Once they expand

[13]Sandesara (1988a), "Small Industry Development Programmes in India – Efficacy, Explanation and Lessons: Some Field Studies"pp-293

they won't receive the benefits. Is this desirable and economically viable? It has often argued that this policy was creating a situation where the 'infant' industries are kept in permanent state of infancy. Often being said there was considerable underutilization of capacity whose products are reserved for the small scale sector.[14] This might have stunting effect on output growth of manufacturing sector. It is also affecting industrial structure of the economy. It would be better not to stand in the way of the natural growth of industrial undertakings. "Preservation of the entrepreneurial upsurge would be vital desideratum while considering any policy change. The momentum of entrepreneurial growth should not be dampened (Ghosh, 1988)". However, it may be true for those units which are closer to the threshold level of investment as discussed in the next section.

To begin with, there should be policy of generous assistance initially and gradual withdrawal of all forms of special assistance. Followed by, continued support for the supply of raw materials, credit and marketing to all units. Policies such as of price preferences for government purchases in respect of small industries should be followed to help the much needed small firms.

4.4 Policy Measures to Promote Small-Scale Enterprises after 1990's

There is change in nature of economic policies and economic environment in the Indian Economy since 1990s. The liberalization of the economy is attracting foreign direct investment favorably. The restrictions in terms of quantitative and non-quantitative on import have been reduced drastically. The different sectors of the economy have been reformed. The economic environment of the economy has been transformed drastically, so is the case for operating environment of MSMEs. The change in economic environment might have offered tremendous scope for MSMEs to grow. But the process has opened up the gate to highly competitive environment for these firms. All these are throwing constraints and obstacles to many of these firms.

In such situation, competitiveness is determined by capital, modern technology and markets. Access to these determinants is very crucial for the MSMEs to be competitive in the market in terms of quality and price of the products.

[14]Ghosh, 1988

The National Policy pertaining to industrial and economic growth had been changed significantly with liberalization, debureaucreatisation and market oriented deregulation. The protective measures for small firms have been diluted. The policies and programmes are introduced aiming at the enhancement of competitiveness of small firms.

The IPR, 1992 led to the beginning of the end of protective measures for small firms. There is promotion of competitiveness in accessing finance, market and better technology. There is gradual decline of items reserved exclusive production for small firms. The number of products for preferential purchase by the government from small firms has been reduced. The price preference scheme has remained the same. The concessional element in lending rates for small firms has been largely withdrawn. [BalaSubrahmanya, 2004]

Trade policy has changes in terms of elimination of import tariff and non-tariff barriers. With removal of quantitative restrictions, most of the products reserved for small firms are now importable. Meaning thereby, reserved items can be produced by large enterprises and imported into India. But, the Indian large firms are not allowed to produce the same items.

The opening of Indian economy unleashed challenges to the SSIs. There is gradual reduction in purely protective measures such as reservation. There is decline in the number of items reserved for small firm production. More emphasis is on improving competitive efficiency and market development. The policy environment is expecting that the small firms will grow faster in a more competitive environment due to their cost advantage and they will be able to profitably access the larger markets in the liberlalised trade regime.[15] The small firms may integrate themselves with the large firm both domestically and globally through increasing adoption of the flexible production systems and outsourcing of business processes and hence may grow faster. But there is ample scope of shocks that the small firms may receive that liberalization and globalization of Indian economy will create. They should be able to absorb them successfully in order to remain in business and continue to become productive. For that, they always need a

[15]Papola (2004)

strong policy framework of regulatory and promotional kind even in the environment of liberalized and trade regimes.

However, it has argued that the earlier regulatory and promotional policy was such that it was creating inefficiency and misuse of public resources. The logic was that if the unit is small then only they will avail benefits of policy provision and these are denied once they jump the cut off of investment ceiling. So they continued to remain small and did not make the right use of benefits under the SSI policy. This might be true for the units which are near the threshold limit of investment cut-off. But the results from the data, as discussed in chapter – 6, show that there is large presence of micro unit in the manufacturing sector. Many of them are not within the reach of the measures of support under the promotional policies. They always need assistance and incentives to grow and sustain themselves. A few them are within the regulation and have registration and have received the benefits of promotional policies.

The criteria of ceiling of investment to define a firm small is based on the assumption to that once a firm grow beyond the ceiling is able to sustain itself even in a situation of not availing assistance and support from the state policy. However, it has been argued that non-availability of the state support might become a disincentive to grow and encourage the entrepreneur to start several small units rather than expanding the existing ones[16]. There is always a case for preferential treatment for these overwhelming majorities of micro and small units by the state policy.

4.5 Conclusion

To withstand the competition and challenges thrown by the liberalization policies, the MSMEs are required to be technically sound and competitive. It can be achieved through integrating the MSMEs into the national and international value chain. Precondition for this to materialize is necessary investment. For this they need sufficient access to capital especially the working capital. Thus, the adequate access of finance at reasonable cost becomes crucial for the development of MSMEs.

[16]Papola (2004)

However, there is lack of adequate credit facility to small and medium enterprises despite their size, importance and lucrative growth prospects in Indian Economy. These businesses say they have problem in accessing credit and payment services provided by banks. The characteristic of the problem is like unavailability of sufficient and timely funds to finance their growth plans.

Continued empowerment of MSMEs is needed. This will enable them to attain high and sustainable growth in the long run. “With adequate financial and non-financial resources as well as capacity building, the MSME sector can grow and contribute to economic development considerably higher than it is doing currently (Intellectual Capital Advisory Services Private Limited, 2012)”.

In this context, a more elaborate discussion of level of access to finance of the MSME, in general and in the Indian economy in particular, is called for. This has been attempted in chapter – 5.

CHAPTER – 5

ACCESS TO FINANCE FOR MSMEs

5.1 Access to Finance and Development Process

Finance (Capital) is stated as engine of economic growth. It is an essential part of the development process. It is also precondition to accelerate the process of industrial development. Finance is crucial for product distribution and development. Finance can be channeled to the productive uses through a financial system that function well. This boosts economic growth, improving opportunities and income distribution and reducing poverty[17](Huybens & Smith, 1998)(Huybens & Smith, 1999). So is the case that poorly functioning financial systems can hamper the level of access of finance by economic agents and hence, the economic activities in Industry and other sector of the economy. This results in lower use of resources and consequential outcome of lower growth in income and employment.

One of the important preconditions to generate an economic environment where firms can prosper is access to finance. Among other things, access to finance contributes to firm entry, growth, and innovation. The easier access to finance enables the firm to exploit growth and investment opportunities. "The availability of external finance is positively associated with the number of start–ups, indicator of entrepreneurships"[18]. This also adds to firm dynamism and innovations. The access to finance and its use helps entry, growth, and innovation and risk reduction[19]. Moreover, firms, with easy access to capitals, can have better chance to make benefit out of investment opportunities and hence, grow rapidly. "The aggregate economic performance will also be improved by increasing access to finance"[20]. "Increased access to finance for small firms can improve

[17] For a theoretical analysis, see *Huybens and Smith (1998, 1999)*
Huybens, Elisabeth, and Bruce Smith. 1998. "Financial Market Frictions, Monetary Policy, and Capital Accumulation in a Small Open Economy." Journal of Economic Theory81: 353–400.
———. *1999*. "Inflation, Financial Markets, and Long-Run Real Activity." Journal of Monetary Economics43 (2): 283–315.
[18]*Klapper, Leora, Luc Laeven, and RaghuramRajan. 2006*. "Entry Regulation as Barrier to Entrepreneurship." Journal of Financial Economics 82(3):591–629
[19]*Beck, Thorsten and Demirgüç-Kunt, Asli , 2008*. "Access to Finance: An Unfinished Agenda". The World Bank Economic Review, Vol. 22, Issue 3, pp. 383-396, 2008
[20]*World Bank Group, Enterprise Surveys Database, 2010*.; http://www.enterprisesurveys.org; "World Business Environment Survey" (WBES) of more than 10,000 firms in 80 countries

economic conditions in developing countries by fostering innovation, macro-economic resilience and GDP growth (Dalberg, 2011)".

Most of the time, access to finance becomes constraint because of the financial market frictions. The amount of finance the poor can borrow and make investment in physical capital is determined by the imperfection in the financial market. To begin new projects is more difficult for them in such situation. Thus, this leads to persistent inequality and slower growth. Therefore, the imperfection in credit and financial market can be a route for persistence of inequality in distribution of income.

A constraint to development always inhibits the process of development. Certain sectors of the economy such as MSMEs lag behinds because of lack of resources such as finance. The extent to which access to finance is restricted, the benefits of financial development are confined out of the reach of large section of society and in particular micro and small enterprises. They won't be able to contribute to the development process to their full potential extent. Development can be accelerated by releasing such constraint.

"Financial constraints are higher in developing countries (Dalberg, 2011)". Small firms[21]face large barrier in accessing finance in developing countries. Many a time, administrative cost and provision of collateral as security to loan becomes obstacles for them to access finance. But, the financial and banking sector can play a crucial role in the process of development of developing economies through fulfilling financial requirement of enterprises (like MSMEs) with good prospects of growth.

5.2 Why there is an access problem in credit markets?

If the demand is more than the supply of a product, the price will increase till demand and supply achieve equilibrium and set a new equilibrium price for the product. For those price is high, the consumer will not purchase the product. The one who can afford to pay will go for the product. Therefore, price solves the problem in accessing the product.

In that sense, the credit market is different (Stiglitz & Weiss, 1981). The rate of interest (Price of the credit) does not do the job to clear the credit market. This is so because there is risk associated with loan due to information problems. Full information regarding

[21]Small firms represents micro, small and medium enterprise.

borrowers is not available to the banks. That is why there is credit rationing even in the equilibrium. If the interest rate is only relied upon, then it may lead to adverse selection (choosing a risky project) and moral hazards (negatively affecting the motive of borrower) in many cases. It does not reduce the risk in the credit or financial market. Rather it may lead to high risk and loss of profit through decline in expected returns of loan as rate of interest increases. Beyond a certain level, usually banks do not go for an increase in the price of funds even in a situation of excess demand than available supply. They ration the credit market. Many borrowers, who can afford high interest rate, are rejected. Therefore, they could not access the credit. Due to lack of information regarding borrowers, lenders in the credit market rely on the collateral provided by borrowers as security for funds. But this becomes an important barrier for many firms. The risk associated with credit can be reduced by assessing viability of the project. Even the evaluation of credit history of the firm can help the banks in deciding the credibility of firms.

Barriers to access credit and funds become more for MSMEs than the large enterprises. The credit institutions opt out small firms in the credit delivery process with a notion that such type of firms are more risky with relatively high delivery cost and less capacity to fulfill the collateral requirement. Most of the time, MSMEs have problem in accessing finance. This is so because banks and financial institutions avoid borrowers and projects with risk.

MSMEs are often more information opaque. From the point of view of financial institution, financing to MSMEs becomes challenging because there is high chances that lack of information can generate a situation of adverse selection or moral hazard problems. MSMEs face credit rationing. Consequently, they cannot receive the amount of credit they require. The asymmetries of information and high transaction costs in the credit market become more binding on the micro and small enterprises. This is because very often they lack collateral, credit histories. If they want to become beneficiary of opportunities generated by development process, they need to depend upon internal finance to make investment. But the amount of internal finance may not be enough to fund their requirement. Such situation may be constraining their growth prospects.

5.3 Access to Finance for MSMEs: Determinants and Implications

'Access to finance' says an absence of obstacles such as price or non-price barriers to the use of finance. This includes the availability, cost, wait time, term and size of a loan and the procedures and collateral required to get finance. This depends on many factors both internal and external to the firm.

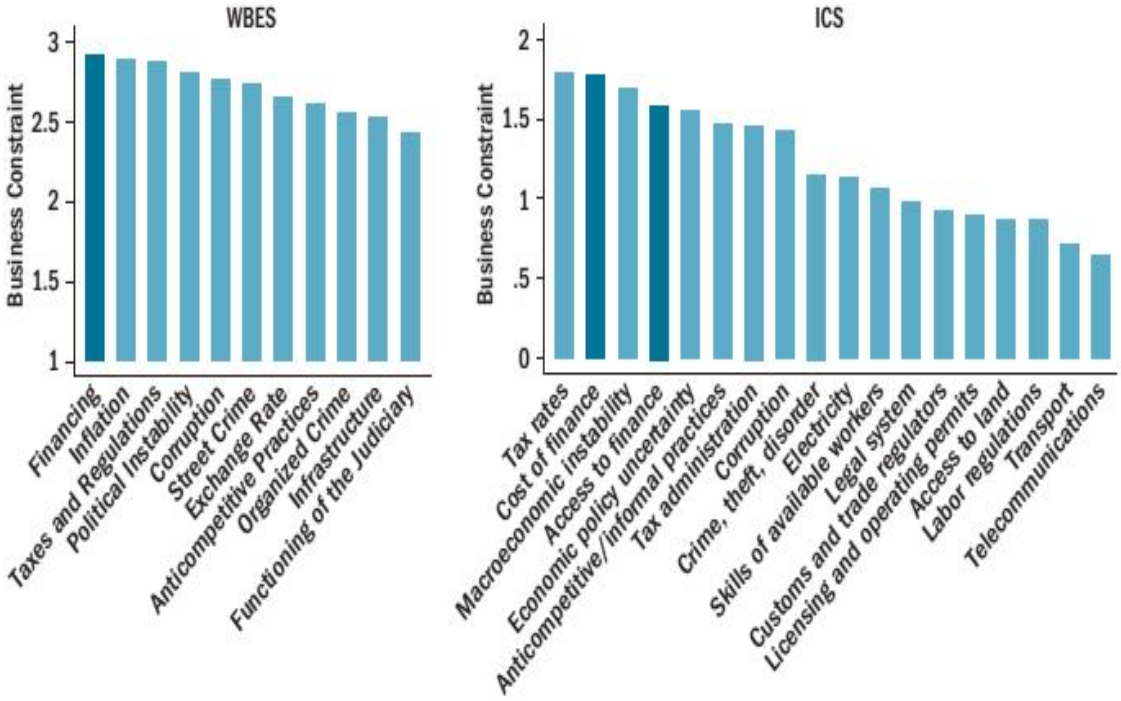
The internal finance is important not only for initiation of the business but also for leveraging finance from outsiders that is external finance. External finance is a function of credibility of finance proposal, credibility of project, risk and uncertainty associated with the implementation of projects.

The worthiness of financial proposal is a function of transparency of its operations and financial condition of the firm, how firm operates along with the substance of the business plan. Another more important factor determining the access of finance of firm is external circumstances to the firm. These are situation of firm, institutional environment and wider policy related to financing firms. These are the external factors influencing the degree of financial constraint of firms in different countries.[22]

"Access to finance seems to emerge consistently as one of the most important and robust underlying factors that constrain firm growth (Ayyagari et al., 2006)". The growth of firm declines significantly with finance constraint among the three constraints such as corruption, legal and finance(Beck et al., 2005). This result is based on the evidence of 10,000 firms in 80 countries from the World Business Environment Survey(WBES) of 1999-2000. Based on data of the WBES and the Investment Climate Survey (ICS), finance constraint is being reported as one of the major constraint faced by small firms (Figure -5.1). These results show the existence of financing constraints and lack of availability of finance does constraint firm growth.

[22] See more in Demirguc-Kunt et al., 2008

Figure 5.1: Financing and other constraints faced by small firms

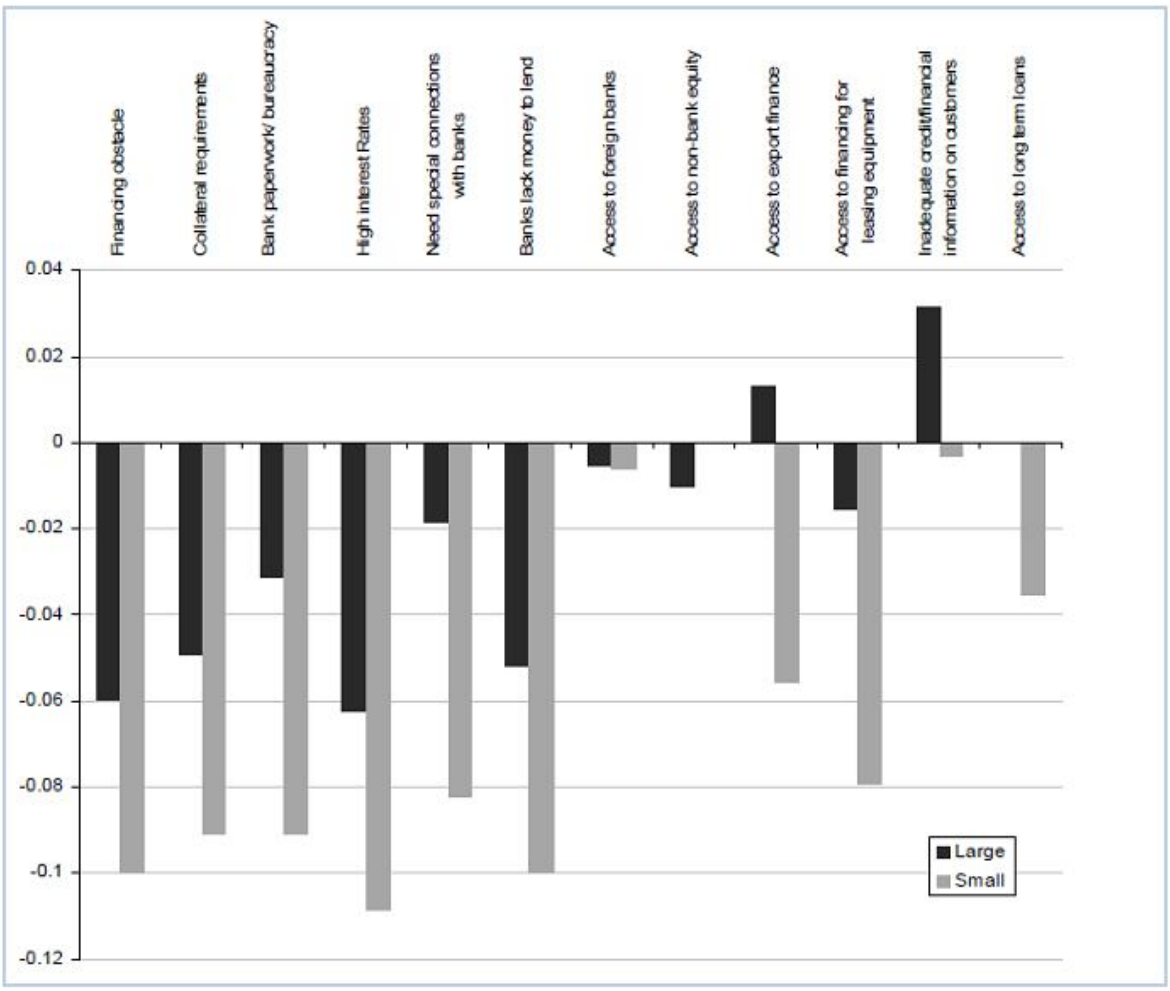


Source: (Demirguc-Kunt, Beck, Honohan, & Winters, 2008)*"Finance for All? Policies and Pitfalls in Expanding Access"*
Notes: Data used is from WBES and ICS. WBES covers small firms in 80 countries; ICS covers those in 71 countries. The figures show the mean response of firms rating obstacles on a scale from 1-4 in WBES (1=no obstacle. 4=major obstacle) and 0-4 in ICS. In WBES, a firm is defined to be small if it has 5- 50 employees: small firms are those with 1-20 employees.

Small firms report higher financing obstacles. Finance problem is more deterrent to small firms than large firms. The findings of WBES show that financing obstacles affected small firms much more than for the large firms (Figure-5.2).Financing obstacles in small firms have almost twice the effect as obstacles in large firms (Figure-5.2).More than 40 per cent of large firms use external finance to finance their new investment whereas for small firms, it is around 20 percent (Figure-5.3).

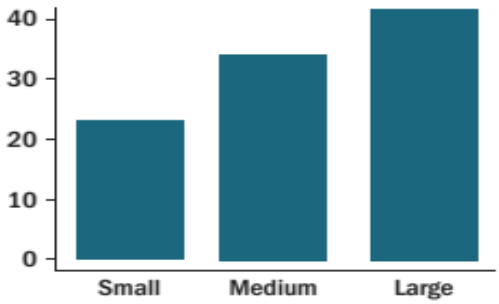
Weaker financial system constrains the growth and dynamism of small firms. This can influence the growth of the economy and make it less inclusive development process. The access to external fund by enterprises is a function of financial development. It can influence industrial structure of an economy and economic development process deeply.

Figure 5.2: Growth effects of financing obstacles across firms of different sizes



Source: reproduced from Dalberg (2011), originally from Beck, Demirguc-kunt, & Maksimovic (2005)
Note: small firm- with 5-50 employees and large firm- with more than 500 employees. The original data source is WBES

Figure5.3: Percentage of firms using external finance, by firm size



Source: Demirguc-Kunt, Beck, Honohan, & Winters (2008): "Finance for All? Policies and Pitfalls in Expanding Access"
Note: Data used is from Investment Climate Survey, 2002.ICS covers 71 developing countries. Small firms are those with 20 or fewer employees; medium firms are those with 20-99 employees; and large firms are those with 100 or more employees.

5.4 Access to Finance for MSMEs in India and its importance

Despite its size and importance in development of Indian economy as discussed in the Chapter – 1 and Chapter - 3, MSMEs have less access to the credit provided by banks. Credit to this sector is underserved and lacking. The reasons usually put forward are high transaction costs, perceived credit risks associated with small loans, unreliability of financial information from entrepreneurs that operate outside the formal economy.

5.4.1 Whether or not increased access to finance is important for smaller sized firms and if so, why???

Access to Finance has been very crucial determinant for the development of MSMEs. Without finance, MSMEs cannot make investment in the technology they require to withstand competition of globalization. They cannot even strike business linkages with larger firms. Better access to finance has been recognized as very important for MSMEs to become as a major agent in the development process of developing countries.

Firm level benefits of increased access to finance are as follows.

- The budding entrepreneurs often lack the funds to self-finance a business. In such situation, bank loan helps in capitalizing on innovation.
- Firms that cannot access bank-lending keep more **cash on hand** in order to finance their working capital needs or purchase of fixed assets. This puts them at a greater risk of **making bad investment decisions due to loosened cost control**(Jensen, 1988)(Stulz, 1990).
- Therefore, access to bank financing effectively reduces the retained earnings requirements for small firms. This will protect them from bad decision making practices within the firm.
- This results in greater efficiency because firms take advantage of economies of scale.
- The small firms have the most to gain from improved access to finance. It is also linked with greater income equality (Demirguc-Kunt et al., 2008).
- The benefits of access to finance of MSMEs have implications for government policy. Government should build sound financial institutions, encourage completion and establish regulation. This will ensure appropriate incentives and access to finance for MSMEs. (Parada, Sakya, Seitz, & Shankar, 2010)

In India, MSMEs are not able to grow to their full potential because the flow of finance to these enterprises is restricted. They usually cite lack of timely access to finance and cost of finance as important causes for under-utilisation of their capacity. Greater access to formal financial services is important especially for small firms. But banks in India are reluctant to provide loans to them. In cases where the banks have provided, they find it costly because of the existence of information asymmetries and higher transaction costs between lender and borrower. More particularly the problem is rooted in combination of factors and problems that bank faced in lending to MSMEs such as

i. Banks face difficulties in bankruptcy and contract enforcement, recovery of bad loans to MSMEs,
ii. They face difficulties in their framework of institution like lack of good credit appraisal and risk management. This increases the bank's transactions costs in dealing with MSMEs.
iii. Absence of enough expertise and experience in the evaluation of project-finance lending to MSMEs.
iv. Monitoring and supervision of funds from disbursal till recovery is absent in banking culture in India.
v. MSMEs are considered as high-risk borrower because of their small size and high exit rates.
vi. Difficult to assess the creditworthiness of potential MSME proposals. The MSMEs lack book of account and credit history. This creates asymmetry of information between banks and MSMEs
vii. The fixed administrative/transaction costs of loan makes small loan, required by MSME, unprofitable to banks.

All these factors make lending difficult for lenders particularly for banks to evaluate riskiness of lending to MSMEs. These factors generate a gap between perceived and real risk involved in MSME lending. This results in unexploited lending opportunities to MSMEs.

From the enterprise side, the problems those come in front of MSMEs to access bank finance are requirement of collateral, time taking, complex process of applying loan and slow processing of loan by banks, strict requirements of documents. Many MSME

entrepreneurs lack information regarding bank procedures because of lack of education. Many times, they do not have enough resources to meet the bank procedure. They lack collateral and documents like book of account and their plan regarding business. High interest of loan also creates problems. All these factors create problems in accessing finance for MSMEs.

Often it is found that MSMEs do not have enough information regarding finance schemes, services provided by bank and financial institutions meant for MSMEs. They are usually not preferred by banks as their market prospects are not considered as promising. They are not regarded as bankable. Sometimes the small firms themselves are less likely to borrow from banks and they do not seek financial loans.

5.4.2 Financial barriers faced by the MSMEs

The problems related to access to finance stems from two different sources. The nature of one source is involuntary, the banks discriminate against small borrowers because of higher transaction costs and information asymmetry and the nature of other source is voluntary, MSMEs may not access finance because of voluntary exclusion. Both voluntary and involuntary exclusion exist in India. [Parada et al., 2010]

"Financial institutions have limited their exposure to the sector due to a higher risk perception and limited access of MSMEs to immovable collateral (Parada et al., 2010)". The problems faced by small firms in accessing finance are because it is too costly or unavailable to them. Many firms simply choose not to turn to banks for loans. So there are two different kind of exclusion from financial services such as involuntary and voluntary. [Demirguc-Kunt et al., 2008]

Involuntary Exclusion – firms cannot access finance because it is costly or unavailable to them. The prices, terms and conditions of formal financial services are unfavorable to small borrowers. Example – banks almost always discriminate against small borrowers due to their perceived riskiness, charge prohibitively high fees to such borrowers and have unreasonable contractual requirements. Small firms have poor financial statement records. This is because most MSMEs entrepreneurs do not know accounting principles and values, do not maintain book of account and financial statement of their business due to lack of knowledge. So banks are unable to correctly evaluate the risk they pose.

Therefore, these factors make difficult for the small firms to get finance from financial institutions and banks.

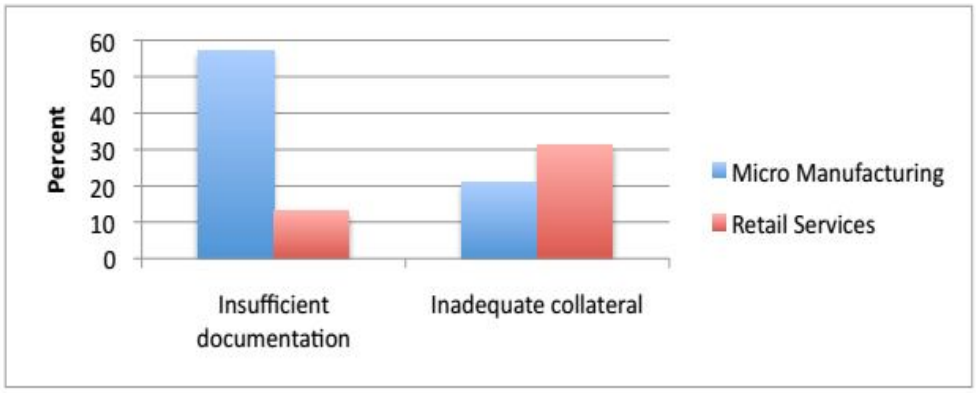
Voluntary Exclusion – firms choose not to turn to banks for loans. Small firm might voluntarily exclude themselves from formal banking services. This might be because of unaware of the benefit due to educational problems and marketing failures on the part of banks. This might be because they possess internal funds. This might also be because of the fact that the entrepreneurs have the perception that being a small enterprise they will not get financing from the banks due to various reasons. This might have prevented them from approaching the banks and they tend to secure loans from other sources.

5.4.3 Inadequate Access to Finance of MSMEs in India

Inadequate access to institutional credit continues to remain a major problem faced by this sector. The small entrepreneurs are forced to depend on the moneylenders. Moneylenders lend at exorbitant rates of interest. This adds to the financial burden further.

There is vulnerability of smaller firms in accessing finance. "There is a strong structural underpinning to the inadequate flow of finance: the organizational structure of banks and processes within them, have taken them far from task orientation and have created a specific bias against small loan portfolios"[23]. "Half of all respondents in the NSSO reported that they experienced an acute shortage of capital"(Allen, Chakrabarti, De, Qian, & Qian, 2012).

Figure 5.4: Reasons for loan rejection by sector



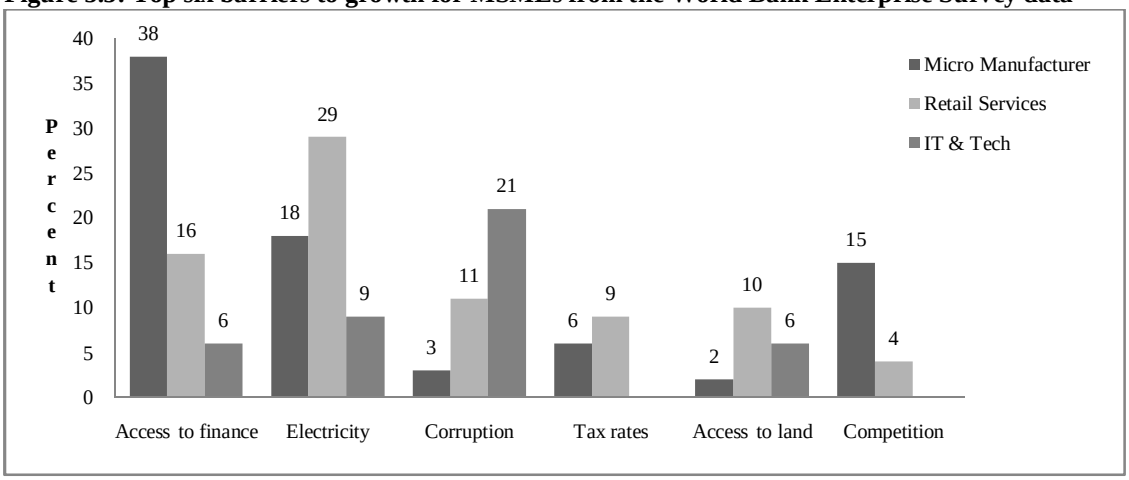
Source: Reproduced from Parada, M., Sakya, A., Seitz, K., Shankar, S., 2010

[23] Morris, et al. (2001)

Banks overwhelmingly reject loan applications from micro manufacturers due to insufficient documentation (see Figure-5.4).A poor informational environment can force the use of collateral as a guarantee for loans rather than assessments of the quality and feasibility of investment projects or the credit history of the firm.

Access to finance is most severe concern for MSMEs in India. Without consistent access to finance at fair prices appear to adversely affect MSMEs in India. Firms identified access to finance as serious barrier to MSME growth. The Figure-5.5 shows that micro manufacturing enterprise (the smallest firms out of the three datasets) rank access to finance as very severe obstacle to investment and growth performances.

Figure 5.5: Top six barriers to growth for MSMEs from the World Bank Enterprise Survey data[24]



Source: Parada, M., Sakya, A., Seitz, K., Shankar, S., 2010

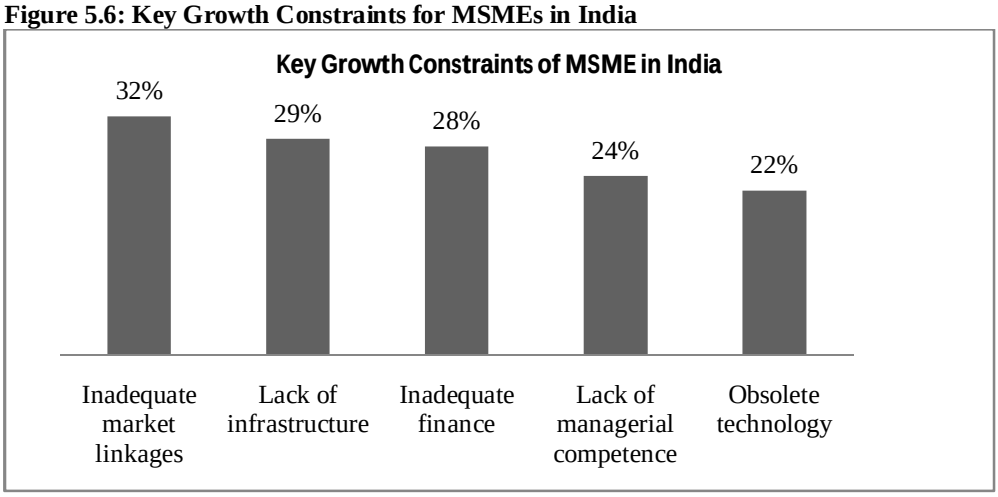
Access to finance stands out for both its severity and its potential, considering the four major obstacles to growth and operations faced by MSMEs. These obstacles are access to finance, electricity delivery, corruption and tax rates. Capital shortages and the lack of long-term financing opportunities often prevent these firms from realizing their full potential for growth.

According to the RBI Stakeholder Survey, many MSME associations mentioned that delayed and inadequate finance, delay in government clearances and high cost of funds are major reasons for MSME's lackluster growth (Chakrabarty, 2008). MSMEs

[24] Data obtained from **The World Bank's Enterprise Surveys.** These are surveys of Micro Manufacturing, Retail Services Enterprises and IT & Communications. The sample covered registered businesses and includes firms of all sizes. The surveys used stratified random sampling within India. The dataset is from 2006. The survey used employee size as the criterion to determine firm size.

experience multiple constraints hindering the sector's growth. Some of the important constraints that MSMEs face are presented in Figure 5.6. The problems in accessing finance are being considered as major obstacles to growth by MSMEs.

Figure 5.6: Key Growth Constraints for MSMEs in India



Note: N = 76 percentage of respondents, Respondents include commercial banks, Regional Rural Banks, MSME Associations
Source: Report of Working Group on Rehabilitation of Sick MSMEs, Reserve Bank of India.

Ayyagari et al.(2006) also suggest that the multiple growth constraints can be related to insufficient financial access by these firms to a large extent. The report of working group on Rehabilitation of sick MSMEs by RBI finds that important reason for high incidence of sickness in the MSMEs is the unavailability of adequate and timely working capital from the banking sector.

Quoting from the Empowering MSMEs for Financial Inclusion and Growth – Role of Banks and Industry Associations, K C Chakravarty, Reserve Bank of India, 2012, "Building on the 2010 data from the RBI, the study estimates that financial institutions serve, to some extent or the other, nearly 33 percent of the enterprises". Many MSEs remain un-served and underserved despite the improved access. Because of constraints present in demand and supply of finance, the MSME sector has problem in accessing finance. However, there is also evidence of voluntary exclusion.

The MSMEs may voluntarily exclude themselves from formal banking services. More of Indian firms report that they do not need a loan (Table 5.1). This shows the possibility such as Indian firms are less likely to have adequate information about bank lending, the application or cost barriers involved with obtaining loans. This points to the necessity of

increasing both access to and understanding of the benefits of formal, external financing to micro and small enterprises in India.

Table5.1: Reasons for not taking out a loan: A comparison with China and Russia

Why did the firm not apply for a loan?	India (%)	China (%)	Russia (%)
Does not need a loan	**80**	**69**	**60**
Collateral requirements are too strict	18	26	25
Interest rates are too high	17	17	35
Application procedures are too burdensome	16	27	23
Does not think it would be approved	n/a	22	2
It is necessary to make informal payments	n/a	11	6
Other	7	n/a	3

Source: Reproduced from Demirguc-Kunt, et al. (2008)
Note: percentages do not add up to 100 because of multiple responses.

5.5 Analysis of access to finance from the demand side

The demand for finance of MSME is in the form of debt and equity. However, debt constitutes the large percentage of total finance demand. Table 5.2 presents debt demand from the enterprises that are either considered "unviable in the near term (one – two year time frame), or those that voluntarily exclude themselves from formal financial services (Intellectual Capital Advisory Services Private Limited, 2012)". Around 37 percent of the total debt demand is unviable. It includes sick units, new and financial problematic units. Many firms voluntarily exclude themselves from formal financial sources. These enterprises are mostly small retail trade and repair shops. They account for 25 percent[25]. *[*(Intellectual Capital Advisory Services Private Limited, 2012)*]*

Table5.2: Exclusion from overall debt demand

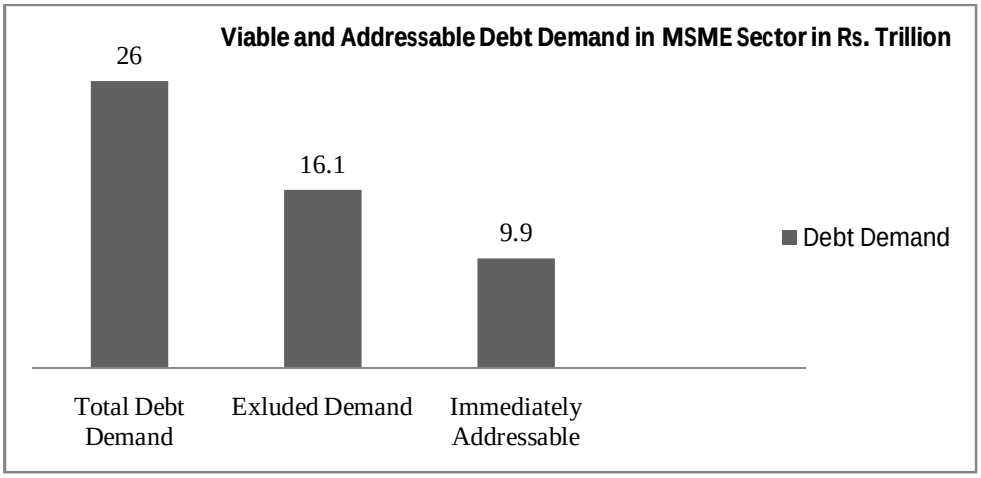
Type of enterprises	Share of debt demand
Sick enterprises in default	13%
New enterprises with less than one year of operations	23 %
Portion of enterprises rejected by formal financial institutions	1%
Voluntary exclusions of micro services sector enterprise segment	25%
Total	62%

Source: IFC-Intellecap Analysis produced in IFC, World Bank Group, 2012

[25] Based on the report 'Micro, Small and Medium Enterprise Finance in India, A Research Study on Needs, Gaps and Way Forward', *IFC, World Bank Group, 2012*

It is estimated that the total debt demand of MSMEs is Rs.26 trillion. Out of these at least 38 percent is viable demand. It is about Rs. 9.9 trillion. This is presented in the figure-5.7.

Figure 5.7: Viable and Addressable Debt Demand in MSME Sector in Rs. Trillion



Source: produced from MSME Census, SIDBI, Primary Research IFC-Intellecap Analysis originally produced in IFC, World Bank Group, 2012

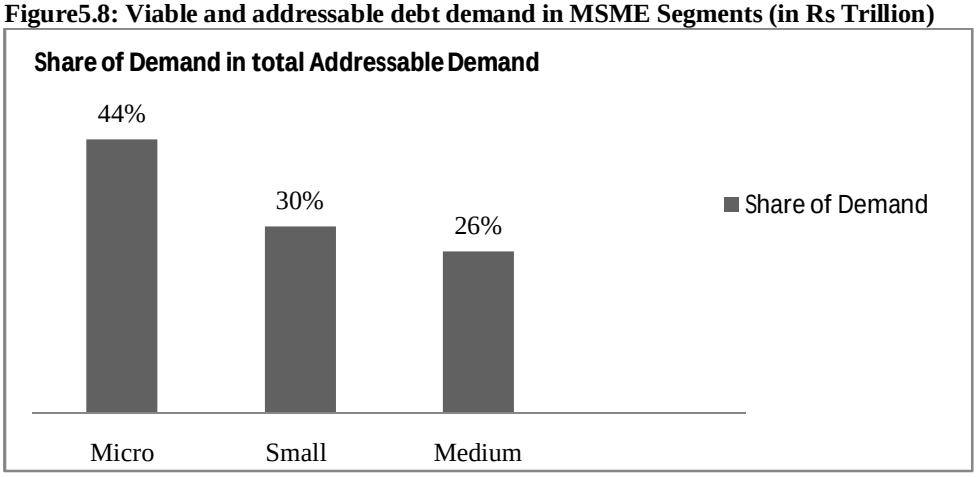
- Most of the total viable and addressable debt demands come from unregistered enterprises. Rest comes from registered enterprises. "Registration of enterprises in no way impacts the access to finance from formal financial institutions". *[*(Intellectual Capital Advisory Services Private Limited, 2012)*]*
- The working capital requirement consists most of the total viable and addressable debt demand of the MSMEs. Research shows that the working capital finance plays critical role in the functioning and growth of MSMEs.[26]

5.5.1 Debt Demand by Size of Enterprise

The MSMEs account for 44 percent (Rs. 4.4 trillion),30 percent (Rs. 2.9 trillion) and 26 percent (Rs.2.6 trillion)respectively out of total 100 percent (Rs. 9.9 trillion) of viable debt demand that can be addressed by financial institutions in the near term (Figure 5.8). Together MSEs account for significant portion of total viable debt demand.

[26] Page – 38 of report 'Micro, Small and Medium Enterprise Finance in India, A Research Study on Needs, Gaps and Way Forward', *IFC, World Bank Group, 2012*

Figure5.8: Viable and addressable debt demand in MSME Segments (in Rs Trillion)



Source: produced from MSME Census, SIDBI, Primary Research IFC-Intellecap Analysis originally produced in IFC, World Bank Group, 2012

5.5.1.1 Micro Enterprise

They are majorly operating in order-driven industries. These are such as retail trade, repair and maintenance, restaurants and textiles among others. They have large demand for working capital. However, the financial institutions find it difficult to assess their credit worthiness. Firstly, because they mostly transact in cash, they do not accurately keep financial records. Secondly, they have insufficient collateral. The financial institutions demand collateral as security to reduce the risk associated with the lending. There is another fact related to the micro enterprises. These enterprises are mostly runs by entrepreneurs and most of the time; it is found that these entrepreneurs lack training to plan their resource. Moreover, they are lacking knowledge regarding different finance sources.

5.5.1.2 Small Enterprise

These enterprises are knowledge-based service industries and value-add manufacturing. They require higher capital investments. They can access both formal and informal finance. The entrepreneurs of these enterprises are aware of different finance sources compared to micro enterprises. Small enterprises in knowledge-based industries have limited access to immovable collateral or assets. It limits their capacity to access formal debt finance. Cash is the most preferred way of financing because they do not want to maintain records of financial statements. This creates problems in their access to finance from formal sources.

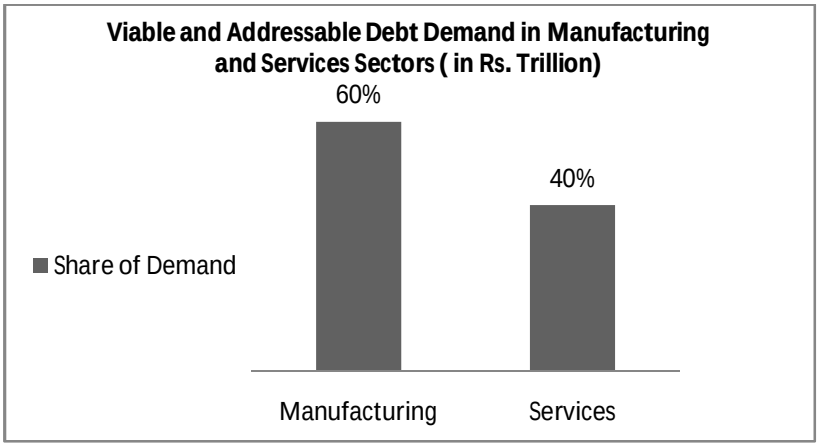
5.5.1.3 Medium Enterprise

These enterprises have better access to finance from different formal sources. They are mostly limited companies. This allows them to use capital in the form of equity. They prefer formal financial institutions as their preferred financiers. They are managed by professionals and less dependent on entrepreneur for management. They have access to both movable and immovable collateral. Thus, they can explore financing from multiple sources. They maintain proper financial records. Their financial history is traceable. They have easy access of financial services from multiple financial institutions. They can also form financial relationships with the banks which make their access to finance more smoothly.

5.5.2 Debt Demand by Type of Enterprise

The manufacturing sector and the service sector share 60 percent and 40 percent respectively in the viable debt demand (figure 5.9). The operations in manufacturing sector are more capital-intensive. Working capital requirement is very high in this sector. "Lower operating margins, coupled with inefficient utilization of capital in this sector, increase the average demand for finance (IFC, World Bank Group, 2012)".

Figure 5.9: Viable and Addressable Debt Demand in Manufacturing and Services Sectors (in Rs. Trillion)



Source: produced from MSME Census, SIDBI, Primary Research IFC-Intellecap Analysis originally produced in IFC, World Bank Group, 2012

The requirements of external capital of **the service industries** are low on an average compared to manufacturing side of MSMEs. However, there is a section inside the services which demands finance for working capital and capital expenditure like the manufacturing enterprises demand. These are firms involved in software development

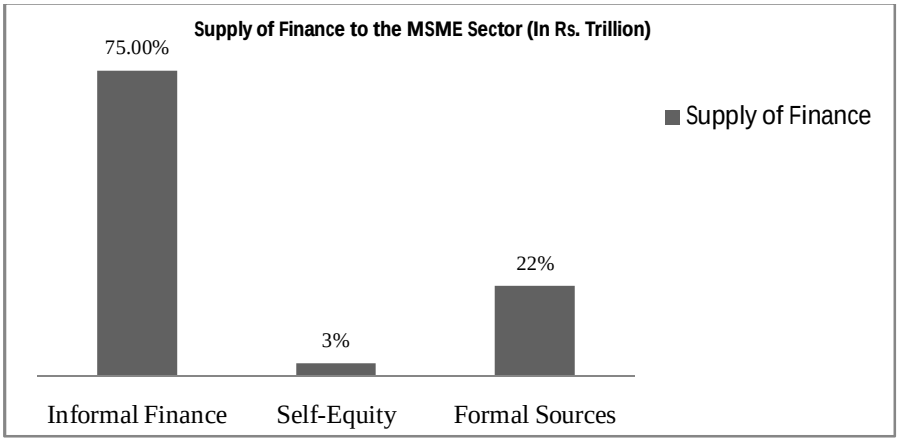
projects and management consultancy. They do not have sufficient immovable collateral. This creates problems in accessing finance from formal sources. They face problems in financing their requirement of man power.

5.6 Flow of Finance to the MSME Sector

The supply of finance to the MSME comprises of formal finance, informal finance and self-finance. The **formal sources** consist of *banks* and capital market. They provide debt capital to the MSMEs. **Informal sources** include both *institutional sources* and *non-institutional.* Finance from moneylenders and chit funds are considered as *institutional.* Finance from family, friends and family business are regarded as *non-institutional*. Most of the finance that flow to the sector comes from informal sources with large percentage from informal non-institutional sources. **Self-finance** means they use cash flow and personal resources to finance their investments.

The large share of finance that flow to the sector is informal sources and self-finance. It is around 78 percent. Formal sources contribute very less amount of finance. They cater to just 22 percent of the demand (see Figure 5.10). [Intellectual Capital Advisory Services Private Limited, 2012]

Figure5.10:Supply of Finance to the MSME Sector (In Rs. Trillion)



Source: produced from RBI, SIDBI, SME Times-2010, Primary Research IFC-Intellecap Analysis originally produced in IFC, World Bank Group, 2012

Informal finance dominates the sector. The MSME sector got an estimate finance of INR 25.5 trillion from informal sources and self-finance. Informal sources have a share of INR 24.4 trillion of funds. The *Non-institutional sources* accounts for INR 23.2 trillion. *The institutional informal sources* have a share of INR 1.2 trillion of funds. *Formal*

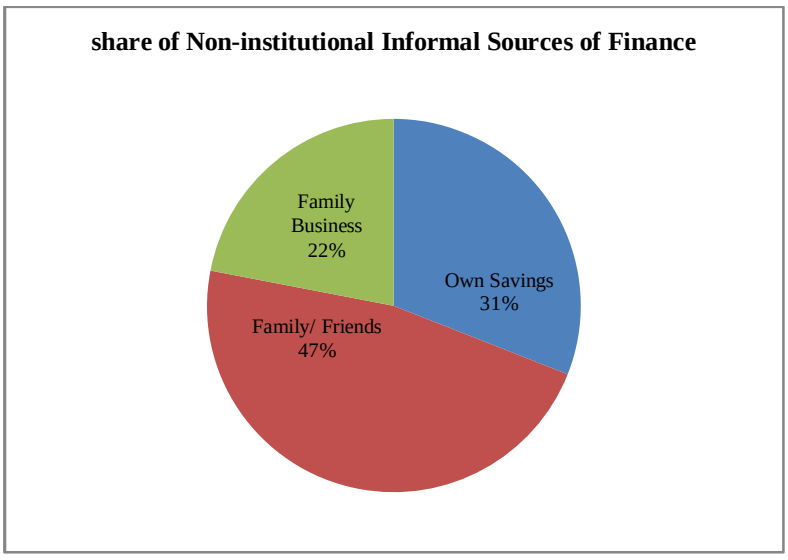
sources cater at INR 7 trillion. Banks and non-banking institutions have a larger share than the supply of formal equity has in total formal finance coming to the sector

Poor profitability and inadequate accessibility to capital markets and institutions lead to dependence on informal financing channels. Funding from those channels is considerably costlier than finance from the formal sources(De, Winter 09-10). This creates a vicious circle in the pattern of funding. High cost of finance results in poor profitability. Poor internal cash flow generation limits ability to service formal bank debt. This makes the firm less creditworthy from the bank's point of view and thus leads to greater dependence on alternative channels.(De, Winter 09-10).

5.6.1 Characteristic of the finance flow

A. **Informal finance**: in this type of finance, **Institutional Sources** ar**e** such as registered trade credit, moneylenders and chit funds. The finance from these sources is based on mutual agreement regarding repayment conditions. These sources do not insist on any immovable collateral. Financing from these sources mostly rely on reference and personal reputation. *Even though the cost of funds from informal sources is very high, micro and small enterprises prefer more to this source of finance because of timely disbursal and shorter turnaround times*.

Figure 5.11:Share of non-institutional informal sources of finance



Source: Report on Entrepreneurship in India, National Knowledge Commission

Non institutional sources are such as family, friends and family business. The finance from this source is usually not based on contract paper. They rely on mutual agreement. The composition of non-institutional informal finance has been presented in the figure-5.11.

Despite high rate of interest, informal finance is chosen by most of the micro enterprises. This is because of its non-contractual nature. It does not demand immovable collateral, rather it depends on "personal reputation or social collateral to hedge repayment risk(Intellectual Capital Advisory Services Private Limited, 2012)". This makes the enterprise easier to access informal finance.

B. **Self-finance**: entrepreneur also invests personal resources. He contributes equity to the enterprise.

C. Finance from the **formal financial** sector: *Banks* and government financing agencies consist large proportion of formal debt flowing to the sector. The rest of the demand of formal finance is provided by NBFCs**.** [(Intellectual Capital Advisory Services Private Limited, 2012)]

The large share of finance from *Formal equity* goes to mature small and medium firms. Most of the MSMEs lack operational and financial transparency. The legal challenges become obstacle for the MSEs in accessing equity capital. The high rate of failure of MSEs makes them risky and prevents the equity investors to invest.

5.6.2 Debt Flow by type of Financial Institutes

Among the formal sources, that finance the sector, schedule commercial banks provides the major share of around 92 percent. **Small banks** such as Regional Rural Banks, Urban Cooperative Banks, Government financial institutions (State Financial Corporation, State Industrial Development Corporations) meet very small percentage of debt finance. They contribute about 8 percent of the total finance from formal sources going to the sector. The share of public banks is highest in the total commercial banking debt going the sector.

Banks vary in factors like information regarding the MSME sector, branch networking, policies regarding management of risk, lending technology, operating efficiencies. These differences among various types of banks are the cause for differences in the amount of

debt going to the sector from banks. “These characteristics also determine the type of enterprise banks prefer to finance, the risk segment or pricing range for financial products, targeting mechanism and outreach strategy(Intellectual Capital Advisory Services Private Limited, 2012)”.

5.6.2.1 Schedule Commercial Banks

Public Banks: In comparison to private and foreign banks, these banks take lead in lending to the MSMEs since they have better access to the sector. They have better technique to manage risk related to credit. They make analysis of credit history of MSMEs. Because of all these, they have enough of empirical knowledge about the MSME sector. They have geographical outreach all over the country. This keeps them in advantageous position for reaching MSME segment and to meet the finance requirement of the sector. Mature Small enterprise require large amount of credit than the Micro enterprise. Banks give preference in financing the former than the latter as it gives the scope for better management of transaction cost.

Private and Foreign Bank: their branch networking is not wide. They focus on enterprises which are within their reach. To enhance their outreach, they hire third party agencies. The main focus of banks in private banks and foreign banks are on efficiencies and higher profitability. When these factors are not there, they do not go for expansion branch networking. This puts obstacles to reach most of the MSMEs having wide dispersal across the country.

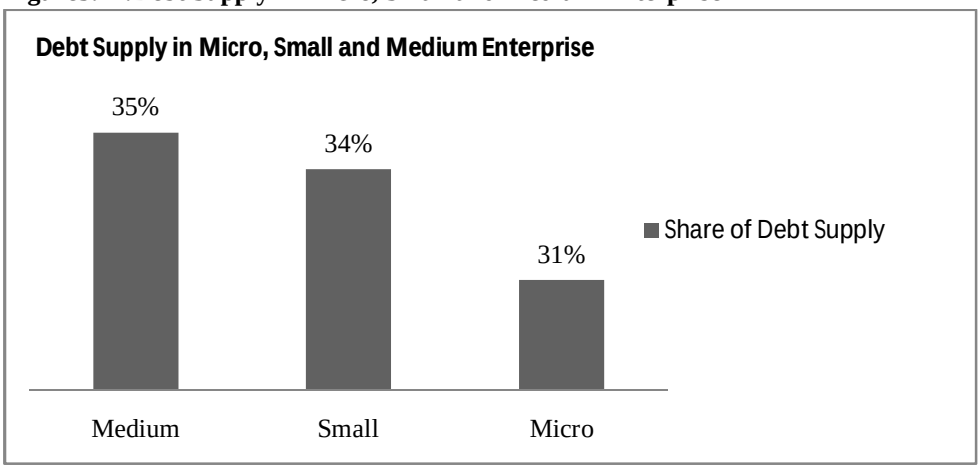
Schedule commercial banks have their own comprehensive framework and processes to manage risk. They take time in processing financial proposals. This becomes one of the major constraints for MSMEs in accessing credit at the time of need.

5.6.2.2 Small Banks: Small banks have extensive potential for outreach. In most of the cases, they have enough information regarding firms and their locality. They can meet the finance requirement of much larger MSMEs. But they supply just 8 percent of total formal debt going to the sector. This is because they have inadequate resource. They can mobilize very less amount of deposit. They depend more on government agencies and sponsors for resource. Their assessment policy of credibility of borrower is very poor with less security for loan. That generates large NPA.

5.6.3 Debt Flow by Enterprise Size

As the figure-5.12 shows, the financial institutions prefer serving the small and medium enterprise segments despite the fact that the micro enterprises have the largest demand. The formal financial institutions prefer to serve the small and medium enterprises. This is because of higher average debt demand and lower cost of transactions. "The formal financial sources provide only 40 to 60 percent of the actual requirement of the micro and small enterprises"(Intellectual Capital Advisory Services Private Limited, 2012). Both short term and long term financing to the micro and small enterprises is inadequate. The cause behind this is that these firms cannot meet collateral required by the finance supplier. This put pressure on the enterprise particularly the smaller one to depend on the informal sources even though that is costly for them. However, most of the finance requirement of medium enterprises is sufficiently met by the formal financial institutions.

Figure5.12:Debt Supply in Micro, Small and Medium Enterprise



Source: produced from RBI, SIDBI, SME Times-2010, Primary Research IFC-Intellecap Analysis originally produced in IFC, World Bank Group, 2012

5.6.4 Debt Flow by Type of Enterprise

The manufacturing sector and service sector account for 55 percent and 45 percent respectively of total debt supplied to the sector from commercial bank. The manufacture sector receives higher share of debt than the service sector. However, the direction of supply of finance is moving away from manufacturing sector to service sector. The knowledge based enterprises get much lower debt finance because they have limited collateral to obtain finance.

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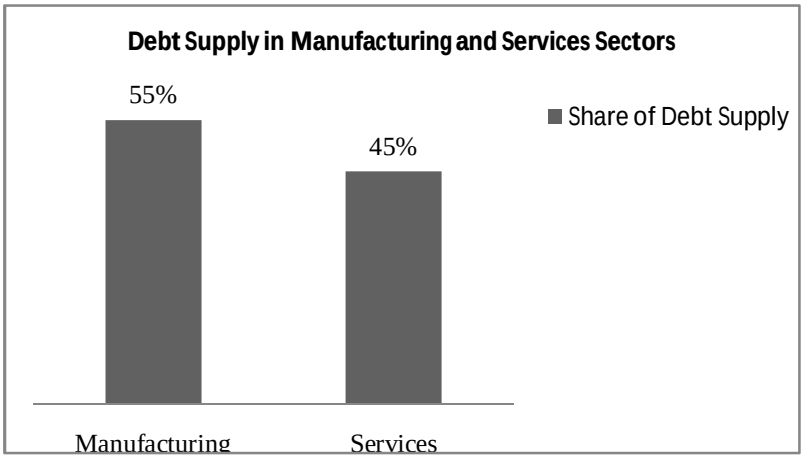
Figure5.13:Debt Supply in Manufacturing and Services Sectors

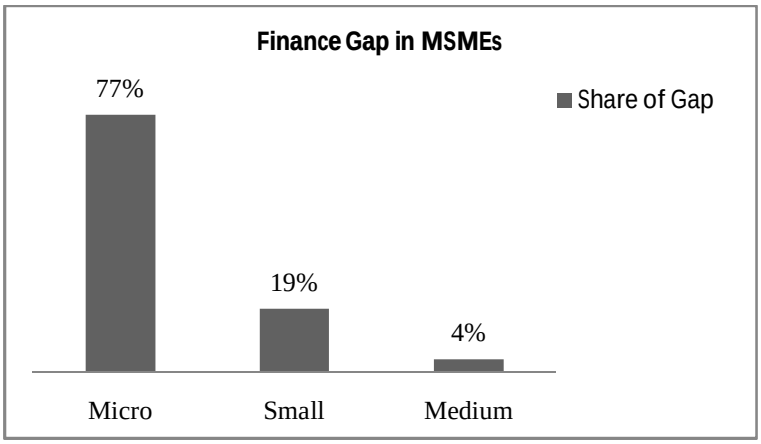


Source: produced from RBI, SIDBI, SME Times-2010, Primary Research IFC-Intellecap Analysis originally produced in IFC, World Bank Group, 2012

5.7 Finance Gap in the MSME Sector

There is huge finance gap for micro enterprises as presented in the Figure-5.14. The un-served micro units and under-served small units contribute mostly for such large gap. The study[27] estimates that financial institutions meet only 40 to 70 percent of the demand of an enterprise on an average. Banks are not interested to provide finance for working capital to MSMEs. However MSMEs cite working capital finance as of greatest need.

Figure5.14:Finance Gap in MSMEs



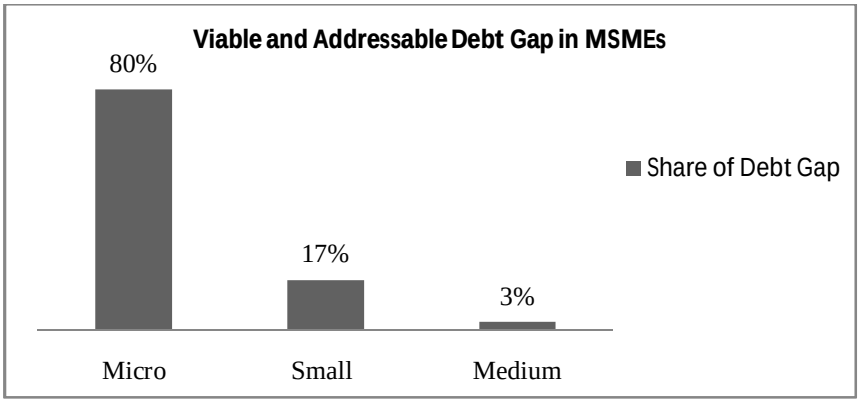
Source: produced from RBI, SIDBI, SME Times-2010, Primary Research IFC-Intellecap Analysis originally produced in IFC, World Bank Group, 2012

5.7.1 Demand-Supply Gap of debt finance by Size of Enterprises

The Figure 5.15 shows that the level of debt gap declines as the size of enterprises increases.

[27]*MSME Finance in India A Research Study on Needs, Gaps and Way Forward (November, 2012), IFC, World Bank Group*

Figure 5.15:Viable and Addressable Debt Gap in MSMEs



Source: produced from RBI, SIDBI, SME Times-2010, Primary Research IFC-Intellecap Analysis originally produced in IFC, World Bank Group, 2012

The **micro enterprise** has the largest share of total debt gap. This is because of unserved and underserved enterprises. The presence of micro enterprises is very high in the manufacturing sector. But, the commercial banks are not adequately reaching out their banking services to these micro firms. Being their size of operation is small; they do not have sufficient collateral to have access to debt. Moreover, the entrepreneurs in the micro enterprises are less aware of the products and schemes of financial institutions and government. In usual case, they rely on their internal funds and retained earnings.

The financial institutions face problems and challenges in assessing the risk associated with financing micro enterprises. They do not maintain proper financial records. As a result, the information regarding them is not easily available. This influences the credit decision of banks. So they cannot meet the target in providing the debt to these enterprises. The traditional credit assessment tools are mostly used to assess these enterprises for their credibility and in the decision making process by the financial institutions. These decision making process leaves out many of the micro enterprise who needs finance.

The small enterprises are more attractive to the financial institutions because entrepreneur of these enterprises are more financially aware. Yet the debt gap for small enterprise is mostly because many small enterprises are underserved. There are many factors from both demand and supply side; those give explanation of debt gap. There is shortfall in working capital finance. The amount of finance provided by banks is not adequately serving their need. This is mostly because of information asymmetry and

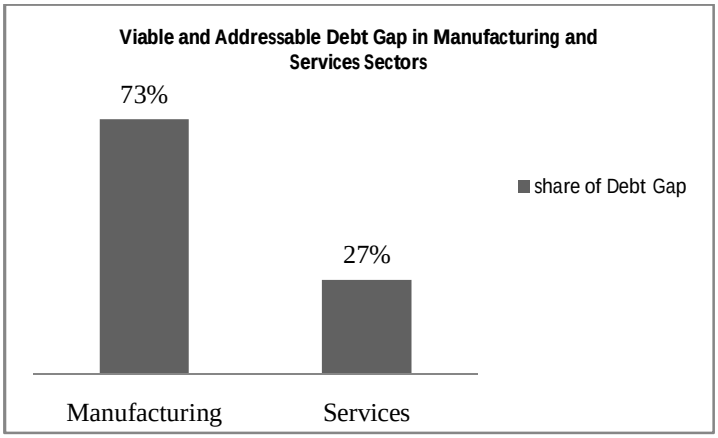
opaqueness in the reported financial statement. It is mentioned that most of these enterprises prepare financial statement for taxation purposes. However, the performance of the enterprise cannot be assessed from their financial statement.

The debt gap in case of **Medium enterprises** is very less. Most of the debt demand of this segment of MSMEs is met by the financial institutions.

5.7.2 Demand-Supply Gap of debt finance by Type of Enterprises

There is a smaller debt gap in the services sector than the manufacturing sector as shown in figure-5.16. One reason can be that retail trade is part priority sector which has been defined under priority sector lending.

Figure 5.16:Viable and Addressable Debt Gap in Manufacturing and Services Sectors



Source: produced from RBI, SIDBI, SME Times-2010, Primary Research IFC-Intellecap Analysis originally produced in IFC, World Bank Group, 2012

5.8 Obstacles to finance (debt finance) for MSMEs

A large share of formal finance received by industry is from banks. The role of banks in financing MSMEs is more important in a situation where most of MSMEs cannot access capital market to raise finance. In India, the finance going to micro and small enterprises from banks is coming under priority sector lending. However, banks do not have any target limits necessary to fulfill.

The micro and small firms face credit constraints in formal credit markets especially in debt financing. Question is why regular banks provide insufficient debt to MSEs. The explanation to demand supply gap of debt-finance to MSMEs is provided by many factors such as lower returns, a lack of intermediary skills, higher risk perceptions etc.

- Banks are not adequately providing MSMEs with capital. There is large debt financing gap for MSMEs in India.
- "Banks can often earn high returns in their core markets. This gives them little reason to take on additional risk in the MSME market. Banks in countries with immature financial systems often face little competition and a low threat of entry. Thus, they can earn handsome returns by lending to large public and private players.[28] They might realize the potential of the MSME market but they have little incentive to move outside of their comfort zone and develop MSME products[29](Dalberg, 2011)".
- The MSMEs lending involves high administrative costs. This is because firstly, the transaction costs do not change as the size of loan change and secondly, the size of loan required by MSME is small. Because of that, they are reluctant to lend MSMEs.
- In India, the share of short term deposits is very high compared to the share of long-term deposits in the total deposits of banks. So they are dependent more on the former in providing finance. There is a "mismatch in the maturities of assets and liabilities (Dalberg, 2011)". In such situation, they face difficulties in offering long-term finance. Thus, banks are challenged in meeting the need of long-term finance of borrowers including MSMEs.
- "Banks have limited information, skills and regulatory support to engage in MSME lending (Dalberg, 2011)".Usually, they do not maintain financial records more particularly on their returns, revenue and profits. The availability of small business credit scores is very less. This limits the potential of MSMEs as a customer to receive lending from the bank. Because in such situation, banks face difficulties to establish credit-worthiness. This is a key barrier in MSME lending. There is problem of lack of skill on the part of bank to establish credit worthiness of MSMEs. It translates into inadequate risk management.
- The above mentioned features of banking system breed unfavorable lending conditions for MSMEs. "The higher costs, lack of skills and higher risks of investment in MSMEs translate into high interest rates and collateral requirements

[28] USAID, Paul L. Freedman, 2004." Designing loan guarantees to spur growth in developing countries"

[29] For example, a recent survey of 91 banks in 45 developed and developing countries found that over 80% of these banks perceived the SME sector as a large market with good prospects (Beck, Demirguc-Kunt, Martinez Peria, 2008)

(Dalberg, 2011)". Most of the time MSMEs do not have enough collateral to obtain bank lending. They usually operate in environments with weak property rights. In most of the cases, the house or land in which they operate is occupied on rent basis. They do not have strong property entitlement. In such situation; they cannot fulfill the collateral requirement of banks and posting collaterals is complicated for the MSMEs.

- Further, financing MSME is suffering because of self-reinforcing market failure. "The lack of MSME lending leads to higher costs and lack of familiarity and knowledge, which in itself can lead to adverse selection (only the riskiest SMEs seek external financing) (Dalberg, 2011)", which in turn can lead to higher costs and interest rates, and less lending. Stiglitz and Weiss(1981) showed that this vicious cycle/market failure can lead to an end - state in which no MSME lending takes place at all.

5.9 Conclusion

Access to finance is troublesome for MSMEs in India. On the one side, they do not get sufficient capital to meet their requirement of working capital and finance investment as they have inadequate collateral and credit histories to access their finance requirement. On the other side, the suppliers of finance say financing MSMEs, particularly the MSE, involves challenge and risk. The credit institutions complain they are not confident about credit worthiness of these firms because of information asymmetry. This leads to a situation of high transaction costs on the part of suppliers in case they involves in the financing business to these firms.

The analysis of secondary literature exhibits three attributes. Firstly, finance constraints are choking the growth and development of these firms. Secondly, evidence of problems in accessing finance by the MSE in India. Thirdly, most of the MSE firms rely on the internal finance and profits to finance their working capital and investment in India. It would be better to analyse this problem in greater details in the Indian context by doing firm level analysis using unit level data from ASI and NSSO and drawing conclusion regarding this problem through analysis of the information from these sources.

CHAPTER - 6

ACCESS TO FINANCE (AND THE GROWTH) OF MSMES IN INDIA: ANALYSIS OF EVIDENCE FROM THE NSSO AND THE ASI

6.1 Introduction

The financial (credit)market is imperfect. The financial institutions (particularly banks) do not have complete information about their borrowers. Information problems make loan to borrowers risky. “Imperfect and costly information leads to adverse selection and moral hazard problems, the expected rate of return to the bank decreases with the increase in interest rate (Demirguc-Kunt et al., 2008)”. In such a situation rate of interest which is also price of the credit does often fail to clear the credit market. Even if demands for funds increases, banks are reluctant to increase the interest rate beyond a certain level and they ration the credit market. That is why there is credit rationing even in the equilibrium.

Because of inadequate information regarding projects of firms on the part of banks, they ask for collateral to secure the credit they provide to the firms. Banks can also reduce the risk associated with credit by assessing worthiness of the project and credit history of the firm. The credit market imperfections determine the amount of access to finance of the many small firms and their investment in physical capital. The need of collateral becomes an important barrier in accessing credit because such firms do not have enough collateral to secure loan in usual case. In other words, these pose a critical barrier in gaining access to finance.

Information asymmetries and transactions costs are more binding on the micro and small enterprises. MSMEs are often more information opaque. Very often, they lack collateral and also credit history. Financing to MSMEs becomes challenging as “asymmetric information may create adverse selection and moral hazard problems (Wagenvoort & Meier, 2003)”. “The financial institutions have traditionally limited their exposure to the MSME sector due to the perception that these businesses carry risk and high cost of delivery and limited access to immovable collateral(Intellectual Capital Advisory Services Private Limited, 2012)”. Consequently, MSMEs face credit rationing. They do

not receive enough credit they need even though they fulfill the preconditions put by creditors. Therefore, small firm tends to face high access barriers than do large firm. They are restricted by gaps in the credit market like the administrative costs and collateral requirement. As a result, small enterprises depend more on their internal finance in making investment and become beneficiary of development.

In this background, the discussion on the extent of access to finance of Indian MSMEs has been presented in greater details in this chapter and the following chapter - 7 based on the analysis of NSSO data on the unorganized manufacturing sector and the ASI data. The objectives of the this chapter are

1. To make an analysis of the fact that Access to finance is an important problem as the firms cite.
2. To analyse amount of loan MSME receive and the sources of the loan.
3. To examine the capital structure of the firms and draw facts about extent of financial access of enterprise by their size and age
4. To analyse relationship between enterprise's growth and growth of outstanding loan by size of enterprise

In the light of above objectives the chapter is divided into six sections. The section two describes the decomposition of manufacturing sector based on the available data and also looks at economic contributions of different sizes of firms. Section three analyses the level of access to finance. It has been studied by analysing the shortage of capital along with the other important problems as cited by them, level and sources of outstanding loan received by MSMEs with a focus on level of owned fixed assets by the enterprises, based on the results from NSSO survey of unorganized manufacturing units. Section four will collect fact about and describe access to finance by looking into the capital structure of firms by size and age of enterprises. Relationship between enterprise's growth and growth of outstanding loan by size of enterprise is presented in section five. Section six concludes with arguments developed in the chapter.

6.2 Distribution of total manufacturing enterprises: Micro, Small, Medium and Large enterprises

Apart from other sources, data for manufacturing sector in India comes from ASI and NSSO survey of unorganized manufacturing enterprise. Both data sources taken together give almost complete picture of manufacturing sector as a whole. The enterprises from both the sources have been classified into 'micro', 'small' and 'medium' enterprises based on the definition of Micro, Small and Medium enterprises under Micro, Small and Medium Enterprises Development (MSMED) Act, 2006. However, the study is not proposing that this is the MSME sector that Census of MSME would have captured.

Most of the enterprises in the sector are micro units, few are small and a few are large. The presence of medium units is quite low. NSSO units are largely situated in rural India whereas ASI units are in urban areas. In NSSO, the percentage of micro units is almost consistent over the years. It has declined in the ASI by 6%between 2005-06 and 2010-11 and that of small and large units are increasing but the number is very less both for former and latter in All-India (see Table-6.2).

Table 6.1: Distribution (Number of units) of manufacturing sector in All-India by type of enterprises and data source

	ASI			**NSSO**		
2000-01	Rural	Urban	Total	Rural	Urban	All-India
micro	29710	60707	90417	11933440	5086767	17020207
small	9795	14178	23973	1235	2956	4191
medium	1463	1264	2727		16	16
large	2607	2140	4747			
Total	43575	78290	121865	11934675	5089739	17024414
2005-06	Rural	Urban	All-India	Rural	Urban	All-India
micro	34175	58805	92980	12125058	4938454	17063513
small	10999	14504	25503	3175	4067	7242
medium	1717	1558	3275	33	32	65
large	3493	2628	6121			
Total	50384	77495	127879	12128266	4942553	17070820
2010-11	Rural	Urban	All-India	Rural	Urban	All-India
micro	40784	68143	108928	10112259	7086868	17199128
small	13538	22314	35852	2821	8311	11132
medium	1652	1932	3585	2	9	10
large	6123	5410	11533			
Total	62098	97799	159897	10115082	7095188	17210270

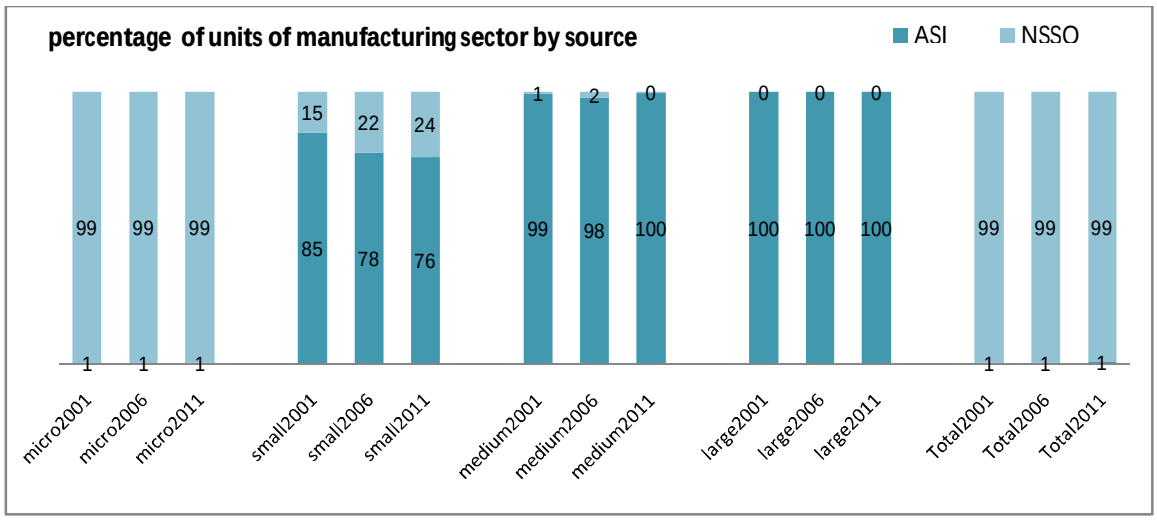
Source: calculated from unit level data of ASI and NSSO survey on unorganized manufacturing sector

Table 6.2: Distribution of Percentage of Number of units in All-India by type of enterprises and data source

	ASI			NSSO		
2000-01	Rural	Urban	All-India	Rural	Urban	All-India
micro	68	78	74	99.99	99.94	99.98
small	22	18	20	0.01	0.06	0.02
medium	3	2	2	0.00	0.00	0.00
large	6	3	4			
2005-06	Rural	Urban	All-India	Rural	Urban	All-India
micro	68	76	73	99.97	99.92	99.96
small	22	19	20	0.03	0.08	0.04
medium	3	2	3	0.00	0.00	0.00
large	7	3	5			
2010-11	Rural	Urban	All-India	Rural	Urban	All-India
micro	66	70	68	99.97	99.88	99.94
small	22	23	22	0.03	0.12	0.06
medium	3	2	2	0.00	0.00	0.00
large	10	6	7			

Source: as in table-6.1

Figure6.1: Percentage of units of manufacturing sector by source of data



Source: calculated from unit level data of ASI and NSSO survey on unorganized manufacturing sector

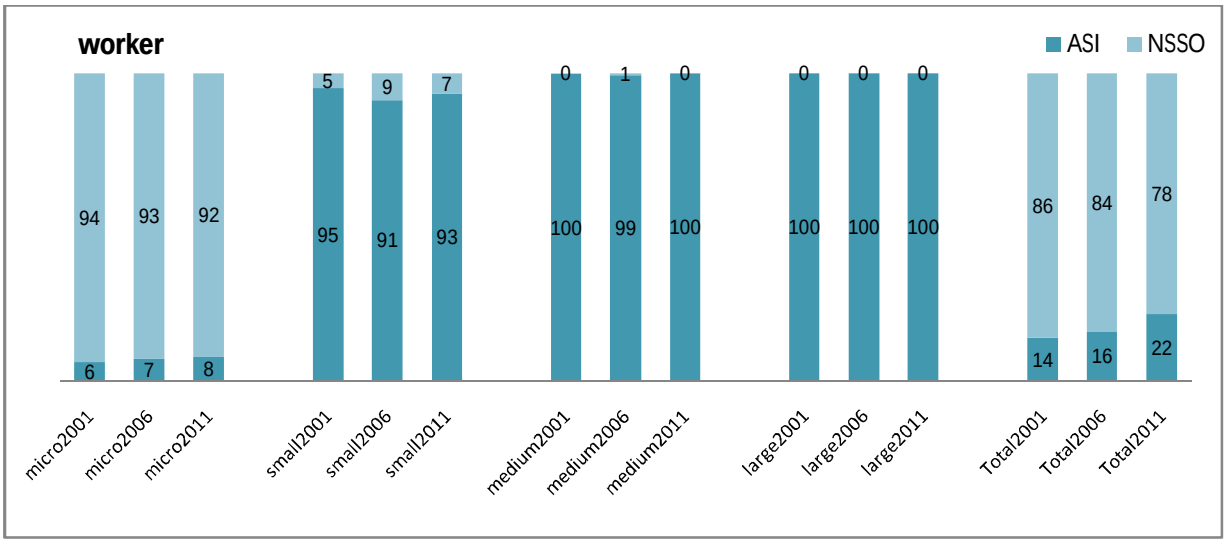
Most of the manufacturing sector is NSSO units (99%) and ASI units are just 1% in the total (Figure 6.1). Almost all the Micro enterprises in the sector are from NSSO. Small enterprises are partly from NSSO but mostly from ASI. The entire Medium and large units are from ASI. This is true for all the years (2001, 2006, and 2011). In other words, most of NSSO units are Micro enterprises, a fraction of it is Small enterprises and a few are Medium. Most of ASI units are also Micro enterprises but there is also presence of

small, medium along with large enterprises (Table 6.2). Following, thereby, is the fact that the manufacturing sector is comprised of a large number of micro enterprises and little number of small and large enterprises with almost missing middle.

The NSSO units are at the lower end whereas the ASI units are at the upper end of the spectrum of manufacturing enterprises in all the classes of enterprises in terms of worker per enterprises, fixed asset per enterprises and gross plant and machinery (GPM)per enterprises (Table A6.1 to Table A6.3 in Appendices to Chapter-VI). There is great gap between the micro enterprises in NSSO and those in ASI and so for other classes of enterprise. The NSSO units are tiny and smaller and the ASI units are bigger and larger. The former set can be called as the tiny and smaller Micro, Small and Medium enterprises (MSMEs) and the latter set as bigger and larger MSMEs excluding the large enterprises.

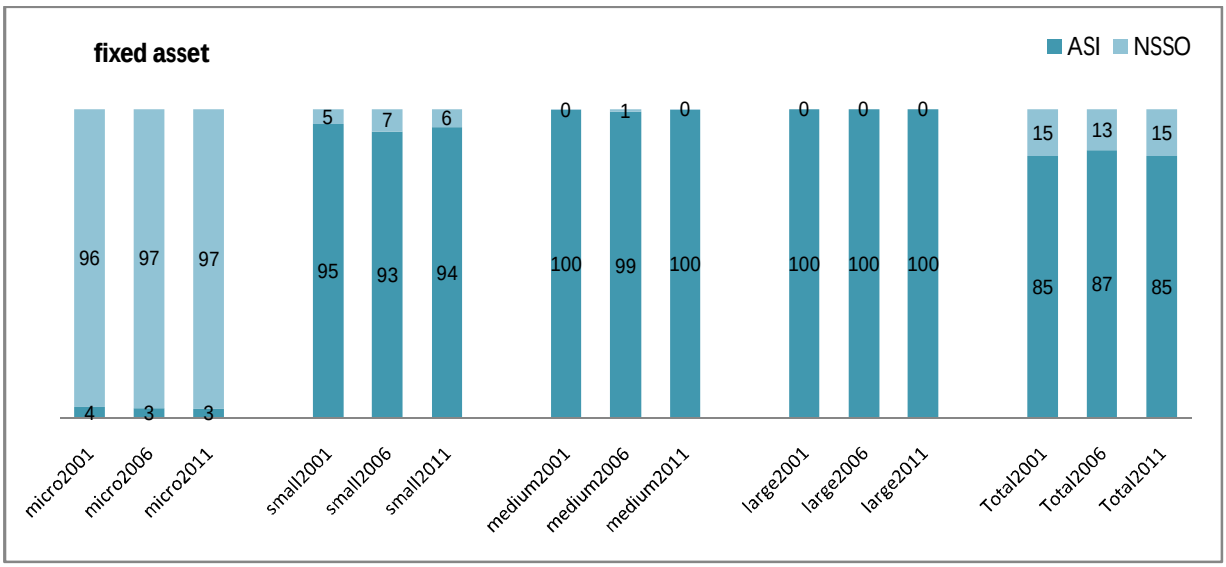
On the one hand, the tiny and smaller MSMEs (NSSO units) create most of employment in the sector compared to bigger and larger MSMEs and Large enterprises (ASI units) (Figure 6.2). On the other hand, the latter set of enterprises has high level of fixed asset, and gross value of plant and machinery compared to the former set (Figure 6.3, Figure 6.4).

Figure 6.2: Percentage of total worker of manufacturing sector by source of data



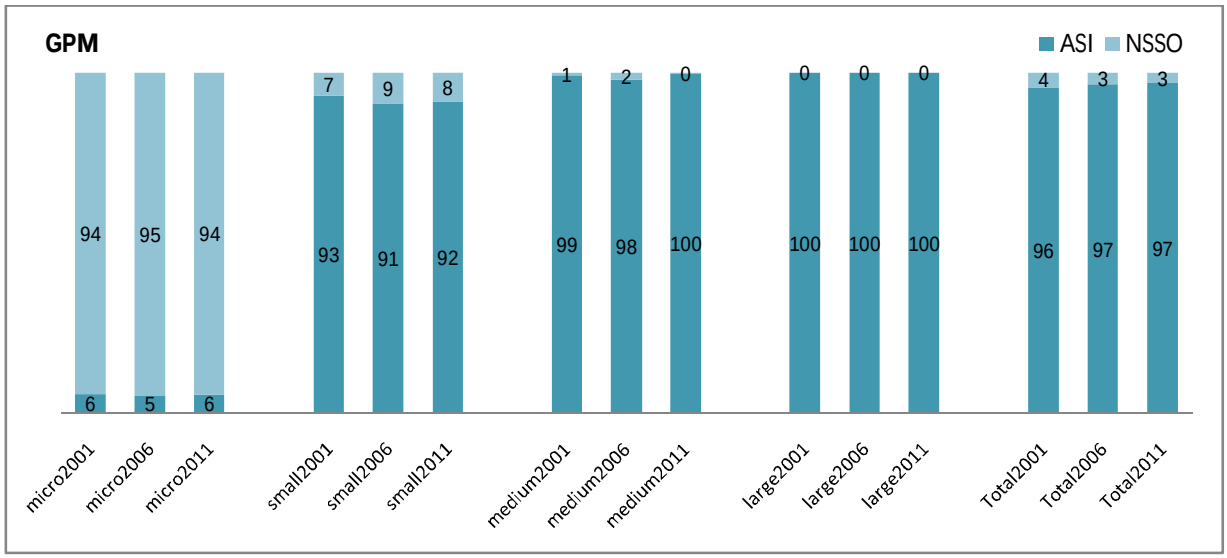
Source: as in figure-6.1

Figure 6.3: Percentage of fixed asset of manufacturing sector by source of data



Source: as in figure-6.1

Figure 6.4: Percentage of GPM of manufacturing sector by source of data



Source: as in figure-6.1

6.3 Access to Finance

In this section, a descriptive analysis of access to finance is presented based on certain indices. The problems that the firm faced as cited by them in the survey are discussed. The sources of loan for smaller MSME have been analysed. The comparison of level of outstanding loan of smaller MSME of NSSO vs. that of larger MSME of ASI is made. The outstanding loan per enterprise of smaller MSME is compared with that of larger MSMEs of ASI. Comparison of loan as a percentage of owned assets of smaller MSME

vs. larger MSME is made by the size of firms. Also loan as a percentage of owned assets of MSME is studied in comparison with that of large firms.

Table 6.3: Problems-faced cited by the firms during the survey, in percentage.

Problems faced	Type of Enterprise	2000-01	2005-06	2010-11
non-availability of electricity connection	All-India	11	11	-
	micro enterprise	11	9	-
	small enterprise	8	5	-
power cut	All-India	16	15	**19**
	micro enterprise	15	23	**28**
	small enterprise	45	**47**	**26**
shortage of capital	All-India	**49**	**42**	**11**
	micro enterprise	**49**	**49**	**10**
	small enterprise	**49**	**17**	**11**
non-availability of raw material	All-India	15	14	13
	micro enterprise	15	11	8
	small enterprise	27	26	1
marketing of product	All-India	19	18	**26**
	micro enterprise	19	17	**24**
	small enterprise	27	27	**14**
non-recovery of financial dues	All-India	6	6	10
	micro enterprise	6	1	10
	small enterprise	1	1	1
non-availability of labour/labour problems	All-India	1	1	4
	micro enterprise	1	7	5
	small enterprise	1	4	13
labour disputes	All-India	1	-	1
	micro enterprise	1	-	1
	small enterprise	1	-	33
no specific problem	All-India	65	70	62
	micro enterprise	65	64	61
	small enterprise	53	52	33

Notes: '-'not available,

Source: Own Calculation from the unorganized manufacturing NSSO unit level data of 56th, 62nd and 67throunds.

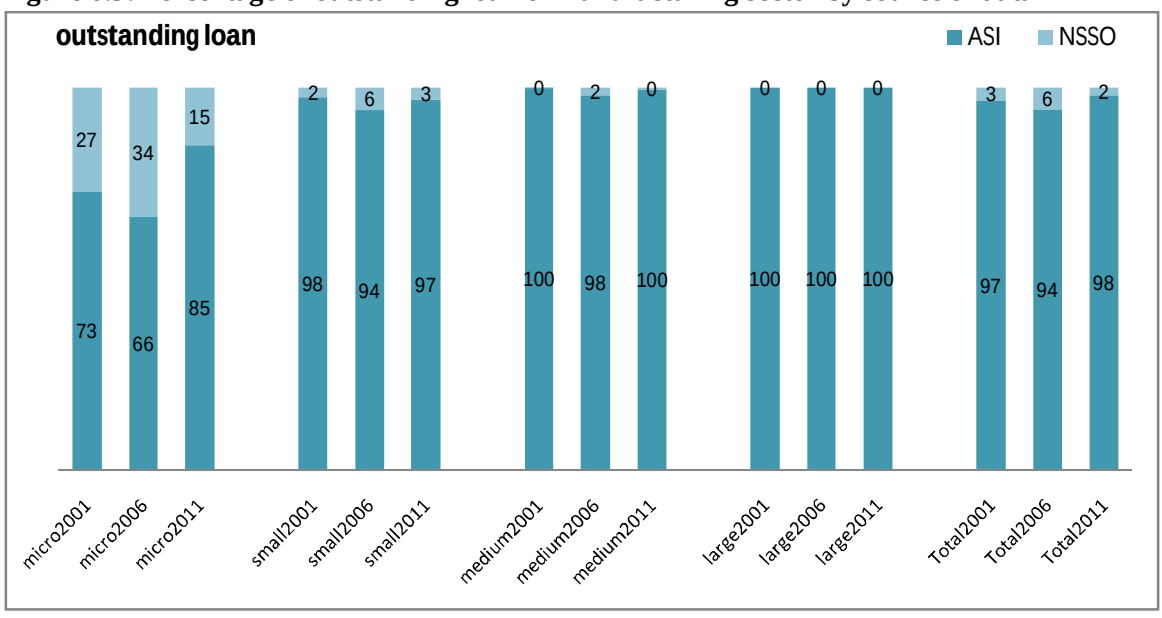
6.3.1 Shortage of Capital as Cited

In 2001, large percentages of tiny Micro and Small enterprises have cited the problem of shortage of capital faced by them. In 2006, it is the same shortage of capital for tiny Micro enterprises but for Small enterprises it is power cut. In 2011, the problem of power cut and marketing problems are cited in descending order by large percentage of tiny Micro and Small enterprises (see Table-6.3). These firms are mostly situated in rural and semi urban area. Given the shortage of capital, marketing problems for their products is arising harder. They cannot market their product if the product is of low quality; or there is inability of access to better market due to problems in transport facility. These are some way manifestation of shortage of capital. Shortage of capital is directly or indirectly cited as problem by large number of tiny Micro and Small firms.

6.3.2 Level of Outstanding Loan

The level of outstanding loan for the larger and bigger MSMEs is higher compared to the tiny and small MSMEs. Most of the outstanding loan is received by the very small number of the larger and bigger MSMEs. The percentage goes beyond 90% over all the periods. The large number of tiny and small MSMEs has received the less of it. For this category, it is hardly 6% or less than that over all the periods (figure 6.5).

Figure 6.5: Percentage of outstanding loan of manufacturing sector by source of data



Source: as in figure-6.1

The distribution of outstanding loan between smaller MSME and larger MSME & large firms is very unequal. The 1 percent of larger firms whether they are MSME or Large firms in manufacturing sector receiving almost all the loan provided by the bank to this sector. It is showing the fact that large segment of Indian manufacturing sector is either not using external finance or not able to access external finance.

6.3.3 Sources of loan and outstanding loan of Enterprises

The sources of loan for smaller MSMEs based on the NSSO data of unorganized manufacturing survey are

a. Central and state level term lending institutions, government (central, state, local bodies), banks & societies (public sector, commercial, co-operative)
b. Other institutional agencies: Loans advanced by institutional agencies like
    - Khadi and Village Industries Commission,
    - Life Insurance Corporation,
    - Chit Funds, etc.
c. Moneylenders
d. Business partner
e. Suppliers/ contractors
f. Friends and relatives
g. Others

In 2001 and 2006, NSSO has the data on loan from institutional source. In 2011, however, this source of loan has been separated into its different segments and also added micro finance as a source of loan for the enterprises. This source constitutes major percentage of their total loan that MSMEs are receiving in all the periods. The next major sources are money lenders and 'friends & relatives' for Micro enterprises. For Small enterprises, the 'Other institutional agencies' plays the next major source of loan. However, they do rely much on friends& relatives and money lenders (Table 6.4 and Table 6.5).

The loan percentage from 'Central and state level term lending institutions, government, banks & societies' have declined in 2006 significantly compared to 2001 level. It moved

Table 6.4: Distribution of outstanding loans by source loans to total amount per enterprise and type of enterprises, 2000-01

Sector	Total		loan from different agencies as percentage to total outstanding loan						
	Amount (in Rs.00)	%of total amount to owned asset	central and state level term lending institutions, banks and other societies	other institutional agencies	money lenders	business partner	supplier/ contractor	friends and relatives	others
All-India	60	12	69	3	12	3	2	8	3
Micro enterprises	55	11	70	2	12	3	2	8	3
Small Enterprises	19000	28	58	15	9	1	0	10	5
Medium Enterprises	59854	8	100	0	0	0	0	0	0

Source: calculated from unit level data of 56th rd. survey on unorganized manufacturing sector.

Table 6.5: Distribution of outstanding loans by source loans to total amount per enterprise and type of enterprises, 2005-06

Sector	Total		loan from different agencies as percentage to total outstanding loan						
	Amount (in Rs.00)	%of total amount to owned asset	central and state level term lending institutions, banks and other societies	other institutional agencies	money lenders	business partner	supplier/ contractor	friends and relatives	others
All-India	122	22	49	7	9	3	2	8	23
Micro enterprises	106	20	48	4	9	3	1	8	26
Small Enterprises	33916	51	48	30	5	4	6	4	3
Medium Enterprises	536540	94	93	3	0	0	0	0	4

Source: calculated from unit level data of 62nd rd. survey on unorganized manufacturing sector.

Table 6.6: Distribution of outstanding loans by source loans to total amount per enterprise and type of enterprises, 2010-11

Sector	Total		loan from different agencies as percentage to total outstanding loan											
	Amount (in Rs.00)	%of total amount to owned asset	central and state level term lending institutions, banks and other societies	Term Lending Institutions	Government	Commercial banks	Cooperative banks	Micro Finance	other institutional agencies	money lenders	business partner	supplier/ contractor	friends and relatives	others
All-India	75	7	71	7	7	44	12	1	1	14	1	3	7	2
Micro enterprises	61	6	68	7	7	45	9	1	2	15	1	4	7	2
Small Enterprises	19380	38	85	10	4	41	30	0	0	5	0	0	8	1
Medium Enterprises	802884	123	53	0	52	1	0	0	0	0	0	0	47	0

Source: calculated from unit level data of 67th rd. survey on unincorporated survey on non-agricultural enterprises.

down from 70 percent and 58 percentage to 48 percent for Micro and Small enterprises respectively. The Micro enterprises depended more on ‘Other’ source which has increased to 26 percent in 2006 from 3 percent in 2001. The Small enterprises have moved to ‘other institutional agencies’ with increase from 15 percent in 2001 to 30 percent in 2006 (see Table 6.4 and 6.5).

During 2011, the loan percentage from ‘Central and state level term lending institutions, government, banks & societies’ have increased to 68 percent and 85 percent for Micro and Small enterprises respectively compared to 2006 level. This can be a reason for the declined dependence of Micro enterprise on ‘Others’ and that of Small enterprises on ‘other institutional agencies’. The dependence of the Micro enterprises on ‘Others’ source has declined to 2 percent in 2011 from 26 percent in 2006 and that of Small enterprises on ‘other institutional agencies’ to almost zero percent in 2011 from 30 percent in 2006. Another interesting story is that, for Medium enterprises, the share of loan from ‘Central and state level term lending institutions, government, banks & societies’ have declined to 53 percent in 2011 from almost 100 percent in the earlier period. Reason behind this may be their increasing dependence on ‘Friends & relatives’ as a source of loan.

Money lender is second largest source of loan for Micro enterprise. This source has provided around 12 percent of total loan Micro enterprises have in the year 2001 and its percentage has declined in 2006 and then increased in 2011. It is also one of the important sources of loan for Small enterprise too in 2001. However, it has become less important in 2006 and 2011. This might be because they could access more loans from 'other institutional agencies’ in 2006 and ‘Central and state level term lending institutions, government, banks & societies’ in 2011 as discussed in the previous paragraphs.

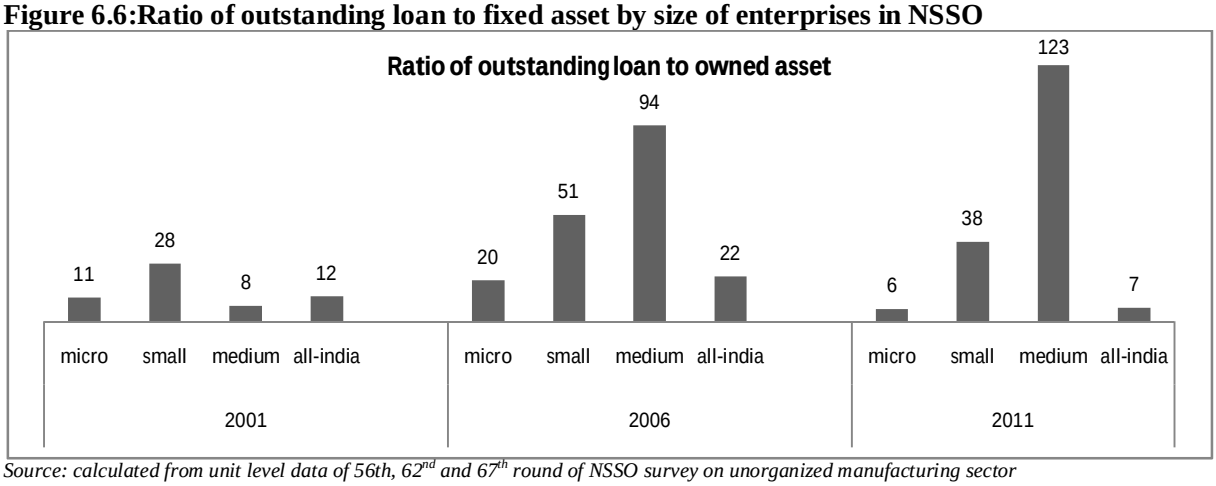
Friends & relatives’ is another important source of loan whose percent in the total loan of Micro enterprises is almost constant around 7 to 8 percent over the years. For Small enterprises, it has declined from 10 percent in 2001 to 4 percent in 2006 and then increased to 8 percent in 2011. This source has become second most important source of loan for Medium enterprises contributing around 47 percent in 2011 from almost zero percent in the earlier periods.

6.3.4 Loan per enterprise

The outstanding loan per enterprises of smaller MSMEs is quite less than that of larger MSMEs in all the classes [Table A6.4 in Appendices to Chapter-VI]. It is also very low for Micro enterprise as compared to the Small and Medium enterprises in all the periods, 2001, 2006, and 2011. For smaller MSMEs, it is just 55 hundreds rupees for Micro whereas it is beyond Rs.19 lakhs per enterprise for Small and Medium enterprises in 2001. There exists a very large gap between the micro vs. small and medium enterprises in loan per enterprise. Same is the case in 2006 and 2011. However, the loan per enterprise has increased in 2006, and then it declined in 2011. Presently, it is larger than what it was in 2001. (See Table 6.4 to 6.6)

6.3.5 Loan as a percentage of owned assets and fixed asset increases with size of the firm in the period 2006, 2011 (Figure 6.6). That means this percent for Medium enterprises is higher than for Small enterprises and that of Small is higher compared to Micro enterprises. Micro enterprises have low proportion of loan compared to Small and Medium enterprises, so is true for Small enterprises if we compare Small enterprises with Medium enterprises. Access to loan of Micro enterprises is lower. But this ratio for Micro enterprises has increased from 2001 to 2006 to a higher level and then declined in 2011 even to a lower level what it was in 2001.

Figure 6.6:Ratio of outstanding loan to fixed asset by size of enterprises in NSSO

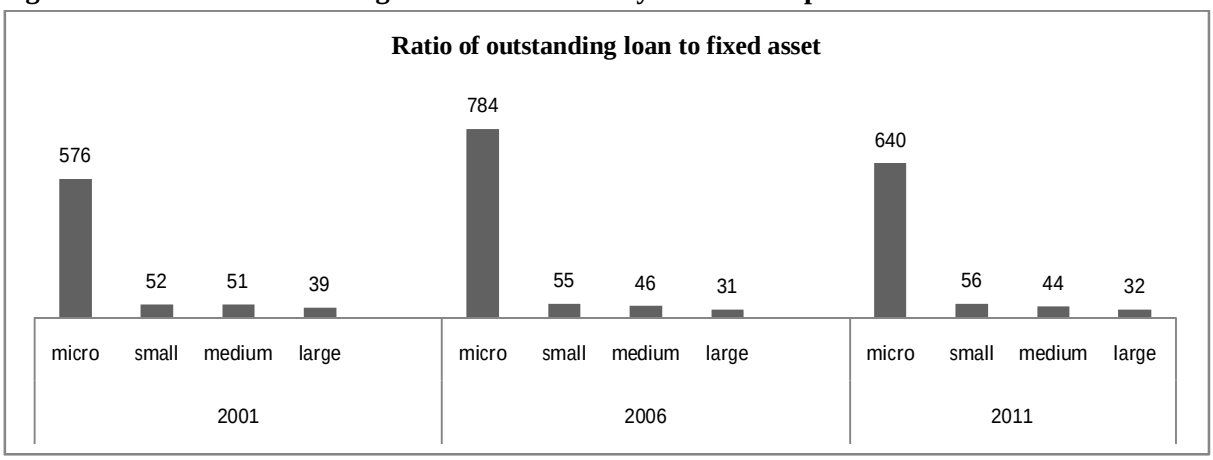


Source: calculated from unit level data of 56th, 62nd and 67th round of NSSO survey on unorganized manufacturing sector

As mentioned earlier that the MSME from ASI data are larger than the NSSO. The ratio of loan to fixed asset is the higher for Micro firms and it declines as the size of firm increases (Figure-6.7). These Micro firms have good access of loan and they are more dependent on the loan for doing business than the other size of firms. The lower ratio of

larger firms than the Micro firms like Small, Medium and Large shows the fact they can also access and are able to depend on the other sources of external finance than only on the debt.

Figure 6.7: Ratio of outstanding loan to fixed asset by size of enterprises in ASI



Source: calculated from unit level data of ASI 2001, 2006 and 2011.

6.4 Capital Structure of Enterprise and Access to Finance

The capital structure of firm can show the financial structure and financial problems of firm. "On the liability side of the balance sheet, a low proportion of bank debt could indicate difficulties of small firms to access credit market (Wagenvoort & Meier, 2003)". On the asset side for example a higher cash position of firm shows limited finance opportunities.

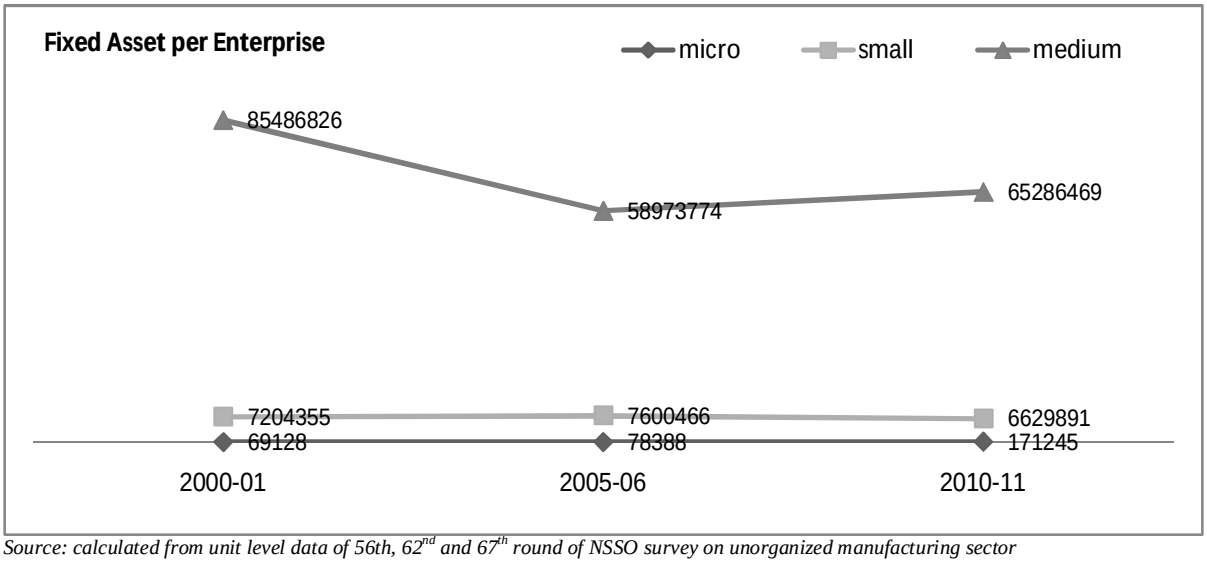
"There are differences in the asset structure across size classes (Wagenvoort & Meier, 2003)", so is the case in the liability side. Fixed asset is used as collateral in the credit contract to face the problem of credit rationing. So, there is a "positive relationship between the share of fixed assets in total assets and share of debt in total liabilities (Wagenvoort & Meier, 2003)". The asset structure can influence the liability structure of the firm. The difference of capital structure of the large firm vis-a-vis small firms might give indication of difficulties of small firms to access external finance. The relation between the difference in the asset structure and the difference of liability side across different size of firms is highlighted in the following paragraphs.

6.4.1 Relationship between Fixed Asset, outstanding loan of enterprises and profit (cash flow) by Size of tiny and smaller MSMEs

Collateral is usually used to deal with imperfect credit market and to reduce cost of finance. Fixed asset of firm is usually used as collateral in the credit market. The differences in level of fixed asset of enterprises depending on their size can have influence on level of outstanding loan of enterprises as a source of external finance. The enterprise with higher level of fixed asset can easily access external credit because they are less risky to the credit institutions. These institutions can keep enough of collateral from the larger enterprises to reduce the risk a credit.

Because of lower value of fixed assets with Micro enterprises reflects into the low proportion of bank finance to these enterprises. A low proportion of bank debt of Micro enterprises may give sign of problem faced by these enterprises in accessing credit (finance constraint) more than Small and Medium enterprises. In such situations, they might be standing with higher level of cash to fulfill their needs. This is because; in the time of need they might not get credit easily. To avoid uncertainty, they may be depending on their profit level (internal finance) as a source of finance.

Figure 6.8: Fixed Asset per enterprise by size of enterprise

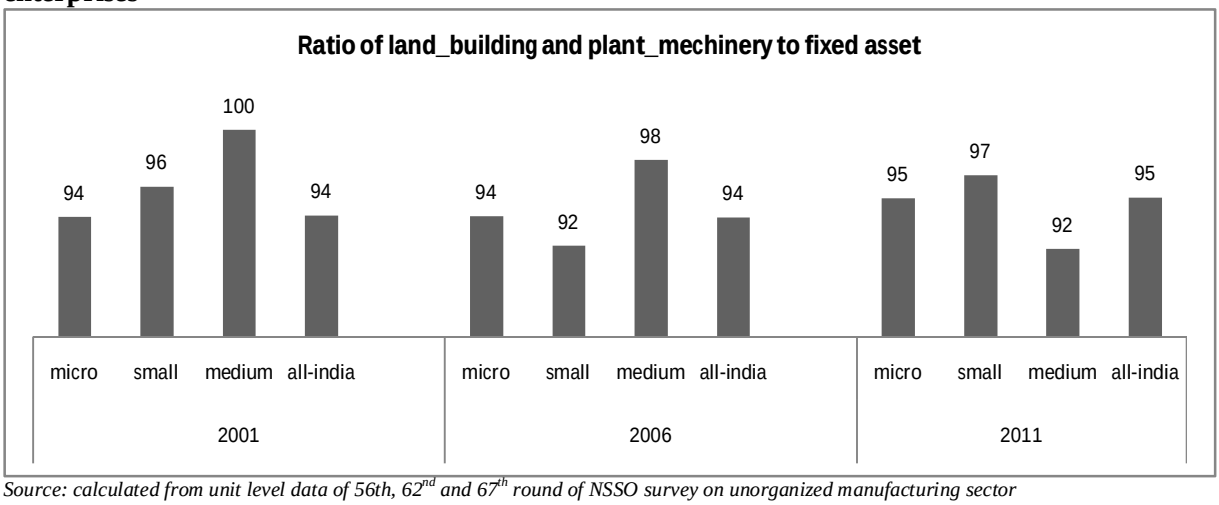


Source: calculated from unit level data of 56th, 62nd and 67th round of NSSO survey on unorganized manufacturing sector

The plant size of Medium enterprise is higher than Small and that of Small from the Micro. The fixed asset per enterprise increases with size (see Figure 6.8). The ratio of land and building & plant and machinery to fixed asset also increases with size (Figure

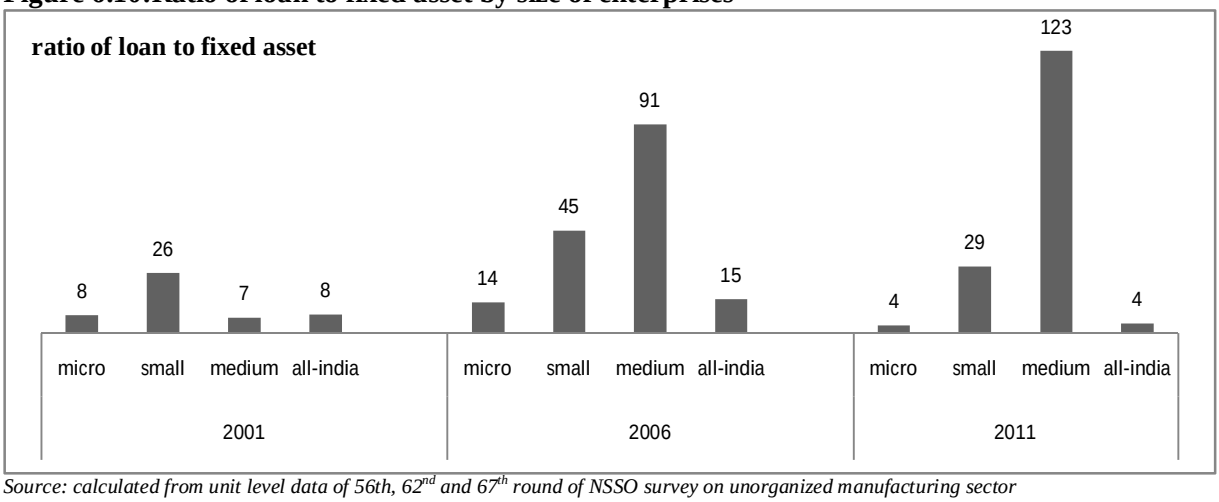
6.9) with little exception such as problems in the process of data collection. The individual category in the schedule of NSSO survey might not be filled. Instead, the total of fixed asset may have provided by some firms.

Figure 6.9:Ratio of land and building & plant and machinery to fixed asset by size of enterprises



Source: calculated from unit level data of 56th, 62nd and 67th round of NSSO survey on unorganized manufacturing sector

Figure 6.10:Ratio of loan to fixed asset by size of enterprises



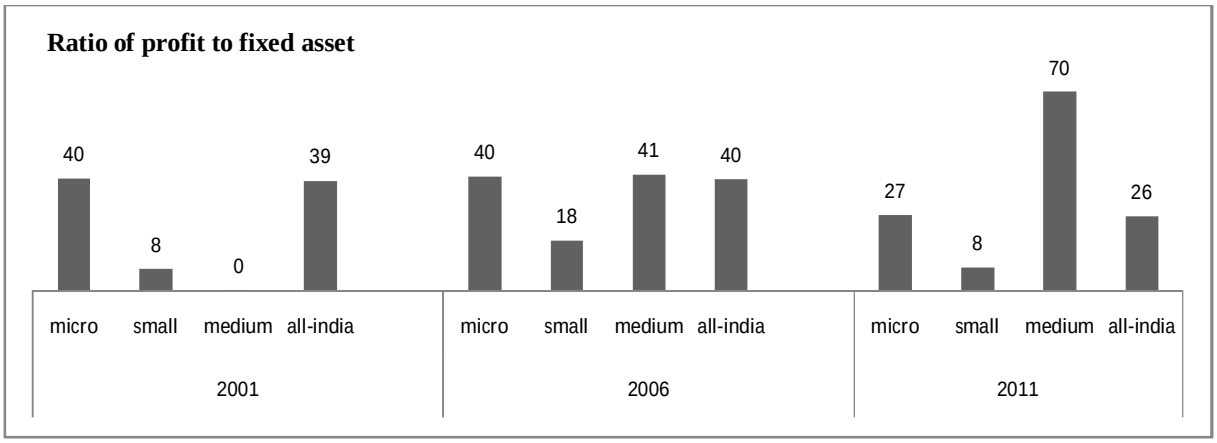
Source: calculated from unit level data of 56th, 62nd and 67th round of NSSO survey on unorganized manufacturing sector

The Medium enterprise may have higher share of loan as they have higher level of fixed asset to provide as collateral than the rest of the enterprises. The same is true for Small enterprise as compared to Micro enterprises. The ratio of loan to fixed asset is increasing with size of the firms if Micro and Small enterprises are compared. For Medium enterprises also, it is higher than the Small enterprises (see Figure-6.10). Meaning thereby**,** Micro enterprises have lower access to finance as compared to Small and

Medium enterprises. Micro and Small enterprises may have problems in accessing external finance.

Micro enterprises have higher level of profit than the Small enterprise (Figure-6.11). The former are maintaining higher level of profit. Probably, this is their internal source of finance. Small enterprises have lower level of profit and they have higher percentage of loan in their liabilities. Financially constraint enterprises, that are those enterprises unable to access external finance, depend more on profit (internal finance) to finance their activities. In other words, dependence on profit as a source of finance is a symptom of financially constraint firm.

Figure 6.11:Ratio of profit to fixed asset by size of enterprises



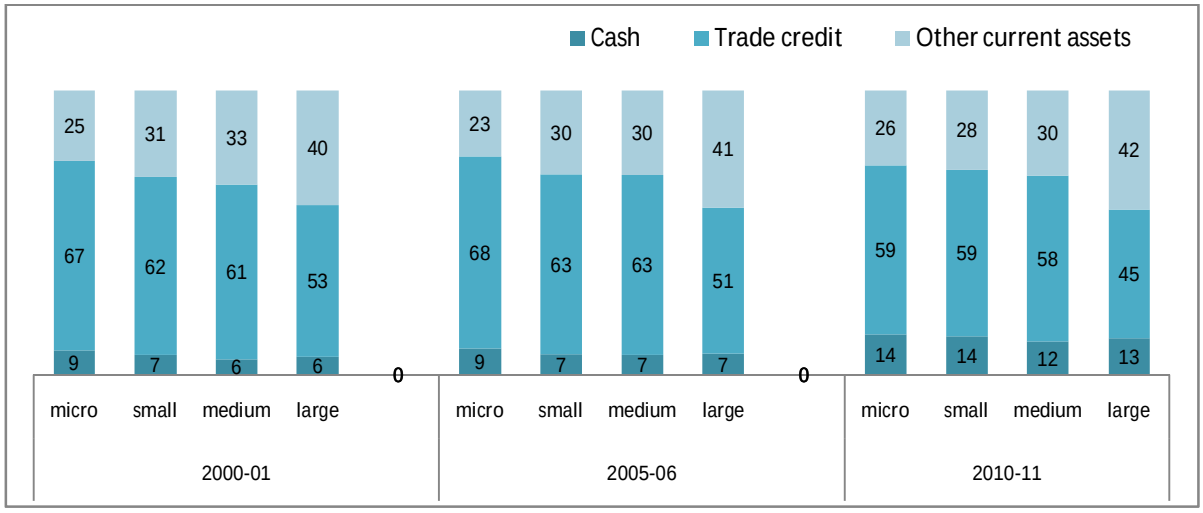
Source: calculated from unit level data of 56th, 62nd and 67th round of NSSO survey on unorganized manufacturing sector

6.4.2 Capital Structure of bigger MSMEs and Large enterprises

On the asset side, Trade credit[30] of Micro, Small and Medium enterprises is very high compared to the Large enterprises (Figure-6.12). Trade credit is increasing as the size declines. Smaller units are maintaining higher level of cash with them (Figure-6.12 and Figure-6.15). They have less of 'other current asset'. The larger units have more of 'other current asset', less proportions of trade credit and cash with them (Figure-6.12).

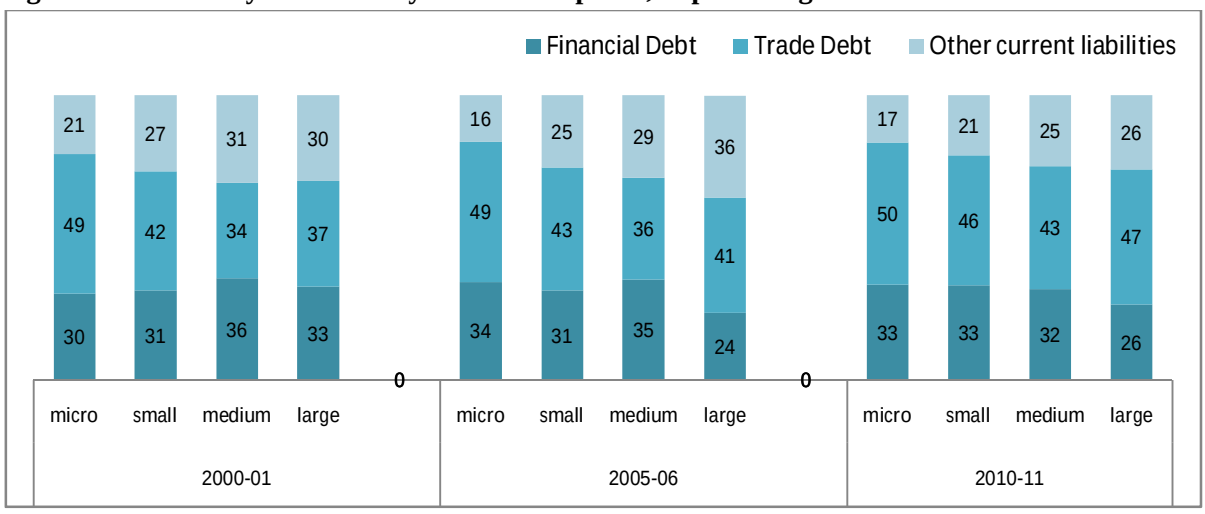
[30] Definition is presented in Methodology section of Chapter-1

Figure 6.12: Asset Structure by size of enterprises, in percentage



Source: Own calculation from ASI – 2000-01, 2005-06, 2010-11

Figure 6.13: Liability Structure by size of enterprises, in percentage



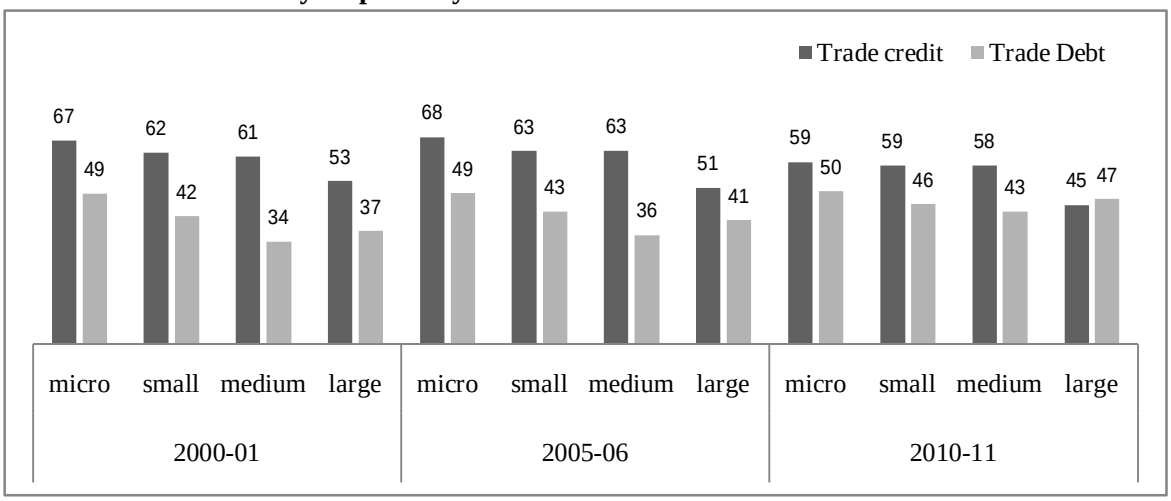
Source: as in figure-6.12

The Large enterprises have high level of fixed asset. They can access financial debt more easily. They can have higher level of debt from bank and other financial institutions. However, this is not true. The level of financial debt of Large enterprises is lower and they are more dependent on the 'other liabilities' (Figure-6.13).MSMEs depend more on Trade debt compared to the Large one (Figure-6.13). The percentage of trade debt is higher for Micro units compared to the Small units and that of Small is higher than the Medium. If we compare Micro, Small and Medium enterprises, observation is that Medium enterprises have higher level of financial debt. Lower proportion of financial

debt of smaller units shows difficulties in their access to the credit market. The reason can be the fact they do not have enough fixed asset to provide the bank as collateral. They depend more on the trade debt and less on the 'other liabilities'. Usually, trade debt is expensive. This is showing the fact that smaller units face financial problems more strongly.

From the comparison between trade credit and trade debt, it is found that the balance between trade credit and trade debt is the highest for the medium enterprise, second highest for the small enterprises, then come micro units (Figure-6.14). This is because Medium enterprises have less trade debt compared to the other. MSMEs are providing more trade credit than the large enterprises. The more striking observation is that micro enterprises are providing the higher amount of trade credit in a situation where they have less percentage of financial debt. One possible explanation can be that MSMEs are less able to insist on prompt payment than large enterprise (Wagenvoort & Meier, 2003). Even though it is expensive to do so, they are doing so because they have to stay in business.

Figure 6.14: Trade credit and trade debt by size of enterprises, in percentage to current asset and current liability respectively

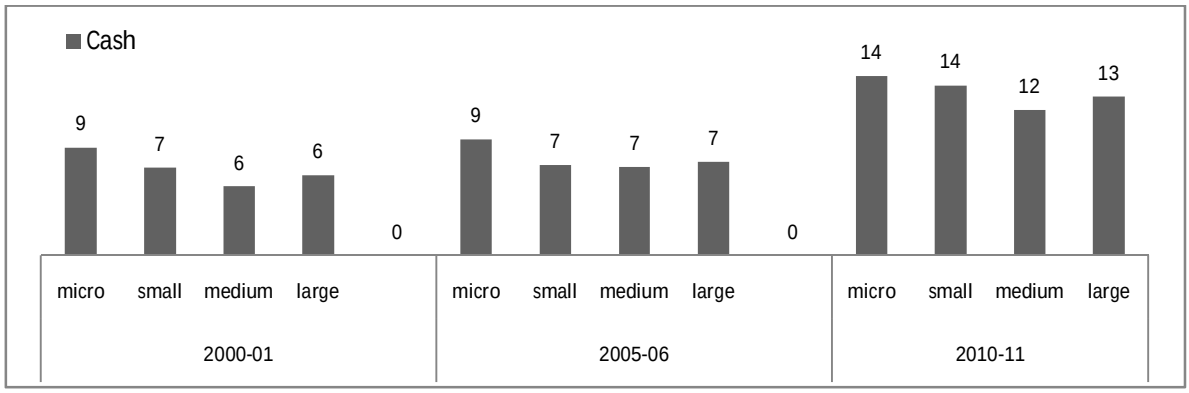


Source: as in figure-6.12

Cash disposition of Micro and Small enterprises is higher than the Medium and Large enterprises (Figure 6.15). The former group of firms have lower share of fixed asset compared to the latter group of firms and the former are keeping more cash with them than the latter. The micro and small enterprises face more difficulties in getting debt from

financial institutions and banks as they are considered more risky and less leveraged. Hence prefer to keep cash with them to face uncertainty.

Figure 6.15: Cash in hand by size of enterprises, in percentage of total current assets



Source: as in figure-6.12

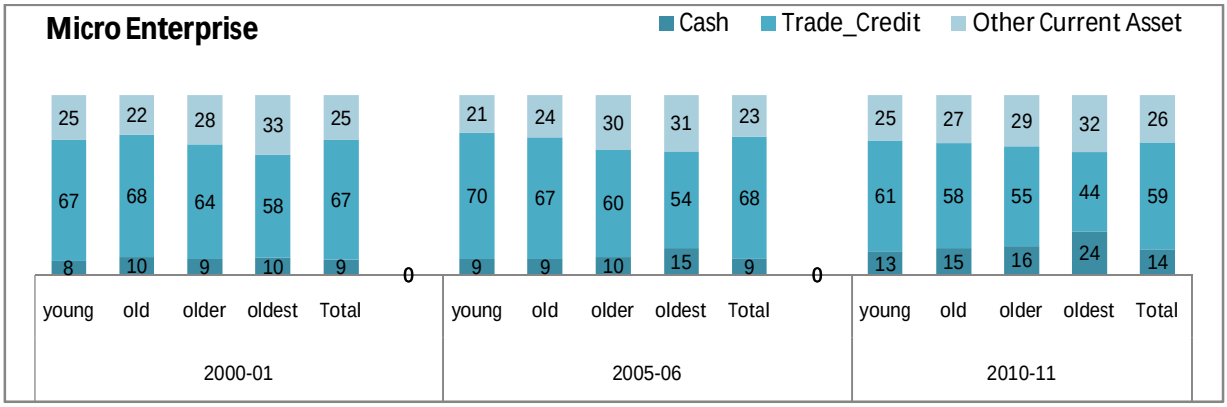
Results: First, the smaller the size of enterprise, the higher is the trade credit and trade debt. Second, the smaller the size of enterprise, the lesser is the financial debt. Third, the smaller the size of enterprise, the higher is the cash disposition.

6.4.3 Capital Structure of MSMEs and Large enterprise by Age of enterprise

With age, information problem of the enterprises become less that is their information about credit history increases and easily accessible by the banks. They become less opaque. The older firms may have better access to financial market to obtain loan, credit and other substitutes of trade debts. Dependence on trade debt and trade credit is expected to reduce as Micro and Small enterprises become mature.

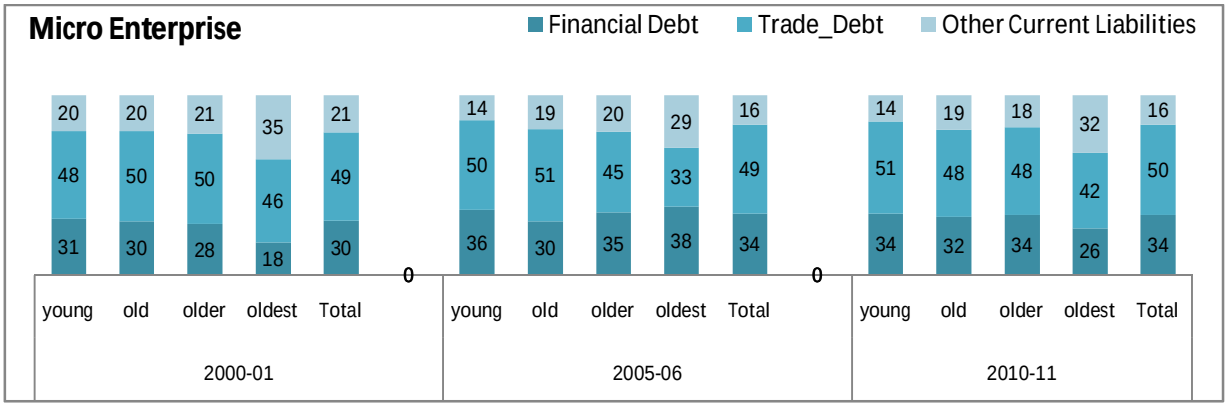
Micro and Small Enterprises: Trade debt reduces with the age of enterprises (figure 6.17 & 6.19). Their dependence on the financial debt is declining and it is increasing on 'other current liabilities' (figure 6.16 & 6.18). As the age increases, their level of financial debt is not increasing showing problems in accessing financial market. The level of cash they are keeping with themselves also increasing (Figure 6.16 & 6.18). This is to meet financial uncertainty. This is true for both Micro and Small enterprises.

Figure 6.16: Asset Structure by age of Micro enterprises, in percentage



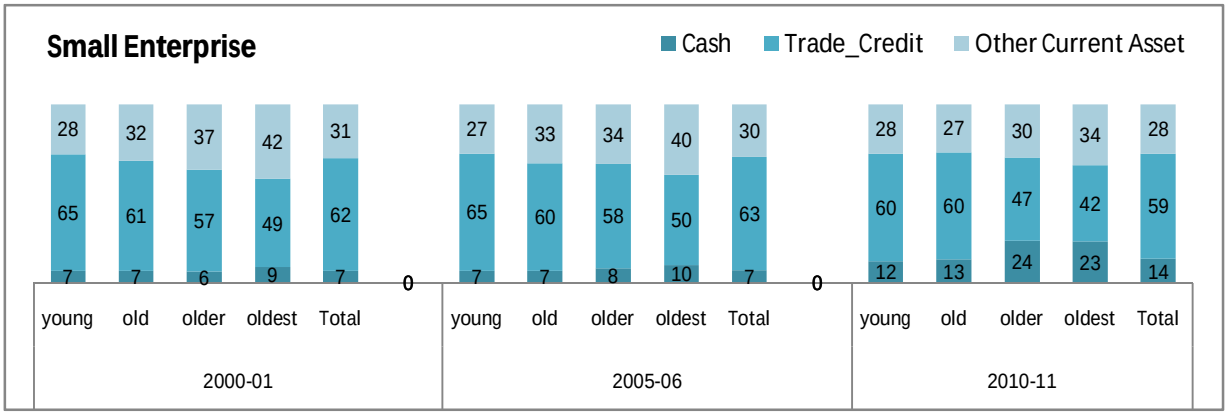
Source: as in figure-6.12

Figure 6.17: Liability Structure by age of Micro enterprises, in percentage



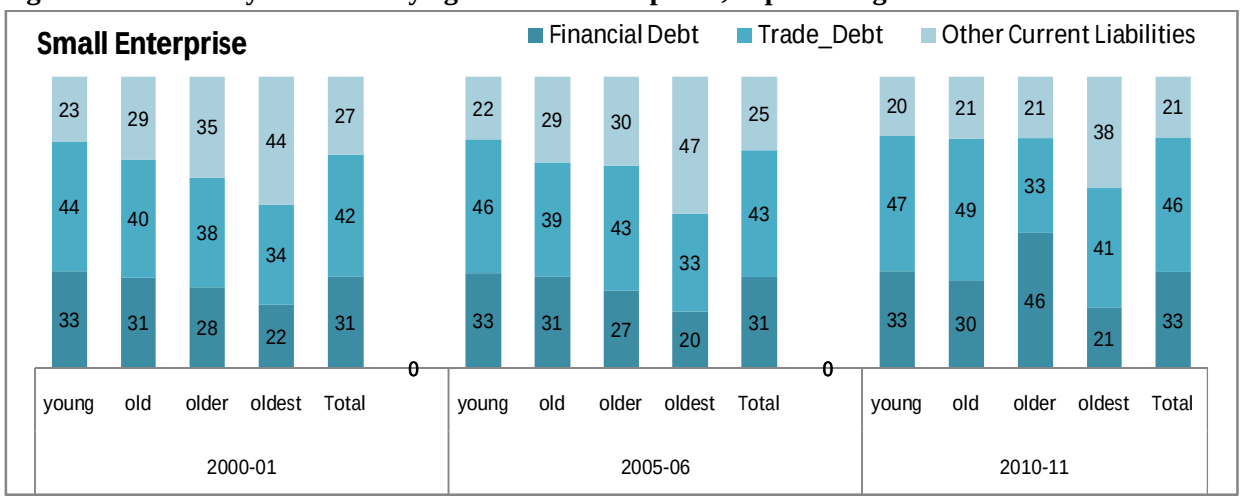
Source: as in figure-6.12

Figure 6.18: Asset Structure by age of Small enterprises, in percentage



Source: as in figure-6.12

Figure 6.19: Liability Structure by age of Small enterprises, in percentage

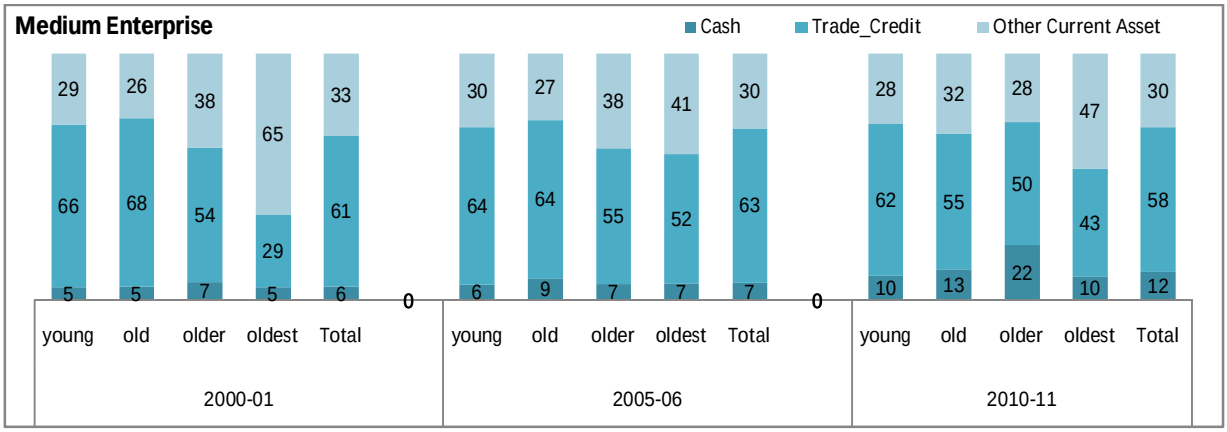


Source: as in figure-6.12

Medium and Large Enterprises: As the enterprises are getting older, trade debt is decreasing (Figure 6.21 and Figure 6.23). Their dependence on the financial debt is declining. The level of 'other current liabilities' is increasing significantly. Disposal of cash is also declining (Figure 6.20 and Figure 6.22). Enterprises are depending more on other substitutes of financial debt.

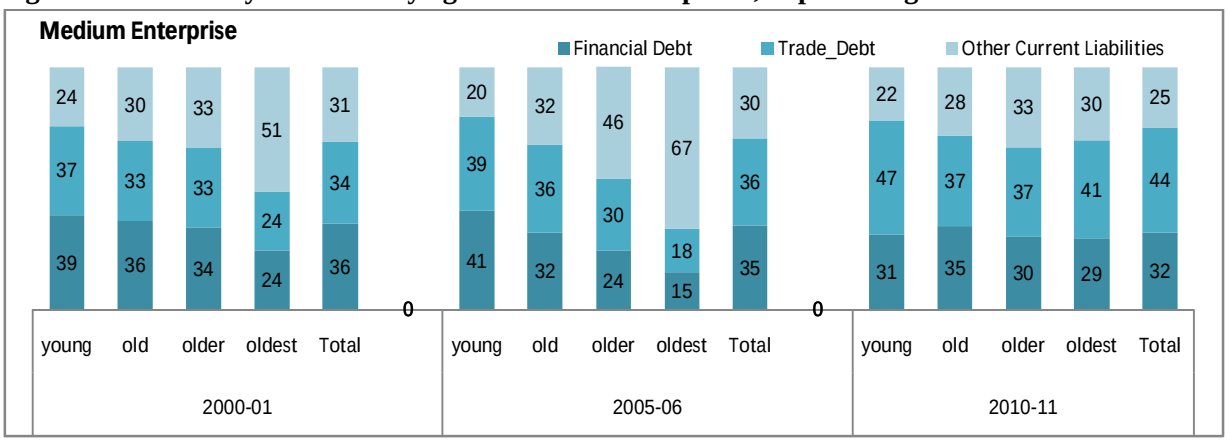
However, the level of financial debt of Medium enterprises is the highest among younger enterprises**.** On the left side of Medium enterprise are the Micro and Small enterprises with less of financial debt and to their right side are the Large enterprises with also less of financial debt across all age group. For large enterprises, this might be out choice. They are more comfortable with other substitutes. However, this might be out of compulsion for Micro and Small enterprises. This is showing the evidence that they face problems in accessing credit from the banks and other sources of finance. To meet the situation, Micro and Small enterprises are sitting with higher level of cash even they become mature and older compared to Medium and Large enterprises.

Figure 6.20: Asset Structure by age of Medium enterprises, in percentage



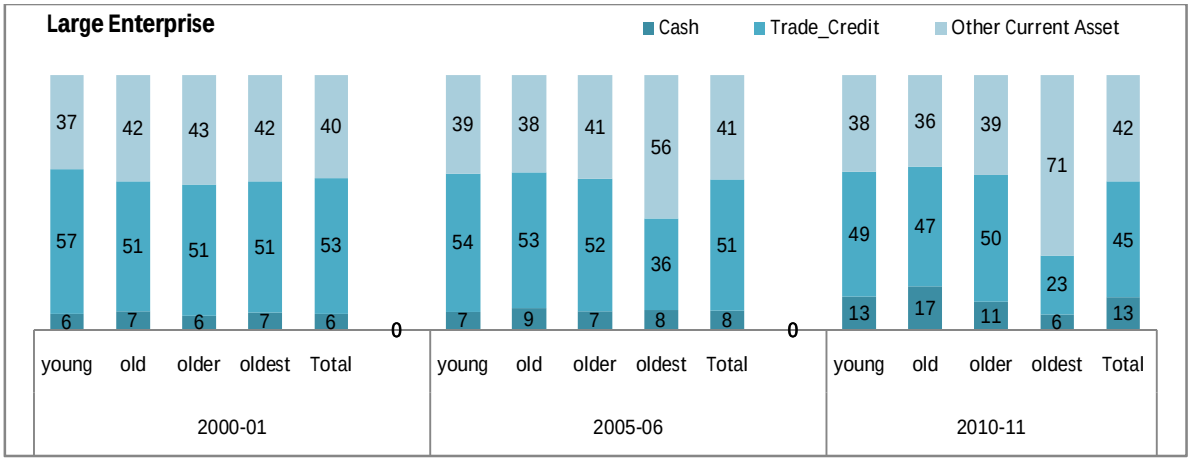
Source: as in figure-6.12

Figure 6.21: Liability Structure by age of Medium enterprises, in percentage



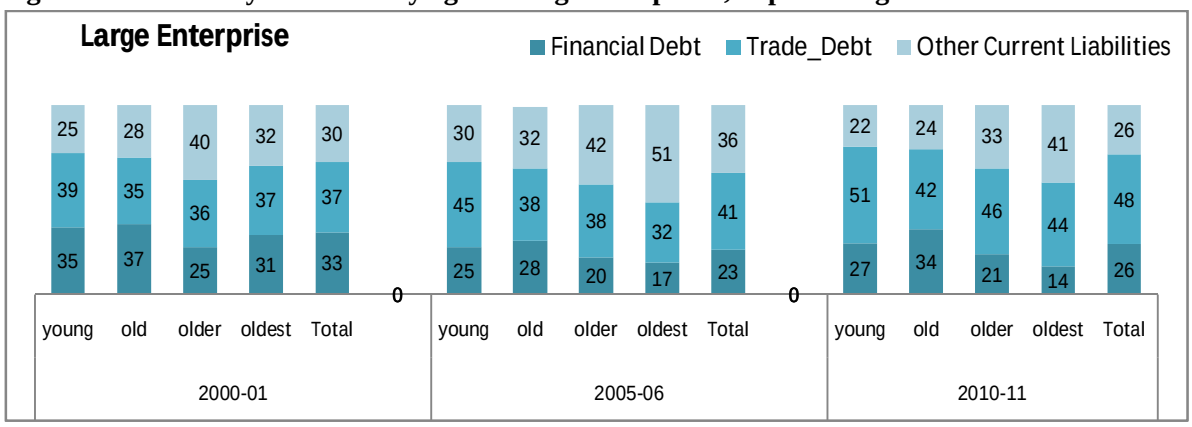
Source: as in figure-6.12

Figure 6.22: Asset Structure by age of Large enterprises, in percentage



Source: as in figure-6.12

Figure 6.23: Liability Structure by age of Large enterprises, in percentage



Source: as in figure-6.12

Results: Micro and Small enterprises are showing the symptoms of problem and difficulty in accessing finance. They are financially constraint. They have less amount of financial debt, are depending more on trade debt and providing huge trade credit to stay in business. Finally, they have larger cash disposition to meet financial uncertainty.

The negative part is that the level of financial debt is declining with the age of micro and small firms. Moreover, the level of cash disposal with them is increasing with age.

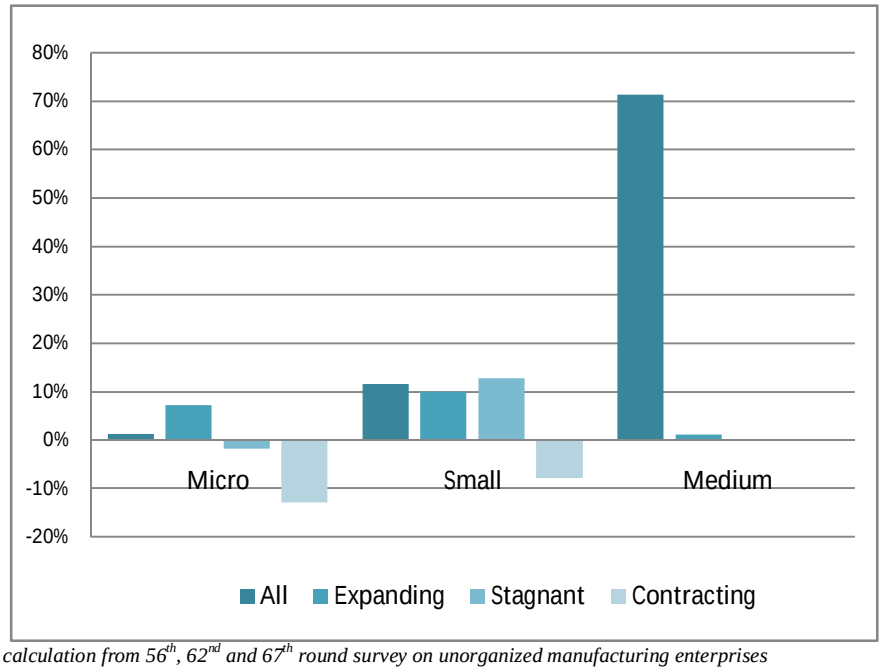
6.5 Relationship between enterprise's growth and growth of outstanding loan by size of enterprise

The firms are flexible in adjusting their financial situation as their growth changes to take advantage of changing growth situation. "The financial debt ratio increases when a firm expands, and it falls when a firm shrinks. What is more, the financial debt ratio increases (falls) faster, the faster the firm grows (shrinks) (Wagenvoort & Meier, 2003)". They have taken ratio of financial debt to total liabilities with the finding that the smaller firms are *less flexible* to adjust as growth changes. When growth is positive they are not able to exploit the situation better than the other by raising their financial debt faster and when situation is bad, they are maintaining more financial debt (financial debt falls less fast).

Here in this case, the enterprise's growth is based on its own impression about the growth or decline of the enterprise in the recent period. The above observation is partly true here in this case.

For the expanding Micro firm, the rate of growth of outstanding loan is increasing less faster than the rate of decline of it for contracting Micro firms. The opposite is found in the case for Small enterprises that is for the expanding Small firm, the rate of growth of outstanding loan is increasing faster than the rate of decline of it for contracting Small firms. (See Figure 6.24, Table 6.7)

Figure 6.24:CAGR of outstanding loan in percentage by type of growth of firms



Source: own calculation from 56th, 62nd and 67th round survey on unorganized manufacturing enterprises

The expanding Small enterprise is increasing its loan faster than the expanding Micro enterprises. However, contracting Micro enterprise has faster decline in loan than the contracting Small enterprises (see Figure-6.24, Table-6.7). Meaning there by that during the negative situation, the rate of decline of outstanding loan of Micro enterprise is much higher than the rate of decline of it for Small enterprise.

Table 6.7:CAGR of outstanding loan in percentage by growth of enterprises

Type of enterprise	Micro	Small	Medium
All	1%	12%	71%
Expanding	7%	10%	1%
Stagnant	-2%	13%	
Contracting	-13%	-8%	

Source: as in figure-6.10

On the downside, the micro enterprises are more flexible on cutting their outstanding loan. It may be the case that they are not getting the credit when they are contracting. On the upside, the growth of outstanding loan of micro enterprise is slow compared to the Small enterprise. This shows new borrowing is limited more for Micro enterprise than Small enterprise both in favorable and unfavorable situations. This also adds to the fact that size of firm matters in accessing bank debt irrespective of the fact that the firm is expanding and contracting.

When the growth situation is positive, the Micro enterprises are not able to gain best out of the situation because of less increase in their access to loan. But Small enterprises can exploit the situation by adding to their growth because they can increase their access to the external (bank) loan. While during the declining period, the rate of shrinking of access of outstanding loan of Micro enterprise is much higher than that of the Small enterprise. It is showing the fact that during the decline period of growth of firms, the access of credit much lower for Micro firms than the Small firms. It would be making serious impact on the growth and development of Micro enterprises because they could not fulfill their financial requirement for working capital and investment during their contracting phase compared to the Small firms.

Result: The expanding Micro enterprises are not able to obtain enough credit to meet their need and take advantage of high growth. Similarly, the contracting Micro enterprises are not able to access the credit to face the situation. Micro enterprises are less flexible in adjusting their debt ratio to take advantage of growth opportunity.

6.6 Conclusion

Unequal distribution of outstanding loan is observed among the firms of different size in Indian manufacturing sector. A large segment of the sector that is micro and small enterprises has received very less or insignificant proportion of the total outstanding loan going to the manufacturing sector. This is showing that either they are not using loan or not receiving credit. Hence, the financial inclusion of tiny and smaller MSMEs by the formal finance is insignificant and questionable. There also exists a very large gap between the micro vs. small and medium enterprises in terms of loan per enterprise.

Loan as a percentage of owned asset declines as the size of firms declines. Access to loan of Micro and Small firms is lower. The proportion of loan to fixed asset and proportion of profit to fixed asset are increasing and declining respectively as size of firm increases. Micro and Small firms may be using profit to finance their working capital in a situation of inadequate access to external finance. Even in a situation of low financial debt, Micro and Small firms are providing the higher amount of trade credit, which is always expensive to do. This is showing evidence of financial problems of smaller firms.

Another fact is that cash disposition of Micro and Small firms is very high compared to larger firms. This may be the evidence of difficulties of these firms in getting debt from financial institution being their size smaller; they do not have adequate collateral to access finance. Hence, they prefer to keep cash with them to face uncertainty. They are more dependent on internal finance.

Size of firm has weakening effect on difficulty in accessing finance but age has not that effect for Micro and Small firms. This is supported by the evidence of negative relation between age and financial debt of firms in MSME sector. Moreover, the level of cash of Micro and Small enterprises is independent of their age. They have high level of cash even when they are mature firms. This is adding to the evidence of their need to depend on internal finance for working capital and investment. This finding supports the result of analysis from secondary literatures done in the chapter-5.

When growth prospect of firm is positive, the micro firms have less increase in outstanding loan compared to the Small firm. While when growth prospect is negative, the rate of decline of loan ratio of Micro firms is higher compared to Small firms. This is also adding to the fact that size of firm is an important factor in weakening the difficulty in accessing finance.

The amount of availability of internal finance may limit the investment of a firm if the firm faces external finance constraints. It would have negative impact on the economic performance of firms. The empirical test of finance constraints can be of testing “whether financial variables (the amount of available internal funds) have a significant impact on the firm’s investment (Wagenvoort & Meier, 2003)” and economic performance like

growth in fixed asset, output and employment. In other words, “a statistically significant and economically important (Wagenvoort & Meier, 2003)” link between a firm’s internal finance and its economic performance would show presence of external finance constraints. This has been dealt for small firms (firms in MSME sector) and large firms in the chapter - 7.

CHAPTER - 7

EMPIRICAL EVIDENCE ON ACCESS TO FINANCE AND THE ECONOMIC PERFORMANCE: FIRMS IN MSME SECTOR IN INDIA

7.1 Introduction

Small size of bank borrowing may be a deliberate choice for firms. That may not reflect supply constraints of finance or firms are financial constraint. The sensitivity test of a firm's growth rate to internal finance (cash flow) indicates that firm needs to rely on the internal funds to finance new investment projects, given the level of access of external finance. This can be an empirical test of external finance constraints. The chapter will seek the answer to the question; have finance constraint in fact impacted on growth and economic performance of firms in Indian MSME sector???

The main objectives of this chapter are

5. To examine empirically whether limited access to external finance have impact on economic performance in terms of growth of employment, output and fixed asset of firm in MSME sector by looking into its dependence on internal and external finance. In other words, it is to observe whether the growth of firm is constrained to the availability of finance.
6. To understand whether liquidity constraints provide explanation of firms' size, age and growth relationship of firm.

The analysis in the Section-2 of the chapter will describe imperfection in credit market, link between internal finance and investment in the presence of inadequate access to external finance of MSMEs (smaller firms). More particularly, this section deals with the behavior of sensitivity between cash flow and economic performance. Economic performance is measured in terms of growth in fixed asset, employment and output. How the different sign of this sensitivity indicates the level of access of external finance by the firm. Thereafter, Section-3 deals with the explanation of how firm's inadequate access to finance or finance constraint determine the firm's size and its economic performance. It will also deal with how size and age of a firm determine its ability to "weaken liquidity constraints and gain access to external finance (Wagenvoort& Meier, 2003)". Section-4

examine whether firms in MSMEs in India are financially constraint or their growth is constrained to the internal finance. This section tries to look empirically, whether economic performance of firm of different size and age is financially constraint or not. The empirical description of access to finance providing analysis of relation between size and economic performance and relation between age and economic performance of MSME firms and large firms in India has also been presented in this section. The conclusion of the chapter is presented in Section-5.

7.2 Presence of capital market imperfections and internal finance theory of growth - the relation between internal finance and growth of firm

In the theory of capital structure, there are two type of financing - internal financing and external financing. The former is the case where enterprise uses its profits as a source of capital. The external finance means getting finance from outside of the enterprise to make investment. Internal financing is cheaper for the enterprise than external financing. The enterprise incurs transaction costs to obtain it.

"The Internal Finance theory of growth is in the background of testing empirically the relation between firm growth and availability of internal finance (Wagenvoort & Meier, 2003)". External financing is more costly than the internal financing because asymmetric information and agency problems in the imperfect capital market. In a situation of external finance constraint, there is high chance that firm will keep all of its profits. "The growth of firm, without any access to external finance, cannot exceed the growth of its own funds (Wagenvoort & Meier, 2003)". Economic performance and development of such firm is constrained to internal finance. The growth of a firm, with easy access to external finance, can be larger than the growth of its internal funds. In other words, with easy access to external finance, economic performance and development of firm will be much better.

If the firm is financially constraint, they mostly depend on internal finance to finance their investment decisions. Investment-cash flow sensitivity reflects the higher costs of external financing relative to internal financing in a situation of information asymmetries (Myres & Majluf, 1984)**.** The finding of excess sensitivity of investment to cash flow for firms that pay low dividends by Fazzari, Hubbard, Petersen, Blinder, & James (1988) has

led to large debate on relation between investment-cash flow sensitivity of firms and their access on different kind of financial sources (internal/external) in general and financial constraints in particular.

In the presence of capital market imperfections, if firms face tighter financial constraints, they have "larger cost differential between internal and external funds. They have to rely more on internal cash for making investments (Allayannis & Mozumdar, 2004)". Therefore**,** the financially constraint firms show higher investment-cash flow sensitivity (Fazzari et al., 1988).

The argument of Fazzari et al.(1988) was the relation of firm's investment to its internally generated cash flow would be stronger for firms that faced the greatest wedge between the costs of internal and external funds. Such firms have high financial constraints. The mentioned study has used low dividend payout as proxy for financial constraint. Supporting this argument, the evidence found in the mentioned study is high investment-cash flow sensitivities for low dividend payout firms than that of high dividend paying firms.

A firm is financially constrained if its investment spending is mostly dependent on the supply of internal finance. The growth of most small firms is more likely to be constrained by the available quantity of internally generated finance. This is because access to external finance is not easier for them. Even if, commercial banks credit is the single most institutional external credit to small firms, they are subject to credit rationing[31] by banks because

- small firms are more informationaly opaque than larger one,
- they have less collateral,
- the small firms have lower profitability and
- regarded as high-risk borrowers.

Therefore, banks are reluctant to lend them. "The external finance tends to be more expensive for small firms (Wagenvoort & Meier, 2003)".

[31] For detail explanation refer to section **raising finance challenging for MSMEs** of **Introduction** chapter.

Suppose, internal fund is called as cash flow. The growth – cash flow sensitivities of a firm with difficulty in access to external finance will be higher than that of the firm with easy access to external finance.

Growth – cash flow sensitivity is very high in case of small firms. This has been shown by the studies Fazzari et al.(1988), Becchetti and Trovato(2002), Elston(2002), Carpenter and Petersen(2002), Wagenvoort(2003), Oliveira and Fortunato(2006), Hutchinson and Xavier(2006), Fagiolo and Luzzi(2006), Honjo and Harada(2006), Lu and Wang(2010) and many other studies mentioned below.

The positive correlation between cash flow and growth in the case of smaller enterprises is because of financing constraint(Carpenter and Petersen, 2002). If the enterprises can access the external finance, then they will reduce the dependence on the internal finance (cash flow or profit). Growth – cash flow sensitivity will be less. Finance constraint is giving an explanation of the relation between the growth and cash flow.

However, there are exceptions.

1. Where the relation between cash flow, investment and growth can be negative for a financially constraint firm (Hovakimian, 2009). The firms with negative cash flow sensitivity are more likely to be liquidity constrained than firms with positive cash flow sensitivity. These are the smallest and the youngest firms in the sample with lowest asset tangibility and cash flows. High investment of these firms are financed by borrowing debt (Hovakimian, 2009).

The explanation for such relationship is based on corporate life cycle hypothesis. The firm starts its life with “a valuable set of investment opportunities but very low earnings (Hovakimian, 2009)". Despite the very low current cash flows, it raises considerable amounts of debt. This is so because the “expected profitability of its investment projects is perceived as very high in the market (Hovakimian, 2009)”. “Timing investments to high-cash-flow periods is not a feasible alternative (Hovakimian, 2009)” because firstly, having started newly it take long time to generate high enough cash flow that can finance the investments and secondly, because high cash flows may not materialize without current investments.

As it grows older, the past investments start generating higher cash flows. However, by then the investment rates slow down as investment opportunities become less and less attractive. Over the life time of firm, with negative cash flow sensitivities, the cash flows and capital expenditures follow trends in opposite directions in response to the changes in the firm's set of growth opportunities. These simultaneous opposite trends of cash flows and investment rates generates a negative empirical relationship between investment and cash flow and hence between cash flow and growth of firm. [Hovakimian, 2009]

This is the new rationale for the negative relationship between investment and cash flow with the premise that growth opportunities change over a firm's lifetime causing changes in firm's investment rates and cash flows. "Periods of high growth opportunities are periods of low cash flows and high capital expenditures and vice versa (Gayane Hovakimian, 2009)".

2. When the internal cash flows are low, the less constrained firm is likely to display greater investment - cash flow sensitivity than the more constrained firm. In such situation, the more constrained firm has already cut investments drastically and has very little room to reduce investments any further. But less constrained firm has still some investments that can be cut if cash flow declines further. The sign of cash flow-investment sensitivity is seen to reverse as cash flow falls from moderate to very low levels (Allayannis & Mozumdar, 2004).

"Investment-cash flow sensitivity is higher for the more constrained firm with normal level of cash flow. But it is higher for the low constrained firm with very low/negative cash flows. This confirms the reversal of sign between financing constraints and investment-cash flow sensitivity (Allayannis & Mozumdar, 2004)".

When cash flow is positive, the investment - cash flow sensitivity is higher for more constrained firm. When cash flow turns negative, the investment - cash flow sensitivity becomes lower for the more constrained firm and the less constrained firms show higher sensitivity of cash flow and growth.

The higher the difference in cost between internal and external funds, the more financially constrained the firm is. The difference in cost between internal and external

funds (financial constraint of firm) and amount of cash flow of firm are not independent. “The more constrained firms are also more likely to have low realizations of cash flow. When the low cash flow observations are included in the sample, the estimated investment cash flow sensitivity is reduced more for the high constrained firms. When negative cash flow observations are excluded from the sample, more constrained firms should exhibit greater investment-cash flow sensitivity (Allayannis & Mozumdar, 2004)”.

For the **Distress firm,** each additional increase in cash flow is more likely to be paid back to the creditors than invested. “If distressed firms are treated in the same group as constrained firms one may not find significantly larger cash flow sensitivity for the group than the unconstrained group. This is because each additional increase in the cash flow is less likely to be invested if a firm is in financial distress (Fazzari, Hubbard, Petersen, Quarterly, & May, 2000)”. It is also empirically proved that “the more financially constrained firms are more likely to encounter financial distress situation and low cash flows (Allayannis & Mozumdar, 2004)”. Since the incidence of negative cash flow is higher for the more constrained firms, the estimated investment-cash flow sensitivity is lower for more constrained firms, the estimated investment-cash flow sensitivity is higher for less constrained groups when negative cash flow observations are included in the estimation (Allayannis & Mozumdar, 2004).

7.3 Dynamics of firm size, age, its growth and economic performance in the context of inadequate access to finance (finance constraints)

The relationship between size and growth of firm is explained by Gibrat’s Law, also called the Law of Proportional Effect (LPE). It was advocated by Gibrat in 1931. Two important points of the LPE are firstly, the rate of growth of a firm is independent from its size at the beginning of the period (Becchetti and Trovato, 2002) or the growth rate of firm is independent of its initial size, secondly, the variance of growth rate of enterprise is also independent of firm size (Carpenter & Petersen, 2002).

The LPE has become useful theoretical benchmark for the theoretical and empirical research on the determinants of firm growth and for the study of the evolution of firm size over time. There has been a lot of empirical literature doing study of the LPE[for

example, Sutton (1982), Evans (1987a, b), Hall (1987), Dunne et al. (1989), Harhoff et al. (1998), Liu et al. (1999), Audretsch et al. (1999), Heshmati (2001), Honjo (2004) and Yasuda (2005)]. Most of the studies refute the hypothesis of the independence of growth from size and age. They state that firm growth is negatively related to age and size.

One of the very important determinants and explanation of firm's size – its development dynamics is financial constraints. All the more, there are few literatures on the analysis of the other determinants of firm's growth and economic performance beyond size-age-growth dynamics Becchetti and Trovato (2002).

The empirical studies investigating the role of financial constraints on firm growth, such as Fazzari et al (1988), Bond and Meghir (1994), Heshmati (2001), Petersen and Rajan (1994), Chittenden et al. (1996), Binks & Ennew (1996), Becchetti and Trovato (2002), Elston (2002), Audretsch and Elstron (2002), Carpenter and Petersen (2002), Wagenvoort and Meier(2003), Honjo (2004), Oliveira and Fortunato (2006), Lu and Wang (2010), Mateev and Anastasov (2011) have tried to show that financial constraints are a significant determinant of firm's investment decision, growth and economic performance.

The finance constraint literature can be used to study the dynamics of firm growth and economic performance and to study the possible deviations from Gibrat's Law**.** The empirical studies on the effect of financial constraints over firm growth are Kumar et al. (1999), Cooley and Quadrini (2001) and Carpenter and Petersen (2002) for the USA; Elston (2002) for Germany; Cabral and Mata (2003) for the Portugal; Desai et al (2003) and Wagenvoort (2003) for the Europe; Fagiolo and Luzzi (2006) for Italy and Hutchinson and Xavier (2006) for Slovania and Belgium; Honjo and Harada (2006) for Japan. These studies convey the idea that finance constraints may also explain the relation between sizes, growth, and economic performance and offer the explanation for the size distribution of firms. Firm's size, age and growth and economic performance dynamics might be better explained by linking liquidity constraints to firm growth.

The presence of asymmetric information, between the supplier of credit and the firm, creates problem for firm in accessing credit/finance in the credit market. As a result firm faces financial constraint or liquidity problem. This influences the investment of capital

and labor and hence in the growth and economic performance of firm. Financial problem has impact on real firm decisions. Then finally affect firm size, growth and economic performance dynamics. The more the firm is finance/liquidity constraints; the higher is difficulties in making investment. The final growth and development of the firm will be much lower. On the other hand, "the ability of the firm to weaken its liquidity constraints and to gain access to external financing (Fagiolo & Luzzi, 2006)" may be a function of its size and age.

The incidence of liquidity problem may be more upon the Micro and Small enterprises as they are more informationally opaque and do not possess enough collateral to pledge and secure the external finance. Particularly, this affects them more if they are young. The older and larger firm may be less liquidity constraint. The older firms might have credit history, good relationship with the lending institution and more collateral to face credit rationing. All these benefits are function of size and age of firm. Therefore, the size and age of firm have likely to weaken the relation between the finance problems faced by the firm and growth and development of firm.

By controlling for liqiuidity constraints may help in segregating between "financial-related" and "sheer" size effects. The former accounts for "higher growth rates due to better access to external capital and higher cash flow, the latter might explain higher growth rates in terms of economies of scale and scope (Carpenter & Petersen, 2002; Elston, 2002; Fagiolo & Luzzi, 2006)". "The impact of firm size on future firm growth and economic performance might have been the result of a composition of 'sheer' and 'financial-related' effects (Fagiolo & Luzzi, 2006)".

All the empirical studies, doing above analysis, have been restricted to the United States, the European area and a few other transition countries (Becchetti & Trovato, 2002; Carpenter & Petersen, 2002; Elston, 2002; Fagiolo & Luzzi, 2006; Hutchinson & Xavier, 2006; Lu & Wang, 2010; Oliveira & Fortunato, 2006; Wagenvoort & Meier, 2003).

There are very few studies about the Asian countries, except Honjo & Harada, 2006 for Japan and Lu & Wang, 2010 for Taiwan. There are almost no studies on the relationship

between binding liquidity constraints, other firm's characteristics such as size and age and consequential growth and economic performance of firm of Indian MSMEs.

Goal of this study is first, to examine the link between firm economic performances (growth) and the extent to which liquidity constraints are imposed by controlling size and age. In other words, this is to observe whether they are financially constraint. Secondly, to investigate the relation between liquidity constraint, firm's size and age and growth dynamics and consequential economic performance of manufacturing firm in India with a focus on MSMEs. This is to see the weakening effect of size and age of firm on its financial constraints and consequential growth. Here, the purpose is *not* to investigate structural models of firm's investment behavior and growth.

7.4 Econometric Approach

7.4.1 Model and its description

Following some of the previous studies such as Evans (1987a, 1987b)**,** Heshmati(2001), Becchetti & Trovato (2002)**,** Elston (2002), Carpenter & Petersen (2002), Wagenvoort & Meier(2003), (Fagiolo & Luzzi, 2006), Honjo & Harada(2006) and Lu & Wang(2010), the model of firm growth is written as

$$\textbf{Growth}_{\text{it}} = \boldsymbol{\beta_0} + \boldsymbol{\beta_1}\textbf{SIZE}_{\text{it-1}} + \boldsymbol{\beta_2}\textbf{AGE}_{\text{it-1}} + \boldsymbol{\beta_3}\frac{\boldsymbol{CF_{it-1}}}{\boldsymbol{FA_{it-1}}} + \boldsymbol{\beta_4}\frac{\boldsymbol{OL_{it-1}}}{\boldsymbol{FA_{it-1}}} + \boldsymbol{\alpha_i} + \boldsymbol{d_t} + \boldsymbol{\varepsilon}_{\text{it}} \quad (1)$$

Here,

1. $\boldsymbol{\beta_0}, \boldsymbol{\beta_1}, \ldots\ldots\ldots, \boldsymbol{\beta_4}$ are parameters to be estimated
2. $\textbf{Growth}_{\text{it}}$ is defined as the difference between the logarithms of firm size in period t and t-1.This variable says economic performance of the firm.
3. $\textbf{SIZE}_{\text{it-1}}$ **and** $\textbf{AGE}_{\text{it-1}}$ represents firm *i*'s log of size and log of age in period t-1 respectively.
4. $\frac{\boldsymbol{CF_{it-1}}}{\boldsymbol{FA_{it-1}}}$ is the cash flow scaled by fixed asset. This is used as proxy for finance constraint.
5. $\frac{\boldsymbol{OL_{it-1}}}{\boldsymbol{FA_{it-1}}}$: Outstanding loan-fixed asset ratio of firm in time period t-1.
6. $\boldsymbol{\alpha_i}\boldsymbol{\varepsilon}_{\text{it}}$ are both error terms. α_i only varies across individuals but not across time (firm specific effect). α_i is firm specific time invariant effects and this allows for heterogeneity across firms. This is part of intercept. ε_{it} is a disturbance term.

7. d_t is the year dummies to control the difference in macro-economic conditions (**time specific effect**).

Variables

1. **Size variable** is measured by three different variables, number of employees (EMP), by fixed asset (FA), and output.
    - SIZEa - size is measured by fixed asset.
    - SIZEo - size is measured by output.
    - SIZEe - size is measured by employment.
2. **Age** is firm age.
3. $\frac{CF_{it-1}}{FA_{it-1}}$ **: Cash flow (CF)** is defined profit of the firm. The rationale for taking cash flow-fixed asset ratio as proxy for liquidity constraint is that a low cash flow ratio may imply strong liquidity constraints for small firms. This is because firms hold cash flow to meet their investment requirement in the absence of availability of external finance (Fazzari et al., 1988).
4. $\frac{OL_{it-1}}{FA_{it-1}}$: Outstanding loan- fixed asset ratio of firm. This is used to measure leverage of firm. It shows availability of external finance or access to finance.

Two-Way Fixed effect model is used to estimate the above equation. It takes into account the time fixed effect by introducing time dummies into the model. To begin with the relation is estimated by using one-way fixed effect to take into account firm specific effect. After that, the relation is estimated with year dummies separately in two-way fixed effect model to take into account both the firm specific effect and time effect. To avoid heteroskedasticity, robust variance estimator is estimated. This is done by using White's heteroskedasticity - consistent estimator.

7.4.2 Data and Empirical evidence on the financial constraints

Three panel data sets have been formed using NSSO data. They are NSS_panel_MSE, NSS_panel_Micro and NSS_panel_Small. These panels are formed out of most recent available data on survey of unorganized manufacturing sector of NSSO for period 2000-01, 2005-06, and 2010-11.

NSS_panel_MSE is a panel of three years with gap in time of 141 firms and 423 observations. Since here, analysis is based on lag value; the analysis is counting 282 observations. This panel is formed by taking into account all firms in the data source. *NSS_panel_Micro* is formed by taking into account the micro firms of the three years. This panel is also of three years with gap in time of 141 firms and 423 observations. Since here, analysis is based on lag value; it is counting 282 observations. *NSS_panel_Small* is formed by taking into account the small firms of the three years. This panel is also of three years with gap in time of 12 firms and 36 observations. Since here, analysis is based on lag value; it is counting 24 observations.

Two different panels have been formed using ASI data. One is for the period of five years for period 2005 to 2009. It is called as ASI_panel2. The other is for the three periods 2001, 2006 and 2011 taken together and it is called ASI_panel1.

ASI_panel2 has been formed three different sets. They are ASI_panel2_Total, ASI_panel2_MSE and ASI_panel2_Medium&Large.

ASI_panel2_Total: the number of firm is 1788 and the time period is from 2005 to 2009, so the numbers of observations are 8940.Since here, analysis is based on lag value; it is counting 7152 observations. This panel is formed by taking into account all type of firms in the ASI data set. *ASI_panel2_MSE*:the number of firm is 247 and the time period is also from 2005 to 2009, so the numbers of observations are 1235.Since here, analysis is based on lag value; it is counting 988 observations. This panel is formed by taking into account all the micro and small firms in the ASI data set. *ASI_panel2_Medium&Large*: the number of firm is 649 and the time period is also from 2005 to 2009, so the numbers of observations are 3245.Since here, analysis is based on lag value; it is counting 2596 observations. This panel is formed by taking into account all the micro and small firms in the ASI data set.

Table 7.1: Information on the panel used in the regression analysis

Name of Panel	number of firm	year	observations	observations used in the analysis	gap	type of firm
NSSO						
NSS_panel_MSE	141	2001, 2006, 2011	423	282	yes	all firms
NSS_panel_Micro	141	2001, 2006, 2011	423	282	yes	micro
NSS_panel_Small	12	2001, 2006, 2011	36	24	yes	small
ASI						
ASI_panel2_Total,	1788	2005-2009	8940	7152	no	all firms
ASI_panel2_MSE	247	2005-2009	1235	988	no	micro and small
ASI_panel2_Medium&Large	649	2005-2009	3245	2596	no	medium and large
ASI						
ASI_panel1_Total	1124	2001, 2006, 2011	3372	2248	yes	all firms
ASI_panel1_MSE	176	2001, 2006, 2011	528	352	yes	micro and small
ASI_panel1_Medium&Large	191	2001, 2006, 2011	573	382	yes	medium and large

ASI_panel1_Total: the number of firm is 1124 and the time period is 2000-01, 2005-06, and 2010-11, so the numbers of observations are 3372.Since here, analysis is based on lag value; it is counting 2248 observations. This panel is formed by taking into account all type of the firms in the ASI data set. *ASI_panel1_MSE*: the number of firm is 176 and the time period is 2000-01, 2005-06, and 2010-11, so the numbers of observations are 528.Since here, analysis is based on lag value; it is counting 352 observations. This panel is formed by taking into account the micro and small firms in the ASI data set. *ASI_panel1_Medium&Large*: the number of firm is 191 and the observation period is 2000-01, 2005-06, and 2010-11, so the numbers of observations are 573.Since here, analysis is based on lag value; it is accounting 382 observations. This panel is formed by taking into account the medium and large firms in the ASI data set.

7.4.3 Descriptive Statistics of Independent variables

Table A7.1 to Table A7.12 in the Appendices to Chapter 7 show the descriptive summary of variables used for different panels. Table A7.13 to Table A7.18 in the Appendices to Chapter - 7show the correlation matrix of the independent variables. All the monetary values are transformed into 2004-05 prices by using wholesale price index for manufacturing products.

The size variables are log output (log of output), loge (log of employment) and loggia (log of fixed asset). The mean size of MSE of NSSO data is less than the mean size of MSE of ASI data (Table A7.1 and Table A7.11 in Appendices to Chapter - 7). This supports the earlier seen fact. goutput, gemp and gFA in the tables denote the growth of output, employment and fixed asset respectively. The means of growth of output and growth of fixed asset of MSME in NSSO is higher than that of MSE of ASI. The means of growth of employment of MSE in ASI is higher than that of MSME in NSSO. Meaning thereby that, *the smaller MSME is growing in terms of output and fixed asset at a faster rate on an average than the larger MSME.*

The smaller the size of firm the higher is the growth of size. This is observed by comparing the growth variables of Table A7.2 and Table A7.3 in Appendices to Chapter-7 (Table A7.2 and Table A7.3 present the descriptive statistics of Micro and Small firms in the NSSO data respectively). It is also true in the case of the ASI data if growth of size

variables is compared between the MSE and Medium&Large firms presented in Table A7.6 and Table A7.8 respectively in Appendices to Chapter- 7.

The younger firm is growing at higher rate than the older firm on an average. This is true in case of MSE of ASI (Table A7.7). However, in the case of Medium&Large firms of ASI, the reverse is true. This is found from ASI data (Table-A7.9). In other words, in the category of small size firms, the younger firms grow faster and *in the category of large size firm, the older firms grow faster.*

Overall

- The economic performance in terms of growth of employment, output and fixed asset of smaller firms is higher than the bigger firms.
- The younger firms are doing better than the older firm on an average in case of MSE.
- In the category of Medium and large size firm, the older firms performing better.

The average ratio of cash flow to fixed asset and that of loan to fixed asset of MSE in ASI is higher than that of MSE in NSSO. *The bigger the size of firm the larger is the cash flow and loan ratio* (Table A7.1 and Table A7.11) *in case of MSME category*. However, in case of NSSO, the average cash flow ratio of micro firm is larger than the small firm whereas the average loan ratio of former is less than the latter. In case of ASI, both average cash flow ratio and loan ratio of MSE is larger than the Medium&Large firms. So if MSE is compared with that of Medium&Large firms, the cash flow ratio and loan ratio of MSE is higher.

The younger the firm, the higher is the cash flow ratio. This is true both in MSE and Medium &Large firms. However, the older firms have higher average loan ratio than the younger firm in case of MSE. The reverse is true in case of Medium & Large firms.

Overall

- the smaller MSME have less loans than the larger MSME
- the MSE have higher loan than the Medium & Large firms in the ASI
- the younger have less loan compared to the older one in the case of MSE

- the younger firms have higher loan compared to the older in the case of Medium & Large
- the smaller MSE has less cash flow ratio than bigger MSE
- the Micro firms have higher cash flow than the Small firms in NSSO
- the MSE have higher cash flow than the Medium & Large firms in the ASI
- the younger firms have higher cash flow in the case of ASI

7.4.4 Empirical Evidence and Analysis

Model (1) is estimated using both one-way and two-way fixed effect method by following 'robust' option in STATA in three variant forms. Robust option is adopted to obtain heteroskedasticity-robust standard error or Huber/White heteroskedasticity-consistent estimators. One-way fixed effect model is controlling firm-specific heterogeneity across firms whereas the two-way fixed effect model is controlling both firm specific heterogeneity and the difference due to macroeconomic conditions over the years.

The three variant forms of the model (1) are based on different dependent and SIZE variables. As mentioned earlier dependent variable is growth in SIZE variable. We have taken three SIZE variables such as employment, output and fixed asset. By taking each of the SIZE variables, the Model (1) has three variant. For employment and output, the relationship in the model is not significant using NSSO data. However, the result of employment and output variant is attached in the Appendices 2 to Chapter -7 in Table A7.19 and Table A7.20.

The models are estimated using NSSO data and ASI data separately. Since data on age is not available in NSSO, the models are estimated without the variable 'age' as independent variable. In case of ASI data, the models are estimated including 'age' variable as data on 'age' is available in this data source.

SIZEa is log of fixed asset of firm. A negative relationship is established between size and growth of firm. The smaller the size of the firm, higher is the growth. The coefficient of this variable is negative in MSE, Micro firms and Small firms in case of NSSO data (Table 7.2). It is also negative in case of ASI data in both panels such as panel1 and

panel2 for both MSE and Medium&Large firms (Table 7.3 and Table 7.4). This result is consistent with findings of earlier studies mentioned before.

Table 7.2: Result of Panel regression using NSSO data for Fixed Asset variant of the Model (1)

	MSE		Micro		Small	
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	FA_a	FA_b	FA_a	FA_b	FA_a	FA_b
SIZEa	-0.734***	-1.276***	-0.717***	-1.267***	-1.483***	-1.643***
	(0.137)	(0.123)	(0.141)	(0.123)	(0.123)	(0.106)
Cashflow_FA	0.343***	-0.0340	0.334***	-0.0362	1.330***	1.218***
	(0.104)	(0.101)	(0.105)	(0.0997)	(0.128)	(0.258)
Loan_FA	0.247	-0.286	0.254	-0.233	0.610***	0.485***
	(0.336)	(0.285)	(0.317)	(0.240)	(0.0796)	(0.0968)
Constant	9.161***	15.24***	8.956***	15.09***	22.98***	25.45***
	(1.607)	(1.438)	(1.657)	(1.445)	(1.903)	(1.658)
Observations	282	282	282	282	24	24
R-squared	0.250	0.688	0.240	0.683	0.962	0.979
Number of id	141	141	141	141	12	12
Firm FE	YES	YES	YES	YES	YES	YES
Year FE	NO	YES	NO	YES	NO	YES
Adj. R-squared	0.242	0.684	0.231	0.678	0.956	0.975
F-test	13.85	75.78	12.59	73.65	73.47	126.2

Notes: Robust standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1
'a' is one-way fixed effect model 'b' is two-way fixed effect model

AGE is log of age of firm. A positive relationship between age and growth of firm is found in case of panel2 of ASI. This is true for all firms taken together and for Medium&Large firm. The mature firm grows faster than the young firm. But there is no such relationship in case of MSE. However, it is negative in case of panel1. This is true for all firms taken together, for also MSE and for Medium&Large firm separately. Negative relationship means the younger firms grow faster than the mature firms. Negative relationship is consistent with the finding of earlier studies.

Cashflow_FA is ratio of cash flow to fixed asset of firm. This study shows impact of finance constraint (cash flow-FA) on the growth and economic performance of firm even after controlling the effect of firm size and age. A statistically significant coefficient of cash flow ratio in case of one-way fixed-effect model (column 1, 3 and 5 of Table-7.2) is the evidence of finance constraints in case of Smaller MSE in general, and smaller Micro and smaller Small firms in particular. The coefficient of the MSE and Micro firms is

smaller than the Small firm. Meaning thereby is that the MSE and Micro firms are more financially constraint than the Small firms. This is an exception case to the cash flow-growth sensitivity.

When the low cash flow observations are there; the estimated growth cash flow sensitivity is low for the high constrained firms. The financially constrained firms are highly vulnerable to face situation like financial low cash flows and distress. Such firms are high probable of having negative cash flow. For the distress firms, each additional increase in cash flow is more likely to be paid back to the creditor than invested. Hence, the estimated growth-cash flow sensitivity is lower for more constrained firms in a situation of low cash flow observations.

The Smaller MSE and particularly Micro firms are firms with low cash flows. The evidence found is that growth- cash flow sensitivity of MSE and Micro firms are lower (column 1, 3 of Table 7.2). The Smaller MSE in general and Micro firms in particular are financially distress and financially more constrained firms.

Growth-cash flow sensitivity is very high for Small firms (column 5 and 6 of Table 7.2). This is because; Micro firms, who have mostly low cash flow, are not part of this group. As a result, cash flow ratio has high coefficient value. This evidence confirms the fact that the Small firms are financially constrained firms. This is in line with the finding of Allayannis & Mozumdar (2004**)** which says that when negative and low "cash flow observations are excluded from the sample, more constrained firms should exhibit greater investment-cash flow sensitivity".

If the Micro and Small firms are compared, both the group has lower access to the external debt. But Micro firms are facing high inadequacy of funds than the Small firms. The low sensitivity of growth-cash flow of the Micro firms is symptom of financial distress situation. When time fixed effect is controlled in the two-way fixed effect regression, coefficient value of growth-cash flow become statistically insignificant for both smaller MSE and smaller Micro firms (see in column 2 and 4 of Table 7.2). This means that cash flow and growth of firm are not related for financially distressed firms over time. This is probably because each additional increase in cash flow is used more to

pay back debts than for investment. Micro firms are financially distress firms. However, in contrast to MSE and Micro firms, Small firms are showing significantly very high growth-cash flow sensitivity both in one-way and two-way fixed effect model. Their growth is highly dependent and restricted to their amount cashflow. Meaning thereby, fluctuation in cashflow is affecting the growth of Small firms highly. So, the growth of Small firms is constraint by the availability of cash flow. They are financially constraint firms.

ASI_panel1 and ASI_panel2 are panels of ASI firms. They are panels of the larger MSME and large firms. They are part of formal sector and registered firms. They are not informationally opaque. They mostly have high level of cash flow. "Growth-cash flow sensitivity is higher for the more constrained firm with normal level of cash flow (Allayannis & Mozumdar, 2004)".

Table 7.3: Result of panel regression from ASI_panel1 for Fixed Asset variant of the Model (1)

	Total ASI		MSE		Medium&Large	
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	FA_a	FA_b	FA_a	FA_b	FA_a	FA_b
SIZEa	-1.432***	-1.527***	-1.404***	-1.552***	-1.466***	-1.522***
	(0.0304)	(0.0301)	(0.0987)	(0.0862)	(0.0574)	(0.0610)
AGE	-0.147***	-0.0813*	-0.149*	-0.0950	-0.156**	-0.141**
	(0.0505)	(0.0471)	(0.0889)	(0.0857)	(0.0659)	(0.0614)
cashflow_FA	0.0157***	0.00953***	0.0176***	0.0111***	0.0259	-0.207
	(0.00520)	(0.00360)	(0.00439)	(0.00307)	(0.213)	(0.188)
loan_FA	-0.00576	-0.00487	-0.00826***	-0.00835***	0.0919	0.0556
	(0.00534)	(0.00418)	(0.00237)	(0.00209)	(0.0751)	(0.0534)
2011.year		0.895***		0.850***		0.571***
		(0.0679)		(0.117)		(0.102)
Constant	26.96***	28.06***	23.81***	25.67***	29.61***	30.39***
	(0.551)	(0.534)	(1.646)	(1.410)	(1.134)	(1.203)
Observations	2,248	2,248	352	352	382	382
R-squared	0.680	0.721	0.724	0.788	0.731	0.768
Number of dsl	1,124	1,124	176	176	191	191
Firm FE	YES	YES	YES	YES	YES	YES
Year FE	NO	YES	NO	YES	NO	YES
Adj. R-squared	0.679	0.721	0.721	0.785	0.728	0.765
F-test	591	568.4	64.54	83.89	170.7	133.3

Notes: Robust standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1
'a' is one-way fixed effect model 'b' is two-way fixed effect model

In case of larger firms, the coefficients values estimated from the panel regression model is although low, but statistically significant at one percent level of significance suggest that larger and bigger MSE has lower sensitivity of growth-cash flow ratio for the mentioned period (see column 1 and 2 of Table 7.3). This confirms the fact that the larger firms are less constraint to their internal funds for investment. The comparative analysis of regression result across the firms shows that the MSE are relatively more financially constraint as compared to the medium&large firms. The Medium&large firms have access to the external finance to finance investment. They may be using cash flow to payback their creditor, to pay as dividend to their share holder.

If Larger MSE is compared with that smaller MSE, the latter are financially distressed and more constrained firms because the growths of fixed asset of latter are more sensitive to the availability of their cash flow. They cannot make investment in labour and capital beyond the amount of cash flow available to them. The reason being they face the greater wedge between the costs of internal and external funds and inability to access external finance, particularly, loan from banks. They have external finance constraint. In the absence of external finance, their economic performance is lower. Their growth and economic performance is more dependent on the availability of finance. They would have performed better economically, if they have enough access to external finance.

The ASI_panel2 corresponds to a period where there was high prospect of growth for Indian firms. If ASI_panel2 is considered, the growth-cash flow sensitivity is negative for Total ASI and MSE (column1, 2, 3, and 4 of Table 7.4).However, no significant relationship between growth-cash flow is established for Medium&Large firms in this panel.

The reason for negative relationship of growth and cash flow is as follows. As the lower size of firm, higher is the prospect of growth. Being size of firm low, their cash flow may be lower than required amount to make investment. So they are making investment by borrowing heavily in the form of debt and other external finance to take benefit of their higher growth prospect, even if those are costly and hence growing faster. This is supported by the fact that they have positive sensitivity between growth and loan ratio

Table 7.4: Result of panel regression from ASI_panel2 for Fixed Asset variant of the Model (1)

	Total ASI		MSE		Medium&Large	
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	FA _a	FA _b	FA _a	FA _b	FA _a	FA _b
SIZEa	-0.785***	-0.985***	-0.669***	-1.003***	-0.907***	-1.170***
	(0.0691)	(0.0822)	(0.112)	(0.137)	(0.0912)	(0.0947)
AGE	0.511***	0.342***	0.216	-0.0479	0.248***	0.0191
	(0.0847)	(0.0887)	(0.135)	(0.132)	(0.0925)	(0.0941)
cashflow_FA	-0.0209	-0.0231*	-0.0288***	-0.0290***	0.0495*	0.0418
	(0.0146)	(0.0134)	(0.00825)	(0.00751)	(0.0277)	(0.0281)
loan_FA	0.0278***	0.0274***	0.0261***	0.0249***	0.0366	0.0397
	(0.00784)	(0.00777)	(0.00633)	(0.00612)	(0.0562)	(0.0577)
2007.year		0.133***		0.171***		0.196***
		(0.0169)		(0.0259)		(0.0168)
2008.year		0.263***		0.313***		0.382***
		(0.0322)		(0.0490)		(0.0340)
2009.year		0.274***		0.475***		0.307***
		(0.0759)		(0.114)		(0.0829)
Constant	13.58***	17.67***	11.09***	17.29***	17.59***	23.31***
	(1.264)	(1.553)	(1.806)	(2.306)	(1.789)	(1.898)
Observations	7,152	7,152	988	988	2,596	2,596
R-squared	0.037	0.042	0.078	0.112	0.085	0.104
Number of dsl	1,788	1,788	247	247	649	649
Firm FE	YES	YES	YES	YES	YES	YES
Year FE	NO	YES	NO	YES	NO	YES
Adj. R-squared	0.0365	0.0415	0.0739	0.105	0.0831	0.101
F-test	39.53	28.34	22.18	16.31	26.61	32.19

Notes: Robust standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1
'a' is one-way fixed effect model 'b' is two-way fixed effect model

(positive coefficient of Loan_FA variable).This finding is consistent with the finding of Heshmati (2001) that the degree of indebtedness positively affects sales growth in the case of Swedish micro and small firms. The degree of indebtedness is also measured by leverage of firms. "Firms with higher availability of external finance (high leverage firms) grow much more than low leverage firms" (Becchetti & Trovato, 2002). Financer is providing the debt because of the expected profitability of these firms' investment is sensed to be large.

Table 7.5: Result of panel regression from ASI_panel1 _Total

VARIABLES	(1) FA_younger_a	(2) FA_younger_b	(3) FA_older_a	(4) FA_older_b
SIZEa	-1.450***	-1.525***	-1.509***	-1.583***
	(0.0553)	(0.0527)	(0.0615)	(0.0600)
AGE	-0.366***	-0.125	0.270**	-0.0727
	(0.0867)	(0.0902)	(0.106)	(0.113)
cashflow_FA	0.145	0.0769	0.208**	0.134
	(0.103)	(0.0954)	(0.0878)	(0.0905)
loan_FA	-0.00294	-0.00604	-0.0336***	-0.0239**
	(0.0136)	(0.0122)	(0.0110)	(0.0111)
2011.year		0.776***		1.028***
		(0.150)		(0.145)
Constant	27.56***	27.90***	27.52***	29.25***
	(1.025)	(0.953)	(1.103)	(1.087)
Observations	1,059	1,059	1,189	1,189
R-squared	0.704	0.730	0.683	0.726
Number of dsl	812	812	877	877
Firm FE	YES	YES	YES	YES
Year FE	NO	YES	NO	YES
Adj. R-squared	0.703	0.729	0.682	0.725
F-test	178.1	174.6	331.8	338.2

Notes: Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1
'a' is one-way fixed effect model 'b' is two-way fixed effect model

Table 7.6: Result of panel regression from ASI_panel1 _MSE

VARIABLES	(1) FA_younger_a	(2) FA_younger_b	(3) FA_older_a	(4) FA_older_b
SIZEa	-1.121***	-1.341***	-1.334***	-1.426***
	(0.142)	(0.146)	(0.113)	(0.0980)
AGE	-0.144	0.105	0.253	0.0176
	(0.147)	(0.115)	(0.216)	(0.231)
cashflow_FA	-0.0574	-0.0489	0.138***	0.0788**
	(0.0630)	(0.0606)	(0.0398)	(0.0357)
loan_FA	-0.0292	-0.00607	-0.0211***	-0.0147***
	(0.0627)	(0.0520)	(0.00555)	(0.00495)
2011.year		0.870***		0.667***
		(0.213)		(0.246)
Constant	19.55***	22.02***	21.55***	23.29***
	(2.454)	(2.216)	(1.822)	(1.605)
Observations	170	170	182	182
R-squared	0.652	0.753	0.782	0.812
Number of dsl	129	129	135	135
Firm FE	YES	YES	YES	YES
Year FE	NO	YES	NO	YES
Adj. R-squared	0.643	0.745	0.777	0.806
F-test	17.57	20.99	1479	1446

Notes: Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1
'a' is one-way fixed effect model 'b' is two-way fixed effect model

Table 7.7: Result of panel regression from ASI_panel1_Medium&Large

VARIABLES	(1) FA_younger_a	(2) FA_younger_b	(3) FA_older_a	(4) FA_older_b
SIZEa	-1.416***	-1.424***	-1.513***	-1.524***
	(0.173)	(0.171)	(0.102)	(0.114)
AGE	-0.271**	-0.240*	-0.0468	-0.275**
	(0.115)	(0.125)	(0.121)	(0.127)
cashflow_FA	-0.113	-0.107	-0.0201	-0.268
	(0.701)	(0.703)	(0.551)	(0.388)
loan_FA	-0.150	-0.125	0.296	0.147
	(0.384)	(0.355)	(0.326)	(0.284)
2011.year		0.0703		0.802***
		(0.220)		(0.194)
Constant	29.10***	29.11***	30.09***	30.65***
	(3.427)	(3.441)	(2.169)	(2.324)
Observations	167	167	215	215
R-squared	0.756	0.757	0.721	0.786
Number of dsl	128	128	152	152
Firm FE	YES	YES	YES	YES
Year FE	NO	YES	NO	YES
Adj. R-squared	0.750	0.749	0.716	0.781
F-test	29.78	27.06	68.95	46.14

Notes: Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1
'a' is one-way fixed effect model 'b' is two-way fixed effect model

These small size firms with negative sensitivity of cash flow - growth in the ASI_panel2 may be the younger one. The evidence for this argument is found in Table-7.8 (columns 1 and 2). So, these are the younger and/or smaller firms in the sample with lowest asset tangibility and cash flows. Hence, they are more likely to be finance constraint (Gayane Hovakimian, 2009) . Since their cash flow is low, their growth, economic performance and development are highly dependent on their access to external finance. The more the smaller and/or younger the firm, the higher is the probability of being financially constrained.

The older and mature MSE have statistically significant relation between the Cash flow ratio and growth of fixed asset (column 3 and 4 of Table-7.6). They are financially constrained firms. This is supported by the fact significant negative relation between the loan ratio and growth of firms showing. They might have already high debt with them. The firm with high debt may face higher hurdles in accessing additional external finance because they give enough impression to default to the financer. This is because of information asymmetry and agency problem. It reduces firm's ability to raise additional

capital. It may also decrease the quantity of free cash flow with them that can be used to invest as they will use the cash to pay back their earlier debt.

Table 7.8: result of panel regression from ASI_panel2_Total

VARIABLES	(1) FA_younger_a	(2) FA_younger_b	(3) FA_older_a	(4) FA_older_b
SIZEa	-0.888***	-1.057***	-0.518***	-0.862***
	(0.0952)	(0.0979)	(0.0955)	(0.113)
AGE	0.463***	0.262***	0.339**	0.0972
	(0.0837)	(0.0920)	(0.156)	(0.133)
cashflow_FA	-0.0267***	-0.0286***	0.0441	0.0279
	(0.0103)	(0.00919)	(0.0356)	(0.0356)
loan_FA	0.0255***	0.0255***	0.0383***	0.0350**
	(0.00617)	(0.00582)	(0.0144)	(0.0140)
2007.year		0.134***		0.144***
		(0.0290)		(0.0180)
2008.year		0.289***		0.260***
		(0.0494)		(0.0368)
2009.year		0.286**		0.444***
		(0.137)		(0.126)
Constant	15.83***	19.30***	8.892***	16.00***
	(1.742)	(1.823)	(1.814)	(2.135)
Observations	3,191	3,191	3,961	3,961
R-squared	0.070	0.079	0.024	0.038
Number of dsl	1,336	1,336	1,447	1,447
Firm FE	YES	YES	YES	YES
Year FE	NO	YES	NO	YES
Adj. R-squared	0.0691	0.0768	0.0229	0.0363
F-test	107	46.51	10.13	12.31

Notes: Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1
'a' is one-way fixed effect model 'b' is two-way fixed effect model

Loan_FA is loan to fixed asset ratio. The coefficient of this variable shows how much they are using debt as an external funding for their investment, growth and how much it contributing to their economic performance.

The level of indebtedness can have positive or negative effects on the growth of the firms. The degree of indebtedness is also measured as leverage of firms. Firms, which can access credit and debt more, can make more investment than the firm with lower accessibility of credit and debt. The former grow faster than the later. This is giving a positive relation between indebtedness and growth of firm. The firm with high debt may face higher hurdles in accessing external sources of capital because they give the impression that they are more likelihood to default during a business downturn. Hence, there is a negative relation between high debt (high leverage firms) and investment

(Lang, Ofek, & Stulz, 1996)(Lang, Ofek, & Stulz, 1996)and resulting in negative effect on economic performance of firm (Lang et al., 1996).

The smaller MSE do not have any significant relation between debt ratio and their growth (column 1 and 2 of Table 7.2). This shows that they do not have enough access to debt. If we disaggregate MSE and see only the Micro, the same is true also for Micro firms (column 3 and 4 of Table 7.2). Small firms are relatively larger firms inside the smaller MSE. They have positive and significant relation between the debt ratio and growth (column 5 and 6 of Table 7.2). It means the larger size firms (Small firms) have the access to external debt and higher is the economic performance.

Table-7.9: result of panel regression from ASI_panel2_MSE

	(1)	(2)	(3)	(4)
VARIABLES	FA_younger_a	FA_younger_b	FA_older_a	FA_older_b
SIZEa	-0.674***	-0.788***	-0.583***	-1.259***
	(0.163)	(0.167)	(0.179)	(0.220)
AGE	0.223*	-0.0268	0.224	-0.231*
	(0.126)	(0.163)	(0.154)	(0.128)
cashflow_FA	-0.0151	-0.0173	-0.0326	-0.0433
	(0.0124)	(0.0141)	(0.0551)	(0.0509)
loan_FA	0.0134	0.0143	0.00768	0.00458
	(0.0108)	(0.0124)	(0.0106)	(0.00808)
2007.year		0.171***		0.177***
		(0.0567)		(0.0285)
2008.year		0.288***		0.368***
		(0.0982)		(0.0562)
2009.year		0.328*		0.689***
		(0.178)		(0.168)
Constant	11.37***	13.64***	9.472***	22.20***
	(2.714)	(2.822)	(2.986)	(3.747)
Observations	428	428	560	560
R-squared	0.105	0.130	0.049	0.139
Number of dsl	174	174	198	198
Firm FE	YES	YES	YES	YES
Year FE	NO	YES	NO	YES
Adj. R-squared	0.0968	0.115	0.0420	0.128
F-test	5.228	7.512	2.873	6.915

Notes: Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1
'a' is one-way fixed effect model 'b' is two-way fixed effect model

The larger MSE have significant negative relation between the debt ratio and growth of firm (column 3 and 4 of Table 7.3). They have high level of debt. They are already high leverage firms. The banks may not be interested to lend more as they are giving the impression to bank that they might default the loan they have already with them. Hence,

they may not be accessing debt anymore. Because of this they might not be making the investment they want to make and resulting in less growth and negative relationship between the debt and growth. The medium&large firms have no relationship between debt ratio and growth and economic performance (column 5 and 6 of Table 7.3). They have access to other formal sources of funds as they are registered and bigger firms.

Younger firms do not have significant relation. But the older firms have significant negative relation. This is true for Total ASI and larger MSE firms. They are high leverage firms. This shows that they are not able to access additional debt from the banks which they need for investment. This also shows that they are not dependent on the other external source of finance. May be there is accessibility problem to these sources of finance being the smaller one compared to the medium and large firms.

Table 7.10: result of panel regression from ASI_panel2_Medium&Large

	(1)	(2)	(3)	(4)
VARIABLES	FA_younger_a	FA_younger_b	FA_older_a	FA_older_b
SIZEa	-1.050***	-1.329***	-0.613***	-0.913***
	(0.152)	(0.112)	(0.123)	(0.136)
AGE	0.346***	-0.0102	0.250	0.0667
	(0.0977)	(0.0977)	(0.152)	(0.101)
cashflow_FA	0.0583***	0.0489***	-0.0196	-0.0353
	(0.0131)	(0.0142)	(0.0565)	(0.0510)
loan_FA	-0.00911	0.00316	0.0607	0.0542
	(0.0352)	(0.0341)	(0.0703)	(0.0677)
2007.year		0.209***		0.159***
		(0.0294)		(0.0187)
2008.year		0.414***		0.300***
		(0.0530)		(0.0400)
2009.year		0.459***		0.279**
		(0.158)		(0.132)
Constant	20.38***	26.53***	11.59***	18.03***
	(2.988)	(2.250)	(2.410)	(2.651)
Observations	1,096	1,096	1,500	1,500
R-squared	0.163	0.198	0.059	0.082
Number of dsl	470	470	542	542
Firm FE	YES	YES	YES	YES
Year FE	NO	YES	NO	YES
Adj. R-squared	0.160	0.193	0.0563	0.0777
F-test	18.09	28.98	6.560	11.41

Notes: Robust standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1
'a' is one-way fixed effect model 'b' is two-way fixed effect model

7.5 Conclusion

Access to Finance is the most important factor determining the survival, growth and economic performance of MSMEs. It allows undertaking productive investments, to acquire the latest technologies. It ensures their competitiveness and contributes in the development process of the economy.

However Indian MSMEs, particularly MSEs are financially distressed and constrained. The MSE in India are financially distressed and their growth is constrained to the availability of internal finance. Lack of access or the availability to external finance continues to be a major problem for Mses. Meaning thereby, the large chunk of Indian manufacturing sector are unable to access the external finance. Inadequate external (particularly bank) finance and at the same time, poorly functioning banking system to address the problem can severely sabotage the microeconomic fundamentals of the country that is the economics of MSMEs firms individually. This may result in lower growth in income and employment at the macro level.

The analysis of trends and sectoral allocation of commercial bank lending to the MSME sector and impact of size and performance of banks on the credit going to the sector would add to the discussion on the access to finance of the firms in the sector. This has been attempted in the Chapter - 8.

CHAPTER – 8

COMMERCIAL BANKS CREDIT TO MSMES IN INDIA

8.1 Introduction

The financing of MSMEs has been a matter of importance and concern for researchers and policy makers because of its contribution in the economies of both developing and developed countries across the world. Banks are the main source of formal finance for MSMEs across countries (Beck, Demirgüç-Kunt, & Maksimovic, 2008). MSMEs particularly the MSEs rely mainly on the banking system for institutional external finance. Their relatively small size hinders their capacity to access loans from private agents in capital market.

An attempt to understand the trends in commercial bank's credit to MSMEs is made here as this would provide the real picture of the progress of credit going to the MSME Sector, and helps in understanding variations there in, and the factor influencing the patterns of credit flow towards MSMEs. Furthermore, it will enhance the understanding of MSMEs financing from the supply side. The chapter will analyse

- the trends in schedule commercial banks' credit to Small- scale industry sector/ MSMEs sector from 1970's to till 2010,
- sectoral allocation of bank credit to MSME vis-à-vis non-MSME sector, and
- does size and performance of banks have influence on the trends of credit to the MSME sector?

8.2 Banks and the factors determining their credit directed to MSMEs

The conventional school of thought argues that 'supply-side' factors are at the root of the inadequate financing of MSMEs. The method of operation of different financial institutions particularly the banks is such that they are biased against extending credit to MSMEs. Many banks and financial institutions are not interested in servicing MSMEs(Torre et al., 2010).

"Financial institutions including banks depend on the technical, managerial and marketing skills of borrowers to service the loan (Bose, 2013)". MSMEs financing is

mostly hampered by their ‘opaqueness’ Torre et al.(2010), Berger & Udell, (2006), Cole et al. (2004)). It means it is difficult to ascertain if firms have the capacity to pay and the willingness to pay(Torre et al., 2010). Banks face problems in dealing with MSMEs due to “lack of transparency and reliability of data, lack of financial discipline and inability to provide sound financial track record (Bose, 2013)”. It creates problem for the financial institutions and banks who engage in more impersonal financing. This kind of financing requires hard, objective and transparent information.

Relationship lending gives solution to the problem of opacity of information regarding firms. It is based on the ‘soft’ information gathered by the loan officer. Loan officer gathers information from his continuous and direct contacts and personal interaction with the managers and owners who run the micro and small enterprises. It is also based on the officers’ personal experience about the local community in which they operate. This is all to mitigate opacity problems. “A firms’ credit history with the bank is the second most important criterion, with the owner’s characteristics and the purpose of the loan being next in importance (Beck, Demirgüç-Kunt, et al., 2008)”.

A large literature such as Berger, Kayshap, and Scalise (1995); Keeton (1995); Berger and Udell (1995); and Strahan and Weston (1996) have argued that small banks are more likely to finance SMEs because they are better suited to engage in ‘relationship lending’. It is argued that small banks are close to the MSMEs, community or neighborhood, which enables them to finance MSMEs through relationship lending. It is also argued that large banks are less capable of collection and processing of information of the relevant sector because their headquarters are far away and it is not easy for them to handle personalized, community based nature of relationship lending. “Large banks are less willing to lend to informationally ‘difficult’ credits such as firms with no financial records (Berger et al, 2005)”.

Another form of credit to risky MSMEs is based on collateral. Most of the time MSMEs do not have adequate collateral to get credit from commercial banks.

8.3 Data Coverage

The study has analysed the credit data to the MSME sector and various other indicators published by the RBI in Basic Statistical returns, Statistical Tables Relating to Banks and Trends and Progress in Banking in India from their various issues. The commercial banks are classified into sub-groups when it is required.

Due to constraints in the data availability, the analysis in the chapter is adjusted mostly in respect of inclusion of time period which is mentioned wherever needed. The analysis of credit is made in aggregate of all banks, by group wise of the commercial banks, by size classes of banks, by scaling their performance and by bank wise also. The coverage of the data is for the period of 1970 to 2010. The analysis on size classes and the regression analysis on the relation between the credit to the MSE and banking characteristics are based on data for public sector banks only since, bank wise data on MSE credit are available for public sector banks in the public domain. All the monetary figures are adjusted based on 2004-05 wholesale price indexes of manufacturing products.

The Public sector banks are divided into three size classes such as 'small', 'medium' and 'large' based on their total asset. Bank size is 'small' if total asset is less than Rs 35,000 crores, it is 'medium' if total asset is between Rs 35,000 crores to Rs.70, 000 crores and it is 'large' if total asset is above Rs.70, 000 crores.

Similarly, the public sector banks are classified as performing 'poor', 'good' and 'very good' based on the Return on Asset (RoA).It is a profitability indicator of bank. Bank performance is 'poor' if RoA is less than 0.4 percent, 'good' if it is between 0.4 per cent to 0.9 percent and 'very good' if it is above 0.9 percent.

8.4 MSMEs and inadequacy of credit from commercial banks in India

The banking system is the important component of the financial system in India. It is also the important source of formal external funding for firms. For example, commercial banks extend credit to firms in the manufacturing sector to help them meet their financial requirement for short-term and long-term investments. This is in the form of fixed and working capital and credit for various other economic units. They are of varying size in terms of employment, sales and total assets. There is a group of enterprises which is

being classified as Micro, Small and Medium Enterprises (MSMEs)[32] by Government of India (GoI). Prior to 2006, this group of Industries (excluding the medium size units) was notified as Small Scale Industry (SSI) by the GoI.

The MSME sector faces a key market failure in the capital market (Mohan, 2002). These enterprises lack institutional finance for startup, face higher cost of credit relative to large enterprises, do not have proper credit assessment techniques and expertise and face higher transaction cost. More importantly, the higher incidence of non-performing loans does not encourage the commercial banks to extend credit to the MSME sector (Ramachandra Rao et al, 2006).

Small scale industry (present day MSMEs) and inadequacy of finance are two terms that invariably go together in any discussion about the small scale enterprise sector. This phenomenon remains unchanged for more than four decades. The committees headed by Abid Hussain, P.J.Nayak, S.L.Kapur, S.P.Gupta, S.S.Kohli, A.S.Ganguly, have gone into the problems of inadequate finance faced by the sector in the past few decades.

8.5 Directed credit to MSMEs Priority Sector Lending (PSL)

The governments or central banks in most countries have used directed credit controls to channel credit to preferred sectors such as agriculture, small scale industries, business enterprises and housing on subsidized terms. This is one way of financing development. The most common means of directing credit are by imposing lending requirements on commercial banks, refinance schemes, loans at preferential interest rates, and credit guarantees and so on. These programs generally target small scale industries, agriculture, state owned enterprises and housing, exports and under-developed regions. These are the sectors which face the problem of inadequacy of credit. Commercial banks themselves do not provide necessary credit to priority sectors.

Directed credit plays a very prominent role in developing countries including India. This is to fulfill the objective of the government to make financial system that would mobilize deposits and make loans to preferred sectors. While formulating the Industrial Policy, the priority and neglected sectors were declared. This is for financing by commercial banks

[32] *Refer Appendices to Chapter -7 for the definition of MSME*

on a priority basis. This has the impact on the functioning and development of commercial banking in India.

The meaning of priority sector is to give priority to certain sectors in the allocation of credit by providing concessions in interest rates, margin etc. Commercial banks should increase their involvement in the financing of priority sectors (such as agriculture and small scale industries). This was being finanlised at a meeting of the Nationalised Credit Council held in July 1968. However, the concept priority sector lending was formalized in 1972 based on the report submitted by the Informal Study Group on Statistics. This report was regarding advances to the Priority Sectors constituted by the Reserve Bank of India in May 1971. The definition and quantitative targets had fully crystallised by 1980s. In 1980, it was decided at the official level that the bank should aim at raising the proportion of their advances to priority sector to 40 percent by March 1985.

Under the guidelines set by the Reserve Bank of India (RBI), banks are required to supply debt to priority sectors at differential rate of interest. Commercial Bank's lending to the Micro and Small Enterprises comes under priority sector advances. Credit going to Medium enterprises does not come under priority sector lending. The priority sector impacts large sections of the population, the weaker sections and the sectors which are employment-intensive such as agriculture, and micro and small enterprises (MSE here after). Categories of Priority sector for all scheduled commercial banks are agriculture, micro and small enterprises, micro credit, education loans, housing loans.

The targets limits for domestic banks and foreign banks are different, under priority sector lending. The target limit for domestic commercial banks is 40 percent of their Adjusted Net Bank Credit (ANBC). For Foreign banks, it is 32 percent of their ANBC (Table 8.2). "Any shortfall in such lending by the foreign banks has to be deposited in the Small Enterprise Development Fund (SEDF) set up by SIDBI (Sengupta Committee, 2009)".

Out of the 32 percent of NBC earmarked for the priority sector for the foreign banks, 10 percent is earmarked for the MSEs. However, *there is no such quota for MSEs from the Indian public and private sector banks*. A quota of 18 percent and 10 percent of NBC

are earmarked for agriculture and weaker section consisting of small and marginal farmers, artisans and others respectively.

Table 8.1: Priority Sector Lending Targets

	Before 1991	After 1991
Total Priority Sector Credit	40 per cent of net bank credit	40 per cent of net bank credit
Agricultural Credit	18 per cent of net bank credit	18 per cent of net bank credit
Weaker Section Credit	10 per cent of net bank credit	10 per cent of net bank credit
Export Credit	_	12 per cent of net bank credit for foreign banks
SSI Credit	_	10 per cent of net bank credit for foreign banks

Source: Dasgupta (2002), 'Priority Sector Lending, Yesterday, Today and Tomorrow' EPW, October 12.

Table 8.2: Targets of priority sector lending

	Domestic Banks	**Foreign Banks**
Total Priority Sector Credit	40 per cent of NBC(60 per cent for RRBs and primary urban cooperative banks)	32 per cent of NBC
Agricultural Credit	18 per cent of NBC	No target
Weaker Section Credit	10 per cent of NBC (15 per cent for RRBs and 25 per cent for primary cooperative banks)	No target
Export Credit	Export credit does not form part of the priority sector	12 per cent of NBC
MSE Credit	No target	10 per cent of NBC
Micro enterprise within MSEs	40 per cent of MSE loan to units having investment in P&M up to Rs. 5 lakh, 20 percent to units with investment between Rs.5lakh and Rs.25 lakh(thus, 60 percent of MSE loan should go to the Micro units	Same as the domestic banks
DRI loan	1 per cent of the previous year's total advances	No target
Contribution to RIDF/SIDBI	Shortfall subject to maximum of 1.5 percent of NBC, contributed to NABARD's RIDF at 8 per cent of interest. No such penalty provision for RRBs.	Shortfall to be contributed to SIDBI's corpus at a rate of interest ranging from the bank rate and the bank rate minus 3 per cent determined as inversely proportional to the shortfall

Source: (Vyas, 2007)

Recently, the Nair Committee Report (February 2012) on Priority Sector Lending has recommended this to be 40 percent. As suggested by this committee, RBI has put following mandates within the advances to micro and small enterprises such as

a) There must be 20 percent y-o-y growth in the MSE lending,
b) There must be 10 percent y-o-y growth in the number of accounts of micro enterprises.

"In order to ensure that sufficient credit is available to micro enterprises within the MSE sector, banks should ensure that:

(a) 40 per cent of the total advances to MSE sector should go to micro (manufacturing) enterprises having investment in plant and machinery up to Rs. 5 lakh and micro (service) enterprises having investment in equipment up to Rs. 2 lakh ;

(b) 20 per cent of the total advances to MSE sector should go to small (manufacturing) enterprises with investment in plant and machinery above Rs. 5 lakh and up to Rs. 25 lakh, and micro (service) enterprises with investment in equipment above Rs. 2 lakh and up to Rs. 10 lakh. Thus**,** 60 per cent of MSE advances should go to the micro enterprises. Remaining 40 per cent is to go other SMEs.

(c) While banks are advised to achieve the 60 percent target as above, the allocation of 60 percent of the MSE advances is to be achieved in stages viz. 50 percent in the year 2010-11, 55 percent in the year 2011-12 and 60 percent in the year 2012-13" (Refer circular RPCD.SME & NFS.No.BC.90/06.02.31/2009-10 dated June 29, 2010).

"Some key focus areas of PSL, with regard to the MSME sector are:

- Sizeable share of banks credit portfolio must go to micro and small enterprises. The existing PSL guidelines have set targets for micro and small enterprises financing. The Nair Committee Report (February 2012) on Priority Sector Lending has recommended that all domestic and foreign banks allocate 7 percent of their credit portfolio solely for financing micro enterprises.

- The committee has also recommended that foreign banks should have priority sector commitment of 40 percent of Annual Net Bank Credit (ANBC), with a sub target for

the micro and small enterprise sector at 15 percent of ANBC"(Intellectual Capital Advisory Services Private Limited, 2012).

But this policy change is after 2010.

The dilution of PSL has been discussed substantially in the Chapter - 9 on policy analysis. The operational relevance of PSL target has been nullified by including number of items which cannot be considered as weaker section borrowal of small loans without other bankable projects and with difficulty in getting bank credit. The coverage under PSL has 'increasingly moved away from the original intensions of the programme'(National Commission for Enterprises in the Unorganised Sector, 2007). A citation is presented to support this point as follows. "In order to align bank credit to the changing needs of the society, the scope and definition of priority sector have been fine turned over time by including new items as also by enhancing credit limit of the constituent sub-sectors. As part of this process, some more measures were initiated in 2004-05. First, the ceiling on credit limit to farmers against pledge/hypothecation of agricultural produce (including warehouse receipts) was increased from Rs. 5 lakh to Rs. 10 lakh under the priority sector. Second, the limit on advances under the priority sector for dealers in agricultural machinery, including drip/sprinkler irrigation systems was increased from Rs. 20 lakh to Rs. 30 lakh and for distribution of inputs for allied activities from Rs. 25 lakh to Rs. 40 lakh. Third, banks were permitted to extend direct finance to the housing sector up to Rs. 15 lakh, irrespective of location, as part of their priority sector lending. Fourth, investments by banks in the mortgage backed securities (MBS) have been classified as direct lending to housing within the priority sector lending subject to certain conditions. Fifth, loans advanced to distressed urban poor to prepay their debt to non- institutional lenders, against appropriate collateral or group security, have been classified as advances to weaker sections within the priority sector. Sixth, the investment limit in plant and machinery for seven items belonging to sports goods, which figure in the list of items reserved for manufacture in the small scale industries (SSI) sector, was enhanced from Re. 1 crore to Rs. 5 crore for the purpose of classification under priority sector advances. Seventh, banks were urged to make efforts to increase their disbursements to small and marginal farmers to 40 percent of their direct advances

under Special Agricultural Credit Plans (SACP) by March 2007. All private sector banks were also asked to formulate SACP targets from 2005-06 with an annual growth rate of at least 20-25 percent of credit disbursements to agriculture. Eight, investment by banks in securities assets has been classified as their direct lending to the SSI sector under priority sector lending, subject to certain conditions(RBI Report and Progress of Banking in India 2004-05, p.16)".

To note once again that the credit policy direction and targeting must be used fundamentally as an umbrella for the weak and disadvantaged sectors and sections. These must be the one whose investment and income earning activities are not easily and overtly bankable. These sector and section rightly deserve the credit policy directives and targeting. MSEs are one of the well-deserved and important parts of such kind of sector and section. However, the credit delivery to the sector is declining as discussed in the coming sections.

In the absence of any quantitative restriction to MSEs lending within the priority sector that is non-fixing of a credit quota for MSEs in percentage terms unlike the other sector, commercial banks have enough leeway of diverting funds to other priority sector lending like housing, education etc. Hence, they meet the overall target. In 1969, the priority sector lending came into being. In that year, the SSI sector received around 58 per cent of total priority sector lending (Table-8.3). This share has been falling consistently since then. It was 39 percent in 1992 (Ramachandra Rao et al., 2006), which declined further to around 24 percent in 2004. However, it has increased to 32 percent in 2010.This is the case with respect to public sector bank. As mentioned in the earlier chapters, most of the PSL to the sector is going to the larger units. The increase in the cut off level of plant and machinery in the definition of MSE has led to increase in lending towards larger firms in this category. Much of the increase in PSL in this sector has been accounted for by these larger firms in recent times.

Table 8.3: Priority sector lending by Public Sector Banks to Micro and Small Enterprise (Rs. Crore)

Year	Total Priority Sector Advances	Small-scale industries	Percentage to Total
1969	441	257	58
1995	61794	25843	42
1996	69609	29482	42
1997	79131	31542	40
1998	91319	38109	42
1999	104094	42591	41
2000	127478	46045	36
2001	149116	48400	32
2002	171484	54268	32
2003	199786	52646	26
2004	244456	58311	24
2005	307046	68000	22
2006	409748	82434	20
2007	521376	102550	20
2008	610450	151137	25
2009	724150	191408	26
2010	863777	276319	32

Notes: from 2008, the sector is called as Micro and Small Enterprises
Source: Report on Trend and Progress of Banking in India (Various Issues), RBI

In case of private sector bank, the amount of priority sector lending extended to MSEs is declining from 55 percent in 1996 to just 9 percent in 2007(Table-8.4). There after it has increased to 30 percent in 2010. Similarly in case of Foreign Banks, it has remained between 30 percent to 33 percent over the thirteen year period 1997 to 2010(Table-8.5). The decline in priority sector lending over the period in general and lending to MSEs in particular is because of financial sector reforms and the consequent dilution of priority sector lending. It calls for the urgent need to re-look the priority sector lending policy.

Although such developments reflect the changing facets of economic policies and economic progress, there is a genuine concern about the falling share of credit to the MSME sector**.**

Table 8.4: Priority sector lending by Private Sector Banks to Micro and Small Enterprise (Rs. Crore)

Year	Total Priority Sector Advances	Small-scale industries	Percentage to Total
1996	6283	3482	55
1997	8832	4754	54
1998	11614	5848	50
1999	14155	6451	46
2000	18368	8000	44
2001	21567	8096	38
2002	25709	8613	34
2003	36648	8051	22
2004	48920	7590	16
2005	69886	8592	12
2006	106586	10421	10
2007	144549	13136	9
2008	164068	46912	29
2009	187849	46656	25
2010	214669	64825	30

Notes: from 2008, the sector is called as Micro and Small Enterprises
Source: Report on Trend and Progress of Banking in India (Various Issues), RBI

Table 8.5: Priority sector lending by Foreign Banks to Micro and Small Enterprise (Rs. Crore)

Year	Total Priority Sector Advances	Small-scale industries	Percentage to Total
1997	6139	1836	30
1998	6940	2084	30
1999	8270	2460	30
2000	9934	2990	30
2001	11572	3646	32
2002	13414	4561	34
2003	14848	3809	26
2004	17960	5307	30
2005	23843	6907	29
2006	30439	8430	28
2007	37831	11637	31
2008	50254	15489	31
2009	55415	18063	33
2010	59960	21147	35

Notes: from 2008, the sector is called as Micro and Small Enterprises
Source: Report on Trend and Progress of Banking in India (Various Issues), RBI

8.6 Performance of MSME Sector

The size distribution of the SSI sector is highly skewed. On one hand, a large proportion of the SSI is under the unregistered sector and on the other hand, most of the total gross output is produced by few units in the registered sector (Table-8.6). The unregistered sector gives most of the employment while, the registered sector generates most of the total output.

Table 8.6: SSI Performance: 2006-07

Characteristics	Registered MSME	Unregistered MSME	Total MSME Sector
Size of the sector(in Lakhs)	15.64	198.74	214.38
	(7.3)	(92.7)	(100)
Total employment(in Lakhs)	93.09	408.84	501.93
	(18.5)	(81.5)	(100)
Total fixed investment (in Rs. Lakhs)	44913800	24081646	68995446
	(65.1)	(34.9)	(100)
Total Gross Output (in Rs. Lakhs)	70751000	36970259	107721259
	(65.7)	(34.3)	(100)

Source: Fourth Census Small Scale Industry, GoI, Ministry of Small Scale Industry

Performance of the year 2006-07 cannot be compared with the previous years (Table – 8.7) because of the change in the definition. The annual growth rate of the number of working units is almost 4 percent on year on year basis and that of the production at current prices is almost at 12 percent or more than that. However, during the same period, employment increase is in between 4 and 5 percent. On the other hand, annual average growth rate of bank credit to the sector increased only at 7 percent for the period 2000-2007 (Table-8.9).

Table 8.7: MSMEs Performance: Units, Employment, Investments, Production and Exports.

Year	Total Working MSMEs	Employment	Fixed Investment	Production (current prices)	Exports
	Lakh numbers	Lakh persons	Rs. Crore		
	105.21	249.33	154349	282270	71244
2001-02	(4.07)	(4.44)	(5.11)	(8.03)	(2.07)
	109.49	260.21	162317	314850	86013
2002-03	(4.07)	(4.36)	(5.16)	(11.54)	(20.73)
	113.95	271.42	170219	364547	97644
2003-04	(4.07)	(4.31)	(4.87)	(15.78)	(13.52)
	118.59	282.57	178699	429796	124417
2004-05	(4.07)	(4.11)	(4.98)	(17.9)	(27.42)
	123.42	294.91	188113	497842	150242
2005-06	(4.07)	(4.37)	(5.27)	(15.83)	(20.76)
	261.12	595.66	500758	709398	182538
2006-07	(111.57)	(101.98)	(166.2)	(42.49)	(21.5)
	272.79	626.34	558190	790759	202017
2007-08	(4.47)	(5.15)	(11.47)	(11.47)	(10.67)
	285.16	659.35	621753	880805	N. A.
2008-09	(4.53)	(5.27)	(11.39)	(11.39)	
	298.08	695.38	693835	982919	N. A.
2009-10	(4.53)	(5.46)	(11.59)	(11.59)	

Notes: The figures in brackets show the percentage growth over the previous year. The data for the period up to 2005-06 is Small Scale Industries (SSI). Subsequent to 2005-06, data with reference to Micro, Small and Medium Enterprises are being compiled. The growth for the year 2010-11 is based on the average growth rate for the previous three years., N. A.:Not Available.
Source: Annual Report 2011-12, GoI, Ministry of Micro, Small and Medium Enterprises.

8.7 Analysis of Commercial Banks' Credit to MSME

8.7.1 Bank's credit to MSME sector vis-à-vis Total Industry[33]

Table-8.8 and Table-8.9 presents the growth in bank credit to MSME vis-à-vis the growth in credit to total industry and growth in total bank credit for the period 1973-1990 and 1991-2010 respectively. While the average annual growth of credit to MSME sector was 12.1 percent during 1973-1980, similar growth in credit to total industry was at 8.5 percent and that in total credit was at 12 percent. Thus, credit to MSMEs witnessed a same growth rate as that in total credit and higher growth rate as that in credit to total industry for the period under review. For the period 1981-1990, the credit to MSMEs witnessed a higher growth rate as that in credit total industry and total credit.

[33] Total industry means the total manufacturing sector including both small and large enterprises

Table 8.8: Growth in Total Bank Credit to Industry and MSE Sector from 1973 to 1990

Year	Growth Rate in Bank Credit			Per Cent Share in		
				Total Bank Credit		Total Industry
	Total	To Total Industry	To MSME Sector	Total Industry	MSME Sector	SSI Sector
1973				57	12	21
1974	10.4	13.7	15.8	59	13	21
1975	-6.9	-8.1	-8.0	58	13	22
1976	27.8	10.2	10.6	50	11	22
1977	12.6	7.2	14.7	48	11	23
1978	16.0	15.3	24.2	48	12	25
1979	19.9	17.6	22.7	47	12	26
1980	-7.5	-5.0	-7.3	48	12	25
1981	-2.1	0.1	2.1	49	13	26
1982	13.1	9.0	9.2	47	12	26
1983	14.3	14.7	6.1	48	11	24
1984	16.6	3.9	32.1	42	13	30
1985	7.8	5.2	14.4	41	14	33
1986	6.1	9.5	-0.4	43	13	30
1987	9.3	13.9	7.1	44	13	28
1988	4.3	9.4	16.0	47	14	30
1989	12.9	14.6	14.1	47	14	30
1990				49	12	25
	Average Annual Growth Rate					
1973-1980	12.0	8.5	12.1			
1981-1990	8.2	8.0	10.1			

Source: Volumes of Banking Statistics released under Basic Statistical Returns system, RBI.
Basic Statistical Returns of Schedule Commercial Banks (various issues), RBI
Note: own calculation using the data from the mentioned data source

For the period 1991-2000, the growth rate of credit to MSMEs witnessed a decline in comparison to credit to total industry and in total credit. However, during the period 2000-2007, the average annual growth of credit to MSME was 6.9 percent, while the growth of credit to total industry was high at 15 percent and that of total credit was at 18 percent during the same period. Thus, the credit to MSMEs witnessed significantly low growth rate as that of credit to total industry and of total credit.

Table 8.9: Growth in Total Bank Credit to Industry and SSI Sector from 1991 to 2010

Year	Growth Rate in Bank Credit			Per Cent Share in Total Bank Credit		Total Industry
	Total	To Total Industry	To MSME Sector	Total Industry	SSI Sector	SSI Sector
1991	9.8	7.2	17.5	48	13	28
1992	-1.1	-0.8	-5.2	48	13	27
1993	7.1	9.2	0.2	49	12	24
1994	0.4	-0.5	1.2	48	12	25
1995	6.8	1.2	-3.3	46	11	24
1996	11.2	17.1	10.2	48	11	22
1997	9.4	12.5	2.6	49	10	20
1998	12.8	11.6	3.8	49	9	19
1999	11.0	11.8	6.5	49	9	18
2000	17.1	10.8	8.3	46	8	18
2001	13.3	7.1	0.0	44	7	16
2002	19.6	12.8	-5.4	41	6	14
2003	12.3	11.1	11.9	41	6	14
2004	10.2	2.3	-5.0	38	5	13
2005	23.2	25.6	15.6	39	5	12
2006	28.3	23.7	14.6	37	4	11
2007	21.7	24.0	16.4	38	4	10
2008	33.1	19.4		34		
2009	-1.3	15.1		40		
2010	14.9	16.8		41		
	Average Annual Growth Rate					
1991-2000	8.5	8.0	4.2			
2000-2007	18.4	15.2	6.9			

Source: As in Table 8.8, *Note:* As in Table 8.8

By looking and observing the average annual growth rate of credit to MSME, credit to total industry and total credit over the four different periods; the growth rate of credit to MSME sector is witnessing significant slowing down whereas that in credit to total industry and that in total credit there is a significant increase during the same periods. This decline is likely to affect the growth of the sector and consequential employment and income generating capability of this sector. Therefore, it is very crucial to look into the factors which are creating problems and inhibiting the flow of credit to MSMEs sector.

It is also observed from the Table - 8.8 that annual growth rates of credit to the MSME sector fluctuated widely between -8.0 per cent to 32.1 per cent compared with the range of -8.1 per cent to 17.6 per cent for total industry for the period 1973- 1990. For the period 1991-2007 the annual growth rates of credit to the MSME sector fluctuated widely between -5.0 per cent to 17.5 per cent while it was in the range of -0.8 per cent to 25.6 per cent for total industry (Table 8.9).

The behavior of share of credit to total industry in total bank credit and that to MSME sector in total bank credit for the period 1973-1990 can be observed from Table – 8.8. The percentage share of credit going to total industry in total bank credit was fluctuating 59 per cent to 41 per cent with an overall declining trend 57 per cent in 1973 to 49 per cent in 1990. During the same period, the share of credit to total MSME Sector in total bank credit was fluctuating in a narrow band of 11 per cent 14 per cent and over the period it was consistent. For the period 1991 – 2007, share of credit to total industry in total bank credit was almost consistent till 1999 at 48 per cent to 49 per cent and there after it declined from 46 per cent in 2000 to 38 per cent 2007. During the same period the share of MSMEs was declining continuously from 13 per cent in 1991 to just 4 per cent in 2007 (Table 8.9).

8.7.2 Analysis of Credit to MSME Sector according to Bank Groups

A. Growth in Credit to Industry according to Bank Groups

To begin with a discussion of credit to the industry will give a background for detail discussion of the credit to the MSMEs. The annual growth rates for the period 1974-1980 in credit of State Bank of India and Associates (SBIA) to the industry fluctuated widely between -8.9 to 15.9 percent; for Nationalised Bank (NB), it is -5.1percent to 17.4 percent; for Other Scheduled Commercial Banks (OSCB), it is -38.5 percent to 21.7 percent and for All Scheduled Commercial Bank (ASB), it is -5 percent to 17.6 percent (Table - 8.10).

For the period 1981 to 1990, the fluctuation in annual growth rates in credit of SBIA to the industry is -8.2 percent to 31.2 percent, that of NB it is 2 percent to 15.3 percent, that of Regional Rural Bank (RRB) it is -31.5 percent to 187.4 percent, for OSCB, it is

Table 8.10:Growth in Bank Credit to Industry according to Bank Groups

YEAR	SBIA	NB	FB	RRB	OSCB	ASB
Jun-73						
Jun-74	10.7	16.2			11.8	13.8
Jun-75	-8.9	-5.1			-11.0	-7.2
Jun-76	6.1	15.4			9.0	11.6
Jun-77	7.4	7.7			13.1	8.4
Jun-78	8.9	3.4			4.9	5.2
Jun-79	15.9	17.4			21.7	17.6
Jun-80	5.2	-1.6			-38.5	-5.0
Jun-81	-2.8	2.0		280.5	-1.4	0.1
Jun-82	1.2	12.7		-31.5	12.7	9.0
Jun-83	31.2	7.4		74.5	9.9	14.7
Jun-84	-8.2	8.3		187.4	18.8	3.9
Jun-85	1.2	8.3		3.9	-0.3	5.2
Jun-86	12.2	7.2		31.6	14.8	9.5
Jun-87	7.1	15.3		35.3	24.2	13.9
Jun-88	13.9	8.2		20.6	4.6	9.4
Jun-89	17.7	12.5		13.7	17.3	14.6
1990	13.3	8.2		11.0	-74.9	9.7
1991	8.4	3.7	24.6	8.2	13.2	7.2
1992	-6.2	-3.2	26.5	3.5	8.8	-0.8
1993	25.6	5.7	-14.5	-1.0	15.0	9.2
1994	8.5	-4.8	-18.8	4.9	30.9	-0.5
1995	-15.8	6.5	26.1	3.2	37.0	1.2
1996	18.6	8.9	41.9	7.3	42.2	17.1
1997	14.6	6.9	14.0	11.0	40.8	12.5
1998	13.1	8.3	5.2	10.8	33.1	11.6
1999	7.9	13.6	1.3	-1.0	28.1	11.8
2000	7.5	9.1	10.6	10.0	26.0	10.8
2001	3.1	7.5	12.0	27.1	9.9	7.1
2002	-8.3	3.2	-6.3	9.8	105.3	12.8
2003	6.7	11.0	-6.5	7.5	22.1	11.1
2004	8.8	10.1	9.0	-2.4	-17.0	2.3
2005	27.8	38.9	14.3	11.9	0.6	25.6
2006	27.1	25.5	16.9	0.1	17.8	23.7
2007	31.0	21.6	28.9	25.2	18.7	24.0
2008	13.8	29.7	19.3	-10.0	-2.1	19.4
2009	25.8	14.1	-12.2	4.8	13.9	15.1
2010	13.1	19.5	-2.2	13.5	22.1	16.8

Source: As in Table 8.8, *Note:* As in Table 8.8

declined to -74.9 percent in 1990 and that of ASB, it is fluctuated between 0.1 to 14.7 percent.

For the period 1991 to 2000, the fluctuation in annual growth rates in credit of SBIA to the industry is between -15.8 percent to 25.6 percent; for NB, it is -4.8 percent to 13.6 percent; for Foreign Bank (FB), it is -18.8 percent to 41.9 percent; for RRB, it is -1 percent to 11 percent; for OSCB, it is 8.8 percent to 42.2 percent and for ASB, it is -0.5 percent to 17.1 percent.

For the period 2001 to 2010, the fluctuation in annual growth rates in credit of SBIA to the industry -8.3 percent to 31 percent; for NB, it is 3.2 percent to 38.9 percent; for FB, -12.2 percent to 28.9 percent; for RRB, it is -10 percent to 27.1 percent; for OSCB, it is -17 percent to 105.3 percent and for ASB, it is 2.3 percent to 25.6 percent.

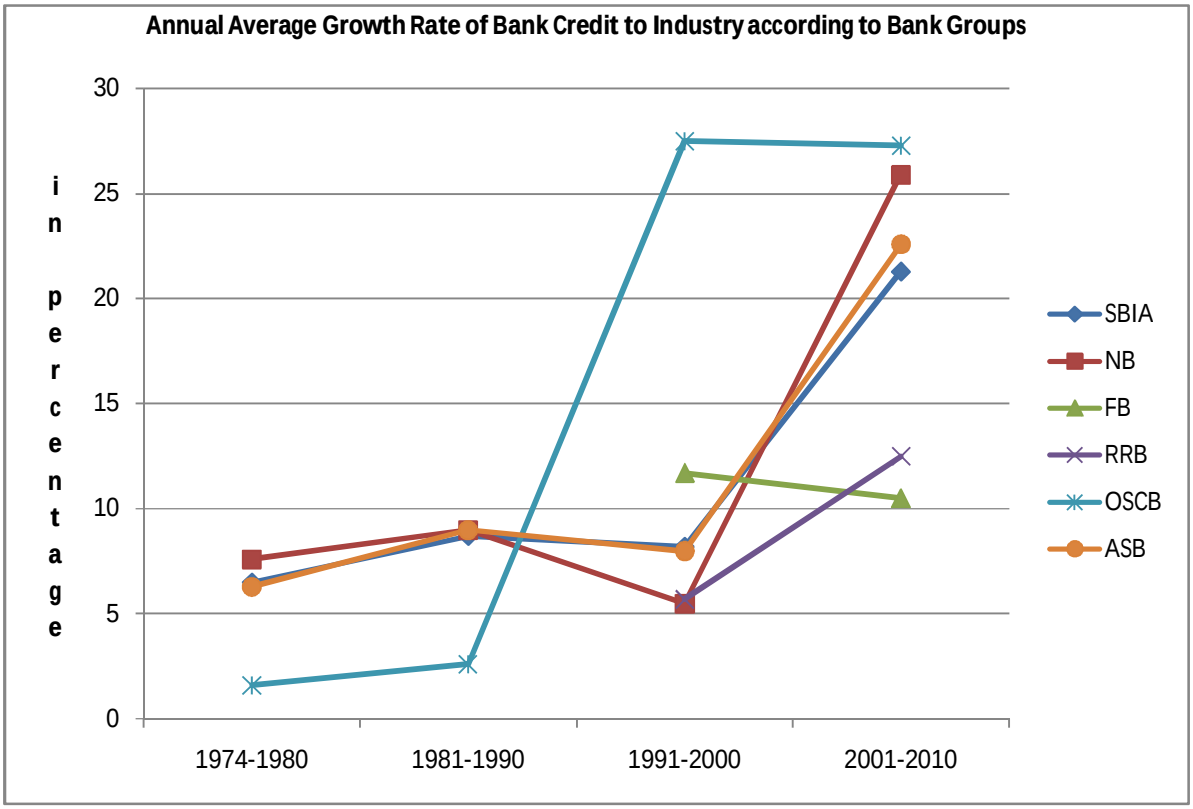
Table 8.11: Annual average growth rate in Bank Credit to Industry according to Bank Groups

	SBIA	NB	FB	RRB	OSCB	ASB
1974-1980	6.5	7.6			1.6	6.3
1981-1990	8.7	9.0		62.7	2.6	9.0
1991-2000	8.2	5.5	11.7	5.7	27.5	8.0
2001-2010	21.3	25.9	10.5	12.5	27.3	22.6

Source: As in Table 8.8, *Note:* As in Table 8.8

The annual average growth rate for the period 1974-1980 in the bank credit of SBIA to industry is 6.5 percent. It increased to 8.7 percent during 1981-1990, and then decreased to 8.2 percent during 1991-2000 and finally to 21.3 percent during 2001-2010 (Table – 8.11). For the NB, it increased to 9 percent during 1981-1990 from7.6 percent during the period 1974-1980, and then it declined to 5.5 percent during 1991-2000 and finally increased to 21.3 percent. For Foreign banks, it declined 10.5 percent during 1991-2000 from 11.7 percent during 2001-2010. For the RRB, it declined to 12.5 percent during 2001-2010 to 62.7 percent during 1981-1990. For OSCB, it is increasing from 1.6 percent during 1974-1980 to 2.6 percent during 1981-1990, then to 27.5 percent during 1991-2000 and slightly declined to 27.3 percent during 2001-2010. Among the five bank group, the credit of the Nationalized Bank to industry had recorded the highest growth during 1974-1980 and 1981-1990. During 1991-2000 and 2001-2010, the credit of OSCB has recorded the highest growth. This has been presented in the Figure – 8.11.

Figure8.1: Annual Average Growth Rate of Bank Credit to Industry according to Bank Groups



Source: As in Table 8.8, *Note:* As in Table 8.8

B. Growth in Credit to MSE and NMSE according to Bank Groups

Comparing the Micro and Small Enterprise (MSE) and the Non Micro and Small Enterprise (NMSE) groups of total industry over the years, no uniform pattern in credit growth to the MSE or in non-MSE sector is recorded across all the bank groups (Table – 8.11). For the period 1974-1980, the annual growth rate in credit of SBIA to the MSE is higher than the NMSE. However the growth rate declined in both in case of MSE and NMSE. For the bank group NB, it declined from 20.3 percent to 1.9 percent in case MSE and in case of the NMSE, increased from 15.3 percent to 182.1 percent. For the bank group OSCB, it declined from 6.1 percent to -58 percent in case of MSE and in the case of NMSE, it increased from 12.8 percent to 53.5 percent. For the ASB, it declined from 15.7 percent to -7.4 percent in case of MSE and in the case of NMSE, it decreased 13.3 percent to -4.2 percent. The growth rate in credit to MSE declined across the entire bank groups. But it has increased in case NMSE except SBIA bank group.

Table 8.11: Annual Growth rate in Bank Credit to MSE and NMSE according to Bank Groups

YEAR	SBIA		NB		FB		RRB		OSCB		ASB	
	MSE	NMSE	MSE	NMSE	MSE	NMSE	MSE	NMSE	MSE	NMSE	MSE	NMSE
Jun-74	12.6	10.1	20.3	15.3					6.1	12.8	15.7	13.3
Jun-75	-10.9	-8.2	-5.4	-5.1					-11.9	-10.9	-8.1	-6.9
Jun-76	1.2	7.5	15.0	15.4					18.6	7.4	10.4	11.9
Jun-77	11.3	6.3	15.3	5.9					17.7	12.3	14.2	6.9
Jun-78	30.3	2.5	18.6	-0.6					29.2	0.4	23.5	0.4
Jun-79	11.2	17.7	27.4	14.3					37.4	17.9	23.0	15.8
Jun-80	-3.7	8.4	1.9	182.1					-58.0	53.5	-7.4	-4.2
Jun-81	-2.1	-3.0	2.5	-1.6			371.9	12.3	6.5	1.8	1.5	-0.3
Jun-82	15.3	-3.3	7.1	14.0			-31.0	-37.0	8.4	7.7	9.6	8.8
Jun-83	0.5	43.1	7.5	12.2			55.3	333.9	8.3	11.9	5.4	17.9
Jun-84	36.7	-8.2	30.9	8.3			332.5	307.7	9.4	18.8	32.3	3.9
Jun-85	17.2	-6.1	12.2	6.5			4.3	0.8	26.7	-4.7	14.5	1.4
Jun-86	-6.1	22.7	1.8	9.8			31.5	32.3	-15.4	21.5	-1.5	14.7
Jun-87	-3.3	11.7	9.9	17.6			38.4	12.5	11.3	26.2	6.2	17.1
Jun-88	14.2	13.8	18.6	4.0			21.8	9.6	-4.0	5.8	16.2	7.0
Jun-89	9.3	20.9	15.3	11.3			14.3	8.3	20.5	16.9	13.8	14.8
1990	-2.0	18.7	-10.3	17.1			-76.6	956.3	-21.4	-81.7	-8.9	17.0
1991	20.1	5.1	18.8	-1.9	72.9	23.4	14.2	6.7	12.8	13.5	19.4	3.4
1992	-2.8	-7.3	-6.7	-1.7	13.0	27.0	-0.7	4.6	3.2	11.8	-4.9	0.6
1993	-5.1	36.1	2.6	7.0	-20.8	-14.3	-2.7	-0.6	14.1	15.5	0.4	12.1
1994	11.6	7.8	-4.6	-4.9	2.5	-19.4	6.0	4.6	18.7	36.9	1.2	-1.0
1995	-9.4	-17.3	-3.3	10.5	35.9	25.7	8.1	2.0	30.1	40.0	-2.9	2.4
1996	8.2	21.4	8.7	9.0	36.7	42.1	5.5	7.7	15.6	52.8	9.5	19.3
1997	7.1	16.4	-4.4	10.8	9.0	14.2	7.9	11.8	27.7	44.8	1.7	15.3

	SBIA		NB		FB		RRB		OSCB		ASB	
	MSE	NMSE	MSE	NMSE	MSE	NMSE	MSE	NMSE	MSE	NMSE	MSE	NMSE
1998	2.5	15.5	0.8	10.6	-6.3	5.7	15.9	9.6	28.4	34.3	3.8	13.4
1999	20.4	5.5	-4.3	18.6	-7.4	1.6	5.9	-2.7	15.0	31.4	5.3	13.2
2000	8.9	7.2	10.3	8.9	2.0	10.8	24.3	6.0	1.8	31.3	8.6	11.2
2001	2.5	3.3	-1.4	9.6	74.5	10.3	-1.9	36.6	4.2	10.9	1.9	8.1
2002	-37.8	-1.6	-2.6	4.4	-36.4	-5.0	40.0	2.7	0.8	122.1	-15.0	18.0
2003	5.7	6.9	25.9	8.1	-2.2	-6.6	8.7	7.1	-4.7	24.0	15.6	10.5
2004	0.7	10.0	-3.3	13.1	-10.7	9.6	-30.5	6.7	-14.8	-17.1	-4.1	3.2
2005	23.5	28.3	7.6	44.9	194.5	9.8	23.3	9.5	12.2	0.0	15.3	26.9
2006	24.6	27.4	15.8	26.9	-43.3	20.9	-6.6	1.7	7.7	18.4	14.4	24.8
2007	10.8	33.5	16.9	22.2	10.6	29.5	53.2	19.1	36.6	17.6	17.2	24.7

Source: As in Table 8.8, *Note:* As in Table 8.8

Table 8.12:Annual average growth rate in Bank Credit to SSI and NSSI according to Bank Groups

	SBIA		NB		FB		RRB		OSCB		ASB	
	MSE	NMSE	MSE	NMSE	MSE	NMSE	MSE	NMSE	MSE	NMSE	MSE	NMSE
1974-1980	7.4	6.3	13.3	32.5					5.6	13.4	10.2	5.3
1981-1990	8.0	11.0	9.5	9.9			76.2	163.7	5.0	2.4	8.9	10.2
1991-2000	6.2	9.0	1.8	6.7	13.8	11.7	8.4	5.0	16.7	31.2	4.2	9.0
2001-2007	4.3	15.4	8.4	18.4	26.7	9.8	12.3	11.9	6.0	25.1	6.5	16.6

Source: As in Table 8.8, *Note:* As in Table 8.8

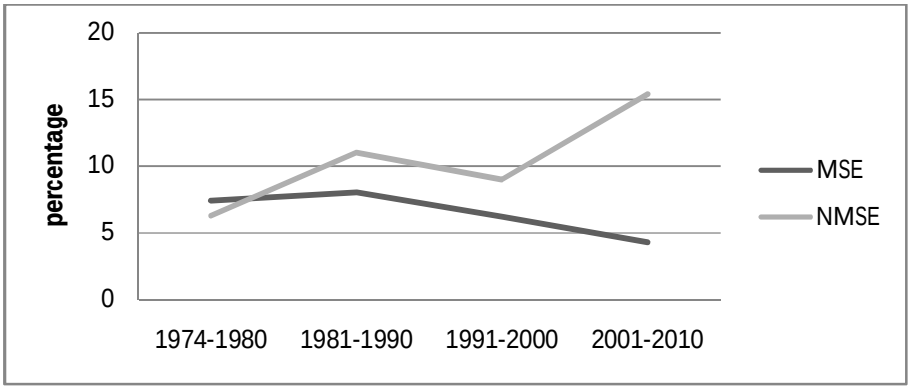
For the period 1981-1990, the credit of SBIA to MSE has increased from -2.1 percent to 36.7 and then declined to -2 percent. The credit of SBIA to NMSE has increased from -3 percent to 18.7 percent. For NB, the credit to MSE has increased from 2.5 percent to 30.9 percent then declined to -10.3 percent. The credit of NB to NMSE has increased from -1.6 percent to 17.1 percent. For RRB, the credit to MSE has declined from as high as 371.9 percent to as low as -76.6 percent with wide fluctuations. This group credit to NMSE has increased from 12.3 percent to 956.3 percent. The credit of OSCB to MSE has declined from 6.5 percent to -21.4 percent and that to NMSE, it has declined from 1.8 percent to -81.7 percent. The credit of ASB to MSE has increased from 1.5 percent to 32.3 percent then declined to -8.9 percent and to NMSE has increased from -0.3 to 17 percent. Over all the period, the growth rates in credit to MSE have declined than that to the NMSE across all the bank groups.

For the period 1991-2000, the credit of SBIA to MSE was almost constant around 20.1 percent with fluctuations and finally declined to 8.9 percent. The growth rate of credit of this bank group to NMSE has increased from 5.1 percent to 36.1 percent and then declined to 7.2 percent. The growth rate of credit of NB to MSE has declined from 18.8 percent to 10.3 percent and that of credit to NMSE has declined from -1.9 percent to 8.9 percent. The growth rate of credit of FB to MSE has declined from 72.9 percent to 2 percent and that to NSME declined from 23.4 percent to 10.8 percent. In case of RRB, for MSE it has increased from 14.2 percent to 24.3 percent and for NMSE it was almost constant around 6 to 7 percent with a height of 11.8 percent in the year 1997. That in case of OSCB, for MSE the growth rate has declined from 12.8 percent to 1.8 percent with wide fluctuation with a peak of 30.1 percent in the year 1995 and for NMSE; it has increased 13.5 percent to 31.3 percent. In case of ASB, the growth rate for MSE declined from 19.4 percent to 8.6 percent and for NMSE, it has increased from 3.4 percent to 11.2 percent. The growth rates in credit to MSE have declined across all the bank groups except RRB, however that of NMSE has increased in OSCB.

For the period 2001-2007, the growth rate of credit of SBIA to MSE has increased from 2.5 percent to 10 .8 percent with a wide fluctuation of as low as -37.8 percent to as high as 24. 6 percent and that to NMSE have increased from 3.3 percent to 33.5 percent. In

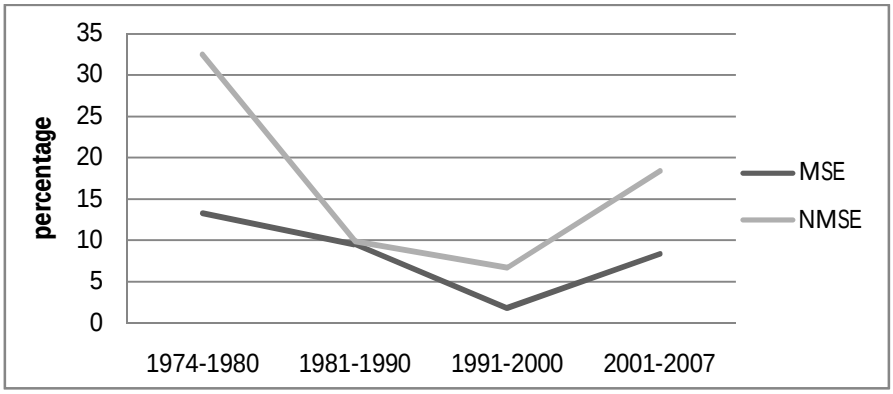
case of the bank group NB, the growth rate of credit to MSE has increased from -1.4 percent to 16.9 percent and to NMSE, it has increased to 9.6 percent to 22.2 percent. For the group FB, in case of MSE it has declined from 74.5 percent to 10.6 percent with wide fluctuation from -36.4 percent to 194.5 percent and for NMSE, it has increased10.3 percent to 29.5 percent. In case of RRB, with MSE it has increased from -1.9 percent to 53.2 percent and with NMSE, it has declined from 36.6 percent to 19.1 percent. For OSCB, with MSE it has increased from 4.2 percent to 36.6 percent and with NMSE, it has increased from 10.9 percent to 17.6 percent. In case of ASB, for MSE it has increased from 1.9 percent to 17.2 percent and NMSE, it has increased from 8.1 percent to 24.7 percent. The growth rates in credit to MSE and NMSE have increased across SBIA, NB, OSCB over the period. However, in case of RRB the growth rate for MSE has increased whereas for NMSE declined. The reverse is true in case of FB bank group.

Figure 8.2: Annual Average growth rate of credit from SBIA



Source: As in Table 8.8, *Note:* As in Table 8.8

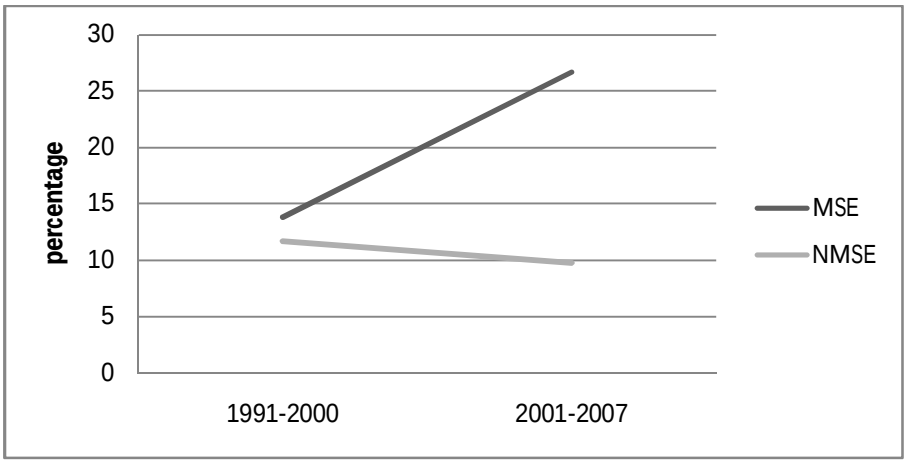
Figure 8.3: Annual Average growth rate of credit from NB



Source: As in Table 8.8, *Note:* As in Table 8.8

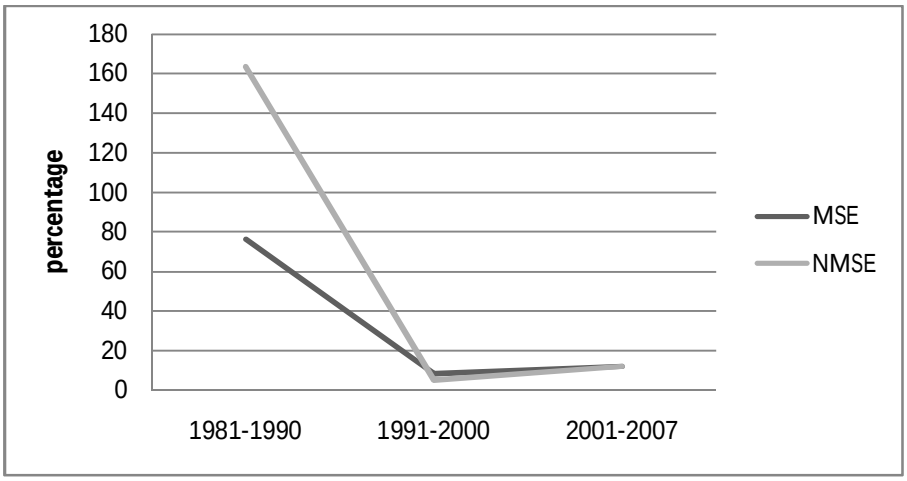
In the first period, annual average growth rate of credit to MSE is higher than that of the NMSE in case of SBIA, FB (Figure 8.2 & Figure 8.4). It is also true if we take all the schedule commercial banks together (Table - 8.12, Figure – 8.7). In the second, third and fourth period the annual average growth rate in credit to NMSE is higher than that of MSE across all bank group except FB and RRB where the reverse is true.

Figure 8.4: Annual Average growth rate of credit from FB



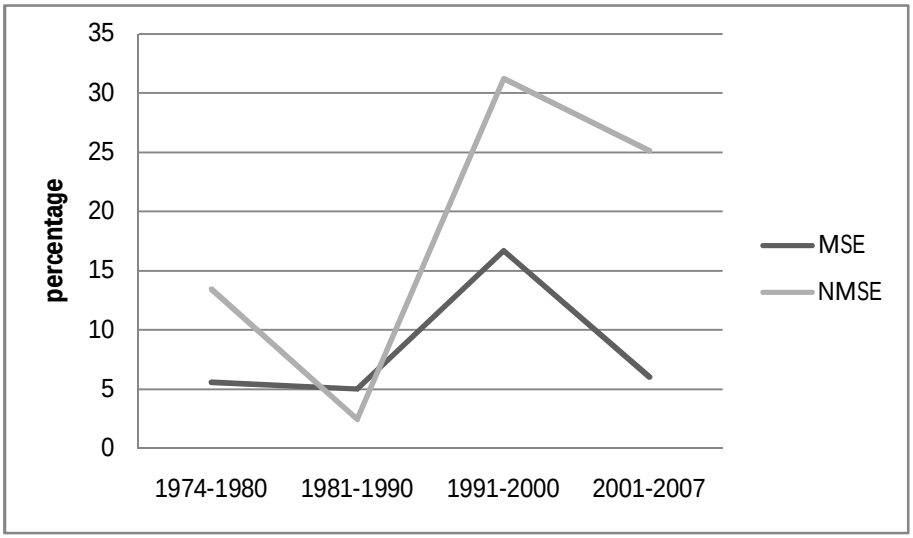
Source: As in Table 8.8, *Note:* As in Table 8.8

Figure 8.5: Annual Average growth rate of credit from RRB



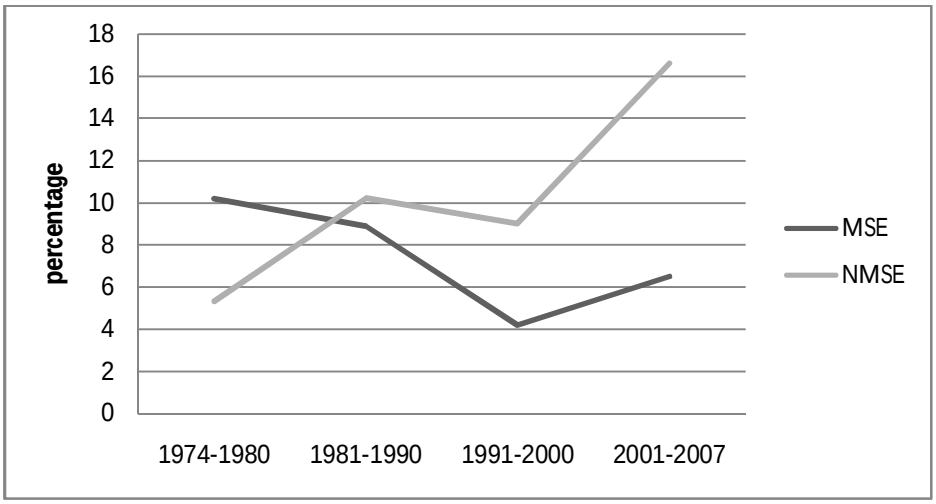
Source: As in Table 8.8, *Note:* As in Table 8.8

Figure 8.6: Annual Average growth rate of credit from OSCB



Source: As in Table 8.8, *Note:* As in Table 8.8

Figure 8.7: Annual Average growth rate of credit from ASB



Source: As in Table 8.8, *Note:* As in Table 8.8

C. The share of bank credit to the MSE to total credit to industry (Table - 8.11) will give a different picture to the analysis credit to MSME sector according to bank groups. During the period 1973-1980, the share of credit to MSE in the total industry has increased across all the bank groups. During the period 1981-1990, the share of credit to MSE in the total industry has declined in the bank group OSCB and ASB. During the period 1991-2000, the share has declined in all the bank groups except in the bank group FB and RRB. During the period 2001 – 2007, same thing happened except in RRB bank

group. Over period 1973 – 2007, there is declined in the share of credit to MSE across all the bank groups except FB. But the disbursal of credit to MSE of FB is very small share

Table 8.11: Share of MSE in Bank Credit to Industry according to Bank Groups

YEAR	SBIA	NB	FB	RRB	OSCB	ASB
Jun-73	23.4	18.8			14.9	19.7
Jun-74	23.8	19.4			14.2	20.0
Jun-75	23.3	19.4			14.0	19.8
Jun-76	22.2	19.3			15.3	19.6
Jun-77	23.0	20.7			15.9	20.7
Jun-78	27.6	23.7			19.5	24.3
Jun-79	26.4	25.7			22.1	25.4
Jun-80	24.2	26.7		74.6	15.1	24.8
Jun-81	24.4	26.8		92.5	16.3	25.1
Jun-82	27.8	25.5		93.1	15.7	25.2
Jun-83	21.3	25.5		82.9	15.4	23.2
Jun-84	31.7	30.8		87.9	14.2	29.5
Jun-85	36.6	32.0		88.3	18.1	32.1
Jun-86	30.7	30.3		88.2	13.3	28.9
Jun-87	27.7	28.9		90.2	11.9	26.9
Jun-88	27.7	31.7		91.1	10.9	28.6
Jun-89	25.8	32.4		91.5	11.2	28.4
1990	22.3	26.9	2.5	19.3	35.2	23.6
1991	24.7	30.8	3.4	20.4	35.1	26.3
1992	25.6	29.7	3.1	19.5	33.3	25.2
1993	19.3	28.8	2.9	19.2	33.0	23.1
1994	19.9	28.9	3.6	19.4	30.0	23.5
1995	21.4	26.2	3.9	20.3	28.4	22.6
1996	19.5	26.2	3.7	20.0	23.1	21.1
1997	18.3	23.4	3.6	19.4	21.0	19.1
1998	16.5	21.8	3.2	20.3	20.2	17.8
1999	18.5	18.3	2.9	21.8	18.2	16.7
2000	18.7	18.5	2.7	24.6	14.7	16.4
2001	18.6	17.0	4.2	19.0	13.9	15.6
2002	12.6	16.0	2.8	24.2	6.8	11.8
2003	12.5	18.2	3.0	24.5	5.3	12.2
2004	11.5	16.0	2.4	17.4	5.5	11.5
2005	11.2	12.4	6.3	19.2	6.1	10.5
2006	10.9	11.4	3.0	17.9	5.6	9.7
2007	9.3	11.0	2.6	21.9	6.4	9.2

Source: As in Table 8.8, *Note:* As in Table 8.8

in the total disbursal credit to the industry. The decline in the bank group NB is small percentage from 18.8 percent in 1973 to 11 percent in the year 2007. There is sharp decline in the RRB bank group from 93.5 percent in 1981 to 21.9 percent. In case of OSCB, it is from 14.9 percent in the year 1973 to 6.4 percent in 2007. In case of SBIA, the decline is from 23.4 percent sharply to 9.3 percent.

A comparison of annual average growth rate of MSE and the share of MSE credit to total credit to Industry by bank group shows that not only the growth rate is declining but also share is declining over the period from 1973 to 2007 if we take all the schedule commercial banks together i.e., ASB. Same is the case with SBIA and NB. In case of FB, the growth rate has increased but the share of credit going to MSE is almost constant and it is very less amount. The growth rate in case of RRB has declined from 1981-1990 to 1991-2000 and it is almost constant between 1991-2000 to 2001-2007 but share has declined significantly and sharply between 1981 to 2007. For OSCB, the growth rate is constant in the first decade, and then it increased in the second decade to a level and finally declined almost to the level from where it began. However, the share of credit going to MSE from the OSCB bank group was declined from 15 percent in 1973 to 6.4 percent 6.4 percent with a fluctuation from 35.3 percent to 5.2 percent.

8.7.3 Analysis: Bank Credit to MSE by Size of Scheduled Commercial Banks

Usually, the small firms do not have financial records. They are informationally opaque. Large banks do not want to take risk and lend credits to these firms. Small banks indulge in relationship lending. This helps them in reducing opaqueness of MSMEs.

Table-8.12 presents the credit going from the public sector banks including State bank of India and Nationalised banks to MSE as a percent of total bank credit according to the size of the banks. It can be observed from the table that the percentage of bank credit going to MSE from large banks is less whereas that from the small banks is higher. The results from the table also add to the point that the credit going to the MSE is declining irrespective of the size of the banks.

Table 8.12: Share of MSE in Total Bank Credit according to size of Public Sector Banks (in per cent)

Year	Size of Bank		
	small	medium	large
1998	16	15	13
1999	18	13	14
2000	17	11	12
2001	16	11	9
2002	17	8	9
2003	10	9	10
2004	9	9	9
2005	9	8	9
2006	9	7	8
2007	9	6	7
2008	8	6	6
2009	6	6	5

Source: based on own calculation using data of various issue of Statistical Tables Related to Banks published by RBI

8.8 Effect of Bank Performance on Credit to MSE

This sub-section will examine whether the performance of commercial banks has any effect on their credit extension to the small scale industry sector. The performance of banks has been measured in terms of two selected measures: return on asset (RoA) and the spread (SP). RoA is defined as the ratio of net profit to average assets. It is a profitability indicator of bank. Spread is the ratio of net interest margin to total assets. Net interest margin is the difference between total interests earned less total interest paid. It is the difference between the return on fund and cost of fund. The two indicators are calculated out of the data of the balance sheet and income & expenditure account.

During the period 1980-1990, RoA of SBIA has increased from 0.04 percent to 0.07 percent with a steady increase. However the RoA of NB has increased from 0.11 percent to 0.19 percent with a fluctuation. During the period 1991-2000, the RoA of SBIA has increased from 0.07 percent to 0.52 percent steadily without any fluctuation and then declined to 0.4 percent in 2000. It has fluctuated a lot in case of NB, FB, RRB, and ASCB. The return was negative in case of NB in the year 1993, 1994 and 1996; in case of FB in the year 1993; in the year 1992 to 1997 for RRB and in the year 1993 and 1994 for ASB. It is less than one percent in all the bank groups except for FB for the year 1991 to 1992 and 1994 to 1997. (Refer to Table 8.13)

Table 8.13: Return on Asset and Spread according to Bank Groups 1970-2010

YEAR	SBIA		NB		PB		FB		RRB		ASCB (EXCL. RRBS)		ASCB (INCL. RRBS)	
	RoA	Spread	RoA	Spread	RoA	Spread	RoA	Spread	RoA	Spread	RoA	Spread	RoA	Spread
1980	0.04	NA	0.11	NA	NA									
1981	0.04	NA	0.09	NA	NA									
1982	0.04	NA	0.10	NA										
1983	0.04	NA	0.09	NA										
1984	0.04	NA	0.07	NA										
1985	0.04	NA	0.07	NA										
1986	0.04	NA	0.14	NA										
1987	0.04	NA	0.16	NA										
1989	0.08	NA	0.18	NA										
1990	0.07	NA	0.19	NA	0.03		1.46		0.11		0.39		0.20	
1991	0.07	NA	0.21	NA	0.04		1.33		0.14		0.43		0.22	
1992	0.11	3.94	0.37	4.25	0.08	5.66	1.99	7.53	-1.46	5.65	0.73	4.41	0.30	4.45
1993	0.12	3.51	-2.17	3.43	0.05	4.84	-3.40	7.27	-1.50	4.97	-2.10	3.79	-1.14	3.82
1994	0.13	3.57	-2.48	3.64	0.10	5.40	2.04	6.62	-1.62	4.55	-1.63	3.94	-0.91	3.95
1995	0.28	4.73	0.12	4.40	0.25	5.61	1.83	6.56	-1.51	5.30	0.84	4.74	0.35	4.75
1996	0.22	5.08	-0.46	4.97	0.30	5.67	1.60	6.96	-1.35	3.94	0.30	5.20	0.08	5.19
1997	0.41	5.23	0.52	4.97	0.33	5.58	1.14	6.65	-2.00	5.56	1.28	5.24	0.54	5.25
1998	0.52	4.32	0.79	4.55	0.34	4.58	0.86	5.79	0.15	6.77	1.56	4.59	0.80	4.65
1999	0.26	3.65	0.47	4.29	0.24	3.74	0.77	5.15	0.39	7.12	0.94	4.12	0.50	4.19
2000	0.40	3.45	0.55	4.23	0.35	3.85	0.94	5.31	0.68	7.63	1.28	4.04	0.69	4.13
2001	0.29	3.21	0.41	4.26	0.29	3.78	0.77	5.21	0.79	7.42	0.97	3.96	0.54	4.04
2002	0.38	2.80	0.84	3.82	0.37	2.64	0.79	4.61	0.72	7.14	1.45	3.40	0.78	3.48
2003	0.43	2.53	1.21	3.79	0.54	4.60	0.88	4.40	0.65	5.81	1.94	3.62	1.02	3.67
2004	0.49	2.75	1.49	3.82	0.54	4.11	0.89	4.62	0.73	5.19	2.18	3.62	1.15	3.66
2005	0.42	3.08	1.10	3.80	0.45	3.73	0.68	4.41	0.65	5.09	1.72	3.63	0.91	3.67
2006	0.87	2.97	0.89	3.75	1.07	3.61	2.08	4.82	0.58	4.09	1.01	3.59	0.94	3.61
2007	0.86	3.16	0.94	3.55	1.02	3.30	2.28	5.33	0.52	5.05	1.05	3.52	0.98	3.56
2008	0.97	2.90	1.01	3.00	1.13	3.57	2.09	5.60	0.89	5.08	1.12	3.28	1.09	3.33
2009	1.02	2.95	1.03	3.14	1.13	3.67	1.99	6.10	0.92	4.76	1.13	3.40	1.10	3.44
2010	0.9	2.8	1.0	3.1	1.2	3.8	1.1	5.5					1.0	3.3
2011	0.8	3.4	1.0	3.6	1.4	4.0	1.7	5.0					1.1	3.7

Notes: calculations based on data of annual accounts of banks
Source: Statistical Tables Relating to Banks (various issues), RBI

For the year 2001-2011, it is observed that RoA is fluctuating but has increased over the years in the almost all the bank group. It is less than 1 percent except in the year 2009 for SBIA. It is more than one percent in the year from 2003 to 2005 and from 2008 to 2011 for NB; from the year 2006 to 2011 for PB; from 2009 to 2011 for FB and from 2003 to 2004 and from 2008 to 2011 for ASCB. It is even more than 2 per cent in case of FB in the years 2006, 2007 and 2008. (Refer to Table – 8.13)

The spread of SBIA has declined slightly from 3.94 percent in 1992 to 3.45 percent in 2000 with a fluctuation from 3.45 percent to 5.23 percent. Similar is the story for ASCB where it has declined slightly from 4.45 percent in 1992 to 4.13 percent in 2000 with a fluctuation from 3.82 percent to 5.25 percent. For NB, it was almost consistent and declined slightly from 4.25 percent in 1992 to 4.23 percent in 2000. For PB and FB, it declined significantly from 5.66 percent to 3.85 percent and 7.53 percent to 5.31 percent between the years 1992 to 2000 respectively. Only for the RRB, it has increased from 5.65 percent in the year 1992 to 7.63 percent in the year 2000. The spread of FB is higher for the period from 1992 to 1996 then spread of RRB stood higher for the period 1998 to 2000.For the period 2001-2011, the spread of the entire bank group has declined except the case of PB. It was highest for RRB for the period 2001 to 2005 and after this period it was the highest for the FB. Spread for the period 2001 to 2011 is always less than the period 1992-2000 across all the bank groups. It is also declining over the years in case the entire bank group. (Refer to Table – 8.13)

A comparison of spread of different bank groups and proportion of credit going to MSE shows that spread of across all bank groups has declined during the period 1992-2000 except for RRB, however it has declined across all the bank group during 2001-2007 (Table – 8.13). The proportion of credit going to MSE from all the bank groups has declined not only during the period 1992-2000 except in the group RRB but also in the period 2001-2007 in all the bank group (Table – 8.11). The spread and share of credit going to the MSE are moving in the same direction over the years from 1992 to 2007 across all the bank groups. It has been mentioned above that *spread is a financial performance indicator of bank.* The performance of the banks groups appeared to have impact on the credit disbursal to Micro and small enterprises. When the performance of

bank group is declining in terms of the spread, the amount of credit going to the MSE from them is also declining.

By splitting the public sector banks into small, medium and large size based on their total asset, it is observed taro has increased and reached highest point during 2003 and 2004.It was above 1 per cent in the year 2003 and 2004 for large banks, in the year 2003 to 2009 for medium size banks and in the year from 2003, 2004 in case of small banks. A comparison across sizes, it was higher for small banks during 1999 to 2003 and during 2004 to 2011, it is higher for medium size banks. (Refer Table - 8.14)

Table 8.14: Return on Asset according to Size of Banks

Year	Size of Bank		
	small	medium	large
1999	0.61	0.57	0.46
2000	0.69	0.43	0.80
2001	0.53	0.27	0.53
2002	0.78	0.68	0.82
2003	1.07	1.02	1.06
2004	1.32	1.26	1.26
2005	0.81	1.16	0.84
2006	0.61	1.13	0.73
2007	0.84	1.04	0.85
2008	0.96	1.04	0.93
2009	1.01	1.04	0.92
2010	0.91	0.98	0.97
2011		0.90	1.02

Source: related tables form various issue of Statistical Tables Related to Banks published by RBI

The performance of the bank has been categorized based on their RoA. Bank performance is ‘poor’ if RoA is less than 0.4 percent, ‘good’ if it is between 0.4 per cent to 0.9 percent and ‘very good’ if it is above 0.9 percent. There is steep decline in share of MSE credit in total bank credit irrespective of the performance of the bank (Table - 8.15). It is observed a negative relation between the share of MSE credit and performance of the bank. This might be because the banks with better profitability putting their credit to more profitable venture and projects.

Table 8.15: Share of MSE in Total Bank Credit according to size of Banks (in per cent)

Year	Performance of bank		
	poor	good	very good
1999	14	18	16
2000	13	17	16
2001	18	11	10
2002	25	12	11
2003	15	10	10
2004	14	-	9
2005	11	9	8
2006	9	7	8
2007	-	7	7
2008	12	6	6
2009	5	6	6

Source: as in Table-8.14

Table 8.16: Average Share of MSE in Total Bank Credit for the period 1999 to 2009 (average percent)

Performance of bank	Type of bank		
	small	medium	large
poor	17	12	7
good	14	8	7
Very good	12	8	8

Source: as in Table-8.14

The small bank with poor performance have higher share of MSE credit to total bank credit (Table – 8.16). Size and performance of banks have negative relation with the share of credit going to the MSEs.

Econometric Evidence: The above analysis is based on the univariate cross-tabulation approach. To understand better and substantiate the results under the univariate approach, the inter-relationships among the determinants of MSME lending and other bank financial parameters, a multivariate regression framework is employed. This will also take into account the inadequacy of the univariate approach such as its inability to address the above mentioned inter-relationships as bank characteristics would be correlated with each other.

Among the different bank characteristics, that can determine the proportion of lending to MSE sector, are size of the bank (log of total asset of the bank), the proportion of NPA

arising from MSME lending (NPA_MSE_CREDIT), average return to asset (RoA) and capital to risk-weighted asset ratio (CRAR). The proportion of MSE lending is measured by ratio of MSE credit to total credit. The inter-relationship is captured by the following two-way fixed effect model

$$\textbf{(Credit to MSE/total credit)}_{it} = \beta_0 + \beta_1 \textbf{size of bank}_{it} + \beta_2 \textbf{MSENPA}_{it-1} + \beta_3 \textbf{CRAR}_{it-1} + \beta_4 \textbf{RoA}_{it-1} + \alpha_i + d_t + \varepsilon_{it} \quad (2)$$

Here,

8. $\beta_0, \beta_1, \ldots\ldots\ldots, \beta_4$ are parameters to be estimated
9. **(Credit to MSE/total credit)$_{it}$** is the ratio of credit to MSE to total Credit of the bank in period t
10. **size of bank $_{it}$** is the log of total asset of bank in period t
11. **MSENPA$_{it-1}$** is NPA arising from MSE lending of the bank in the period t-1
12. **CRAR$_{it-1}$** is capital to risk-weighted asset ratio of the bank in period t-1
13. **RoA$_{it-1}$** is return on asset of the bank.
14. α_i is firm specific time invariant effects and this allows for heterogeneity across banks. This is part of intercept. It varies across individuals
15. d_t is the year dummies to control the difference in macro-economic conditions (**time specific effect**).
16. ε_{it}, the error term or the disturbance term, varies across banks and time period.

This model is based on panel of 243 observations over the nine years period from 2001 to 2009 on the above mentioned bank characteristics from the data compiled from various issues of Statistical Tables Related to Banks and Reports on Trends and Progress of Banking in India published by RBI. The information here is only for public sector banks. The bank wise data on MSE credit, apart from public sector banks, is not available in the public domain. Since bank wise data on NPA from MSE lending is available from 2001 to 2009, the time period is taken so. The result of regression of this model is presented in the Table 8.17.

Table 8.17: Results of Panel Regression of Determinants of MSE Credit of Public Sector Banks

Variables and Name of Parameters	Estimated Coefficient and Parameters
Size of bank	-2.484**
	(1.180)
lag1_NPA_MSE_CREDIT	0.157*
	(0.0837)
lag1_CRAR	0.221
	(0.228)
lag1_RoA	-3.546**
	(1.401)
Constant	36.14***
	(11.34)
Observations	216
R-squared(within)	0.235
R-squared(between)	0.129
R-squared(overall)	0.205
Number of bank	27
Firm FE	YES
Year FE	yes
Adj. R-squared	0.194
F-test	5.511

Notes: Robust standard errors in parentheses
**** p<0.01, ** p<0.05, * p<0.1*

The large banks are lending less credit to the MSE than the small banks. There is a positive relation between the non-performing asset from MSE lending and lending to MSE. This may be because of the fact that the lending to MSE is part of priority sector lending and they have to lend them under statutory pressure. The earlier period performance, as measured by the RoA, has negative effect on the lending to MSE. This means if the bank is performing well in the previous year, it is more likely that it will reduce the lending to MSE.

The findings are pointing the reasons behind declining volume and trends of credit to the MSE are more associated to the fact that firstly, MSE credit is less profitable for the banks; secondly, higher transaction and monitoring cost associated with MSE lending; thirdly, opaqueness of micro, small enterprise leading information gap between banks and performance of the MSE. The first reason is measured by negative causal relation between the NPA of MSE lending and proportion of MSE lending going to the sector. The second and third reasons is measured by negative relation between size of the bank

and proportion of MSE credit and positive causal relation between performance of bank and proportion of credit going to the sector.

8.9 Conclusion

The following are the important findings from the analysis of the chapter. These findings are pertaining to the period 1970-2010. The priority sector lending to the sector has declined significantly. The average annual growth rate of credit going to MSE has declined and is less than half of the growth of total credit and credit going to the industry respectively. The share of credit going to MSE as percentage of total credit and as a percentage of credit going to the industry have declined to a great extent. The annual average growth rate of credit has declined across all the bank groups while the growth rate of credit flowing to the NMSE has increased. There is negative relation between size and performance of bank and credit going to the MSEs. However, there is general decline in credit to the sector irrespective of size and performance of the banks.

The analysis of the chapter is offering the evidence that the decline in credit to the sector is mostly related to the change in policy and perceived riskiness of banks in offering credit to the MSEs. Moreover, there are many loopholes erupted in the PSL system in the recent time. These loopholes are providing enough scope to the bank to divert the funds to other projects and places of higher profits and returns. An analysis of banking and credit policies will substantiate the above findings. This has been attempted in Chapter - 9.

CHAPTER - 9

THE ROLE OF PUBLIC POLICIES IN EASING FINANCIAL CONSTRAINTS OF MSMES IN INDIA

9.1 Importance of sector

The MSMEs forms a significant part of manufacturing sector and Indian Industry. It contributes a large chunk of production, exports and employment of the economy. The significance of this sector in the Indian economy has been discussed earlier in Chapter - 3 in terms of its role in eradication of poverty, creation of employment, developing backward and rural area and thereby generating atmosphere for balance regional growth and development. MSMEs have the prospect to create employment opportunity for the large proportion of labor force dependent on agriculture. While MSMEs are critical to the country's long-term development, sustainable access to finance is fundamental to achieve the goal.

Millions of poor people in India run profitable microenterprises and small businesses. Economic development will reach to these people if the financial system is more inclusive through policies contributing to the creation of inclusive financial systems. These underserved enterprises can access high quality financial services. Micro and Small firms have the most to gain from improved access to finance. This is also linked with greater income equality in the country. All these benefits have important implications for government policy.

For MSMEs, it is difficult to access market opportunities. Most of these opportunities require large production facilities. Because of their small size, they are in disadvantage position in achieving economies of scale and accessing continuous supply of finance. They face many difficulties because of their small size such as in achieving economies of scale; accessing finance, machinery and equipment; acquiring technology. Because of all these factors, quite often of time they face problem in sustaining their business. Proper organization, management and the development of MSEs depends on sufficient finance.

All these factors hinder the development of Indian MSMEs. This affects the performance of manufacturing sector as they comprise the large chunk of manufacturing sector.

Consequently, it is affecting the overall economic growth, employment and poverty reduction.

The production process of MSMEs particularly MSEs is labour intensive. They require only small investment in the beginning. Their own savings are small. They find it very difficult in mobilising the required capital. They are considered as risky. They need a few years to establish themselves firmly in order to be able to access institutional finance. It draws attention that how they can establish themselves in the absence of finance they need to make investment on working and fixed capital. They unusually mention that financial problem as severe constraint to their development. They do not have adequate and timely access to finance.

9.2 The evidence of problem in accessing finance for MSEs found from the study and supporting documents

Micro enterprises constitute the most of the manufacturing sector in India. Indian manufacturing sector consists of firms, with the coverage from NSSO (99 percent) and ASI (1 percent) data sources. Most of the NSSO and ASI units are micro units. This is around 99 percent and 74 percent respectively for NSSO and ASI data sources respectively (Table 6.2 and Figure 6.1 of Chapter - 6).

The universe of micro enterprises comes under the definition of Rs.25 lakh in investment. But the truth is that 94 percent of them do not have an investment exceeding Rs.5 lakhs[34]. All these units are either financially distressed or constraint firms. The findings from the Chapter-6 andChapter-7 also supports in that smaller micro enterprises are financially distressed and more constraint firms and the larger MSE are financially constrained firms. They mostly depend on their finance.

Meaning thereby, the large segment of Indian economy (the MSEs), that is, the micro and small manufacturing units are financially distress and constrained firms. To put in other words, they are financially unhealthy firms. Their access to external finance is very restricted. For micro enterprises, the problem of accessing finance is worse. Their growth

[34]The challenge of employment in India an Informal Economy Perspective, Vol I – Main Report, pp-287

and development is critical to the availability of external finance. They are excluded from the formal banking system in meeting their need for credit. This is supported by the results from secondary literature. “Lack of capital is the greatest constraint especially to unorganized sector enterprise development in India largely because of the limited access to sources of credit at reasonable rates of interest. The smaller the size of the enterprise the higher is the cost of capital. The micro enterprise sector in this country is almost excluded from having access to credit from institutional sources (Sengupta Committee, 2009)”.

To cite further

- “A steady decline in the flow of credit to micro enterprises.
- The Internal Working Group of RBI confirms that the quota of 60 per cent of small enterprise credit has not been achieved.
- The credit to micro enterprises with investment up to Rs 25 lakh in plant and machinery has declined from 3.7 per cent of Gross Bank Credit in 2002-03 to 2.5 per cent in 2006-07. It also reveals that against the target of 60 per cent, credit advanced to micro enterprises was only 35.6 per cent in 2006-07 (Sengupta Committee, 2009)”.

The share of total credit that MSEs are receiving is not in proportion to their contribution to national income. The micro enterprises are almost in a state of crisis. They are in a financially distressed position. They are in a state of “near exclusion from access to the institutional credit (Sengupta Committee, 2009)”. The meager amount of credit they receive is through palliative government schemes. The state of credit flow to the MSEs has not improved overtime even after formation of many committees, interventions by the Government. These interventions are not concerted and direct. Majorly, they are kind of ‘guidelines’. They are like floating a number of schemes to provide small amounts as specific funds.

9.3 The importance of policy in the context drawn

The problems in accessing finance of MSMEs is a function of many factors such as state policy, “legal and regulatory framework – recovery, bankruptcy and contract enforcement, institutional weaknesses – absence of good credit appraisal and risk

management, monitoring tools and lack of reliable credit information on MSMEs (Ghatak, 2006)".

Table 9.1: Scheduled Commercial Bank's Credit to Micro Enterprises (Rs.Crore)

Segment of Credit	Year				
	2002-03	2003-04	2004-05	2005-06	2006-07
1.Gross Bank Credit	778043	902026	1045954	1443920	1841878
2.Credit to SSI	64707	71209	83498	101285	127323
3.Credit to Micro Enterprises with Investment P&M up to Rs. 5 Lakh	15080	13677	14482	17308	21768
4. 3 as percentage of SSI credit	23.3	19.2	17.34	17.10	17.10
5. Credit to Micro Enterprises with investment in P&M between Rs. 5 lakh and Rs. 25 lakh	13896	14870	14048	17672	23550
6. 5 as percentage of SSI credit	21.4	20.9	16.82	17.4	18.5
7. Credit to MICRO Enterprises with investment in P&M up to Rs. 25 lakh (Rows 3+5)	28976	28547	28530	34980	45318
8. 7 as percentage of SSI credit	44.8	40.1	34.16	34.50	35.60
9.7 as percentage of GBC credit	3.7	3.1	2.7	2.4	**2.5**

Source: compiled from Report on Trend and Progress of Banking in India, RBI(1995), RBI(2005),reproduced from RBI IWG Report (RBI 2008), reproduced from "The challenge of employment in India an Informal Economy Perspective", Vol I – Main Report
Notes: the table cannot be updated because data on credit to SSI in such disaggregation is not available for the recent year

"According to UNIDO report, supports for MSMEs are largely depending on following premises. Firstly, it sustains a broad and diversified private sector and creates employment and thus benefits the country as a whole. Secondly, a strong MSME sector will not emerge without support from the state, but they suffer disadvantages in the markets because of their size. Thirdly, the programs aimed at smallest enterprises, have been justified more in terms of their welfare impact than their economic efficiency. The MSMEs need all the policy support the government can offer. Institutional support is more helpful (Humphrey & Schmitz, 1995)".

The development experience of highly successful East Asian countries like Japan, Korea and China gives enough support to the role of public policy and development finance in originating and maintaining the process of industrialization. They have financed the

startup firms. They have ensured that “the more successful ones are not constrained from growing by lack resources (Gokarn, 2004)”.

The South East Asian countries have supported MSME development. This is through promotional and supportive public policies. In such policies, financing programs are in the way of supporting development finance; schemes like credit guarantee, loan quotas, interest rate subsidies, export financing etc.

“Across the countries, the MSMEs sector has thrived primarily on the back of access to financing through various facilities such as government-backed guarantees, credit insurance for export oriented units and schemes for equity financing. These facilities are supplemented by institutional infrastructure for advocacy, technical research, refinancing platforms and easy access to services (*Report of the Committee set up to examine the financial architecture of the MSME sector*, 2015)”.

Governments should build sound financial institutions, encourage competition and establish regulation that ensures appropriate incentives and broader access to finance for MSMEs. Framing proper policy is required in this regard to influence the flow of finance to this sector.

Berger & Udell(2006) have proposed a conceptual framework for the analysis of SME credit availability issues. They argue that in the context of loans to SMEs, two factors affect the availability of loans and the nature of the credit facility. First is the *lending technology* which refers to the combination of primary information source, screening and underwriting policies and procedures, loan contract structure and monitoring mechanisms which are used in the lending business. Second is the *lending infrastructure* which includes the information environment including the quality of accounting information, the legal, judicial and bankruptcy environments, the social environment, the tax environment and the regulatory environment in which financial institutions operate in a given country. The government policies influence the lending technology used in different countries, through the lending infrastructure.

9.4 Policy regarding banking and credit delivery system since the planning of Indian Economy

India is one of the late-industrializing developing countries. It started the process of industrializing its economy during early 1950'sthrough developmental banking financing system. It had chosen the institutional framework and regulatory structure. The neo-Keynesian philosophy was behind such policy. This is referred as "financial repression". Mostly there were two-pronged strategy such as artificially lowering of interest rates and directing credit to "preferred sectors" at a lower cost by the state. The objective behind was to deal with the difficulties of ensuring growth through the diversification of production structures.

In this development model, *the role of investment was at the center of development*. In a commodity producing sectors, the growth of output and employment depends on investment. The investment expands the capital stock. "Given the production conditions, rise in the rate of real capital formation leads to an acceleration of the rate of physical accumulation. This is at the core of the development process. Any trajectory of growth is associated with a certain rate of investment. There is a need for allocation of investment to realize that rate of growth given a certain access to foreign exchange (Chandrasekhar & Pal, 2006)". The state needs to direct credit and influence the prices at which such credit is provided to realize a particular allocation of investment. It must impose restrictions on the financial sector. It must use the banking system as a means to direct investment. Directed credit and differential interest rates are important tools of any state-led development trajectory. In such framework, the financial policies can be used to influence the pattern of investment. However, they might not help in increase the rate of savings and ensure that the available ex ante savings are invested. For this, the state needs an appropriate regulatory structure and institutional framework. [Chandrasekhar & Pal, 2006]

In the framework of industrializing Indian economy, the traditional role of *banking system was being the principal financial intermediary bearing risks* in the system in return for a margin defined broadly by the spread between deposit and lending rates. The regulatory framework had the central bank as the boss in the top of the system to ensure the sturdiness of the system. There was regulation of interest rates as a provision to insure

deposit. This framework also regulated the business and investment of the banks. The idea behind such regulation was that bank cannot put household savings that they have collected as deposits to risky investments to earn high returns.

The objective of bank nationalization in the year 1969 was *the 'Social control' of bank credit flows*. This was to ensure bank advances of loan and credit would spread to the larger need of unprivileged sectors like agriculture and small scale industries beyond the large- scale industries and big business houses. There was another phase of banking nationalization in the year 1980. The major "objectives of this policy intervention were to institutionalize credit, enlarge its coverage and ensure the provision of timely and adequate credit at a reasonable rate of interest (National Commission for Enterprises in the Unorganised Sector, 2007)" to the needy.

The regulation also involved measures to meet *directed credit in the form 'priority sector lending'*. Nationalisation of banks was to support this banking policy of directed credit. This implied "pre-empting banking resources for the government through the statutory liquidity ratio (SLR). SLR is the proportion of deposits that need to be diverted to hold specified government securities. This was also for directed credit for priority sectors through the imposition of lending targets (Chandrasekhar & Pal, 2006)".

Another important feature of intervention of state in the industrialization process was *the development banks*. They were providing adequate credit to selected industrial establishment mandatorily. Even that was subsidized. This was to accelerate the investment in the industrial sector of the economy. The objective was "to make up for the failure of private financial agents to provide certain kinds of credit to certain kinds of clients (Chandrasekhar & Pal, 2006)". They were unwilling to take risks. The anticipated return from such projects for private agents were very low but the social return from such investment was much higher. It had been observed that there was impressive dispersal of the banking habit in the country by both in terms of the mobilization of a large amount of savings and allocation of credit to the then needy small scale industries.

During late 1980's, major change and *shift in the policy regime* has started and the neo-liberal reform process including financial sector reform has taken its course. There is

withdrawal of state from the banking system. The main objective is to create favorable condition for market signals in the allocation of capital. The structures described earlier have been dismantled.

During late 1980s and early 1990s, the financial liberlisation processes in India has made significant influence in the public policies. The earlier policy is reversed back "with the introduction of large-scale banking de-regulation and reforms in the banking sector (Chandrasekhar & Pal, 2006)". These are all part of the overall economic liberalization in the economy. The logic behind such liberlisation is that liberlising financial systems, both domestic and external, would encourage better savings mobilization and greater allocative efficiency of capital. It is expected to contribute to capital accumulation by the achievement of reduction in agency costs and asymmetric information problems, elimination of rent seeking and financial deepening. It is also expected that it would boost private investment and promote growth process in the economy.

However, *these policies bring down the institutional structure particularly the financial structures* which are historically evolved in late industrializing Indian economy. The earlier kind of financial structures are "to deal with the difficulties of ensuring growth through the diversification of production structures that international inequality generates (Chandrasekhar & Pal, 2006)".

The 1991 reforms have changed the orientation of India's industrial policy. With the introduction of financial liberlisation policy, *the Indian banking system has become less developmental oriented*. They are following the risk management practices of western baking system to harmonise the system with international best practices.

"The most regulated financial systems sought to keep the different segments of the financial systems, such as banking, merchant banking, the mutual fund business and insurance, separate one from another (Chandrasekhar & Pal, 2006)". This is to avoid the "conflicts of interest that could affect business practices adversely(Chandrasekhar & Pal, 2006)". However, the different segments of the financial systems are no longer separated with the change in policy. The *financial agents have now got the ability to do different financial activities*. There is reduction in controls over the investments done by the

financial agents. There is *emergence of 'universal banking' or financial super markets*. The linkages between different financial markets have increased.

In the earlier framework, viability of the banking system was ensured firstly, through the protection provided and secondly, strong regulatory constraints on it. The change in banking policy has *transformed "the traditional role of the banking system of being the principal intermediary*(Chandrasekhar & Pal, 2006)", bearing the risk in the system (as principal bearer of risk). Banks are now refusing to undertake this role. The banking system managed to perform those functions. However, in the current context the role of banking system has been *shifted to more as generator of financial assets* that transfer the risks to the portfolio of institutions willing to hold them.

There is privatization of the publicly owned banking system. The *"development banks" have been transformed into regular normal bank*s. "There was creation of development banks with the mandate to provide adequate, even subsidized, credit to selected industrial establishments and the agricultural sector. The principal motivation for the creation of such financial institutions was to make up for the failure of private financial agents to provide certain kinds of credit to certain kinds of clients (Chandrasekhar & Pal, 2006)".

Denationalisation of banks undermines the ability of the state to carry on with policies of directed credit and differential interest rates. The control on the interest rate has been liberlalised. Banks can fix interest rates on all advances including the small ones. The State and central bank are dismantling the regulatory measures including priority lending and restriction of banking activities. Even the public sector banks are seeking new sources of finance, new activities and new avenues for investment to increase their interest income and revenues. This is because the private domestic and foreign banks are luring away the clients through special services and terms they are able to offer.

Financial liberlisation has changed the composition of bank portfolios. *This has impact on the sectoral deployment of credit*. To improve their CRAR ratio, the banks are putting more resources in the risk free government securities. This has reduced their advances growth. With the change in policy, the banks are doing non-bank operations like insurance and security-related transactions to generate income.

With the adoption of Basel I norms and subsequent standardization of credit risk by the banking system under the Basel II prudential norms, there is decline in credit flow to MSEs. Banks have become increasing risk averse. The MSEs are perceived to be highly risky by banks because of informational deficiencies and credit history. But the truth is that these enterprises are "manned, managed and sustained by worker-owners and small entrepreneurs. They are not in a sound position to separate their livelihood requirements from business activities (Sengupta Committee, 2009)(Sengupta Committee, 2009)(Sengupta Committee, 2009) (Sengupta Committee, 2009)"[35]. *The banking sector has become insensitive to the needs of credit and finance by this sector*. The Directed credit or the priority sector lending by the banking system to MSEs is an instrument for development. But this has become a casualty of the reform effort(Chandrasekhar & Pal, 2006).

All this is affecting both the amount and the terms of credit to MSEs. The credit going to the sector has fallen significantly overtime. Financial constraints due to credit restraint policy, delay in disbursement of loans and unfavorable investment climate are adding to the sickness of MSEs. "The prime reason of sickness among small units is faulty disbursement of bank finance"[36].

9.5 Implications of change in macro policy on the credit delivery to MSMEs

- Financial liberlisation has led to change in institutional structure and financial structure which were earlier crucial for economic growth. The end of development finance is a major setback for the economy. These financial structure and development finance created a congenial environment for the origin and nurture of entrepreneurial activity. They were decisive in developing new ideas. They are no longer providing the required credit to MSEs, the nursery of entrepreneurial activity. "In order to access the required credit, firms have to have grown to a certain size and established some track record of performance. But how do they do that, if they do not have access to finance before they are able to access finance (Gokarn, 2004)".

[35] The challenge of employment in India an Informal Economy Perspective, Vol I – Main Report, pp-290
[36] S.N. Bidani& P.K. Mitra, "Industrial sickness, Indefication and rehabilitation, New Delhi, 1982

- The role of the banking system in allocating credit and redistributing assets and incomes is under threat. There is reduction of roles of state banking and development banking institutions. Their role as instruments for mobilizing savings and directing credit to priority sectors at low real interest rates has also declined. There is imposition of sectoral targets.
- With greater choices of investment, the banks prefer the investment with higher profitability instead of lending.
- Reversal of the trends in the ratio of priority sector lendings: The target for priority sector lending has remained unchanged. But they have widened to include many new areas under the umbrella of PSL. The banks are being asked to make investments in special bonds issued by certain specialized institutions. They are being treated as priority sector advances. These changes are giving the scope for banks to move away from the responsibility of directing lending to priority sector of the economy. There has been sharp rise in the PSL in the heading with name 'other priority sector lending' in total priority sector lending. The share of small-scale industry in total bank loans has fallen drastically. Much of the credit, which is going to this sector, is to the higher end of MSEs. " The principal mechanism of directed credit to the PSL that aimed at using the banking system as a instrumentality for development is increasingly proving to be a casualty of the reform effort (Chandrasekhar & Pal, 2006)". Overall, there is a decline in credit delivery to MSEs.
- There is "shift in the focus of bank activities away from facilitating manufacturing sector and agriculture that is the commodity production and investment to lubricating trade, financing house construction and promoting personal consumption (Chandrasekhar & Pal, 2006)" and speculative activity like making investment in stocks and real estate. This is because the returns from the latter sets of activities are higher than the investment in commodity production. The returns to investment in manufacturing and other sector are very limited. The borrowers would not be willing to pay beyond a limit to finance such investments. However, the social returns from the investment in commodity production are much higher than from the real estate and stocks in terms of employment generation, growth and poverty alleviation. Yet in

most of the time, MSMEs, which is part of this sector, are deprived of credit at the required rate. There will be less growth, less employment generation and hence adversely affecting the level of poverty alleviation and living standards, ultimately creating macroeconomic risks.

- The presence of MSEs is more in rural India. Since there is sharp drop in credit delivery to rural India, the access to finance is more inadequate for rural MSEs. It has adversely affected rural income and employment growth.
- The private investment is badly affected by the damage of the structure of development banking.
- "The Indian MSEs have a strong demand for term-financing with maturity of more than 3 years to meet their capital formation and technological up-gradation needs. Bank financing currently available to MSMEs is of a shorter tenor because banks face difficulty in raising longer-term resources. At present , more than 80 percent of the total deposits of India's commercial banks have a maturity of less than 3 years" (Basu, 2004).

The implication of policy change, that has started three decades ago, is sharp decline in credit delivery to MSEs. MSEs are facing finance constraints to a great extent. These have already been mentioned in the earlier chapters. Since the sector is financially unhealthy, their growth and development is in danger. This is going to jeopardise the developmental consequences, which this sector would have for the larger economy, which is very much needed to make the development of Indian economy inclusive in nature.

9.6 Institutional problems to promote credit to micro and small enterprises in the recent time

Multi-level institutional structure for credit to MSEs: there exists a well-*structured multi-level institution* to ensure credit dispensation to MSMEs. The regulations related to the credits going to the MSEs are in the hands of the RBI. However, this is part of the broader monetary policy. This policy is in accordance with the overall framework of the macroeconomic policy of the state. RBI has issued a number of policy guidelines to ensure adequate availability of credit to the MSEs. NABARD and SIDBI are the financial

institutions at the apex level for micro and small enterprises. At the state level, SFCs and State Industrial Development Corporations (SIDCs) cater to the needs of such enterprises.

SIDBI is for promoting, financing the development need of the small industries. It also coordinates the functions of other institutions engaged in similar activities. It make provision of financial assistance to the MSMEs directly through schemes like direct discounting, project finance, assistance for technological up gradation and modernization, marketing finance, resource support to institutions engages in developing MSMEs, venture capital, factoring services.

"Financial sector policies often work against the ability of commercial financial institutions to serve MSMEs (Malhotra et al., 2007)". Supervisory and capital adequacy requirements penalize banks for lending to enterprises that lack traditional collateral. On the one hand, the MSME usually do not have financial record, cannot provide reliable information and required collaterals. On the other hand, banks do not possess the needed tools for managing risks and also they do not have technical knowledge and skill to reach the MSME. "They face difficulties in enforcing contracts because of inadequate legal frameworks and inefficient court systems (Malhotra et al., 2007)". [Malhotra et al., 2007]

The reality is that many credit institutions and banks do not want to provide loans to MSE in general and micro enterprises in particular. Most of the times, the reasons they say is that MSE are high risk - real or perceived, large transaction costs, higher NPAs and lack of collaterals.

If the micro enterprises could manage to get loan from banks, the terms and conditions are not cheaper for them. They imposed high cost of borrowings, high charges and fees, high legal documentation fees and other charges. It is creating a situation where micro enterprises are discouraged to approach the banks and they tend to secure loans from other sources.

The number of rural branches of banks in India is declining. It has declined by more than 5000 from 35360 in 1993 to 30551 in 2007[37]. Firstly, in such situation the decision of

[37] The challenge of employment in India an Informal Economy Perspective, Vol I – Main Report, pp-289

doubling the MSE credit in three year by policy maker is not going to materialized. It will work with strengthening the rural bank infrastructure. Secondly, it is very likely that the micro enterprises are not being among the beneficiaries.

It has been criticized that most of the time SIDBI meets the needs of the higher ends of the MSMEs. In the process, the micro enterprises have been neglected. In this regard, there is a bright example to cite in the connection is that government made an announcement of transferring Rs. 7000 crores for the SIDBI to support to meet the incremental need of credit from MSMEs. But no earmark of lending has been stipulated for the micro enterprises. In other words, there is no earmarking of funds for micro enterprises. In such situation, the financial institutions and banks will be more interested to provide loan to the bigger small enterprises and medium enterprises.

The banks are not interested in financing the MSEs. It is also observed that the MSEs are not interested in approaching banks for various reasons. The procedures, systems and documentation formalities for obtaining loans have kept the MSEs outside the fold of the banking system. The way bank finance has been tailored is more focused to meet the needs of the projects and not to meet the needs of the needy MSEs. Usually MSEs do not have the projects but they have only needs to stay in the business and sustain the livelihood. Moreover, they do not have any other source of institutional credit as compared to the larger industries which have multiple sources including access to the capital market.

As mentioned above, at the time of starting a loan sanction to the MSEs, it is the absence of acceptable collateral has become the main difficulty for banks. To solve this problem, the concern ministry and SIDBI have initiated a Credit Guarantee Fund Trust for Small Industries (CGTSI) with main objective to promote banks to provide required finance to MSMEs without collateral. This scheme has the potential in reducing the price of MSEs credit and improving the terms of loan. It can enhance the amount of availability of information regarding the enterprise. This can help small firms in accessing formal credit to finance working capital, investment. Despite this, the banks are hesitant to extend credit to MSEs. Most of the time credit from such scheme is going to the higher end of MSMEs.

Banks are not interested to provide credit to the needy MSEs. To substantiate, it has been found that the banks are not adhering the guidelines of the RBI. "(a) inadequate working capital which was ranging between 10 to 13 per cent against the RBI norm of 20 percent of the projected turnover to be given as working capital, (b) insistence on collaterals even on loan up to Rs.5 lakh, in spite of RBI guidelines, (c) neglect of the small loan segment since the share of loan below Rs.25,000 has declined from 21 per cent of the total outstanding of scheduled commercial banks in 1985 to 3.7 per cent in 2005, and (d) disinterest of banks in advancing a loan under the Credit Guarantee Scheme which is available for loan up to Rs 25 lakh (Vyas, 2007)".

The fundamental reason behind such findings is that the dismantling of social and development banking in the economy with the change of broader macroeconomic policy in the country. The available fund with the banking system is limited for disbursal of credit and there is also change in the arrangement of credit delivery. Today banks have more liberty in their choice of loan, with proper consideration of creditworthiness of the borrower. The evidence of declining credit to MSE is supporting this fact as they considered less creditworthy by the banking system.

9.7 Credit policy in the current context: a micro enterprise perspective

The public policies for contributing bigger access to credit by MSEs are very insignificant and irregular. The Priority Sector Lending Policy is in the form of guidelines to the commercial banking system by the government to allocate credit to the MSEs. (The priority sector lending to the MSEs has been discussed in more details in the Chapter-8)

It has been found that the priority sector lending policy is not meeting its objectives. New areas such as housing loan, education loan have been brought under the umbrella of priority sector lending. Commercial banks have enough leeway of diverting funds to other priority sector lending like housing, education etc. This is because there is no separate sub-target for the MSE sector within the priority sector lending for the public and private sector banks. "It has been tilted in favour of housing facility of urban upper middle and high income, and corporates by neglecting and squeezing over the share of loans to agriculture, small and micro enterprises and other small borrowers(National Commission for Enterprises in the Unorganised Sector, 2007)". There is continuous

increase in the credit going to the “other priority sector” in the total priority sector lending. So the net result is that the priority sector lending to MSEs from commercial banks has been declining.

However, in the recent period, it has been found that there is increase in credit going to the MSEs. The reason behind is change in the definition of the MSEs in the cut off, which has increased from Rs 1 crore of investment in Plant and Machinery to Rs 5 crore in 2006. Much of the increase in PSL is going to the higher ends of small enterprises cut off. The share of micro enterprises is not increasing. The beneficiaries are the relatively more capital-intensive and larger units. There is actually siphoning off bank credit earmarked for the MSEs at the policy level to the places, which are not meant for.

Adding to the discussion on priority sector lending, another point is that banks have been permitted to adopt soft approaches, instead of undertaking retail lending to the MSEs, like subscription to the bonds of SFCs, NABARD, NHB, Rural Electrification Corporation, Housing and Urban Development Corporation etc. in order to fulfill the priority sector lending targets. This flexibility has generated a tendency amongst the banks to park bank funds in the debt instruments floated by the above named institutions.

The state has an inclination to adjust the policy to suit the requirements of established large industry. To support this argument is the fact that there is continuous increase in the upper limit definition of small scale industry. So, the larger units get the benefits out public policies, even though those are primarily meant for the small units. In such situation, the beneficiaries are actually the capital intensive large units inside this very heterogeneous sector.

From time to time, the ministry of MSME has announced different policy measures and program with an objective to enhance the supply of credit to MSME. Among them are rising of loan limit under Composite Loan Scheme, rising in project cost limit under National Equity Fund Scheme, implementation of Credit Guarantee Scheme and Credit Rating Schemes for SSI to enhance the confidence level of banks. But, the accessibility of adequate and timely finance to MSEs still pertains a large problem.

It is a big problem for micro enterprises to fulfill the collateral requirement while applying for bank loan, because they do not have adequate collateral. They could not opt for bank finance even they need. In the year 2000, the then Ministry of Small Scale Industry has introduced the credit guarantee scheme for Micro enterprises to solve the above mentioned problem faced by them. Based on the scheme, the enterprises with investment in plant and machinery less than Rs.25 lakh (Micro Enterprises) will be made available bank credit up to Rs.10 lakh without collateral/ third party guarantees. Collateral free loan could be available to the micro enterprises. The coverage of the loan is very low. Many leading banks delayed in undertaking the decision to join the program. They are not interested to approve loans under the guarantee scheme. They feel it is more risky to provide loans without collateral. It is also found that at the branch level, there is lack of awareness. Given the requirement of credit coverage for micro enterprises in the country, the progress of the scheme is very less.

Another initiative to facilitate the flow of credit to the MSEs is the Credit Rating Scheme in the year 2005. The aim of the program is to sensitize the MSMEs sector regarding their requirement of obtaining credit rating. This is also to promote them to keep proper financial statement. This would earn them a good rating for their need of credit whenever they move towards the financial institutions for obtaining finance to fund their working capital and investment. However, this facility is restricted for the registered units with DICs. Moreover, the "scheme covers large MSEs or medium enterprises which have corporate entities and not the Micro enterprises (National Commission for Enterprises in the Unorganised Sector, 2007)". The program should be opened to all MSEs whether registered or unorganized.

9.8 Conclusion

The nature of banking and credit policies has become exclusionary on the MSE firms in the context of the larger liberlisation of the economy. There is contraction in the proportion of priority credit which was before available to the MSEs. Credit delivery by the banking system in India has been following 'supply-driven approach' for MSEs among the other sectors. 'Demand – centric approach' like asset – based financing for MSE sector would be much better. "The supplementary finance as available from outlets

like the SIDBI, cooperative banks or even the fiscal measures do not fill in the void as is left in terms of the unfulfilled demand for finance on the part of MSMEs (Sen & Ghosh, 2005)".Lack of access to credit, lack of ability in making payment high interest rate, the need to fulfill collateral requirements and many other procedure and formalities are all creating problems in the efficient functioning of MSEs in general and micro enterprises in particular. Shortage of working capital is one of the primary factors responsible for the sickness of the MSEs.

Given the relevance of MSMEs in the development process of the economy, the lack of access and denial of credit to the sector is actually creating hurdle in the socio-economic objective of employment opportunities and poverty alleviation. The adequate access of credit to the sector is very urgent and stupendous. They must "get adequate and timely credit at reasonable cost (Sengupta Committee, 2009)". This calls for better implementation and monitoring of proper policy for the enhancement of access to finance of MSMEs.

Suggestions and Recommendations……

- There is utmost necessity to revise the policy initiative to iron out the obstacles challenging the increase in credit disbursal to the MSMEs.
- A quota for micro enterprises in the priority sector lending is required.
- Many a time, it is being noticed that the state is vague in its objectives. If it is to poverty eradication through employment generation, the concentration should be more on the rural MSEs and the urban Micro firms.
- There is a need to understand the composition of MSMEs and their finance requirements. The firms inside this sector are very heterogeneous in terms of size. The proportion of Micro units is very high. The finance requirement of Medium units is different from that of Small and Micro units. The public policies need to understand the vast range of MSMEs and accordingly they are being designed to take care of certain set of MSMEs.
- The monitoring of the growth of credit should be done separately for Micro Enterprises and for each of Small and Medium Enterprises. This is because the

Medium Enterprises are with better credit worthiness. Hence, banks may divert credit to Medium enterprises instead of providing Micro enterprises.

- It has been discussed earlier that most of the Indian manufacturing sector in general and MSME sector in particular is in the form Micro Enterprises. SIDBI should be taking care of its financing of these enterprises. SIDBI should open more branches both in rural and semi-urban areas to increase its reach. It should fix separate targets for Micro, Small and Medium Enterprises loaning.
- Banks are concerned about "the NPAs and the growing incidences of sickness (Reddy, 2006)" in MSMEs. The policy should be such that it would reduce the risk of banks while financing the MSEs.
- "The bank manuals should provide for incentives for encouraging the banks to undertake more risk based developmental loaning. The banks should be given fiscal and financial incentives for promoting financing of small enterprises (Vyas, 2007)". Efforts should be made to avoid the lack of awareness among bank branches about the MSE credit schemes and facilities. It is also found the even if bank officials have knowledge of government schemes, they do not prefer to extent loan to MSEs under the schemes for various reasons.
- Most of the MSEs entrepreneur lack knowledge of accounting principles and values to maintain record of financial statement. This hinders them to access loans from the banks. The state should make provisions for training and periodical monitoring of the micro entrepreneurs to understand the procedures involved in the loan application.
- Along with the disbursal of loans and funds for the sake of achieving the target, the state should adopt measures to assist the MSEs in utilizing the funds.
- RRBs should be strengthened with field staff to work as designated banks for financing of Micro enterprises in the rural areas. There is also need of post for technical staff in rural bank branches that will guide the prospective entrepreneurs in choosing suitable projects and also assist in proper appraisal of projects.
- The goal of enhancing access of credit of MSEs can only be achieved with presence of strong and adequate credit delivery structure. But the number of branches of commercial banks has declined over time. The institutional structure in terms of branch banking has been weakened. In such situation, any attempt to enhance the

credit delivery will have less impact on the quality, purpose of lending and in the process of loan recovery. Therefore, there is urgent necessity for furthering the spread of branch network by commercial banks and RRBs. [Sengupta Committee, 2009]

CHAPTER - 10

CONCLUSION

10.1 The access to finance enables any firms to exploit growth and investment opportunities. For that matter, adequate access to finance of small firms can help in improving their economic conditions by improving the products, processes and technology, encouraging innovation, stabilizing macro-economic condition and GDP growth (as discussed in chapter-5). Particularly, the access to finance of small firms will be of more importance in the developing countries, particularly in India, as these firms contribute significantly to the employment and livelihood of the large section of labour force next to agriculture in these countries.

"With adequate financial and non-financial resources as well as capacity building, the MSME sector can grow and contribute to economic development in a better way (Intellectual Capital Advisory Services Private Limited, 2012)". However, the small firms are reporting higher obstacles in accessing credit, and it is more constraining and severely affecting their development. Their contribution to the development process would be chocked off by the constraint like inadequate access to finance.

Most of the time, access to finance becomes constraint because of the financial market frictions. MSMEs often have trouble in accessing bank finance. They do not get enough credit. Financing them is challenging and risky due to the imperfect credit market, as information asymmetry problem leads to high transaction costs. These become bindings on MSMEs since they lack collateral and credit histories to secure their access to loan.

Given a large presence of the small firms in the economy and as small firm community has the capacity of making the development process much more inclusive, lack of access of finance may have larger consequence on the economy. The extent to which access to finance is limited, the benefits of financial development are confined out of the reach of larger segment of the economy that is MSMEs. They cannot contribute to the development process to their full potential extent. Access to finance at reasonable price is critical for MSMEs development.

10.2 There is lack of adequate credit facility to micro, small and medium enterprises despite their size, importance and lucrative growth prospects in Indian Economy. These businesses rarely have access or very little access to credit and finance provided by banks. The characteristic of the problem is like unavailability of sufficient and timely funds to finance their growth plans.

The main cause of high incidence of sickness in the MSMEs is unavailability of adequate and timely working capital from the bank. Insufficient documentation and inadequate collateral are the main reasons for the loan rejection by the banks to the sector. The Micro manufacturing firms in the sector cite access to finance as serious obstacle to their development (Parada et al., 2010). The report of working group on Rehabilitation of sick SMEs (2008) by RBI also finds “lack of adequate and timely access to working capital finance as one of the key reasons for sickness in the sector".

A large percentage of debt demand from the sector is non-addressable. “It comprises enterprises those are sick, with limited operational history and suffer from poor financial health (Intellectual Capital Advisory Services Private Limited, 2012)”. Many a time, micro enterprises voluntarily exclude themselves and prefer informal sources compared to the formal finance. The other problem is that MSMEs are not fully aware of different policy and support program for enhancing credit flow to the MSMEs.

A large percentage of the total viable debt demand comes from the micro units. Together micro and small enterprises account for significant portion of total viable debt demand. However the financial institutions find it difficult to assess their credit worthiness. Firstly, because they mostly transact in cash, they do not accurately keep financial records. Secondly, they have less access to collateral. But the medium enterprises can access capital from different sources as they have more than enough collateral with themselves. They maintain proper financial records.

The supply of finance to the MSME comprises of formal finance, informal finance and self-finance. “The informal sources and self-finance together constitute the most of the finance channeled into the sector (Intellectual Capital Advisory Services Private Limited, 2012)”. Formal sources contribute very less amount of finance. Poor profitability and lack of access to formal capital markets and institutions lead to dependence on informal

financing channels. Such kind of finance is much more costly than the formal finance. High cost of finance results in poor profitability. Poor internal cash flow generation limits ability to service formal bank debt. This makes the firm less creditworthy from bank's point of view.

Out of total formal debt finance, most of it comes from schedule commercial banks and the small banks like RRBs, Cooperative Banks, and Government financial institutions meet very small percentage of debt finance. Public banks account most of the debt finance going to the sector as compared to the private and foreign banks. "The reason for the variance in the banks' share in MSME debt finance is because of the inherent differences in Knowledge of the MSME sector, size of the branch network, internal risk management policies and operational efficiencies. These characteristics also determine the type of enterprise banks prefer to finance, the risk segment or pricing range for financial products, targeting mechanism and outreach strategy(Intellectual Capital Advisory Services Private Limited, 2012)".

The financial requirement of micro and small enterprises is not sufficiently met by formal sources. They meet around 40 to 60 percent of their financial need. The cause behind this is that these enterprises cannot meet required collateral provision. However, these financial sources meet, sufficiently, the financial requirement of most of the medium enterprises.

There is huge debt-finance gap especially for micro and small enterprises. "The gap in debt is largely because of un-served micro enterprises and underserved small enterprises (Intellectual Capital Advisory Services Private Limited, 2012)". However, for medium enterprises, it is very less, almost negligible. The reach of commercial banks has been limited in providing banking services to these micro and small firms. It is being argued that *the commercial banks face problems and challenges in assessing the risk associated with financing micro and small enterprises as these enterprises do not maintain proper financial records*. In case of those Micro and Small enterprises which maintains financial records, there is "information asymmetry and opaqueness in the reported financial statement (Intellectual Capital Advisory Services Private Limited, 2012)". Above all, these enterprises do not have access to immovable collateral to secure the access to debt.

The traditional credit assessment tools are mostly used to assess these enterprises for their credibility and in the decision making process by the financial institutions. These decision making process left out many of the micro enterprise who need finance.

The analysis of secondary literature shows, firstly, finance constraints are chocking the growth and development of these firms, secondly, evidence of problems in accessing finance by the MSE in India and thirdly, most of the MSE depend on the internal finance and retained earnings to finance their working capital and investment in India.

The above findings regarding access to finance of MSMEs in India from the analysis of secondary literature provides a background for analysis of the information of firm in MSME sector using unit level data from ASI and NSSO survey on unorganized manufacturing firms. From this analysis, the following conclusions regarding problem of access to finance of firms in MSME sector have been found.

10.3 The manufacturing sector in India is comprised of a large number of micro enterprises and a little number of small and large enterprises with almost missing middle (a few medium enterprises). Most of the manufacturing sector is NSSO units (99 percent) and ASI units are just 1 percent in the total (Figure 6.1). Decomposition of the sector shows that most of NSSO units are Micro enterprises, a fraction of it is Small enterprises and a few are Medium. Most of ASI units are also Micro enterprises but there is also a presence of small, medium along with large enterprises (Table 6.2). On the whole, there is a predominance of Micro firms in the sector. On the one hand, the tiny and smaller MSMEs (NSSO units) create most of employment in the sector as compared to bigger and larger MSMEs and Large enterprises (ASI units). On the other hand, the latter set of enterprises has high level of fixed asset, gross value of plant and machinery compared to the former set.

Large percentage of tiny and smaller MSMEs have cited that they face *shortage of capital and marketing problem*. The fact as found is that most of the outstanding loan is received by the very small number of the larger and bigger MSMEs and the large number of tiny and small MSMEs has received very less or insignificant part of the total outstanding loan going to the manufacturing sector. *Unequal distribution of loan* showing, that a large segment of Indian manufacturing sector (the micro and small

enterprises) is either not using or not able to access external finance. Hence, the financial inclusion of tiny and smaller MSMEs by the external finance is insignificant and questionable.

The *outstanding loan per enterprises* of smaller MSMEs is quite less than that of larger MSMEs in all the classes (Table A6.4 in Appendices to Chapter-6). There exists a very large gap between the micro vs. small and medium enterprises in terms of loan per enterprises.

Micro enterprises have a low *proportion of loan as a percentage of owned assets and fixed asset* compared to Small and Medium enterprises, so is true for Small enterprises if we compare Small enterprises with Medium enterprises. The access to loan of Micro enterprises is lowest. This is true in the case of tiny and smaller MSMEs. However, in the category of lager MSMEs, this ratio of loan to fixed asset is the higher for Micro firms and it declines as the size of firm increases (Figure – 6.7). It may be because these Micro firms have higher level of fixed asset to provide as collateral to the banks. The lower percentage of loan of bigger units shows that they can also access and depend on the other sources of external finance than only on the debt from the bank.

The analysis of *relationship between fixed asset, outstanding loan of enterprises and profit (cash flow)* by size of tiny and smaller MSMEs shows that as the size of firm increases, the proportion of loan to fixed asset increases. The smaller enterprises such as MSEs may have problems in accessing external finance. The proportion of profit to fixed asset of micro enterprises is higher than the small enterprises. Probably, this is their internal source of finance. Dependence on profit as a source of finance can be a symptom of finance constraint of Micro firm.

The comparison and *analysis of capital structure* of the MSMEs give the following results. Firstly, as the size declines the proportion of *financial debt* also declines showing the difficulties in accessing credit market by smaller firms. Secondly, as the size of firms declines the amount of *trade debt* is increasing. The smaller firms depend more on trade debt. Usually, trade debt is expensive. It confirms more strongly to the fact that smaller units face financial problems. Thirdly, the *trade credit* of MSMEs is very high compared

to the large firms. Fourthly, the larger firms have more of 'other current asset', less proportions of trade credit and cash with them.

Micro enterprises are providing the higher amount of trade credit in a situation where they have less percentage of financial debt. One possible explanation can be that Micro "firms are less able to insist on prompt payment (Wagenvoort & Meier, 2003)" than large enterprise. Even though it is expensive to do, they are doing so because they have to stay in business. *Cash disposition* of Micro and Small enterprises is higher than the Medium and Large enterprises. The former group of firms have lower share of fixed asset compared to the latter group of firm which would have been used as collateral. The micro and small enterprises face more difficulties in getting debt from banks or financial institutions as they are considered more risky and less leveraged. Hence, prefer to keep cash with them to face uncertainty.

From the discussion of the *capital structure of MSMEs and Large enterprise by Age* of enterprise the following results were obtained. Firstly, the level of financial debt is declining as age of MSMEs increases. Secondly, financial debt of Micro and Small enterprise is lower than the medium enterprises along with the different age groups. Even in the same age group, if comparison of firms across the different size groups is made, the amount of financial debt decreases as the size of firms decreases. It is showing the fact that, smaller size of firms is not considered as worthy borrowers by banks whether they are young or old. Thirdly, Micro and Small enterprises are sitting with higher level of cash across all the age groups compared to the Medium and Large enterprises. Meaning thereby, Micro and Small enterprises are dependent more on internal sources of finance to fund their need of working capital and investment. Micro and Small enterprises are facing difficulties in accessing credit market even they have become older.

When the *growth situation is positive*, the Micro enterprises are not able to gain best out of the situation because of less increase in their access to external credit. But Small enterprises can exploit the situation by adding to their growth because they can increase their access to the external loan. While *during the declining period*, the rate of shrinking of access of outstanding loan of Micro enterprise is much higher than that of the Small enterprise. It is showing the fact that the during the decline period of growth of firms, the

access of credit is much lower for Micro firms than the Small firms. It would be making serious impact on the growth, economic performance and consequential development of Micro enterprises because they could not fulfill their financial requirement for working capital and investment during their contracting phase compared to the Small firms.

Financial situation of Micro and Small enterprises is not the same as the Medium and Large enterprises. Financially, the former is not in an easy position. The capital structure of Micro and Small enterprises is different from Medium and Large enterprise. Specially, the low level of financial debt or bank loan of smaller enterprise might not be out of choice.

The available amount of internal finance may put constrain on the investment of a firm if the firm faces external finance constraints. The inadequate access of external finance would have negative impact on the economic performance of firms, if internal finance is not enough. This has been discussed in chapter-7 for firms in Indian MSME sector and the followings are the results.

10.4 The smaller the size of firm, the higher is the growth in terms of fixed asset, employment and output of the firms in Indian manufacturing sector in general and MSME sector in particular. The younger firms are doing better than the older firm on an average in case of Micro and Small enterprises (MSE). In the category of Medium and large size firm, the older firms are performing better.

The empirical findings also support the fact that the smaller firms have higher growth and economic performance. The younger firms are growing faster in terms of growth of employment, output than the older firms in their economic performance. However, the tiny and smaller MSE in general and Micro firms are particularly financially distress and more constrained firms. The Small firms are financially constrained.

Even if Micro firms are doing faster in term of growth but they are financially distressed and constrained firms. Their economic performance is restricted to the availability of internal finance. Meaning thereby, they are more dependent on internal finance and have less access to external finance. They do not have enough access to external finance because they are the micro units and have less fixed asset to put forward as collateral to

obtain loan. On the supply side, for banks, it is risky business to provide loan to these micro units.

But for Small firms, even if they are financially constraint firm, they have better access to the external finance. They are able to finance their investment. The reason behind this is the fact that they have enough collateral to shield their loan requirement which the loan provider is asking for to reduce the risk associated with the loan.

However, if smaller MSE is compared with that larger MSE, the former are financially more constraint because the economic performance in terms of growth of former is more sensitive to their cash flow. It shows the fact that the smaller MSE face the greater "wedge between the costs of internal and external funds (Gayané Hovakimian, 2009)" and they are financially constraint. It is difficult for them to access the external finance even they need to finance their working capital and investment.

There is high chance; such situation is affecting their (potential) economic performance. They are not able to access external finance. They are mostly dependent more on their internal finance, which is, in any case, inadequate to them in meeting their needs. The inadequate access to external credit is chocking the growth and development of the MSE firms whether they are smaller (NSSO units) and bigger (ASI units) in a situation when they need finance the most.

The Medium & Large firms are not financially constraint as compared to MSEs . They have better access to the external finance to fund their need to invest.

Inside the bigger firms (ASI firms), the relatively more smaller and/or younger the firm, the higher is the probability of being financially constrained. Their growth and development is highly dependent on access to external finance. Since they are able to access external loan, they can maintain their economic performance. If we take only the group of bigger MSE, the older and the mature MSE are financially constrained and availability of external loan for them is not good enough to support the finance they need for investment. This is because as they become older, they are highly leveraged firms, and do not get additional loan. It reduces their ability to raise additional capital and hence in financing their new investment. This result confirms the finding from descriptive

analysis; that access to external credit of MSE does not increase as the firms become more mature.

The larger the size of firm, higher is the access to external debt. But among the larger firms, the one those are high leverage firms are not able to get additional debt to finance their growth and development. Inside these groups, the older firms are highly leveraged firms. They are not getting finance any more. Their accessibility of alternative sources of finance is almost zero. May be, for them there is accessibility problem to these sources of finance being the smaller (bigger MSE) one compared to the medium and large firms. The Medium&Large firms have access to other formal sources of funds. They have better access to external funds.

MSMEs constitute major part of the manufacturing sector in India. The MSE are doing better in economic performance. However, *the firm level study has shown that MSEs (both tiny & smaller and bigger) have not only perceived accessing finance to be one of the obstacles and problems, but it also constrains economic performance of MSEs more compared to the Medium & large firms.*

Inability to access finance or liquidity constraints provides explanation of firms' size, age and growth relationship of firm.

The relatively larger firm (Small firms) inside the group of smaller MSE has good access to external credit but Micro firms do not have good access. This confirms the fact that financial challenges like lack of capital and lack of access to credit faced by MSE reduces as size of firm increases. Being Micro firms, the main reason for their limited access to credit is their inability to provide collateral which is needed to obtain loans. Hence, their economic performance is getting compromised. As the size of firm increases, their ability to weaken the relationship between the problem in accessing finance and their economic performance also increases; firms can perform better.

The irony of the fact is that: to attain a larger size, they need finance; but they can access finance only if they are a bigger firm. It raises the pertinent question about how the micro and small can attain the 'big' size in a situation where they cannot access finance due to their small size. This must draw the attention policy formulators.

The larger and/or younger MSE have good access to bank loan because of their size which contributes to their economic performance in better possible way. However, the larger but older MSE are not able to weaken the relation between the finance problems they face and their growth and development. They are already high leveraged firms, as they become older and they do not get additional loan. It reduces their ability to raise additional capital and hence financing their new investment. The result confirms the finding from descriptive analysis, that access to external credit of MSE is not increasing as the firm's becomes more mature.

The access to Finance is a decisive factor which determines survival, growth and economic performance of MSMEs. It allows firms to undertake productive investments and also to adopt the latest technologies. It ensures their competitiveness and contributes in the development process of the economy. However, Indian MSMEs, particularly MSEs are financially distressed and constrained. Lack of access or the availability to finance remains to be an important obstacle for MSEs. Meaning thereby, the large chunk of Indian manufacturing sector are unable to access the external finance. This may result in lowering growth in income and employment at the macro level. Inadequate external (particularly bank) finance and at the same time inability of poorly functioning banking system to address the problem can seriously undermine the microeconomic fundamentals of the economy that is the economics of MSMEs individually.

The result of analysis of trends and sectoral allocation of commercial bank lending to the MSME sector and impact of size and performance of banks on the credit going to the sector are mentioned below. This would add important points to the results on the access to finance of the firms in the MSME sector.

10.5 The priority sector lending to the sector has declined significantly from 58 percent of total PSL in 1969 to 32 percent in 2010 for public sector bank, from 55 percent to 30 percent for private sector banks during the same period. The average annual growth rate of credit going to MSME is higher than that of credit going to industry and that of total credit of the banks during 1973-1980 and during 1981-1990. The growth rate was 12.1 percent and 10.1 percent respectively in the period 1973-1980 and 1981-1990. However, it declined to 4.2 percent and 6.9 percent during 1991-2000 and during 2000-2007

respectively. Moreover, this growth rate is less than half of the growth of total credit and credit going to the industry respectively. Over all there is significant decline in the credit going to the sector.

The share of credit to MSME in total credit has declined from 12 percent in 1973 to 4 percent in 2007. Similarly, the share of credit to MSME in the credit going to the industry has also declined 21 percent in 1973 to 10 percent in 2007. The comparison between the share of credit going to industry and to MSME in total credit shows the fact that former's share is always more than 40 percent in the period 1973 to 2010, but the share of latter is always less than 14 percent and all the more it has declined to a great extent.

The findings from the analysis of credit to MSME by bank group wise are firstly, the annual average growth rate of credit has declined across all the bank groups from 1974-1980 to 2001-2007 but the growth rate of credit flowing to the NMSE has increased except group like FB, RRB. The share of credit going to MSE as a per cent of credit going to industry has also declined across all bank group except FB and RRB.

The analysis of credit going to the MSE according to the size of the banks, it shows that the percentage is higher for the small banks compared to the medium and large size banks. However, *the percentage of credit going to the sector is declining continuously across all size of banks*.

The performance of the banks groups appeared to have impact on the credit disbursal to Micro and small enterprises. When the performance of bank group is declining in terms of the spread, the amount of credit going to the MSE from them is also declining. The spread is declining from 1992 to 2007 across all the bank groups and credit flowing to the MSE has declined continuously in the same period. It has been observed that the negative relation between performances of the bank, measured in terms RoA, and the share of MSE credit. However, *there is general decline in credit to the sector irrespective of performance of banks*.

The analysis of relation between the size and performance of bank on the credit flowing to the sector is giving evidence that the decline in credit to the sector is mostly related to the change in policy and perceived riskiness of banks in offering credit to the MSEs.

The negative relationship between the size of the bank and proportion of credit going to the sector is also found from the econometric analysis. The amount of credit flowing to the sector is mostly because of the mandatory requirement on the part of the bank to lend to the sector. This is supported by the positive relation between NPA arising out of MSE lending and lending to the sector. This finding is also supporting the fact that the better performing banks are not interested in lending to the sector (negative empirical relation between performance of MSE and proportion of credit going to the sector).

There is sharp decline in the credit going to the MSME sector in the recent time. There are many loopholes erupted in the PSL system. These loopholes are providing enough scope to divert the funds to other projects and places of higher profits and returns. The reasons for such trends in the credit flowing to the sector can be attributed to the changes in banking and credit policy to a great extent.

10.6 The shift in banking and credit policies in the 1990's has led to the withdrawal of state from the banking system. There are changes in the institutional structure particularly in the financial structures. The Indian banking system has become less developmental oriented. Banks are reluctant to play their traditional intermediary role of bearing risk. They are more interested in earning returns and profits with greater choice in conducting their activities. It has an impact on the sectoral deployment of credit. The banking sector has become insensitive to the needs of credit and finance by MSME sector.

Primarily, the agenda of PSL has been diluted. New areas have been brought under the umbrella of PSL. Given that no separate sub-target for the MSE sector within the priority sector lending, commercial banks have taken enough leeway of diverting funds to other priority sector lending like housing, education etc. The priority sector lending to MSEs has been declining. Above all, much of the credit, which is going to this sector, is to the higher end of MSEs.

"Supervisory and capital adequacy requirements penalize banks for lending to enterprises that lack traditional collateral (Hallberg, 2000)". The MSEs usually do not have financial record, cannot provide reliable information and required collaterals. "Financial sector policies often work against the ability of commercial financial institutions to serve

MSMEs (Malhotra et al., 2007a)". Most of the times the reasons they say are: high risk - real or perceived, high transaction costs, higher NPAs and lack of collaterals.

The fundamental reason behind such findings is the dismantling of social and development banking in the economy with the change of broader macroeconomic policy in the country. The available fund with the banking system is limited for disbursal of credit and there is also change in the arrangement of credit delivery. Today banks have more liberty in their choice of loan, with proper consideration of creditworthiness of the borrower. The evidence of declining credit to MSE is supporting this fact as they were considered less creditworthy by the banking system.

The policy change has affected the amount and the terms of credit to MSEs. There is sharp decline in credit delivery to MSEs. The meager amount of credit they receive is through palliative government schemes. MSEs are facing finance constraints to a great extent. These have already been mentioned in the earlier chapters. The micro enterprises are almost in a state of crisis. Financial constraints due to credit restraint policy, delay in disbursement of loans and unfavorable investment climate are adding to the sickness of MSEs. Since the sector is financially unhealthy, their growth and development is in danger.

10.7 Given the relevance of MSMEs in the development process of the economy, the lack of access and denial of credit to the sector creates major hurdles in the socio-economic objective of creating employment opportunities and poverty alleviation. The adequate access of credit to the sector is an urgent policy priority.

They must get adequate and timely credit at reasonable cost. This calls for better implementation and monitoring of proper policy (as suggested in the Chapter - 9) for the enhancement of access to finance of MSMEs. Many times, it is true that the MSMEs do not have financial record, cannot provide reliable information and required collaterals. These could have been used by banks to manage risk associated with credit to MSEs in traditional risk management system followed by them. It is also true that banks do not have suitable tool for managing risks and that they do not have technical knowledge and skill to reach the MSMEs. In such a situation, it is suggested that appropriate

infrastructure should be created so that the commercial banks can opt for ‘relationship lending’ while dealing with MSE loan requirement. This can go a long way in reducing the risk of banks while financing the MSEs.

Appendices to Chapter - 1

Table-A1.1, Reasons for Closure and proportion for closure, Second Census (1987-88)

Reasons	All-India
Labour problems	2.2
Dispute Problems	3.7
Raw material problem	5.6
Finance problem	*34.7*
Marketing problem	14.4
Natural calamity	3.4
Combined reasons	16.5
Others	19.4
Total	100

Source: Report on second Census of Small Scale Industrial Units for All-India, 1992, DCSSI, GOI, New Delhi

Table-A1.2, Reasons for sickness and proportion of sick units *, Third Census (2001-02), registered sector and unregistered sector

Reasons	All-India registered sector	All-India unregistered sector
Lack of Demand	58	69
Shortage of working capital	*57*	*43*
Non-availability of raw material	12	12
Power shortage	17	12
Labour Problems	6	4
Marketing Problems	37	36
Equipment problems	9	12
Management problems	5	3

*Notes:** The total in each column will exceed 100%, as some units have reported more than one reason.
Source: Third All India Census of Small Scale Industry 2001-2002, MoSSI, GOI

Table-A1.3, Reasons for sickness and proportion of sick units *, Fourth Census (2006-07)

Reasons	All-India
Lack of Demand	71.6
Shortage of working capital	*48*
Non-availability of raw material	15.1
Power shortage	21.4
Labour Problems	7.4
Marketing Problems	44.5
Equipment problems	10.6
Management problems	5.5

*Notes:** The total in each column will exceed 100%, as some units have reported more than one reason.
Source: Quick Results Fourth All India Census of MSMEs 2006-2007, MoMSME, GOI.

Table A1.4, Industries with same nomenclature

NIC-1998	NIC-2004	NIC-2008	Product Groups
15	15	10+11	Manufacture of food products and beverages
16	16	12	Manufacture of tobacco products
17	17	13	Manufacture of textiles
18	18	14	Manufacture of wearing apparel
20	20	16	Manufacture of wood and products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
22	22	18	Printing and reproduction of recorded media
26	26	23	Manufacture of other non-metallic mineral products
28	28	25	Manufacture of fabricated metal products, except machinery and equipment
36	36	31	Manufacture of furniture

Table A1.5, the states and their codes considered for NSS panel

Si.No.	state	State Code in the NSS round of 62nd and 67th
1	J & K	1
2	Himachal Pradesh	2
3	Punjab	3
4	Haryana	6
5	Rajasthan	8
6	Uttar Pradesh	9
7	Bihar	10
8	Tripura	16
9	Assam	18
10	West Bengal	19
11	Jharkhand	20
12	Orissa	21
13	Madhya Pradesh	23
14	Gujarat	24
15	Maharashthra	27
16	Andhra pradesh	28
17	Karnataka	29
18	Kerarla	32
19	Tamil Nadu	33

The World Bank's Enterprise Surveys are firm level surveys. It is conducted in many countries and in different industrial sectors within a country. The sample covered registered businesses and includes firms of all sizes. The surveys used stratified random sampling within India. The dataset is from 2006. In India, the data is for three sector surveys such as micro-sized manufacturing enterprises, retail services firms, and information technology and communications services firms. The surveys used employee size as the criterion to determine firm size.

The Micro Manufacturing dataset surveys enterprises which are quite small in size. This survey classifies three sizes of firms

- household (1 worker)
- micro (1-5 workers) and
- small (6-10 workers).

The retail enterprises dataset surveys enterprises which are mostly proprietorships with private ownership. Small enterprises form an overwhelming majority of business surveyed, making up 96 percent of all respondents.

The IT and Communication Technology survey classifies

- small enterprises as 1 – 19 workers,
- medium enterprises as 20 – 99 workers and
- large over 100 employees.

Appendices to Chapter - 6

Table-A6.1, Total worker per enterprise in different type of enterprises in All-India

Workers	ASI			NSSO		
Enterprises 2000-01	**Rural**	**Urban**	**All-India**	**Rural**	**Urban**	**All-India**
Micro	27	24	25	2	3	2
Small	48	49	49	17	13	15
Medium	114	164	137		50	50
Large	307	588	433			
Total	52	47	48	2	3	2
Enterprises 2005-06	**Rural**	**Urban**	**All-India**	**Rural**	**Urban**	**All-India**
Micro	33	30	31	2	3	2
Small	49	53	51	19	15	17
Medium	130	159	144	64	22	44
Large	312	512	398			
Total	61	54	56	2	3	2
Enterprises 2010-11	**Rural**	**Urban**	**All-India**	**Rural**	**Urban**	**All-India**
Micro	30	25	27	2	2	2
Small	51	52	51	17	10	12
Medium	118	142	131	63	68	74
Large	332	412	374			
Total	66	56	60	2	2	2

Source: calculated from unit level data of unorganized manufacturing survey, NSSO and ASI.

Table-A6.2, Fixed Asset per Enterprises (in constant price) in different type of enterprises in All-India

Fixed Asset	**ASI**			**NSSO**		
Enterprises 2000-01	**Rural**	**Urban**	**All-India**	**Rural**	**Urban**	**All-India**
Micro	401385	516453	478643	31659	157028	69128
Small	27089085	23997941	25260935	7344955	7145613	7204355
Medium	103845736	1340030558	1231263801		85486826	85486826
Large	1141980771	1340030558	1231263801			
Total	78171725	43169621	55685247	32416	161355	70964
Enterprises 2005-06	**Rural**	**Urban**	**All-India**	**Rural**	**Urban**	**All-India**
Micro	348573	565163	485555	35699	183200	78388
Small	29282186	27065896	28021744	7303796	7832068	7600466
Medium	110487259	118912562	114495388	81623503	35616241	58973774
Large	1199941640	1443860375	1304666103			
Total	93583083	56849203	71322258	37824	189723	81804
Enterprise 2010-11	**Rural**	**Urban**	**All-India**	**Rural**	**Urban**	**All-India**
Micro	595568	1006793	852816	77590	304881	171245
Small	36067676	32006048	33539751	7077897	6477824	6629891
Medium	108549319	110784280	109723488	60679669	59056150	65286469
Large	1431160475	1183985485	1315213480			
Total	152257607	75687742	105424607	79554	312186	175460

Source: calculated from unit level data of unorganized manufacturing survey, NSSO and ASI.

Table-A6.3, Gross Plant and Machinery (GPM) per Enterprises (in constant price) in different type of enterprises in All-India

GPM	ASI			NSSO		
Enterprises 2000-01	**Rural**	**Urban**	**All-India**	**Rural**	**Urban**	**All-India**
Micro	111469	134780	127120	6659	22277	11327
Small	14633641	12468927	13353396	6669562	4882222	5408913
Medium	68863023	68390621	68644059		77129255	77129255
Large	880536004	1047436502	955776591			
Total	58358054	32097668	41487536	7348	25342	12728
Enterprise 2005-06	**Rural**	**Urban**	**All-India**	**Rural**	**Urban**	**All-India**
Micro	84629	129958	113297	6742	22147	11201
Small	15022075	13068395	13910983	4738477	4880522	4818248
Medium	68294506	68998021	68629186	85893914	55562529	70961540
Large	922557324	1091911076	995267937			
Total	69622785	40960416	52253316	8215	26505	13510
Enterprise 2010-11	**Rural**	**Urban**	**All-India**	**Rural**	**Urban**	**All-India**
Micro	134911	168065	155650	10502	25977	16878
Small	16147725	14139821	14898021	4965351	4188754	4385554
Medium	61320023	61170834	61222518	50730207	48188024	53515263
Large	1019281372	790865787	912134202			
Total	105743673	48300437	70609236	11894	30914	19735

Source: calculated from unit level data of unorganized manufacturing survey, NSSO and ASI.

Table-A6.4, Outstanding Loan per Enterprises (in constant price) in different type of enterprises in All-India, in Rupees

Outstanding Loan	ASI			NSSO		
Enterprises 2000-01	**Rural**	**Urban**	**All-India**	**Rural**	**Urban**	**All-India**
Micro	3287139	2495558	2755663	3263	10744	5498
Small	12817121	13521721	13233832	1762695	1957534	1900119
Medium	44975515	66505693	54955033		5818923	5818923
Large	408872306	570408315	481694522			
Total	31094295	21049250	24641035	3445	11892	5970
Enterprises 2005-06	**Rural**	**Urban**	**All-India**	**Rural**	**Urban**	**All-India**
Micro	3864202	3775175	3807897	3336	28482	10614
Small	14483885	15955268	15320686	3693839	3155588	3391565
Medium	53600397	50511369	52130868	81962492	24460927	53654029
Large	368834618	448073939	402855356			
Total	33179949	22061416	26442090	4525	31213	12252
Enterprise 2010-12	**Rural**	**Urban**	**All-India**	**Rural**	**Urban**	**All-India**
Micro	5536125	5415917	5460875	4199	8876	6126
Small	18651904	18607750	18624423	2964606	1589461	1937942
Medium	46219422	49236672	47832562		89209319	80288387
Large	459248964	382928759	423448018			
Total	54214801	301745542	39510877	5025	10840	7422

Source: calculated from unit level data of unorganized manufacturing survey, NSSO and ASI

goutput: growth of output

gemp : growth of employment

gFA : growth of Fixed Asset

logoutput : log of output

logemp : log of employment

logFA : log of Fixed Asset

lage : log of age of firm

cashflow_FA : ratio of cashflow to Fixed Asset

loan_FA : ratio of Outstanding loan to Fixed Asset

Descriptive Statistics

Table-A7.1, Descriptive summary of variables of NSS_panel_MSE

Variable	Mean	S. D.	Min	Max
goutput	0.78	1.06	-2.31	5.13
gemp	0.05	0.42	-1.92	1.72
gFA	0.77	1.04	-3.66	4.01
logoutput	12.17	1.12	9.08	17.30
logemp	1.32	0.41	0.71	3.89
logFA	11.77	1.07	8.38	14.72
cashflow_FA	0.45	0.72	0.05	7.40
loan_FA	0.34	0.26	0.01	2.16

Table-A7.2, Descriptive summary of variables ofNSS_panel_Micro

Variable	Mean	S. D.	Min	Max
goutput	0.78	1.05	-2.31	5.12
gemp	0.05	0.42	-1.92	1.72
gFA	0.77	1.03	-3.66	4.00
logoutput	12.16	1.11	9.08	17.30
logemp	1.31	0.41	0.71	3.95
logFA	11.75	1.05	8.38	14.72
cashflow_FA	0.46	0.73	0.04	7.40
loan_FA	0.34	0.26	0.01	2.16

Table-A7.3, Descriptive summary of variables ofNSS_panel_Small

Variable	Mean	S. D.	Min	Max
goutput	0.45	1.69	-2.67	5.24
gemp	0.05	0.93	-2.03	1.81
gFA	0.49	0.95	-1.65	2.45
logoutput	16.14	1.42	12.91	19.04
logemp	2.83	0.67	1.71	5.06
logFA	15.69	0.62	14.64	17.63
cashflow_FA	0.25	0.27	0.02	1.01
loan_FA	0.74	0.65	0.05	2.70

Table-A7.4, Descriptive summary of variables ofASI_Panel2_Total

Variable	Mean	S. D.	Min	Max
goutput	0.14	1.36	-11.54	10.20
gemp	0.04	0.95	-6.17	7.66
gFA	0.13	1.28	-9.70	9.91
logoutput	19.56	1.74	5.43	26.61
logemp	5.12	1.22	0.69	9.09
logFA	18.96	1.77	12.90	25.40
cashflow_FA	0.17	2.27	-11.76	161.49
loan_FA	0.73	4.16	0.00	191.46
lage	2.76	0.84	0.00	5.15

Table-A7.5,Descriptive summary of variables ofASI_Panel2_Total; by age

	Younger ASI Firms			Older ASI Firms	
Variable	Mean	S. D.		Mean	S. D.
goutput	0.11	1.46		0.17	1.26
gemp	0.00	1.03		0.07	0.87
gFA	0.09	1.35		0.17	1.21
logoutput	19.47	1.75		19.63	1.73
logemp	4.95	1.25		5.26	1.19
logFA	18.89	1.76		19.01	1.77
cashflow_FA	0.27	3.28		0.09	0.78
loan_FA	0.71	4.86		0.75	3.50
lage	2.22	0.79		3.20	0.58

Table-A7.6, Descriptive summary of variablesofASI_Panel2_MSE

Variable	Mean	S. D.	Min	Max
goutput	0.16	1.19	-8.09	10.03
gemp	0.05	0.90	-5.18	4.87
gFA	0.15	0.75	-4.25	3.79
logoutput	18.26	1.45	10.34	21.89
logemp	4.35	1.18	0.69	7.29
logFA	17.23	0.94	14.08	19.35
cashflow_FA	0.48	5.83	-7.69	161.49
loan_FA	1.63	10.26	0.00	191.46
lage	2.60	0.95	0.00	5.15

Table-A7.7, Descriptive summary of variablesofASI_Panel2_MSE; by age

	Younger MSE			Older MSE	
Variable	Mean	S. D.		Mean	S. D.
goutput	0.18	1.41		0.14	0.99
gemp	0.06	1.04		0.04	0.79
gFA	0.16	0.78		0.14	0.72
logoutput	18.25	1.49		18.26	1.42
logemp	4.19	1.13		4.47	1.19
logFA	17.28	0.95		17.20	0.93
cashflow_FA	0.87	8.13		0.19	3.06
loan_FA	1.25	9.13		1.92	11.04
lage	1.94	0.87		3.11	0.64

Table-A7.8, Descriptive summary of variablesofASI_Panel2_Medium&Large

Variable	Mean	S. D.	Min	Max
goutput	0.10	1.16	-9.29	10.01
gemp	0.02	0.76	-4.83	5.38
gFA	0.09	0.90	-6.04	5.85
logoutput	20.42	1.43	8.56	25.92
logemp	5.64	0.95	0.69	8.80
logFA	20.09	1.25	17.82	25.40
cashflow_FA	0.10	0.55	-6.47	19.21
loan_FA	0.49	0.64	0.00	7.94
lage	2.83	0.78	0.00	4.80

Table-A7.9, Descriptive summary of variables ofASI_Panel2_Medium&Large; by age

	younger Medium&Large firms			older Medium&Large firms	
Variable	Mean	S. D.		Mean	S. D.
goutput	0.07	1.31		0.11	1.03
gemp	-0.03	0.87		0.05	0.66
gFA	0.08	0.98		0.10	0.84
logoutput	20.34	1.51		20.49	1.36
logemp	5.47	1.02		5.76	0.88
logFA	20.10	1.26		20.09	1.24
cashflow_FA	0.12	0.67		0.09	0.44
loan_FA	0.53	0.75		0.45	0.54
lage	2.30	0.74		3.21	0.55

Table-A7.10, Descriptive summary of variables ofASI_Panel1_Total

Variable	Mean	S. D.	Min	Max
goutput	0.71	2.42	-9.74	11.43
gemp	0.02	1.67	-5.56	6.11
gFA	0.59	2.45	-10.46	9.75
logoutput	18.74	1.86	7.16	26.22
logemp	4.79	1.36	0.69	9.21
logFA	18.15	1.88	8.35	25.02
cashflow_FA	0.25	8.25	-49.04	374.36
loan_FA	1.05	8.47	0.00	342.72
lage	2.66	0.96	0.00	5.12

Table-A7.11, Descriptive summary of variables ofASI_Panel1_MSE

Variable	Mean	S. D.	Min	Max
goutput	0.72	2.04	-7.58	8.78
gemp	0.14	1.34	-3.35	3.84
gFA	0.56	1.80	-7.20	9.42
logoutput	17.15	1.47	10.24	21.51
logemp	3.44	1.19	0.69	6.64
logFA	16.30	1.33	8.35	19.56
cashflow_FA	1.43	20.59	-22.34	374.36
loan_FA	2.45	20.04	0.00	342.72
lage	2.48	0.95	0.00	4.84

Table-A7.12,Descriptive summary of variables ofASI_Panel1_Medium&Large

Variable	Mean	S. D.	Min	Max
goutput	0.45	2.07	-6.61	11.43
gemp	0.11	1.44	-4.32	4.83
gFA	0.35	1.65	-4.97	4.91
logoutput	19.92	1.55	7.16	24.32
logemp	5.65	1.02	2.56	9.13
logFA	19.69	1.20	17.53	24.28
cashflow_FA	0.01	0.35	-2.90	1.58
loan_FA	0.56	1.11	0.00	14.86
lage	2.81	0.92	0.00	4.71

Table-A7.13, Correlation matrix of independent variables NSS_panel_MSE

	logoutput	logemp	logFA	cashflow_FC	loan_FA
logoutput	1				
logemp	0.7161	1			
logFA	0.7872	0.5553	1		
cashflow_FC	0.0218	0.0315	-0.2291	1	
loan_FA	0.1768	0.1555	0.0455	0.0712	1

Table-A7.14, Correlation matrix of independent variables NSS_panel_Micro

	logoutput	logemp	logFA	cashflow_FC	loan_FA
logoutput	1				
logemp	0.7089	1			
logFA	0.7808	0.5339	1		
cashflow_FC	0.0321	0.0484	-0.2271	1	
loan_FA	0.1844	0.1851	0.0416	0.0814	1

Table-A7.15, Correlation matrix of independent variables NSS_panel_Small

	logoutput	logemp	logFA	cashflow_FC	loan_FA
logoutput	1				
logemp	0.6915	1			
logFA	0.4913	0.4589	1		
cashflow_FC	0.4876	0.3238	0.0272	1	
loan_FA	0.4708	0.0937	-0.0961	0.3899	1

Table-A7.16, Correlation matrix of independent variables - ASI_Panel2_Total

	logoutput	logemp	logFA	cashflow_FC	loan_FA	lage
logoutput	1					
logemp	0.6765	1				
logFA	0.7991	0.6654	1			
cashflow_FC	0.0535	-0.0155	-0.0546	1		
loan_FA	-0.0508	-0.0085	-0.1007	0.5813	1	
lage	0.1126	0.2347	0.1148	-0.061	0.0237	1

Table-A7.17, Correlation matrix of independent variables - ASI_Panel2_MSE

	logoutput	logemp	logFA	cashflow_FC	loan_FA	lage
logoutput	1					
logemp	0.56	1				
logFA	0.5653	0.4832	1			
cashflow_FC	0.0897	-0.0037	-0.1666	1		
loan_FA	-0.0102	0.0441	-0.2283	0.6956	1	
lage	-0.0237	0.1854	-0.001	-0.0866	0.0402	1

Table-A7.18, Correlation matrix of independent variables - ASI_Panel2_Medium & Large

	logoutput	logemp	logFA	cashflow_FC	loan_FA	lage
logoutput	1					
logemp	0.5174	1				
logFA	0.7169	0.5038	1			
cashflow_FC	0.2309	0.0415	0.0618	1		
loan_FA	-0.0079	-0.0184	-0.0199	-0.0767	1	
lage	0.1282	0.2876	0.0485	-0.0198	-0.0451	1

Table-A7.19: Result of Panel regression using NSSO data for Employment variant of the Model (1)

	MSE		Micro		Small	
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Emp_a	Emp_b	Emp_a	Emp_b	Emp_a	Emp_b
SIZEe	-1.212***	-1.201***	-1.200***	-1.186***	-1.501***	-1.496***
	(0.169)	(0.169)	(0.166)	(0.167)	(0.249)	(0.272)
cashflow_FA	-0.0223	-0.0464	-0.0261	-0.0493	-0.118	-0.142
	(0.0373)	(0.0388)	(0.0389)	(0.0404)	(0.385)	(0.543)
loan_FA	-0.0543	-0.126	-0.0103	-0.0752	0.103	0.0961
	(0.106)	(0.111)	(0.101)	(0.107)	(0.293)	(0.323)
Constant	1.680***	1.640***	1.641***	1.596***	4.247***	4.233***
	(0.222)	(0.224)	(0.220)	(0.222)	(0.697)	(0.752)
Observations	282	282	282	282	24	24
R-squared	0.549	0.580	0.546	0.576	0.781	0.781
Number of id	141	141	141	141	12	12
Firm FE	YES	YES	YES	YES	YES	YES
Year FE	NO	YES	NO	YES	NO	YES
Adj. R-squared	0.544	0.574	0.541	0.569	0.748	0.735
F-test	26.66	21.85	24.34	20.16	14.81	10.39

Notes: Robust standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1
'a' is one-way fixed effect model 'b' is two-way fixed effect model

Table-A7.20:Result of Panel regression using NSSO data for Output variant of the Model (1)

	MSE		Micro		Small	
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Output_a	Output _b	Output _a	Output _b	Output _a	Output _b
SIZEo	-0.904***	-1.375***	-0.895***	-1.370***	-0.903***	-0.897***
	(0.121)	(0.124)	(0.121)	(0.124)	(0.136)	(0.160)
cashflow_FA	0.0853	-0.148*	0.0735	-0.154**	-0.460	-0.629
	(0.0923)	(0.0772)	(0.0975)	(0.0774)	(0.672)	(0.835)
loan_FA	0.189	-0.182	0.185	-0.116	-0.0521	-0.115
	(0.311)	(0.261)	(0.306)	(0.236)	(0.354)	(0.466)
Constant	11.68***	16.99***	11.56***	16.89***	15.17***	15.07***
	(1.451)	(1.480)	(1.454)	(1.472)	(2.110)	(2.425)
Observations	282	282	282	282	24	24
R-squared	0.297	0.714	0.292	0.713	0.807	0.811
Number of id	141	141	141	141	12	12
Firm FE	YES	YES	YES	YES	YES	YES
Year FE	NO	YES	NO	YES	NO	YES
Adj. R-squared	0.290	0.709	0.285	0.709	0.778	0.772
F-test	20.72	49.19	20.10	49.29	53.03	32.32

Notes: Robust standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1
'a' is one-way fixed effect model 'b' is two-way fixed effect model

Table A7.21: result of panel regression from ASI_panel1 for Employment variant of the Model (1)

	Total		MSE		Medium and Large	
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Emp_a	Emp_b	Emp_a	Emp_b	Emp_a	Emp_b
SIZEe	0.485***	0.490***	0.427***	0.426***	0.566***	0.552***
	(0.0307)	(0.0290)	(0.0553)	(0.0547)	(0.0644)	(0.0607)
AGE	0.0221		0.00651		-0.0447	
	(0.0329)		(0.0612)		(0.0648)	
cashflow_FA	0.00239**	0.00216**	0.00263***	0.00279***	-0.211	-0.194
	(0.00110)	(0.00106)	(0.000674)	(0.000698)	(0.197)	(0.202)
loan_FA	-0.000716	-0.000456	-0.00206***	-0.00216***	0.0420	0.0468
	(0.00166)	(0.00177)	(0.000724)	(0.000790)	(0.0441)	(0.0448)
Constant	-2.359***	-2.348***	-1.348***	-1.316***	-2.990***	-3.029***
	(0.144)	(0.141)	(0.225)	(0.196)	(0.338)	(0.342)
Observations	2,248	2,248	352	352	382	382
R-squared	0.218	0.218	0.219	0.219	0.305	0.304
Number of dsl	1,124	1,124	176	176	191	191
Firm FE	YES	YES	YES	YES	YES	YES
Year FE	NO	YES	NO	YES	NO	YES
Adj. R-squared	0.216	0.217	0.210	0.210	0.298	0.297
F-test	73.05	72.89	25.26	24.76	30.72	30.87

Notes: Robust standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1
'a' is one-way fixed effect model 'b' is two-way fixed effect model

Table A7.22: result of panel regression from ASI_panel1for Output variant of the Model (1)

	Total		MSE		Medium and Large	
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	output_a	output_b	output_a	output_b	output_a	output_b
lag1_logoutput	-1.397***	-1.531***	-1.435***	-1.596***	-1.412***	-1.475***
	(0.0321)	(0.0310)	(0.100)	(0.0918)	(0.0667)	(0.0626)
lag1_lage	-0.146***		-0.0926		-0.171*	
	(0.0521)		(0.127)		(0.0909)	
cashflow_FA	0.0121***	0.00693**	0.00992***	0.00368***	-0.00850	-0.213
	(0.00317)	(0.00291)	(0.00216)	(0.00115)	(0.248)	(0.239)
loan_FA	-0.00790*	-0.00589	-0.00537***	-0.00177	0.0192	-0.0167
	(0.00407)	(0.00504)	(0.00179)	(0.00156)	(0.0919)	(0.0578)
Constant	27.28***	28.87***	25.56***	27.49***	29.06***	29.51***
	(0.603)	(0.574)	(1.784)	(1.559)	(1.290)	(1.252)
Observations	2,248	2,248	352	352	382	382
R-squared	0.679	0.736	0.637	0.736	0.770	0.802
Number of dsl	1,124	1,124	176	176	191	191
Firm FE	YES	YES	YES	YES	YES	YES
Year FE	NO	YES	NO	YES	NO	YES
Adj. R-squared	0.679	0.735	0.633	0.733	0.768	0.800
F-test	492.3	616.4	58.72	124.2	134.9	157.8

Notes: Robust standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1
'a' is one-way fixed effect model 'b' is two-way fixed effect model

Appendices to Chapter - 8

Definition of MSMEs

The MSME sector spans non–agricultural sector of the economy subject to limiting factor size as defined in the MSME Act, 2006 in terms of original value of P&M/ Investment. The present definition of MSEs under Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 is as follows. It recognized the concept of 'enterprise' to include both manufacturing and service sector besides, defining the medium enterprises.

The enterprises engaged in the manufacture or production, processing or preservation of goods as specified below:

(ii) A micro enterprise is an enterprise where investment in plant and machinery does not exceed Rs. 25 lakh;

(ii) A small enterprise is an enterprise where the investment in plant and machinery is more than Rs. 25 lakh but does not exceed Rs. 5 crore; and

(iii) A medium enterprise is an enterprise where the investment in plant and machinery is more than Rs.5 crore but does not exceed Rs.10 crore.

Enterprises engaged in providing or rendering of services as specified below

(i) A micro enterprise is an enterprise where the investment in equipment does not exceed Rs. 10 lakh;

(ii) A small enterprise is an enterprise where the investment in equipment is more than Rs.10 lakh but does not exceed Rs. 2 crore; and

(iii) A medium enterprise is an enterprise where the investment in equipment is more than Rs. 2 crore but does not exceed Rs. 5 crore.

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