FINANCIAL INCLUSION IN MICRO, SMALL AND MEDIUM ENTERPRISES (MSMEs): IMPACT OF FINANCIAL GROWTH STAGES AND FINANCIAL LITERACY

A Thesis Submitted to Goa University for the award of the degree of

DOCTOR OF PHILOSOPHY

in

MANAGEMENT

by

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GOA UNIVERSITY,

TALEIGAO – GOA, 403206.

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DEDICATION

To my parents,

Mrs Mira and Mr Ganesh P Chimulkar

This humble work is a sign of my love to you!

To my parents – in – law,

Mrs Jyoti and Mr Upendra Pai Kane

who have been a constant source of support

To my husband,

Shriram Kane

for encouraging me to believe in myself

To my son,

Aarav

Hope to inspire you in some way some day!

DECLARATION

I, Ms. Mamata Shriram Kane, do hereby declare that this dissertation entitled *"Financial Inclusion in Micro, Small and Medium Enterprises (MSMEs): Impact of Financial Growth Stages and Financial Literacy"* is a bonafide record of research work done by me under the guidance of Dr. (Ms.) Purva G. Hegde Desai, Professor, Goa Business School , Goa University.

I also declare that this dissertation or part thereof, has not been submitted by me for the award of any Degree, Diploma, Title or Recognition before.

Mamata Shriram Kane

Date:

Place: Goa University

CERTIFICATE

This is to certify that the Ph.D. thesis titled *"Financial Inclusion in Micro, Small and Medium Enterprises (MSMEs): Impact of Financial Growth Stages and Financial Literacy"* is an original work carried out by Ms. Mamata Shriram Kane under my guidance, at the Goa Business School, Goa University.

This dissertation or a part thereof, has not formed the basis for the award of any Degree, Diploma, Title or Recognition before.

Dr. (Ms.) PURVA G. HEGDE DESAI

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Mamata Shriram Kane

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

FINANCIAL INCLUSION IN MICRO, SMALL AND MEDIUM ENTERPRISES (MSMEs): IMPACT OF FINANCIAL GROWTH STAGES AND FINANCIAL LITERACY

By: Mamata Shriram Kane

Research Guide: Dr. Purva G. Hegde Desai, Professor, Goa Business School, Goa University.

ABSTRACT

Micro, Small and Medium Enterprises (MSMEs) are being looked upon by an economy as the drivers for its growth, sustainability and development. They play a critical role towards a country's employment generation, exports and empowerment. However, they face a number of problems, such as, absence of adequate and timely banking finance, limited capital and knowledge, non-availability of suitable technology and low production capacity amongst others. Financial inclusion is the process of providing financial services to the weaker and disadvantaged sections of the economy. It thus becomes imperative to study the concept of financial inclusion with respect to MSMEs, since MSMEs could be considered as the weaker segment as compared to their larger counterparts.

Objectives: The objective of this research is to ascertain the relationship between financial growth stages of MSMEs and financial inclusion. The research also seeks to examine the relationship between financial literacy amongst MSMEs and financial inclusion. It further aims to explore the relationship between different dimensions of financial literacy and financial inclusion. The study endeavours to examine the role of financial literacy as a

moderating factor between financial growth stages of a firm and financial inclusion. The study also seeks to establish whether there is any association between financial inclusion and financial literacy with firm specific characteristics.

Research Design: This research, in its first stage of research design, adopted the technique of exploratory study to identify the factors affecting financial inclusion in MSMEs. Further, a supplementary study conducted by the researcher and the mentor further strengthened the preliminary findings of literature review. Second stage involved development of measurement instrument and administration of the same to owners/entrepreneurs of MSMEs across the state of Goa. Third stage described the use of quantitative methodology adopted for testing the hypotheses derived from proposed conceptual model and review of existing literature.

Findings and Theoretical Contributions:

The research established that there is a significant relationship between financial growth stages of a firm and financial inclusion. It was observed that the financial inclusion differed significantly across financial growth stages. The research also elucidated that there exists a significant relationship between financial literacy amongst MSMEs and financial inclusion. It was established that the “awareness” dimension of financial literacy had more influence on financial inclusion out of the three dimensions identified through exploratory factor analysis. This research, however, did not support the findings from literature pertaining to the role of financial literacy as a moderating factor between financial growth stages of the firms and financial inclusion. Further, it was observed that both financial literacy and financial inclusion had a significant association with firm specific characteristics.

The research sought to affirm the findings of Scott and Pam (1991) with respect to small business finance gaps, those being limited knowledge regarding availability of funds and higher costs of financing The research also examined additional gaps relating to SMEs posited by Kumar and Rao (2015) which included (a) accessibility of limited financial sources (demand gap) due to the effect of various quantitative and qualitative variables on capital structure of SMEs, (b) limited availability of finance for SMEs (supply gap), (c) lack of awareness about the approachability towards potential sources of finance (knowledge gap) and (d) reluctance of financial institutions in providing funds to SMEs (benevolence gap).

This study addressed the demand gap (accessibility of limited financial sources) and the knowledge gap (lack of awareness about the approachability towards potential sources of finance) as emphasised from the literature. It confirmed the existence of such gaps amongst MSMEs and concluded that there exists a significant relationship between financial literacy and financial inclusion as well as between dimensions of financial literacy and financial inclusion.

The study incorporated the contributions made to literature with respect to financial growth stages by Mac an Bhaird (2010) and tried to link it with financial inclusion. It was ascertained that there did exist a relationship between financial growth stages of a firm and its financial inclusion and that the extent of financial inclusion varied within different financial growth stages of a firm. The research considered the works of Andoh & Nunoo (2012) and Gartner et al (2004) to examine the linkage between financial literacy and usage of financial services by MSMEs. It was evident through this research that there exists a significant relationship between financial literacy and financial inclusion, that is, financial inclusion is determined by the level of financial literacy. Further, it was also identified that awareness as a dimension of financial literacy had more impact on financial inclusion out of the three dimensions. However, the role of financial literacy as a moderating factor between financial growth stages of a firm and financial inclusion was not found evident in case of this research.

Limitations: This research restricts to the study of MSMEs in the manufacturing sector. Service sector units were not studied for this research. This could be considered as a limitation for this study.

Managerial Implications: This study proposes to bring to the attention of the banks, financial institutions and policy makers the difficulties faced by MSMEs with respect to access to finance, availability of finance, the extent of usage of different financial products and services and quality of such financial services offered. The aim of this study is to determine the extent of financial literacy of entrepreneurs and finance managers. This research will help in identifying specific areas pertaining to awareness, knowledge and skills, attitude and behavior of MSMEs where intervention is required in order to equip them with necessary expertise.

Key words: MSMEs, Financial Inclusion, Financial Growth Stages, Financial Literacy

CHAPTER 1

INTRODUCTION

1.1: BACKGROUND

1.1.1: MICRO, SMALL & MEDIUM ENTERPRISES (MSMEs):

Micro, Small and Medium Enterprises (MSMEs) are being looked upon by an economy as the drivers for its growth, sustainability and development. They play a critical role towards a country's employment generation, exports and empowerment. MSMEs are considered as a thriving force in fostering entrepreneurship and provide opportunities in creation of ancillary units for their larger counterparts. Fayad (2008) advocates that most of the current multi-million dollar enterprises have their origin in SMEs. Researchers and practitioners (SEAF 2007) agree that SMEs are crucial contributors to job creation and economic growth in both high and low-income countries.

1.1.2: Global Definition – MSME:

European Union defines an MSME as: 'The category of micro, small and medium-sized enterprises is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding 50 million euro, and/or an annual balance sheet total not exceeding 43 million euro.' Small and medium enterprises are thus defined as firms with 10 to 250 employees, and more than 10 million euro turnover or annual balance sheet total, according to the European Commission, 2003.

Definition (Table 1.1)

Enterprise category	**Headcount**	**Turnover**	**Balance Sheet Total**
Medium	< 250	≤ € 50 million	≤ € 43 million
Small	< 50	≤ € 10 million	≤ € 10 million
Micro	< 10	≤ € 2 million	≤ € 2 million

Source: European Commission, Enterprise and Industry, 2011. "Small and medium-sized enterprises (SMEs), SME Definition".

The World Bank defines SMEs as those enterprises with a maximum of 300 employees, $15 million in annual revenue, and $15 million in assets. The Inter-American Development Bank describes SMEs as having a maximum of 100 employees and less than $3 million in revenue.

1.1.3: Indian Definition – MSME:

In India, as per the Micro, Small and Medium Enterprises Development Act 2006, enterprises are broadly classified into micro units, small units, medium units & large units depending on the investment in plant and machinery (their original cost excluding land, building and items specified by the Ministry of Small-Scale Industries in its notification No. S.O. 1722(E) dated October 5, 2006):

Table 1.2

Firm Type	**Initial Investment in Plant and Machinery**
Micro Enterprise	Not more than Rs 25 Lakhs
Small Enterprise	More than Rs 25 Lakhs but less then Rs 5 Crores
Medium Enterprise	More than Rs 5 Crores but less than Rs 10 Crores

1.1.4: Contribution of MSMEs:

SMEs are the key drivers of growth and development in both developing (i.e. India, China) and developed countries (i.e. UK, USA and Japan) and thus contribute positively to the economy (Ayyagari et al, 2011). A formal report drafted by Organization for Economic Co-operation and Development (OECD) reports that more than 95% of enterprises in the OECD area are SMEs. These enterprises account for almost 60% of private sector employment, make a large contribution to innovation, and support regional development and social cohesion (Ayyagari et al, 2011).

As per the annual report of Ministry of MSME, Govt of India, 2011, in India, MSMEs employ 40% of the total population of India i.e. 69 million people which accounts for the second largest workforce after agricultural sector. They constitute of 90% of the total industrial units and are responsible for 45% of industrial output and 40% of the total exports. MSMEs contribute approximately 8% to India's GDP. The manufacturing sector among MSMEs, which is a little larger than the services sector, constitutes 90% of the total industrial units that spread all over India. It can thus be seen that the MSME sector contributes towards an equitable distribution of income and balanced development of the country.

1.1.5: Obstacles and Challenges Faced by MSMEs:

An overview of SME's contribution to global economy reveals that there are three lines of difficulties faced by MSMEs, those being related to practices of trade, technology, and investment. The most commonly discussed topic in SMEs international literature is the unavailability of financing schemes to this sector and the inability of MSMEs to reach out to those schemes. SMEs face a number of problems, such as, absence of adequate and timely banking finance, limited capital and knowledge, non-availability of suitable technology and low production capacity amongst others. SMEs worldwide consider access to finance their greatest obstacle to growth (IFC Factors Report, 2013).

OECD, 2017 highlights that specific barriers and market failures may prevent SMEs from accessing strategic resources, including finance, management capacity and skills, and knowledge networks, placing them at a competitive disadvantage in the global and digitalised economy. Skills shortages, poor management practices and workforce training limit SME productivity and innovation. There is evidence that SMEs have higher skills deficiencies than large firms and SME training effort is on average significantly weaker per employee than in larger firms (OECD, 2013). Further, due to asymmetric information and agency problems, access to credit by MSMEs has run into huge failure in financial markets.

Financial constraints majorly pertain to low-income countries. The World Bank Enterprise Surveys reveal that, in low-income countries, on average 43% of businesses with 20 to 99 employees rate access to finance or cost of finance as a major constraint to current operations. In high-income countries, only 11% of businesses of the same size rate access to finance as a constraint.

The finance gap has been prevalent in existing literature (Kumar and Rao, 2015; FinScope Small Business Survey, 2010) and has been described as having two components, those being knowledge gap and supply gap. Knowledge Gap arises as a direct consequence of a limited awareness of the appropriate sources of finance and the relative benefits and limitations of such sources. On the other hand, Supply Gap focuses on availability of funds/finance to smaller businesses. It also takes into consideration the cost of debt to small firms.

According to Yadav R, 2012, MSME sector gets lesser credit under proposed norms of 7% lending to Micro Enterprises. It has also been observed that bankers consider MSME lending more risky because of many reasons such as MSMEs don't have collaterals for loans, they have low equity base, absence of marketing tie-up, diversion of funds, poor book keeping, low technology level amongst many more.

Global Entrepreneurship Monitor (GEM) Entrepreneurship Framework Condition, 2009, also highlights entrepreneurial finance, defined as the availability of financial resources for SMEs in the form of debt and equity, as one of the key factors for stimulating and supporting entrepreneurial activity. The difficulties that SMEs encounter when trying to access financing can be due to an incomplete range of financial products and services, rigid regulatory framework, lack of information on both the bank's and the SME's side. It has to be noted that banks may avoid providing finance to certain types of MSMEs that lack sufficient collateral, or firms whose activities offer the possibilities of high returns but at a substantial risk of loss.

Prior study conducted by Hegde Desai, Borde and Kane, 2013, points to the fact that the MSME sector gets regarded as a weaker section of the society. They are disadvantaged with respect to access to finance, availability of finance, the usage of financial products and the quality of such financial products. Hence it becomes imperative to bring within the scope of financial inclusion, this weaker section.

1.2: FINANCIAL INCLUSION:

Financial inclusion is provision of financial services to the weaker and disadvantaged sections of an economy at an affordable cost. These services spread across a wide gamut of financial offerings from savings accounts, lending schemes to insurance and microfinance needs. "Financial inclusion has been recognized world over as an important development in financial sector and a pre-condition for economic growth and poverty alleviation" - CGAP, 2010; Sharma and Pais, 2008. Importance to financial inclusion has been growing since it is recognised as a way to eliminate poverty and problems of inequality.

1.2.1: Financial Inclusion – Global Scenario:

Financial inclusion has become an important global task and an emerging priority for policymakers and regulators in financial sector development as part of ensuring sustainable long-term economic growth (Zulkhibri, 2016). Financial inclusion is defined as "a process that ensures the ease of access, availability and usage of formal financial services. It represents the state in which all members of society have access to a full set of financial services at affordable prices and in a convenient manner" - (Sarma and Pais 2008). According to them, two complementary contributions of an Inclusive financial sector can be identified that makes an effort to poverty alleviation. Firstly, it drives economic growth, which indirectly reduces poverty and inequality. Secondly, by creating appropriate, affordable, financial services for poor people, it can focus on improving their welfare.

In developed economies, financial inclusion is more about knowledge of fair and transparent financial products, while, in developing and emerging economies, it is a question of both access to financial products and financial literacy. It is widely believed that financial inclusion provides formal identity, access to payments system and deposit insurance, and many other financial services. “Universally, it is accepted that the objective of financial inclusion is to extend the scope of activities of the organized financial system to include within its ambit the people with low income” -Vighneswara (2011).

1.2.2: Financial Inclusion in India:

The Rangarajan Committee (2008) defines financial inclusion as “the process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as the weaker sections and low income groups at an affordable cost”.

Indian Institute of Banking & Finance (IIBF) opines, “Financial inclusion is delivery of banking services at an affordable cost (‘no frills’ accounts,) to the vast sections of disadvantaged and low income group. Unrestrained access to public goods and services is the sine qua non of an open and efficient society”.

For a more complete concept of financial inclusion, the Financial Inclusion Data Working Group of the Alliance for Financial Inclusion (AFI FIDWG) highlighted three main dimensions of financial inclusion, those being access, usage and quality. It is pertinent to note that financial inclusion is a multidimensional concept that goes beyond access to encompass usage and quality. Hence, a comprehensive understanding of financial inclusion should consider the availability and accessibility of services, frequency of use, and suitability and quality of financial options for all income levels. Financial inclusion can thus be considered as a process of providing ease of access, availability, usage and quality of financial services.

1.2.3: MSMEs and Financial Inclusion:

With regard to the capital needs of these small units, there has been a gap between the needs and the available resources. It is a proven fact that MSMEs need credit support not only for running the enterprise but also for their diversification and expansion. MSMEs largely operate through finance consisting of owner's own contribution, loans from friends and relatives and some bank credit. There are information asymmetries associated with lending to small scale borrowers that restrict the flow of finance to the MSMEs. This highlights the need for focussing on financial inclusion with respect to MSMEs in India. Literature lacks evidence on the focus of financial inclusion in the MSME sector. This study highlights the need for focus on financial inclusion mainly because financial inclusion involves the delivery of credit and other financial services at an affordable cost to large sections of the disadvantaged and low income groups of the economy.

Kodan, et al, (2011) cited Walter (1873) and Hicks (1969) and reasoned that finance played a crucial role in ushering in industrialization in England by facilitating mobilization of capital. Schumpeter (1912) contended that well-functioning banks spur technological innovation by identifying and funding potential entrepreneurs. Economists like Robinson (1952) opined that, “where enterprise leads, finance follows”, thereby concluding that economic development creates demand for particular types of financial arrangements and proved that the financial system responds automatically to these demands (as quoted in Kodan et al, 2011). In the Indian context, Bell and Rousseau (2001) have shown how financial intermediaries in India plays a leading role in influencing its economic performance.

1.2.4: Factors affecting Financial Inclusion:

According to Sahrawat R, 2010, factors that affect or restrict the scope of financial inclusion in MSMEs are financial illiteracy, low and cyclical income, minimal collateral, lack of credit history, absence of formal and verifiable identity, apprehension of bureaucracy and credit primarily being used for personal consumption.

Financial literacy has been highlighted as a major concern affecting financial inclusion. Kumar and Mohanty, 2011 reasoned that with the growth of information technology and allied services, if financial literacy in the region is properly addressed, financial inclusion drive in the SAARC countries would definitely progress and show results.

With respect to the demand side of financial inclusion, financial literacy and financial capability are regarded as important factors and have been used interchangeably or cumulatively. Shankar, 2013 opines that while financial literacy refers to the basic understanding of financial concepts, financial capability refers to the ability and motivation to plan financials, seek out information and advice and apply these to personal circumstances. Existing studies indicate that financial illiteracy is widespread and people lack knowledge of even the most basic economic principles (Lusardi and Mitchell, 2006).

While there are ample studies on the effect of financial literacy on financial inclusion among individuals, there is very little evidence pertaining to determining the extent of financial literacy and its impact on financial inclusion with respect to the MSME sector. This research thus aims to bridge this gap by establishing a relationship between financial literacy and financial inclusion amongst MSMEs.

1.3: FINANCIAL LITERACY:

Organization for Economic Cooperation and Development demarcated financial literacy as "a combination of financial awareness, knowledge, skills, attitude and behavior necessary to make sound financial decisions and ultimately achieve individual financial wellbeing".

1.3.1: Financial Literacy and MSME:

Entrepreneurs and finance managers are entrusted with the task of making complex financial decisions to turn around the fortunes of their businesses. Entrepreneurs make financial decisions in the form of savings, investment and retirement planning. Financial literacy therefore becomes crucial in financing decisions of firms and their subsequent performance. It is evident from prior research that most entrepreneurs do not have the tools they need to make decisions that are beneficial to their firm's performance. This can affect the firm's day-to-day money management and ability to utilise funds for long-term goals such as investing in profitable ventures and activities.

Financial literacy is a significant tool for managing business finance (Miller et al., 2009). Adomako and Danso, 2015, propounded that financial literacy is an important major driver of firm performance and should be developed as an integral part of the entrepreneurial activities. Therefore, managers should recognise and manage the learning process of financial management. Financial literacy can be perceived as a deterrent to access to finance, thus restricting the scope of financial inclusion amongst MSMEs. Further, Kane and Hegde Desai, 2015 pointed out that firms in different stages of their growth have varying levels of financial literacy and financial inclusion. This further necessitates the association between different financial growth stages of a firm and its financial literacy and financial inclusion.

1.4: FINANCIAL GROWTH STAGES:

The study of literature on small and medium enterprises (SMEs) suggests that all SMEs go through different stages of growth, also commonly called as life cycles. Though the terms used by different authors may vary, the events through which each enterprise passes remain more or less the same. Growth-oriented firms are considered as a significant contributor in a country's economic gain. However, the concept of growth differs according to different approaches towards measurement of growth stages. Various parameters are used to determine the growth stage of a firm like age of the firm, size, employee strength and average turnover of the firm. However, Berger and Udell (1998) pointed out that these studies largely ignore the issue of the sources of finance employed by a firm at various stages of its life cycle, and how the combination of financing changes and evolves across stages of development. It is suggested that firm's funding requirements vary significantly over the course of its life cycle, along with access to various sources of financing. An advantage in adopting this approach is that it details the most important sources of finance at each stage of a firm's life cycle, facilitating identification of potential funding gaps at various points in a firm's development. This research aims to use the Financial Growth Life Cycle Model propounded by Berger and Udell (1998) to classify the MSMEs into various growth stages of their financial life cycle.

It has been highlighted by Poranki, 2015, that growth of small organizations is influenced by three major factors – the background/resource of the entrepreneur, the nature of the firm, and the strategic decisions taken by the owner/manager (Storey, 1994 adapted from Poranki, 2015). The entrepreneur needs to develop both strategic and tactical skills and abilities (Kuratko et al, 2001 adapted from Poranki, 2015). This necessitates that the entrepreneur, often the sole decision maker, should have strong financial literacy. Financial literacy of the decision maker can be considered as a major contributor towards advancement of a firm to the next growth stage. The purpose of this research is to integrate the concepts of financial growth stages of a firm and the level of financial literacy, which further leads to varying levels of financial inclusion of the firm in the formal financial system.

1.5: SIGNIFICANCE OF THE STUDY:

Research Gap / Statement of the problem:

MSMEs are considered to be drivers of economic development. Their contribution towards building and growing a nation's GDP cannot be overlooked. They are often termed as agents for change, innovation and competitive advantage. However, many MSMEs fail in fulfilling this purpose of economic development. This is mainly due to their inability in obtaining finance. Most of the times banks and other institutions are unable to provide adequate finance to these MSMEs owing to a large number of reasons such as lack of adequate collateral, low confidence in income and profit generation by MSMEs, information asymmetry in terms of their credit history and knowledge gap. These problems lead to considering MSMEs as a weaker section of the economy. This paired with their widespread presence in clusters across the geography with the absence of deriving strategic alliances classifies the sector as truly disadvantaged.

Hence it becomes imperative to extend the scope of financial inclusion to include within its ambit these MSMEs. Further, a lot of literature is available on financial inclusion with respect to individuals. However, little or no research emphasis is available on financial inclusion and MSMEs. Also, a need is felt to explore the role of financial literacy and its impact on financial inclusion. Further, review of literature also suggests that the level of financial literacy and financial inclusion differs across different financial growth stages of a firm. This provides a scope to further investigate whether firms in different stages of their financial growth stages have varying levels of financial inclusion. It is also endeavoured to explore whether the presence of financial literacy moderates the relationship between financial growth stages and financial inclusion.

1.6: SCOPE OF THE DISSERTATION:

This study explores the relationship between financial literacy and financial inclusion amongst the MSMEs and further tries to establish the differences amongst different levels of financial life cycle of the firms. This study is conducted amongst the Micro, Small and Medium Enterprises from the manufacturing sector. The MSME units are located at various industrial estates in the state of Goa. Attempt has been made to reach out to all industrial estates in Goa, both in the rural and semi-urban localities. The sample size is 160 MSME units, 90 belonging to micro category, 40 in the small category and 30 from the medium category. The respondents to the measurement instrument are entrepreneurs themselves or finance managers who take financing decisions for the firm.

1.7: OBJECTIVES OF THE STUDY:

Following are the objectives of the study:

1. To ascertain the relationship between Financial Inclusion amongst MSMEs and Financial Growth Stages.
2. To examine the relationship between Financial Literacy amongst MSMEs and Financial Inclusion.
3. To examine the relationship between various dimensions of Financial Literacy amongst MSMEs and Financial Inclusion.

4. To examine the role of Financial Literacy as the moderating factor between Financial Growth Stages of a firm and Financial Inclusion.
5. To ascertain whether there is any association between Financial Inclusion amongst MSMEs and firm specific characteristics like forms of organization, methods of manufacturing, types of markets they cater to and their total net worth.
6. To ascertain whether there is any association between Financial Literacy amongst MSMEs and firm specific characteristics like forms of organization, methods of manufacturing, types of markets they cater to and their total net worth.

1.8: RESEARCH QUESTIONS:

1. Does Financial Inclusion differ significantly across Financial Growth Stages?
2. Between which two Financial Growth Stages of MSMEs is the variance for Financial Inclusion higher?
3. Is there relationship between Financial Literacy of MSMEs and Financial Inclusion.
4. What is the strength of relationship between Financial Literacy of MSMEs and Financial Inclusion?
5. What is the strength of relationship between different dimensions of Financial Literacy and Financial Inclusion?
6. Does financial literacy significantly moderate relationship between Financial Growth Stages of an MSME and Financial Inclusion?
7. Is there a significant association between Financial Inclusion amongst MSMEs and firm specific characteristics?
8. Is there a significant association between Financial Literacy amongst MSMEs and firm specific characteristics?

1.9: OVERVIEW OF METHODOLOGY:

A detailed literature review with respect to difficulties faced by MSMEs for accessing credit was conducted that pointed out the need for this study. Financial inclusion was identified as being the most prominent obstacle concerning MSME's access to finance.

A preliminary survey was conducted wherein an open-ended instrument was administered amongst 15 MSMEs to identify the factors affecting financial inclusion. The findings of the same propounded that financial literacy was a major concern amongst entrepreneurs and finance managers. A supplementary research was also conducted which helped in identifying the factors affecting usage of SME Platform of the BSE. Based on this, hypotheses were framed and a model for testing was generated.

In the second stage, a questionnaire was formulated that would help in determining the financial growth stages of a firm, its financial literacy and financial inclusion. This measurement instrument was administered to entrepreneurs and finance managers who are directly involved in financial decision making for a total of 160 MSMEs. Quantitative techniques were used to test the hypotheses and determine the fitness of the model incorporated, thereby enabling drawing conclusions to support the purpose of this study.

1.10: MANAGERIAL IMPLICATIONS:

1. The purpose of this study is to identify the factors affecting financial inclusion amongst MSMEs is Goa. The outcome of this study is to bring to the attention of the banks, financial institutions and policy makers the difficulties faced by MSMEs with respect to access to finance, availability of finance, the extent of usage of different financial products and services and quality of such financial services offered.

2. The study also focuses on the much talked about aspect in today's industrial scenario, that being Financial Literacy. The aim of this study is to determine the extent of financial literacy of entrepreneurs and finance managers. This will help in identifying specific areas pertaining to awareness, knowledge, skills, behavioral and attitudinal aspect of entrepreneurs where intervention is required in order to equip them with necessary traits.

3. Through this study, it is identified that financial inclusion plays a prominent role in the success of the Make in India campaign. Financial literacy of the MSMEs will be of prime focus in accelerating the country's economic growth through this campaign. Adequate measures to create awareness about new and emerging sources of finance like private equity and venture capital will go a long way in achieving this objective. Such efforts would help in providing a more conducive financial environment for MSMEs.

1.11: ORGANIZATION OF THESIS:

The thesis is structured into six chapters. Outline of the same is mentioned below.

Chapter 1 highlights the background of the research, the research gap, the objectives of the study and scope of the study. The logic behind choosing the topic and different variables has also been highlighted in this chapter.

Chapter 2 details the findings of existing literature with respect to MSMEs, factors affecting MSMEs access to finance, concept of financial inclusion and the factors affecting financial inclusion. The chapter also provides an outlook towards the numerous definitions of financial inclusion globally, financial literacy being of prime importance and the need for linking it to MSMEs in different cycles of their financial growth stages.

Chapter 3 explains the lucidity behind the choice of research methodology adopted for the study, the tools of analysis used and the technique of scale development. Content validity and reliability tests are shown to support the scale's validation. Logical reasoning for development of hypotheses and model is also mentioned herein.

Chapter 4 provides descriptive statistical analysis of data generated through administering the research instrument and conclusions obtained are listed.

Chapter 5 presents the results of the quantitative study based on statistical tests followed by the interpretations of results.

Chapter 6 enlists the contribution of the study to MSMEs access to finance, financial inclusion and financial literacy. This chapter also points out the managerial implications, the limitations of this study and scope for future research.

CHAPTER 2

LITERATURE REVIEW

2.1: INTRODUCTION

The main objective of this study is to study the Financial Inclusion amongst Micro, Small and Medium Enterprises (MSMEs). The study further aims at exploring the relationship between Financial Literacy and Financial Inclusion amongst these MSMEs. An attempt has been made to identify whether the level of Financial Literacy of MSMEs and the Financial Growth Stages of MSMEs make an impact on the level of Financial Inclusion. To propel this study, an extensive review of existing literature on the following has been conducted:

- MSMEs: a. Global Contribution, b. Indian Context, c. Obstacles and challenges faced by MSMEs
- Financial Inclusion: a. Financial Inclusion and MSMEs, b. Dimensions of Financial Inclusion, c. Factors affecting Financial Inclusion.
- Financial Growth Stages: a. Concept, b. Existing Literature Review, c. Dimensions of Financial Growth Stages, d. Theoretical Background
- Financial Literacy: a. Concept, b. Existing Literature Review, c. Dimensions of Financial Literacy, d. Theoretical Background

This chapter also deals with reviewing relevant theoretical background and identifying the gaps therein, supported further with operational definitions, proposed models and formulation of hypotheses.

2.2: MSMEs – GLOBAL CONTRIBUTION

MSMEs are considered to be a vital link for the development of the global economy. They play a significant role in creating new jobs, contribute towards creating entrepreneurial opportunities and provide scope for innovation. Almost 95% of the world's enterprises are SMEs – defined as the firms with fewer than 250 employees and less than €50 million in annual turnover (OECD, 2004) and account for around 60% of private employment (Ayyagari, Demirguç-Kunt, & Maksimovic, 2011).

2.3: MSMEs – INDIAN CONTEXT

The MSME sector represents as an emerging and a highly dynamic sector of the Indian economy. Apart from its usual contribution to job creation, it aides in industrialisation of the rural and backward areas, thereby leading to an equitable distribution of income and wealth in a nation. The sector complements to serving as an ancillary base to its larger counterparts and ensures a continuous flow of capital and investments.

The MSME sector contributes 8 per cent to country's gross domestic product (GDP), 45 per cent to total industrial production and 40 per cent to the exports of the country. This coupled with high labour-to-capital ratio, high growth and high dispersion makes them crucial for achieving the objective of inclusive growth (Economic Survey, 2010–2011).

Contribution of MSMEs in Country's Economy (Table 2.1)

(Figures in Rs. Crores at current prices)						
Year	**MSME GVA (Gross Value of Output)**	**Growth (%)**	**Total GVA**	**Share of MSME in GVA (%)**	**Total GDP**	**Share of MSME in GDP (in %)**
2011-12	2583263	-	8106946	31.86	8736329	29.57
2012-13	2977623	15.27	9202692	32.36	9944013	29.94
2013-14	3343009	12.27	10363153	32.26	11233522	29.76
2014-15	3658196	9.43	11481794	31.86	12445128	29.39
2015-16	3936788	7.62	12458642	31.60	13682035	28.77

Source: Central Statistics Office (CSO), Ministry of Statistics & Programme Implementation (MSME AR 2017-2018)

Despite the sector's vital contribution to a nation's well-being, employment potential and industrial importance, it faces many challenges and obstacles right from its inception to its sustenance.

2.4: OBSTACLES AND CHALLENGES FACED BY MSMEs:

MSMEs are considered a backbone of the developing nations due to both economic and social factors. Although its importance is emphasised very strongly throughout literature, the sector is often challenged and does not get the required support from relevant groups. The MSME sector seems to get handicapped with respect to a lot of challenges faced by the firms, the more prominent ones being: Absence of adequate and timely banking finance, limited capital and knowledge, non-availability of suitable technology, low production capacity, constraints on modernisation & expansions, non-availability of skilled labour at affordable cost and Follow up with various government agencies to resolve problems due to lack of man power and knowledge etc. Out of all these factors, access to finance, its availability and limitations in knowledge levels stands out as the most crucial obstacles faced by MSMEs world over.

According to Thiripurasundari and Gurumurthy (2009), the Indian MSMEs are facing a great problem due to larger production of foreign manufacturing concern. The financially strong MSMEs will survive strongly at globalized platform.

The literature suggests that a lack of finance is one of the major issues influencing the development of SMEs (Beck, 2007; Beck & Demirguc-Kunt, 2006; Klonowski, 2012; Petersen & Rajan, 2002). According to Green, Kimuyu, Manos and Murinde (2002), finance serves as the adhesive that collectively binds all elements of MSMEs. Although MSMEs continuously enhance the economic activity of a country, the difficulty in accessing finance slows down their growth and development (Beck, 2007; Beck & Demirguc-Kunt, 2006; Klonowski, 2012; Petersen & Rajan, 2002; Ayyagari et al., 2008).

According to Organization for Economic Cooperation and Development (2006), the term “financing gap” refers to a situation where a sizeable proportion of economically significant SMEs cannot obtain financing from banks, capital markets or other suppliers of finance. The reasons identified for such a financing gap are: (i) many entrepreneurs or SMEs that do not currently have access to funds would have the capability to use those funds productively if the funds were available; (ii) due to structural characteristics, the formal financial system does not provide finance to smaller firms.

Failures in financial markets, due to asymmetric information and agency problems, typically limit access to credit by SMEs and start-ups, which are often under-collateralised, have limited credit history and, and may lack the expertise needed to produce sophisticated financial statements (OECD, 2013). It highlighted in the literature (OECD, 2016a) that most SMEs, including new, innovative and fast-growing firms, remain heavily reliant on internal resources and traditional bank debt. It becomes pertinent to note that the availability of bank lending and any other alternative sources of finance is held back by various demand-side barriers, relating mostly to limitations in financial knowledge, resources and the willingness or awareness to successfully attract sources.

According to a recent study by the Asian Development Bank (2016), globally more than half of the requests made by SMEs for trade finance are rejected, compared to only 7 per cent for multinational companies. Access to trade finance tends to be the most difficult in developing countries. Scott and Pam, 1991 highlighted that the problems experienced by small businesses in financing operations are normally attributed to the "small business finance gap". The said gap consists of two parts; firstly, relating to limited knowledge regarding availability of funds and secondly, higher costs of financing. These two components act as the biggest restraint to borrowings from financial institutions. The finance gap has been prevalent in existing literature and has been described as having two components, those being knowledge gap and supply gap. Knowledge Gap arises as a direct consequence of a limited awareness of the appropriate sources of finance and the relative advantages and disadvantages of such sources. On the other hand, Supply Gap focuses on availability of funds/finance to smaller businesses. It also takes into consideration the cost of debt to small firms.

Kumar and Rao, 2015 identified the major problems associated with SMEs and inadequate finance, those being: a. accessibility of limited financial sources (demand gap) due to the effect of various quantitative and qualitative variables on capital structure of SMEs, b. limited availability of finance for SMEs (supply gap), c. lack of awareness about the approachability towards potential sources of finance (knowledge gap) and d. reluctance of financial institutions in providing funds to SMEs (benevolence gap).

A study conducted by FinScope Small Business Survey (2010) points out that when MSME entrepreneurs were asked to identify the single most significant obstacle to growth, access to finance ranked third with 8.7% of small business owners citing the lack of access to finance as a reason. Literature review with respect to MSME sector in the developing economies lists three major obstacles to finance, those being - (i) a general lack of awareness of the funding programmes; (ii) a mismatch between the products offered on the supply side and that which is required by the MSME market; and (iii) a gap between the minimum requirements for a business loan and status (especially on the issue of formality) of the majority of SMEs. This means that even registered microenterprises are less likely to have access to credit. Furthermore, a large proportion of the SMEs are completely excluded from the financial market. (Mahembe, 2011).

There are numerous studies which highlight access to finance as one of the driving factors of an enabling economic environment. The Global Entrepreneurship Monitor (GEM) Entrepreneurship Framework Condition highlights entrepreneurial finance, defined as the availability of financial resources for SMEs in the form of debt and equity, as one of the key factors for stimulating and supporting entrepreneurial activity. The difficulties that SMEs encounter when trying to access financing can be due to an incomplete range of financial products and services, rigid regulatory framework, lack of information on both the bank's and the SME's side. It has to be noted that banks may avoid providing finance to certain types of MSMEs that lack sufficient collateral, or firms whose activities offer the possibilities of high returns but at a substantial risk of loss.

Prior study conducted by Hegde Desai, Borde and Kane, 2013, points to the fact that the MSME sector gets regarded as a weaker section of the society. *They are disadvantaged with respect to access to finance, availability of finance, the usage of financial products and the quality of such financial products. Hence it becomes imperative to bring within the scope of financial inclusion, this weaker section.*

2.5: FINANCIAL INCLUSION

Financial inclusion is defined by Sarma and Pais (2008) as "a process that ensures the ease of access, availability and usage of formal financial services. It represents the state in which all members of society have access to a full set of financial services at affordable prices and in a convenient manner". Kumar and Mohanty (2011) propounded that "financial inclusion is the process of ensuring the accessibility, availability, and usage of the formal financial system for all members of an economy". An exhaustive definition of financial inclusion has been provided by the Rangarajan Committee Report (2008) wherein financial inclusion has been defined as "the process of ensuring access to financial services and timely and adequate credit where needed by vulnerable groups such as the weaker sections and low income groups at an affordable cost".

According to a report by Financial Inclusion Data Working Group of the Alliance for Financial Inclusion (2011), three dimensions of financial inclusion are Access, Usage and

Quality. Access highlights the availability of formal, regulated financial services, physical proximity and affordability. Usage emphasises on the actual usage of financial services and products, regularity, frequency and duration of time used. Quality determines whether the products are well tailored to suit the firm's needs.

Financial inclusion can thus be regarded as a combination of access (accessibility), availability, usage and quality of financial services required by the MSMEs. Since MSMEs are considered to be relatively weaker as compared to their larger counterparts, it becomes imperative to include them under the purview of financial inclusion. While numerous studies are available with respect to financial inclusion amongst individuals, there is no sufficient literature regarding financial inclusion amongst the MSME sector. This research aims to do away with this gap.

2.5.1: Financial Inclusion and MSMEs:

Micro, Small and Medium Enterprises (MSMEs) are considered as drivers of economic growth. Their contribution to a nation's GDP, employment, innovation and sustenance cannot be ignored. The MSMEs primarily rely on bank finance for their operations and as such ensuring timely and adequate flow of credit to this sector has been the most important objective of the policy makers. Despite their importance, it is often found that MSMEs do not get the required support from the formal financial sector. A large number of MSMEs face difficulties is accessing credit. Small borrowers do not normally have wide access to formal finance. According to Subba Rao (2007), though financial inclusion covers a wide array of services by the banking sector, one crucial area relates to borrowings from banks by the lower strata of the unorganised segments of the economy, which per force has to depend upon non-institutional sources when the avenues from formal sources are not forthcoming. Financial inclusion thus becomes of utmost importance while assessing the role of MSME sector in a country.

Andoh & Nunoo (2012), emphasized, that "the utilization of financial products does not only promote the growth of the SMEs themselves but also their active participation in the financial services market leads to financial development which is widely recognized as an important determinant of economic growth and also recognized as important for enhancing the social and economic impact of the financial sector".

Since financial inclusion is being considered as a combination of access (accessibility), availability, usage and quality of financial services required by the MSMEs, these four factors can be considered as dimensions to measure financial inclusion.

2.5.2: Dimensions of Financial Inclusion

Access:

Access to credit is the most important aspect/dimension of financial inclusion. Quite a significant number of entrepreneurs are of the opinion that, although there seems to be sufficient funds available it remains difficult to access these funds (Mazanai and Fatoki, 2012). Investment Climate Survey conducted by the IBRD/World Bank (2008) showed that one of the major impediments of nurturing firms is lack of access to financial services which would expand economic growth and employment generation as well as reducing poverty in many developing countries. Review of literature (adapted from report from National Credit Regulator, South Africa) in South African firms conducted in 2011 pointed out that many entrepreneurs or SMEs that do not currently have access to funds would have the capability to use those funds productively if the funds were available.

Availability:

Review of literature in South African firms conducted in 2011 opined that due to structural characteristics, the formal financial system does not provide finance to such entities. This restricts the availability of credit to the MSME sector. It becomes pertinent to ponder whether the financing available to MSMEs is sufficient to meet the needs of the SME sector. This is restricted due to the lack of information, especially with regard to the demand side factors affecting financial inclusion. Mazanai and Fatoki (2012) opined that banks advance four main reasons for their reluctance to extend credit to small enterprises viz, high administrative costs of small-scale lending, asymmetric information, high risk perception and lack of collateral. Although the reasons apply to industrial as well as developing and emerging economies, they tend to be more significant in the latter.

Usage:

Many SMEs around the world remain heavily reliant on straight debt and are undercapitalised, which makes them more vulnerable to economic downturns and dependent on the health of the credit market (OECD, 2018). They do not explore other possibilities of finance available for their credit needs. *Literature seems to lack evidence with respect to the extent of usage of financial products by the MSMEs, the demand side barrier to financial inclusion. This research attempts to address this limitation in the literature.*

Quality:

There could exist a possibility that may be there is sufficient credit being made available to MSMEs, but the terms and conditions under which it can be accessed are not appropriate for the sector it is intended to serve. In other words, there is sufficient quantities of funding available, but the quality of funding (i.e. the product design/services being offered) does not match the needs of the sector. Financial services providers may levy heavy restrictions to discourage the MSME sector from approaching them. This could be because this vulnerable sector may not fulfil collateral requirements and is often considered as risky. *Not enough studies are available that focus on quality as a dimension to financial inclusion. This research aims to emphasise on this aspect of financial inclusion.*

2.5.3: Factors Affecting Financial Inclusion:

While one aspect of financial inclusion pertains to provision of formal financial services to weaker section of the society, a number of factors do influence this facet of financial inclusion. These factors could be demand side or supply side factors / barriers. Demand side barriers pertain to a. those wherein the firms do not use the financial system due to the barriers that prevent them from contracting with existing financial institutions; b. Those wherein the firms do not use the financial system because they do not have the means or the resources to use the financial system. It becomes pertinent to note that a firm's economic condition is so critical that they wouldn't have any means of repayment of a credit, however little it was, nor do they generate enough resources to cover even their most basic needs (Giovanna, Luis & Rafe, 2012). This research focuses on the demand side factors/barriers affecting financial inclusion.

Two broad factors affecting the extent of financial inclusion are hence identified as Financial Growth Stages of a firm and Financial Literacy of a firm. Both factors are independently well researched, but not researched as antecedents of MSMEs' financial inclusion. Therefore, this research attempts to study financial inclusion and its antecedents, namely, financial growth stages and financial literacy.

2.6: FINANCIAL GROWTH STAGES:

The study of literature (Hanks et al, 1993; Penrose, 1952; Berger and Udell, 1998) on small and medium enterprises (SMEs) suggests that all SMEs go through different stages of growth, also commonly called as life cycles. Most of the researchers suggest that each enterprise has to start, then grow while facing various challenges and crises, and finally mature and decline. Different variables are used to measure growth of a firm. Some of these include enterprise age, size, rate of growth, enterprise structure including inherent key management issues or problems.

Life cycle stages represent different phases in the life of an enterprise. Lack of an explicit definition of a life cycle stage in the literature lead Hanks et al. (1993) to explore stage descriptions and derive a life cycle stage definition as a unique configuration of variables related to organization context and structure. Life cycle stage models have been referred using different names by authors with no effort in the literature to distinguish between such terms as life cycle, growth stages or developmental stages (Hanks et al. 1993).

The stage model or life cycle theory of the firm originates in economics literature (Penrose 1952; Rostow 1960), and is commonly used to describe the progression of the successful firm through growth phases. Small business may be thought of as having a financial growth cycle in which financial needs and options change as the business grows, gains further experience, and becomes less informationally opaque (Berger and Udell 1998).

2.6.1: Studies highlighting growth stages and problems therein as factors affecting financial inclusion:

1. Orser, Hogarth-Scottand Riding (2000) provided a comprehensive and integrative model of growth that recognizes company size, sector and management skills as interrelated aspects of growth. They also found capital-related problems to be a major obstacle to growing firms. Access to capital and financial information figured as the top two problems faced by firms at different growth stages.

2. Moy and Luk (2003) used Kazanjian (1988) four-stage organizational life cycle model, the stages being Conception and Development, Commercialization, Growth and Stability. They propounded that Capital was the major problem firms had to overcome at the Conception stage and as their firms grew from Commercialization to Growth.

2.6.3: Dimensions of Financial Growth Stages:

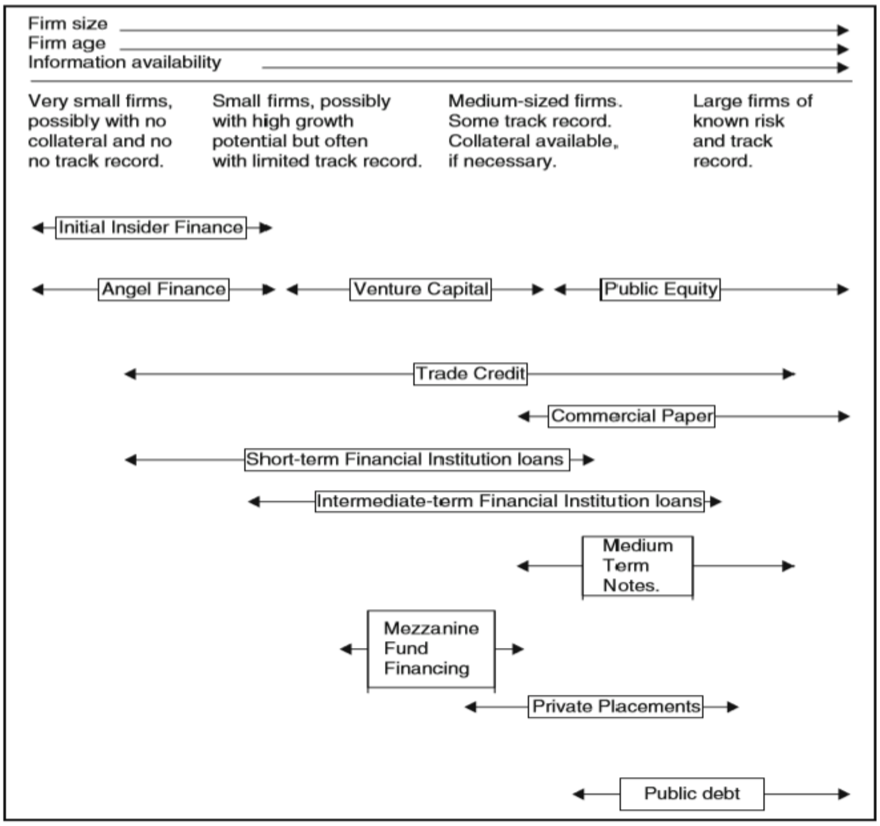
There is evidence in literature (Kumar and Rao, 2015; Lusardi and Mitchell, 2006) which suggests that as a new venture is started, these are highly risky and they lack in proper managerial skills and knowledge. This results in the preference of quasi-equity to debt. Therefore, MSMEs are likely to follow modified pecking order theory: quasi-equity → retained earnings → debt → external equity (Kumar and Rao, 2015). The nature of funding required by an SME depends on its growth stage. Businesses in the start-up phase generally rely on personal savings, friends and families, while those businesses which are stable rely on bank loans for financing.

2.6.4: Theoretical evidence to posit the link between financial inclusion and financial growth stages:

Mac an Bhaird (2010) described a financial growth life cycle model adapted from Weston and Brigham (1970), described a financial growth life cycle model wherein capital structures were tested and categorised by five sources of equity and two sources of debt, and presented across six age groups. They emphasised that the financial life cycle theory of the firm developed in corporate finance identifies a number of stages in a firm's development. At start-up, the commonly held view is that firms have difficulty accessing external finance due to information opacity (Huyghebaert and Van de Gucht 2007). As firms survive nascent and start-up phases, and mature through growth stages, personal funding becomes relatively less important as investment finance is increasingly sourced from retained profits.

Furthermore, stepping into the next stage facilitates access to increased sources and amounts of external financing, particularly bank financing and trade credit. On reaching maturity, firms have acquired a trading history, and typically have access to a broad range of financing sources. Sources of finance accessed at this stage are generally determined by preferences of firm owners. The figure depicted below is the outline of application of the Financial Life Cycle Approach to the SME Sector:

Figure 1



Source: Berger and Udell (1998)

Various growth stages as identified by Weston & Brigham (1970) are:

Table 2.2

LIFE CYCLE STAGE	DEFINING CRITERIA
Inception	Wherein only owners' resources are used
Growth 1	Use of owners' resources + retained profits, trade credit, bank loans and overdrafts, hire purchase and leasing
Growth 2	All of the above sources + longer term finance from financial institutions including loans.
Growth 3	All of the above + new market issue
Maturity	All of the above
Decline	Withdrawal of finance: firm taken over / share repurchase / liquidation

Source: Weston and Brigham (1970), quoted by Mac an Bhaird, 2010.

The above review of literature leads to the conclusion that MSMEs depend on internal funds in their earlier stages and graduate towards dependence on external funding in their later stages. The financial growth stages approach suggests that in the beginning, firms, being in their nascent stage, have no or limited access to credit. However, as they advance, their usage on more exhaustive sources of finance increases. This research uses the sources of funding / capital structure components to arrive at financial growth stages of an MSME.

2.7: FINANCIAL LITERACY:

Financial Literacy is considered as a key factor to improve access to and utilisation of financial services. It is considered to play an increasingly important role in financial reform across the world. Organization for Economic Cooperation and Development (OECD) demarcated financial literacy as a combination of financial awareness, knowledge, skills, attitude and behavior necessary to make sound financial decisions and ultimately achieve individual financial wellbeing. Financial Literacy creates awareness in common man regarding the financial products and services, thereby generates demand for the same. It makes them to understand the needs and benefits of the products and services offered by the banks and accelerates the pace of financial inclusion (RBI, 2013). Existing studies indicate that financial illiteracy is widespread and people lack knowledge of even the most basic economic principles (Lusardi and Mitchell, 2006, National Council on Economic Education (NCEE, 2005), and Hilgert and Hogarth (2002).

2.7.1: Financial Literacy and MSMEs:

According to Remund (2010), the operational definition of financial literacy is “having the knowledge, skills and confidence to make responsible financial decisions”. The degree of financial literacy of the owners is vital in the operation of these enterprises (Guliman, 2015).

Given the increased complexity of day-to-day financial transactions, the evidence of illiteracy does not only raise important questions for policy but also has implications for household and firm financial behavior. Abubakr (2009) observed that firm's financial resource endowment is a vital determinant of firm growth and that firm's inability to meet financial demands is mainly caused by market imperfection.

It is affirmed that entrepreneurs wanting to grow need to feel confident of their finances, as well be adequately informed (Kotzè & Smit, 2008). If the owners-managers are illiterate concerning their organizational finances, the financial knowledge of their firms will also be lacking and will lead to reduction in innovation that can transform into competitive capability, unable to accessing different sources of financing provision due to non-awareness and this attitude will lead to possible failures of SMEs (Kotzè & Smit, 2008).

Dahmen and Rodriguez (2014) opined that small business is the backbone of the U.S. economy; when the financial literacy skills of entrepreneurs fall short of those needed to operate a successful business, it is more than the individual business at risk. It is evident through literature that most entrepreneurs do not have the tools they need to make decisions that are most advantageous to the performance of their firms. This can affect the firm's day-to-day money management. This could further restrict a firm's ability and capacity to obtain credit for their short term as well as long term needs.

There is a need to study the level of financial literacy of an MSME. The extent of financial literacy can further lead to understanding the extent of financial inclusion amongst MSMEs.

Financial literacy can provide for effective implementation of entrepreneurial and financial management plans by allowing firms to access finance that may be more demanding in terms of collateral requirements.

2.7.2: Studies highlighting financial literacy as a factor affecting financial inclusion:

1. Cisneros, 2013 has identified a number of factors affecting financial inclusion. The most important ones being financial literacy, unsustainable growth, insufficient infrastructure and product cost.
2. A pilot study conducted by the Organization for Economic Cooperation and Development (2008) has pointed out that Financial Literacy and capability across different cultural environments play an important role in an individual's extent of financial inclusion.
3. According to Triki & Faye (2013), there exists a lack of financial and management skills and financial literacy across firms, translating into poor financial accounting, record keeping or inappropriate business plans.
4. Allen, et al (2012) pointed out that low financial inclusion was an indication of a lack of awareness of financial products or lack of financial literacy more generally.
5. Shankar (2013) propounded that on the demand side, financial literacy and financial capability are regarded as important factors by the task force. While financial literacy refers to the basic understanding of financial concepts, financial capability refers to the ability and motivation to plan financials, seek out information and advice and apply these to personal circumstances.

Mostly, financial literacy as a factor affecting financial inclusion is studied from the perspective of an individual's inclusion in the formal financial sector. There is little academic evidence linking financial literacy of a firm with financial inclusion. There is a need to study these factors from the MSMEs point of view. It has been acknowledged (Kane and Hegde Desai, 2015) that a firm's literacy level will be an indicator of the extent of the firm's financial inclusion. That is, the more literate the entrepreneur, the more likelihood of his firm being well included in the formal financial set up. *Hence, this research attempts to study Financial Literacy as a major factor affecting financial inclusion amongst MSMEs.*

2.7.2: Dimensions of financial literacy:

Financial literacy can be termed as a combination of awareness, knowledge, skills, attitude and behavior.

Awareness pertains to being mindful about the different financial products and services available in the market. It also includes being aware about the different banks, financial institutions and intermediaries providing such services.

Knowledge pertains to having more in-depth information about the available sources of finance. This includes having theoretical or practical understanding about the cost associated with finance, the tax implications and other terms and conditions that are a pre requisite for obtaining credit.

Skills could be measured based on the numeric and computational ability and include skills involved in preparing financial statements, budgets, etc.

Attitude and Behavior towards financial decision making includes attitudes towards purchasing and recommending formal financial products and services. It further includes behavior of the entrepreneur towards financial decision making.

These dimensions are studied individually to a vast extent (OECD, 2016; Guliman 2015; Hung, Parker and Yoong, 2009). However, financial literacy has not been measured with a combination of all these dimensions.

2.7.3: Theoretical evidence to support the link between financial inclusion and financial literacy:

1. Andoh & Nunoo (2012) uses a direct measure of financial knowledge to empirically investigate the linkage between financial literacy and utilization of financial services by SMEs. However, since people's level of knowledge can improve through utilization of financial service, the researchers have established a bi-causality problem. In the analysis, two equations were estimated: (1) financial literacy level, and (2) utilization of financial service which includes financial literacy as an endogenous variable. Overall, the results show that there was modest level of financial literacy among small and medium entrepreneurs in Ghana. Moreover, it was discovered that the better and more financially literate entrepreneurs were more likely to utilize financial service. The most commonly utilized financial service was operating a bank account. This has important policy implication. Finally, the instrument for financial literacy, recipient of financial education, also had positive relationship with utilization of financial service.

2. Katz and Cabezuelo (as cited in Gartner, Shaver, Carter, & Reynolds, 2004) report that many start-up companies have financial problems such as inadequate capitalization, excessive debt, and poor record keeping, and they relate these common problems to the poor financial education of entrepreneurs and, consequently, of the company.

This research focuses on the dimensions of financial literacy, as coined by OECD. These dimensions, namely awareness, knowledge, skills and attitude and behavior, are considered for measuring financial literacy amongst MSMEs as a holistic approach. As reviewed through above literature, it can be seen that most of the studies pertaining to dimensions of financial literacy are undertaken with reference to countries other than India. *However,* *sparse evidence is available with respect to studies focussing on financial literacy and MSMEs in India, measured through the four dimensions of financial literacy. Further, not many studies exist throwing light on measuring financial literacy with a combination of all these dimensions. This research focusses on measuring financial literacy in MSMEs by giving due consideration to all the dimensions of financial literacy.*

A study by Adomako, Danso and Damoah, (2016) draws emphasis on resource-based view to introduce financial literacy as a moderator of the relationship between access to finance and firm growth. Their empirical findings suggest that financial literacy positively enhances the access to finance-firm growth relationship. A need is felt to explore the role of financial literacy as a moderating factor between financial growth stages of a firm and its financial inclusion. *Barring the above study (Adomako, Danso and Damoah, 2016), this role of financial literacy remains unexplored. This research therefore aims to discuss whether financial literacy moderates the relationship between financial growth stages and financial inclusion in the Indian context.*

2.8: REVIEW OF LITERATURE PERTAINING TO ASSOCIATION BETWEEN FINANCIAL INCLUSION AND FIRM SPECIFIC CHARACTERISTICS:

2.8.1: Financial Inclusion and Firm Specific Characteristics:

Baker et al, 2017, elucidated how owner/manager characteristics affect preferences and practices of external funding of SMEs. They have empirically examined the differences in financing preferences across firm characteristics like forms of organization, growth stages, methods of manufacturing and export orientation. The study accomplished that financing preferences of SMEs vary across sole proprietorships, partnerships, and private limited firms. Further, there is evidence that financing preferences differ across the business stage namely, (1) incubation, (2) growth, and (3) maturity and expansion. They propounded that financing preferences differ significantly between manufacturing and service firms. Specifically, manufacturing firms prefer higher levels of financing sources like short term finance, long term finance and funds from family and friends than do service firms. Manufacturing SMEs with tangible assets are more likely to obtain financing from external sources than service firms with fewer tangible assets. These findings are consistent with Kumar and Rao (2015) who find differing financing patterns between Indian SMEs in the manufacturing and service sectors.

Singh and Janor, 2013, propounded that capital needs of entrepreneurs are met with the bank loans, money lenders, account payable and friends and relatives. These sources of capital are not easily accessible by different business organizations to fulfil their capital requirement. They further stated that SME sector is facing financing constraint and the factors that influence the financing choices are different depending on the structure of the firm.

The above review of literature propels this research in the direction to examine whether financial inclusion and financial literacy differs across firm specific characteristics like forms of organization, methods of manufacturing, markets catered to and net worth of the firms.

2.9: PROPOSED CONCEPTUAL MODELS:

The model proposed to study the impact of Financial Literacy and Financial Growth Stages on Financial Inclusion amongst Micro, Small and Medium Enterprises is as follows:

Figure 2

Proposed Conceptual Model 1:

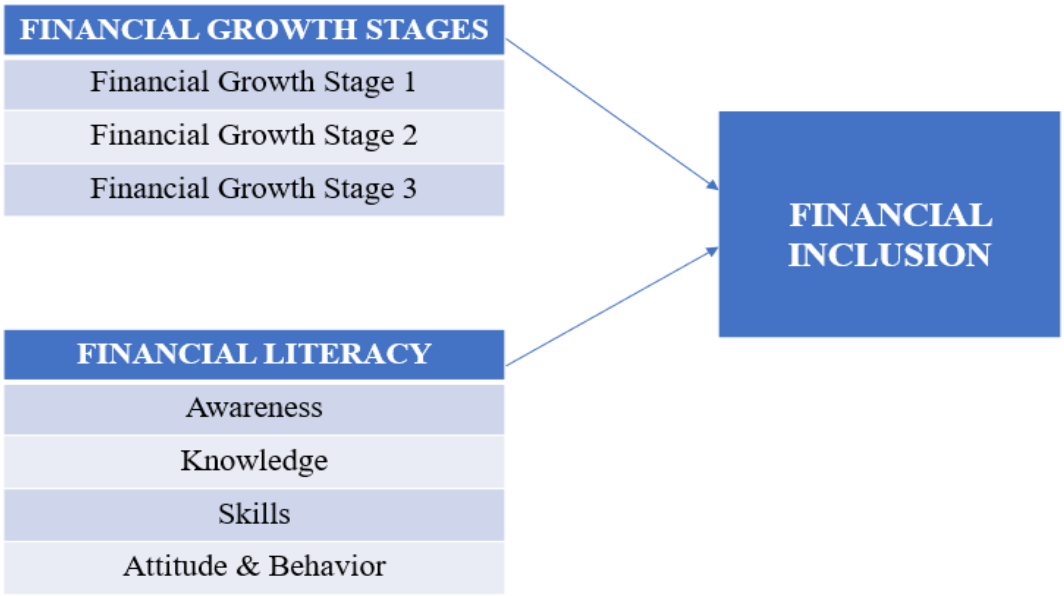
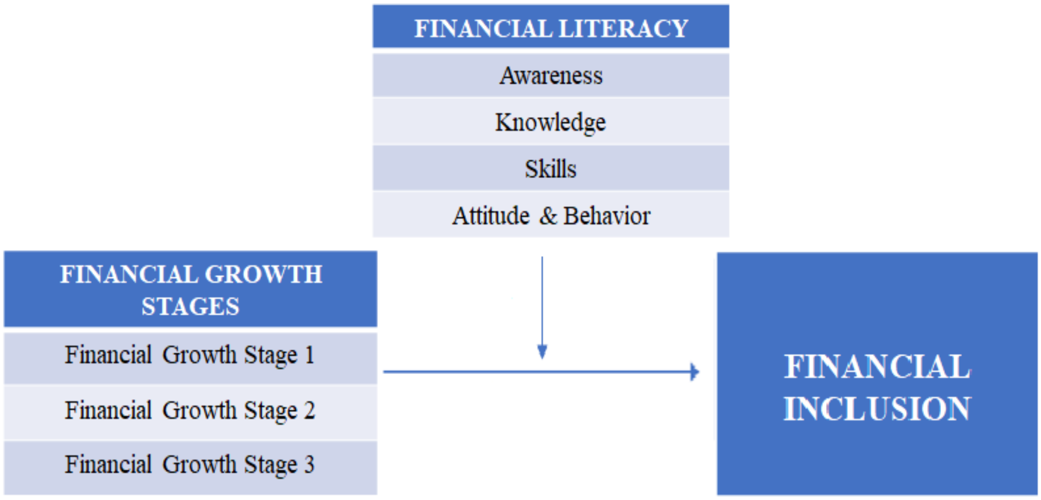


Figure 3

Proposed Conceptual Model 2:



2.10: OPERATIONAL DEFINITIONS:

The constructs used in this research were operationalised based on reviewing existing definitions and existing literature base (OECD 2003). The operational definitions are as follows:

a. Financial Inclusion:

According to Sharma & Pais (2010), “Financial inclusion is a concept that ensures the ease of access, availability and usage of the formal financial system for industrial members of an economy”. This definition emphasizes several dimensions of financial inclusion, viz., accessibility, availability, usage and quality of the financial system. These dimensions together build an inclusive financial system. Financial inclusion is thus measured using Access, Availability, Usage and Quality of financial products and services.

Access: Access is the ability to employ available financial services and products from formal institutions by the MSME sector. It includes within its scope the insight and analysis of potential barriers to opening and using a bank account for any purpose, such as cost, technology and physical proximity of bank service points.

Availability: Availability is the presence of suitable financial products and services from either a formal source or an informal channel. It includes within its scope the affordability of such products and services.

Usage: Usage focuses more on the permanence and depth of financial service / product use. In other words, determining usage requires more details about the regularity, frequency and duration of use over time. Usage also involves measuring what combination of financial products is used by the MSMEs.

Quality: Quality is the experience of the consumer, demonstrated in attitudes and opinions towards those products that are currently available to them. The measure of quality would therefore be used to gauge the nature and depth of the relationship between the financial service provider and the consumer as well as the choices available and their levels of understanding of those choices and their implications. It focuses on wide gamut of financial services provided by different financial institutions like banks, central and state government bodies and development corporations.

b. Financial Growth Stages:

Various growth stages as identified by Weston & Brigham (1970) are:

Table 2.3

LIFE CYCLE STAGE	**DEFINING CRITERIA**
Inception	Wherein only owners' resources are used
Growth 1	Use of owners' resources + retained profits, trade credit, bank loans and overdrafts, hire purchase and leasing
Growth 2	All of the above sources + longer term finance from financial institutions including loans.
Growth 3	All of the above + new market issue
Maturity	All of the above
Decline	Withdrawal of finance: firm taken over / share repurchase / liquidation

Source: Weston and Brigham (1970), quoted by Mac an Bhaird (2010).

For the purpose of this research, the above mentioned stages will be reclassified into three stages of Life Cycle, those being:

Stage 1: Inception and Growth 1

Stage 2: Growth 2, Growth 3 & Maturity

Stage 3: Decline

c. Financial Literacy:

Adapted from OECD: "Financial Literacy as a combination of financial awareness, knowledge, skills, attitude and behavior necessary to make sound financial decisions and ultimately achieve financial well-being".

Awareness: Awareness is the perception of a situation or fact.

Knowledge: Knowledge is a familiarity or understanding of someone or something, such as facts, information, descriptions, or skills. Knowledge can refer to a theoretical or practical understanding of a subject

Skills: A skill is the learned ability to carry out a task with pre-determined results often within a given amount of time, energy, or both.

Attitude: A manner of thinking, feeling or behaving that reflects a state of mind or disposition.

Behavior: The way in which one acts or conducts oneself.

2.11: PROPOSED HYPOTHESES:

1. Hypotheses researching the relationship between Financial Inclusion amongst MSMEs and Financial Growth Stages.
2. Hypotheses researching the relationship between Financial Inclusion amongst MSMEs and Financial Literacy.
3. Hypotheses researching the moderating effect of Financial Literacy between Financial Inclusion amongst MSMEs and Financial Growth Stages.
4. Hypotheses researching the difference in Financial Inclusion with respect to firm specific characteristics.
5. Hypotheses researching the difference in Financial Literacy with respect to firm specific characteristics.

Hypotheses researching the relationship between Financial Inclusion amongst MSMEs and Financial Growth Stages.

H_1: There is a significant difference in Financial Inclusion across Financial Growth Stages of MSMEs.

H_{1a}: Financial Inclusion between Financial Growth Stage 1 and Financial Growth Stage 2 of MSMEs will vary significantly.

H_{1b}: Financial Inclusion between Financial Growth Stage 2 and Financial Growth Stage 3 of MSMEs will vary significantly.

H_{1c}: Financial Inclusion between Financial Growth Stage 1 and Financial Growth Stage 3 of MSMEs will vary significantly.

Hypotheses researching the relationship between Financial Inclusion amongst MSMEs and their Financial Literacy.

H_2: There is a significant relationship between Financial Literacy of MSMEs and Financial Inclusion of MSMEs.

H_3: There is a significant relationship between different dimensions of Financial Literacy of MSMEs and Financial Inclusion of MSMEs.

H_{3a}: There is a significant relationship between Knowledge and Skills of MSMEs and Financial Inclusion of MSMEs.

H_{3b}: There is a significant relationship between Awareness of MSMEs and Financial Inclusion of MSMEs.

H_{3c}: There is a significant relationship between Attitude and Behavior of MSMEs and Financial Inclusion of MSMEs.

Hypotheses researching the moderating effect of Financial Literacy between Financial Inclusion amongst MSMEs and Financial Growth Stages.

H_4: Financial Literacy significantly moderates the relationship between Financial Growth Stages of MSMEs and Financial Inclusion of MSMEs.

Hypotheses researching the difference in Financial Inclusion with respect to firm specific characteristics.

H_5: There is a significant association between Financial Inclusion of MSMEs and their forms of organizations.

H_6: There is a significant association between Financial Inclusion of MSMEs and methods of manufacturing employed by them.

H_7: There is a significant association between Financial Inclusion of MSMEs and the markets they cater to.

H_8: There is a significant association between Financial Inclusion of MSMEs and their net worth.

Hypotheses researching the difference in Financial Literacy with respect to firm specific characteristics.

H_9: There is a significant association between Financial Literacy of MSMEs and their forms of organizations.

H_{10}: There is a significant association between Financial Literacy of MSMEs and methods of manufacturing employed by them.

H_{11}: There is a significant association between Financial Literacy of MSMEs and the markets they cater to.

H_{12}: There is a significant association between Financial Literacy of MSMEs and their net worth.

CHAPTER 3

RESEARCH METHODOLOGY AND INSTRUMENT DEVELOPMENT

This chapter covers the research design, methodologies, scale development and collection of data.

RESEARCH DESIGN

The design of this research includes sections on qualitative and quantitative methodology to achieve the objectives of the research. Section 1 presents the exploratory research, a qualitative study. Section 2 incorporates on a supplementary project conducted that contributes towards findings for this research. Section 3 describes the quantitative methodology used for devising the instrument and testing of hypotheses based on the proposed conceptual model.

SECTION 1:

3.1: FIRST STAGE OF RESEARCH – A QUALITATIVE STUDY

An exploratory study was conducted to identify the issues, obstacles, challenges and factors affecting financial inclusion in the Micro, Small and Medium Enterprise (MSME) sector. An open-ended questionnaire (Annexure 1) was administered to owners/entrepreneurs of MSMEs. Such questionnaires enable the respondents to express their views openly and bring out areas that may not be highlighted in existing literature. Questionnaires were circulated amongst the owners of fourteen enterprises, all of which were filled in the presence of the researcher.

The objective of this study was to bring out the factors affecting financial inclusion with respect to MSME sector. Also, it was of importance to find out the different barriers and obstacles faced by MSMEs in meeting their financial needs. This qualitative study provided a direction to this research towards identifying the major factors affecting financial inclusion, namely, financial literacy and financial growth stages.

3.1.1: Sample Selection:

Fourteen MSMEs operating in Goa were administered the questionnaire (See Annexure D). These were selected on a random basis. Out of these, five belonged to the Micro category, seven were from Small category and two belonged two medium category. Further, four out of the fourteen enterprises chosen for the study were from service sector and remaining eleven were from manufacturing sector comprising of pharmaceuticals, corrugated boxes, powder coated items, mono filaments and precision machines. All the questionnaires were answered by the owners themselves in presence of the researcher.

3.1.2: Data Analysis and Findings:

Findings of the study were classified into distinct categories like Functioning of MSMEs, Preferred source of funding, Awareness of financial institutions and financial services and Financing difficulties faced by MSMEs.

a. Functioning of MSMEs:

It was noticed that most of the firms (10) catered to the local Goan market while only a few of them catered to the national market and only one was supplying its products in the international market. Only two out of five micro units employed managers to look after their functions while all small and medium units had employed managers to carry out the administrative tasks. In case of managers being employed by micro units, the major duties carried out by the owners were restricted to financial functions like banking, procurement of raw materials, payments made to suppliers and payments recovery from customers. Owners of small units carried out functions like performance monitoring, budgeting, cash flow management, decision making in procurement of raw materials, export promotion and marketing. *This aspect highlighted that financial literacy of owners/entrepreneurs or managers will be an influencing factor in conduct of financial activities of the firm and financial decision making.*

b. Preferred source of funding:

Financing or funding options considered by the MSMEs were: Personal savings and “f” connections, retained profits, long term debt, venture capital, business angels, private investors, short term bank loans and overdraft, Government grants and equity. The study pointed to the fact that most of the micro enterprises choose to go ahead with procuring term loans from banks, followed by retained profits, personal savings and then government grants. Four out of seven small enterprises preferred to avail term loans from banks first and then move towards ploughing back of profits and government grants. Medium units too preferred long term debts and personal savings to government grants. Most of the micro units had not heard of the concept of venture capital and private investors. Amongst the small and medium units, the owners preferred to stay away from venture capital and private investors as they had no great choice of such investors in the state of Goa.

It was further observed that micro units give more preference to short term loans from banks (debt), followed by personal savings and retained profits and then proceed towards availing government grants (External – internal). Same pattern is observed among the small units in the sense that they too prefer bank loans as their primary source of funding and then moving towards retained profits and personal savings (External – internal). Whereas, the medium units prefer to first plough back their profits and then go towards availing bank credit (Internal – external). *The study opined that firms in different stages of their growth choose different methods of financing. Further, it can be concluded that depending upon the type of credit the firm chooses to obtain, it can advance to the next stage of financial growth.*

c. Awareness of Financial institutions and financial services:

The study highlighted that financial illiteracy seemed to be the most important factor affecting financial inclusion. From amongst the sample, owners of eight out of the chosen fourteen units had knowledge about the existence of the financial institutions offering financial assistance to MSME sector. Further, even though some of them were aware about the presence of such institutions, they had not taken any initiative to inquire about such schemes, *thus limiting their knowledge.*

d. Financing difficulties faced:

Almost all units faced difficulties at the time of availing credit from banks and other institutions at all the stages of credit disbursal. The most common difficulty faced by these units was with the documentation and paperwork required to be followed at the time of obtaining credit. *This stressed the need upon probing further the aspects of usage and quality of financial services and products. Also, access and availability of funds are the key issues faced by these firms.*

From the study conducted, factors affecting financial inclusion could be identified as: Low collateral capacity, high rate of interest, inadequate regulatory framework, lack of credit bureaus, tedious and time consuming procedures and processes in obtaining credit. *These factors focus on aspects of Access, Availability, Usage and Quality of financial products, thus leading to lower levels of financial inclusion.*

Following were identified as the barriers or obstacles faced by Goan MSMEs with respect to their funding needs: Limited financial literacy, Absence of sufficient knowledge about such schemes available to MSMEs, Negative perception of private banks and other institutions, Absence of trust towards financial institutions. *These factors focus on aspects of Awareness, Knowledge, Skills, Attitude and Behavior of the MSME owners, thus highlighting the role of financial literacy in MSMEs.*

The above study focussed on stressing upon the need to explore relationship between various financial growth stages of a firm and its level of financial inclusion. It was thus necessary to investigate whether a firm in its first financial growth stage will have low level of financial inclusion or will it contradict? Further, as the firm advances from first to second stage and so on, does the level of financial inclusion differ or not? Therefore it becomes pertinent to ascertain the relationship between financial inclusion amongst MSMEs and their financial growth stages.

It is observed that SMEs' access to credit include the lack of business managerial experience and skills, insufficient information on available products, relatively low levels of financial literacy, poor business plans and other external factors (National Credit Regulator, South Africa, 2011). Also, Krishnan (2014) propounded that comprehensive financial education is critical for MSMEs to get access to finance. The exploratory study conducted by the researcher pointed that a firm's extent of financial inclusion will depend on the firm's (entrepreneur's) level of financial literacy. Thus, it becomes evident to examine the relationship between financial literacy and financial inclusion, providing confirmation to the literature review.

Hence, this research endeavours to test the following hypotheses:

H_1: There is a significant difference in Financial Inclusion across Financial Growth Stages of MSMEs.

H_2: There is a significant relationship between Financial Literacy of MSMEs and Financial Inclusion of MSMEs.

Dahmen and Rodriguez (2014) contended that those owners who do not regularly review their financial statements nor perform financial analysis were experiencing financial difficulties. These authors argued that the reason for not reviewing or performing financial analysis was because of the "lack of understanding of what to look at and how to look at it – in other words, inadequate FL (financial literacy) and QL (quantitative literacy) in relation to business management". Guliman (2015), highlighted that most of the owners of enterprises who have low levels of financial knowledge and skills also have low levels of financial literacy.

Responses of the exploratory study further confirmed that mere awareness of financial products and schemes did not suffice and additional efforts were needed to know about these aspects in detail that will enable in procuring finance. In one of the responses, respondent said that supply of credit is not an issue, but lack of knowledge is the primary cause of not being able to raise funds. Additional responses assimilated that possessing skills to take financial decisions for the firm also affects access to finance, both in the short term as well as long term. Conceptual knowledge about working capital analysis, product cost estimation, budgeting of cash and other short term budgets go a long way in ensuring continuous supply of credit for the short term.

Further comments confirmed that an entrepreneur's attitude and behavior towards business decision making and day to day operations plays a key role in ensuring adequate access to finance. It was observed through the study that attitude and behavior of entrepreneurs is based on past experiences in dealing with banks, financial institutions and government bodies.

As such, this research attempts to test the following hypothesis:

H_3: There is a significant relationship between different dimensions of Financial Literacy of MSMEs and Financial Inclusion of MSMEs.

SECTION 2:

3.2: A SUPPLEMENTARY STUDY

A supplementary study entitled "Financial Literacy and other Factors affecting the usage of SME Platform of BSE, by SMEs in Goa" was conducted by the researched and the mentor with the objective to study the financial literacy including awareness about the SME Platform of the Bombay Stock Exchange among the SMEs in Goa. This study was conducted to further probe the role of financial literacy amongst SMEs in Goa and their ability to have easier access of finance, SME Platform (new market issue) being one of the sources to finance. The secondary objective of this study was to identify the factors responsible for non usage of SME platform by SMEs in Goa. Besides financial literacy and the lack of awareness, there could be other concerns such as costs and dilution of control. The report for the same is available on the website of BSE SME Platform and could be accessed from the following url: (https://www.bseindia.com/downloads1/BSE_SME_Platform.pdf)

3.2.1: Methodology and Sample Selection:

As a thorough probing was deemed essential for exploring the reasons for not availing of the BSE SME platform option, the personal interview method was deemed appropriate for the survey of the SMEs. Detailed Interview Schedule was prepared and administered to the Owners of the SMEs. The total sample size was 30. Qualitative content analysis was then carried out of the responses obtained

3.2.2: Data Analysis and Findings:

With respect to awareness level, it was found that though all the owners were aware of Bombay Stock Exchange, one third of them in each of the small and medium categories were not aware of Initial Public Offer (IPO) or raising money through IPOs by listing at stock exchange. With respect to overall financial literacy, the firms were tested by querying about the terms used in finance for specific providers of financial services and investors. About one third of firms in each of the small and medium categories did not reply to the question regarding venture capital, private equity, retail investors. Very few firms, namely three to five had the knowledge about angel investors, institutional buyers, non-banking finance companies, merchant bankers, high net worth individuals, registrars to the issue and brokers.

The outcome of the study with respect to its contribution to the main research was as follows:

1. This study reinforced the importance of financial literacy as a major factor towards access to credit, its availability, its usage and the quality. The study seemed to comprehend with the review of literature.

2. This study helped in identifying the role played by the new and emerging sources of finance namely, venture capital, private equity and business angels. It reinforced that these emerging sources of finance are rarely used by SMEs.

Taking into consideration the above findings, the scale for measuring financial growth stages was adapted in its originality from Weston and Brigham (1970), quoted in Mac an Bhaird (2010) to measure the growth stage of a firm.

The two surveys (3.1.1 and 3.2.1) pointed that that financial literacy and financial growth stages are the most important factors affecting financial inclusion. It has been probed before by Adomako et al (2015) that the ability to acquire financial information and to react to this information (financial literacy) can facilitate the successful conversion of access to finance into improved firm growth. Their study pointed out that the relationship between access to finance and firm growth is more positive for those with high, as opposed to low, financial literacy.

Hence, taking inference from the above exploratory studies, it was deemed expedient to examine whether the presence of financial literacy would moderate the relationship between financial growth stages of a firm and financial inclusion, thus enabling the formulation of fourth hypothesis:

H_4: Financial Literacy significantly moderates the relationship between Financial Growth Stages of MSMEs and Financial Inclusion of MSMEs.

SECTION 3:

3.3: THE QUANTITATIVE METHODOLOGY FOR TESTING OF HYPOTHESES BASED ON CONCEPTUAL MODEL

3.3.1: Scale Development – Measurement of Constructs:

This research uses questionnaire designed to measure financial inclusion and financial literacy. It also classifies an MSME into being in a particular financial growth stage. Section A of the questionnaire pertains to demographic details and firm characteristics. Section B aims to identify the financial growth stages that the MSME belongs to. Section C measures Financial Literacy and Section D measures Financial Inclusion.

a. Financial Growth Stages:

The measurement scale to classify an MSME as belonging to financial growth stage one, two or three has been adapted from Weston and Brigham (1970), quoted by Mac an Bhaird (2010). Sources of funds used have been considered as the measurement criteria to arrive at classification of the firms into different growth stages (refer table 2.2). For this research, only three financial growth stages are considered, namely: Stage 1: Inception and Growth 1; Stage 2: Growth 2, Growth 3 & Maturity; and Stage 3: Decline.

b. Financial Literacy:

The measurement scale is adapted from Organization for Economic Co-operation and Development (OECD) Toolkit for measuring financial literacy and financial inclusion, 2014-15. The original scale pertained to measuring financial literacy amongst individuals. However, in absence of sufficient literature for measurement of financial literacy amongst MSMEs, this scale was adapted. Financial literacy, as reviewed through literature and through supplementary studies conducted during this research, can be measured through measurement of awareness, knowledge, skills, attitude and behavior.

Awareness is measured through four questions eliciting response for awareness about sources of short term finance, sources of long term finance, about the different schemes of financial assistance available to MSMEs and about financial assistance provided by the Government.

Knowledge is measured through three questions further divided into sub questions pertaining to having in depth information about the sources of short term finance, sources of long term finance, costs associated with it, and whether they have knowledge about various accounting functions like book keeping.

Skills were measured through three questions further divided into sub questions with respect to practice of financial planning techniques like cash budget, sales budget; financial operations like estimation of production cost, variable cost, contribution margin; capital budgeting techniques like being able to compute net present value, internal rate of return, return on investment.

Attitude and Behavior was measured through two questions further divided into sub questions based on parameters pertaining to the entrepreneur’s disposition towards considering to borrow funds, risk taking, monitoring finances and savings. Further, behavior of the entrepreneur with respect to the decisions they take at the time of financial crisis was also measured.

c. Financial Inclusion:

It is evident from literature review and subsequent exploratory study that financial inclusion comprises of four dimensions, namely access, availability, usage and quality. The scale for financial inclusion is divided into these four sections and consist of items that are adapted from: a. AFI Policy Paper, Financial inclusion measurement for regulators: Survey design and implementation, Feb 2010; and b. A Report on Financial Inclusion in Africa, 2013, by African Development Bank.

Access is measured with two questions that pertains to a firm's access to a first order retail finance service provider and access to any electronic device linking the firm to financial service provider.

Availability is measured with two questions pertaining to meeting the firms' needs and whether they are available at an affordable cost.

Usage is measured with three questions pertaining to using specific financial products from the banks, from financial institutions other than banks and whether the firms' demand for funds from these sources increased, remained unchanged or decreased.

Quality is measured with six questions pertaining to whether the firms have any restrictions in dealing with banks, financial institutions or any other fund provider, whether the bank products change to suit the firm's needs, whether the bank's services are flexible to accommodate the firm's requirements and whether the banks provide timely and adequate information to the firms.

3.3.2: Scoring and assigning codes:

For the purpose of this research, a technique of assigning scores for each construct is undertaken, thus coding and categorizing them into being high, medium or low. This leads to measurement of the construct “Financial Literacy” and “Financial Inclusion” which helps in: 1. Determining the difference in the levels of financial inclusion in different financial growth stages.2. Determining the relationship between financial literacy and financial inclusion.

a. Scoring:

A technique of assigning scores was undertaken. The questions used for measurement elicit a “Yes” or a “No” as response. Suitable scores/marks are given for each question measuring a particular variable. This leads to a composite score for the construct.

For the items measuring financial inclusion, following will be the scoring criteria:

1. To measure Access: 2 items are considered. A response of “yes” will be scored 50 each, thus cumulating the Access score to be 100.
2. To measure Availability: 2 items are adapted considered. A response of “yes” will be scored 50 each, thus cumulating the Availability score to be 100.
3. To measure Usage: 3 items with 5, 6 and 5 sub items are considered. A response of “yes” will be scored 8 each for item 1, 6.66 each for item 2 and 4 each for item 3, thus cumulating the Usage score to be 100.
4. To measure Quality: 6 items are considered. A response of “no” for question 1, 2 and 3; and a “yes” for questions 4, 5 and 6 will be scored 16.66 each, thus cumulating the Access score to be 100.

For the items measuring financial literacy, following will be the scoring criteria:

1. To measure Awareness: 4 items are considered. A response of "Yes" will be scored as 25 for each of the 4 items, thus cumulating the Awareness score to be 100.

2. To measure Knowledge: 2 items with 8 sub items and 1 item with 3 sub items are considered. A response of "Yes" will be scored 5 for each of the sub items of item 1 and 2, and 6.66 for "Yes" for the 3 sub items of item 3, thus cumulating the knowledge score to be 100.

3. To measure Skills: 3 items with a total of 12 sub items are considered. A response of "Yes" will be scored as 8.33 for each of the 12 items, thus cumulating the Skills score to be 100.

4. To measure Attitude and Behavior: 1 item with 5 sub items are considered. A response of "Yes" for sub item a and c and "No" for sub items b, d and e will be scored as 10 each. Item 2 is divided into 12 sub items also adapted from the same scale. A "yes" response for sub items b, d, e, h, i, and j and a "no" response for items a, c, f, g, k and l will be scored 4.16 each. This cumulates the score of Attitude and Behavior to 100.

The composite score for financial literacy and financial inclusion is thus arrived at 400 each.

b. Coding:

The respondents have to select the sources of funds used by them from amongst the sources given above. Depending upon the sources that they have obtained, the firm will be categorised into being in Financial Growth Stage 1, Financial Growth Stage 2 or Financial Growth Stage 3. This will be a categorical variable. The composite score for Financial literacy and Financial Inclusion will be then coded into High, Medium or Low indicating their extent. A construct will be coded as High if the composite score is more than 66.66, Medium if the composite score is more than 33.33 up to 66.66; and Low if the score is up to 33.33.

3.4: SCALE EVALUATION

3.4.1: Content validity test:

A content validity index is the degree to which an instrument has an appropriate sample of items for the construct being measured. (Polit & Beck, 2004). It determines whether or not the items sampled for inclusion on the tool adequately represent the domain of content addressed by the instrument. (Waltz, Strickland, & Lenz, 2005). Content validity is largely a matter of judgment, involving two distinct phases: a priori efforts by the scale developer to enhance content validity through careful conceptualization and domain analysis prior to item generation, and a posteriori efforts to evaluate the relevance of the scale’s content through expert assessment (Lynn, 1986; Mastaglia, Toye, & Kristjanson, 2003).

According to Lynn, 1986, two types of CVI (Content Validity index) need to be computed. The first type involves the content validity of individual items and the second involves the content validity of the overall scale. A panel of content experts is asked to rate each scale item in terms of its relevance to the underlying construct. Lynn (1986) advised a minimum of three experts, but indicated that more than 10 was probably unnecessary.

The rater is required to review the test items based on the relevance, clarity and simplicity of the content in each of the dimensions.

1. Relevance:
    a. Non relevant
    b. Item needs some revision
    c. Relevant but needs minor revision
    d. Very relevant

2. Clarity:
    a. Not clear
    b. Item needs some revision
    c. Clear but needs some minor revision
    d. Very clear
3. Simplicity:
    a. Not simple
    b. Item needs some revision
    c. Simple but needs some minor revision
    d. Very simple

The researcher administered the questionnaire in person to all the experts. The researcher used the CVI (Content validity index), method to evaluate the content validity of the instrument.

3.4.2: Results of content validity test:

The instrument was circulated amongst five experts, two from the academic field and three from the entrepreneurial segment. The experts rated the instrument for reliability, simplicity and clarity.

Relevance:

Table 3.1

MEAN I-CVI	**1**
S - CVI / UA	**23**
MEAN EXPERT PROPORTION	**1**

All five experts rated all 23 items as relevant. S-CVI/UA is 23, which means that all experts have rated all 23 items as relevant (3 or 4 rating). This fits the standard requirement advocated by Lynn, 1986.

Clarity:

Table 3.2

MEAN I-CVI	**0.991304**
S - CVI / UA	**22**
MEAN EXPERT PROPORTION	**0.956522**

4 out of 5 experts have rated all items as clear. S-CVI/UA is 22, which means that one expert has rated one item as not clear. Lynn's criteria states that an I-CVI¼1.00 with 3 to 5 experts and a minimum I-CVI of .78 for 6 to 10 experts is accepted. It would have an SCVI/ Ave of 0.90 or higher. Hence as per the requirements advocated, it complies with the above.

Simplicity:

Table 3.3

MEAN I-CVI	**1**
S - CVI / UA	**23**
MEAN EXPERT PROPORTION	**1**

All five experts rated all 23 items as simple. S-CVI/UA is 23, which means that all experts have rated all 23 items as being simple (3 or 4 rating), thus making the finding acceptable as per Lynn, 1986.

Lynn (1986) recommended that with a panel of ‘‘five or fewer experts, all must agree on the content validity for their rating to be considered a reasonable representation of the universe of possible ratings’’. In other words, the I-CVI should be 1.00 when there are five or fewer judges. When there are six or more judges, the standard can be relaxed, but Lynn recommended I-CVIs no lower than 0.78. – (Polit and Beck, 2006).

The instrument with 23 items was hence treated as acceptable and was deemed fit to be administered to the MSMEs for pilot testing the proposed conceptual model.

3.5: RELIABILITY TEST:

3.5.1: Pilot testing of questionnaires:

Pilot testing of the final instrument (questionnaire) was done on a sample size of 15 firms, 9 from the micro category, 4 from the small category and 2 from medium category. The instrument was considered to be reliable with the Coefficient Alpha devised by Cronbach being computed.

3.5.2: Cronbach’s Alpha:

Cronbach’s coefficient Alpha was arrived at to test the instrument’s reliability and provide a measure of the internal consistency of a test or scale; it is expressed as a number between 0 and 1.

Internal consistency describes the extent to which all the items in a test measure the same concept or construct and hence it is connected to the inter-relatedness of the items within the test, - Tavacol et al, 2011. The closer the alpha is to 1.00, the greater the internal consistency of the items on the instrument being assessed and used. The data collected has been introduced to statistical reliability test using a statistical software SPSS.

Results of the test:

Table 3.4

Measurement Scale	**Cronbach's Alpha (n = 15)**
Financial Literacy (total 12 items)	*0.793*
Financial Inclusion (13 items)	*0.725*

3.5.3: Analysis of results:

Generally, a questionnaire with an α of 0.8 is considered reliable (Field, 2009). However, values above 0.7 are acceptable indicators of internal consistency as suggested in literature (Nunnally, 1967). For this research, Cronbach's alpha for 25 items is **0.849**, which indicates a relatively high level of internal consistency.

Reliability Statistics:

Table 3.5

Cronbach's Alpha	**N of Items**
.849	25

Table 3.6

Item – Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Awareness 1	479.40	17996.543	.609	.841
Awareness 2	482.73	17953.210	.372	.845
Awareness 3	489.40	17105.829	.539	.838
Awareness 4	491.07	17196.067	.511	.839
Knowledge 1	483.73	18078.067	.453	.843
Knowledge 2	485.40	18197.829	.334	.846
Knowledge 3	486.40	18803.543	.132	.850
Skills 1	488.33	18541.667	.202	.849
Skills 2	479.80	17170.314	.635	.836
Skills 3	480.33	16758.810	.523	.839
Attitude and Behavior 1	470.07	18176.924	.205	.851
Attitude and Behavior 2	478.20	16675.457	.769	.831
Access 1	459.40	16342.257	.543	.838
Access 2	462.73	16884.638	.331	.852
Availability 1	462.73	14748.924	.779	.824
Availability 2	466.07	15060.352	.625	.835
Usage 1	485.67	18574.810	.353	.847
Usage 2	494.33	18338.238	.490	.844
Usage 3	497.00	18659.000	.118	.852
Quality 1	487.80	18934.886	.124	.850
Quality 2	489.93	18706.924	.189	.849
Quality 3	488.87	19251.838	-.122	.854
Quality 4	492.07	18053.210	.467	.843
Quality 5	489.93	18453.210	.331	.846
Quality 6	494.20	18011.457	.457	.843

3.6: SAMPLE SIZE AND SAMPLE SELECTION:

3.6.1: Defining Population:

The Unit of Analysis in the present study is the Micro, Small and Medium enterprise in the manufacturing sector. According to Malhotra (1999), population is the aggregate of all the elements that share some common set of characteristics and that comprise the universe for the purpose of the research problem. For this research, MSMEs in the state of Goa involved in manufacturing comprises of population for the study. It was observed in Project Report by Hegde Desai et al, 2018 that manufacturing firms find it easier to raise debt in comparison to the firms in service sector. The authors confirmed that there exists a significant difference in the proportion of capital structure across service and manufacturing sectors at the initial stage. The authors attributed this due to the reason that the manufacturing sector is able to provide security for its debt with physical assets, unlike the services sector, where quantum of physical assets could be much lower. Since the definition of MSME itself differs according to manufacturing and service sector showing that the two are substantially different, this research will consider only manufacturing sector.

3.6.2: Determining Sampling Frame:

Sampling frame has been developed from the data provided by the Department of Industries and Mines, Government of Goa. The website and manuals of local body Goa Small Industries Association (GSIA) has also been verified for arriving at the sampling frame.

3.6.3: Selecting Sampling Technique and Determining Sample Size:

As identified by Israel (1992), sample size can influence the detection of significant differences, relationships or interactions (Peers 1996). Sudman (1976) suggests that a minimum of 100 elements is needed for each major group or subgroup in the sample and for each minor subgroup, a sample of 20 to 50 elements is necessary. Similarly, Kish (1965) says that 30 to 200 elements are sufficient when the attribute is present 20 to 80 percent of the time (i.e., the distribution approaches normality). On the other hand, skewed distributions can result in serious departures from normality even for moderate size samples (Kish, 1965). In that case, a larger sample or a census is required. - Israel, 1992.

A total of 2665 MSMEs have been identified as per the data obtained from relevant sources. The classification of this data is as under:

Table 3.7

Category	No of Enterprises
MICRO	1982
SMALL	607
MEDIUM	76
TOTAL	2665

As 74 per cent of the MSME units are micro firms, proportionately determining the sampling size may not be suitable as sample would be skewed towards micro firms. As per evidence available from literature review (Kish, 1965; Israel, 1992), a sample of minimum 30 units is considered adequate for each of minor groups or sub group. Hence for the purpose of this research, a total of 160 firms comprising of 90 firms from micro category, 40 firms from small category and 30 firms from medium category will be used as sample. Furthermore, units will be chosen using simple random sampling deriving firms from the three categories. The researcher personally administered the questionnaires to 160 entrepreneurs after seeking formal appointments from them. The questionnaires were filled up by the entrepreneurs in presence of the researcher by carefully reading and marking the relevant response in about

20 minutes per questionnaire. Thus, the response rate was 100%. There was no missing data in the questionnaire hence the entire set of questionnaires could be used by the researcher for analysis. The data was entered on SPSS DATA SHEET and SPSS 20.00 VERSION was used for analyses.

3.7: TECHNIQUES FOR ANALYSIS:

3.7.1. ANOVA:

An ANOVA makes multiple comparisons of treatment groups in single tests, by identifying whether there is any difference in mean values. Moreover, the possibility of multiple comparisons makes the ANOVA technique more useful than structural equation modelling and regression analyses in experimental examinations (Morrison, 2005).

One way ANOVA test has been conducted to determine if there is sufficient evidence to infer that the means of the corresponding population distributions differ. It needs to be established whether financial inclusion of a firm significantly differs between the different financial growth stages of a firm (three groups). Hence, this technique is used to test the differences in financial inclusion among the three groups, Financial Growth Stages 1, 2 and 3.

3.7.2. Pearson's Chi squared test:

Chi Square test determines whether frequencies of one categorical variable differ across levels of another categorical variable. In other words, it tests whether or not a statistically significant relationship exists between the two variables.

This research uses Chi Squared Test to: 1. Determine if there is any association between the dependent construct financial inclusion and firm specific characteristics like forms of organization, methods of manufacturing, markets catered to and net worth.; 2. Determine if there is any association between the independent construct financial literacy and firm specific characteristics like forms of organization, methods of manufacturing, markets catered to and net worth.

3.7.3: Linear Regression Model:

To establish the relationship between Financial Literacy of a firm and its Financial Inclusion, linear regression is used. Linear regression will explain the variations in financial inclusion with proportionate increase in financial literacy of a firm. However, in order to further explore this, the basic assumptions for regression have been tested, those being: normality, homoscedasticity, multicollinearity and linearity. The results for the same are elucidated in chapter 5 of this thesis.

In order to measure the extent of financial literacy on financial inclusion, there is a need to explore the relationship between different dimension of financial literacy and financial inclusion. hence it is essential to have validation of the construct of financial literacy, which will provide further validation to the definition adapted from OECD, that being “Financial Literacy as a combination of financial awareness, knowledge, skills, attitude and behavior necessary to make sound financial decisions and ultimately achieve financial well-being.”.

3.8: EXPLORATORY FACTOR ANALYSIS:

EFA is often used as a dimensionality-reduction technique. It identifies the dimensionality of constructs by examining relations between items and factors when the information of the dimensionality is limited (Netemeyer, Bearden, & Sharma, 2003). However, it can also be used to examine the structure or relationship between variables and for detection and assessment of dimensionality of a theoretical construct (Pett et al, 2003; Thompson, 2004).

According to Williams et al, 2010. Exploratory Factor Analysis is said to have three main purposes. Firstly, it reduces a large number of variables into a smaller set of variables (also referred to as factors). Secondly, it establishes underlying dimensions between measured variables and latent constructs, thereby allowing the formation and refinement of theory. Thirdly, it provides construct validity evidence of self-reporting scales. Exploratory Factor Analysis thus allows the researcher to explore the main dimensions to generate a theory, or model from a relatively large set of latent constructs often represented by a set of items.

For the purpose of this research, Exploratory Factor Analysis (EFA) would throw better light in examining which dimension of financial literacy has a greater impact on financial inclusion. Also, the items that are used to measure financial literacy are adapted from the scale that measured an individual's financial literacy. Therefore, to corroborate these items for measuring financial literacy of an MSME, EFA was conducted.

3.8.1: Extraction of factors:

The exploratory factor analysis process was initiated with an initial analysis run to obtain Eigenvalues for each factor in the data. Here, the most commonly used method is principal component analysis. Next, the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (KMO) test and Bartlett's Test of Sphericity were executed to determine construct validity and to confirm that the data collected for an exploratory factor analysis were appropriate. The KMO test is used to verify the sampling adequacy for the analysis, and Bartlett's Test of Sphericity is used to determine if correlations between items are sufficiently large for EFA. Bartlett's Test of Sphericity should reach a statistical significance of less than .05 in order to conduct an EFA (Yu and Richardson, 2015). If the results of the initial EFA show items which are loading on the wrong factors or cross-loading on multiple factors, those items are deleted in order and the EFA re-performed until a simple solution is achieved.

3.8.2: Results of EFA:

a. Extraction of factors:

Table 3.8

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Sqd Loadings			Rotation Sums of Sqd Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.154	42.953	42.953	5.154	42.953	42.953	3.404	28.370	28.370
2	1.434	11.947	54.900	1.434	11.947	54.900	2.744	22.867	51.237
3	1.175	9.788	64.689	1.175	9.788	64.689	1.614	13.452	64.689
4	.918	7.647	72.336						
5	.793	6.609	78.944						
6	.603	5.024	83.968						
7	.567	4.723	88.692						
8	.387	3.225	91.916						
9	.363	3.025	94.941						
10	.342	2.851	97.792						
11	.224	1.869	99.662						
12	.041	.338	100.000						
Extraction Method: Principal Component Analysis.									

Interpretation:

An initial analysis was run to obtain eigenvalues for each factor in the data. The SPSS software by default considers Principal Component Analysis (PCA) for generating these values. It is specified to retain only those factors with an eigenvalue larger than 1 (Guttman-Kaiser rule). It is observed from the above table that the Initial Eigenvalues indicate that the first three factors have Eigenvalues greater than 1. The 12 item structure for measuring financial literacy explains 64.69 % of the variance in the pattern of relationships among the items. The percentages explained by each factor were 42.95% (knowledge and skills), 11.95% (awareness) and 9.78% (attitude and behavior). The fourth factor onwards has eigen values below 1 and explain variance of as little as 7.6%.

b. Sampling Adequacy:

Table 3.9

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.805
Bartlett's Test of Sphericity	Approx. Chi-Square	1073.688
	Df	66
	Sig.	.000

Interpretation:

The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.805, above the commonly recommended value of .6, and Bartlett's test of sphericity was significant ($\chi 2$ (66) = 1073.68, $p < .05$). It is evident that each item shares some common variance with other items and hence further analysis (EFA) is deemed to be suitable with all 12 items considered for measuring financial literacy.

c. Communalities:

Table 3.10

Communalities		
	Initial	Extraction
Awareness 1	1.000	.683
Awareness 2	1.000	.667
Awareness 3	1.000	.677
Awareness 4	1.000	.700
Knowledge 1	1.000	.686
Knowledge 2	1.000	.666
Knowledge 3	1.000	.542
Skills 1	1.000	.421
Skills 2	1.000	.512
Skills 3	1.000	.683
Attitude and Behavior 1	1.000	.779
Attitude and Behavior 2	1.000	.748
Extraction Method: Principal Component Analysis.		

Interpretation:

Item communalities are considered “high” if they are all .8 or greater (Velicer and Fava, 1998). More common magnitudes in the social sciences are low to moderate communalities of .40 to .70. If an item has a communality of less than .40, it may either a) not be related to the other items, or b) suggest an additional factor that should be explored (Costello and Osborne, 2005). It is observed from the above table that all the items have communality > 0.4 and <0.8. This suggests that three factors identified could be considered with all 12 items for further testing the research model.

d. Rotation and Factor Loadings:

EFA is conducted to determine the number of factors underlying the variation in and correlations among the items. Further it becomes essential to identify the items that load onto a particular factor. It is necessary that items that do not load onto any factor be removed and analysis be re-run. It needs to be ascertained as to how large an item's factor loading should be in order to retain that item. According to Stevens (2012) for a sample size of 100 factor loadings are significant at the 0.01 level when they are larger than 0.512, for a sample of 200 they are significant when they are larger than 0.364 (as quoted in Henson and Roberts, 2006). According to Guadagnoli and Velicer (1988) a factor with four loadings greater than 0.6 is stable for sample sizes greater than 50 and a factor with 10 loadings greater than 0.4 is stable for a sample size greater than 150. Rotation is done to simplify and clarify the data structure. The most common method used for such rotation is Varimax.

Table 3.11

Rotated Component Matrix[a]

	Component		
	1	2	3
Awareness 1		.826	
Awareness 2		.764	
Awareness 3	.789		
Awareness 4	.820		
Knowledge 1	.702		
Knowledge 2	.695		
Knowledge 3	.522		
Skills 1	.470		
Skills 2	.530		
Skills 3	.578		
Attitude and Behavior 1			.874
Attitude and Behavior 2			.841

Interpretation:

Tabachnick and Fidell (2001) cite .32 as a good rule of thumb for the minimum loading of an item, which equates to approximately 10% overlapping variance with the other items in that factor. The above results indicate use of three factors for determining the relationship with the dependent variable. The three extracted factors explain 64.69% of the variance.

3.8.3: Factor Loadings for identified three factors:

The items measuring the dimensions of Financial Literacy were regrouped into three factors. Factor 1 (Knowledge &Skills), Factor 2 (Awareness) And Factor 3 (Attitude & Behavior)

Table 3.12

FACTORS / COMPONENTS			
ITEM	**FACTOR 1 (KNOWLEDGE &SKILLS)**	**FACTOR 2 (AWARENESS)**	**FACTOR 3 (ATTITUDE & BEHAVIOR)**
Awareness 1		.826	
Awareness 2		.764	
Awareness 3	.789		
Awareness 4	.820		
Knowledge 1	.702		
Knowledge 2	.695		
Knowledge 3	.522		
Skills 1	.470		
Skills 2	.530		
Skills 3	.578		
Attitude and Behavior 1			.874
Attitude and Behavior 2			.841

The item loadings on each factor has been examined. Output for three factors were each examined using varimax rotations of the factor loading matrix. Items “Awareness 3” and

"Awareness 4" from the Awareness Category have got loaded under Knowledge and Skills category. Similarly, all items under "Knowledge" and "Skills" category have loaded under one common factor. Items in the Attitude and Behavior category haven't shown any deviations from the main dimension measurement scale.

These factors have further been tested for reliability among their items and results are as follows:

Table 3.13

Factor Name	No of items	Cronbach's Coefficient α	Interpretation
Knowledge and Skills	8	0.868	High internal consistency
Awareness	2	0.689	Moderate internal consistency
Attitude and Behavior	2	0.660	Moderate internal consistency

3.8.4: Conclusions:

The Exploratory Factor Analysis conducted for the purpose of this research advocates that there are three main factors or dimensions that measure the independent construct Financial Literacy. All 12 items generated for measuring this construct have been retained. However, they are now grouped under three dimensions (independent variables) instead of four. The reliability for these new factors generated after screening and considering factor loadings also provide for moderate to high internal consistency. As such, for further testing of the model, three dimensions will be considered. This will help in:

a. Determining the relationship between Financial Literacy of MSMEs and Financial Inclusion using simple linear regression.

b. Determining the relationship between each dimension of Financial Literacy and Financial Inclusion using multiple linear regression.

3.8.5: Revised Scoring and Coding:

For the items measuring financial literacy, following will be the scoring criteria:

1. To measure Factor 1 (Knowledge and Skills): 8 items are considered. A response of "Yes" will be scored as 12.5 for each of the 4 items, thus cumulating the factor score to be 100.

2. To measure Factor 2: 2 items are considered. A response of "Yes" will be scored 50 for each, thus cumulating the factor score to be 100.

3 To measure Factor 3 (Attitude and Behavior): 1 item with 5 sub items are considered. A response of "Yes" for sub item a and c and "No" for sub items b, d and e will be scored as 10 each. Item 2 is divided into 12 sub items also adapted from the same scale. A "yes" response for sub items b, d, e, h, i, and j and a "no" response for items a, c, f, g, k and l will be scored 4.16 each. This cumulates the score of Attitude and Behavior to 100.

The composite score for financial literacy will be 300. The dimensions measuring the constructs as well as the construct as a composite score will be considered as continuous variables.

3.8.6: Proposed Conceptual Models:

Figure 4

Proposed Conceptual Model 1

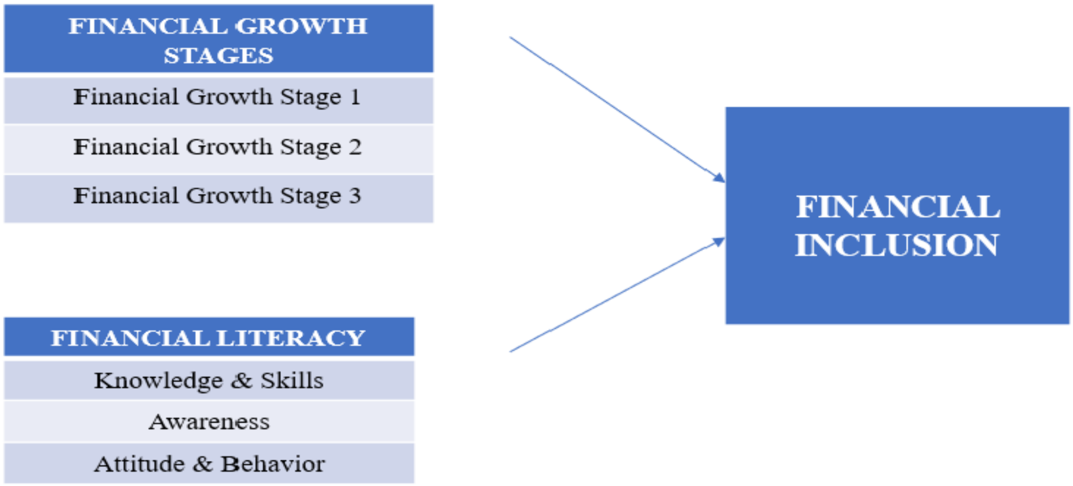
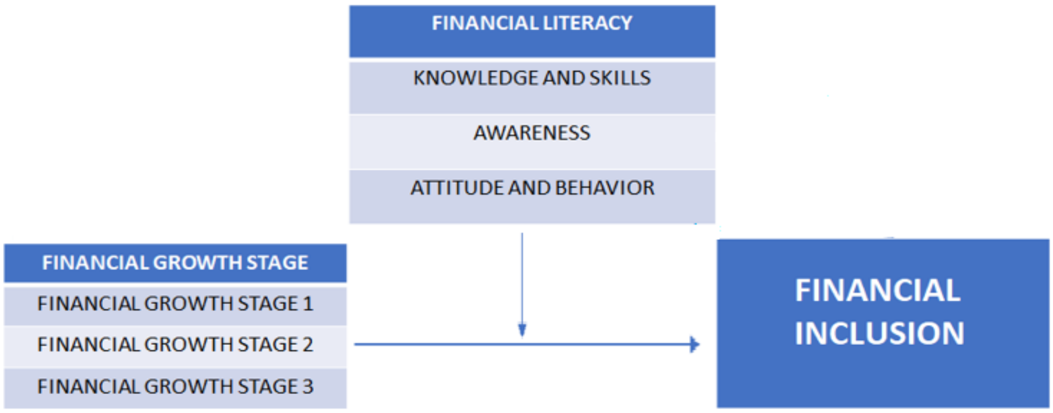


Figure 5

Proposed Conceptual Model 2



CHAPTER 4

DESCRIPTIVE STATISTICS

This chapter deals with descriptive statistics of the data collected through administering the instrument to the identified sample. It characterises the data collected from the sample based on demographic details. Section 1 brings out the data characteristics pertaining to MSMEs and Financial Growth Stages. Section 2 provides the cross tabulations with respect to the sample, the dependent variable (DV) and the independent variables (IV). Section 3 provides the frequency tables pertaining to the dependent construct Financial Inclusion and the independent construct Financial Literacy.

SECTION 1:

4.1: DEMOGRAPHIC CHARACTERISTICS OF SAMPLE

1. MSMEs, its categories, forms of organization, manufacturing methods, markets and net worth.
2. Financial growth stages of MSMEs,

4.1.1: Micro, Small and Medium Enterprises:

a. Category:

Table 4.1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Micro	90	56.3	56.3	56.3
	Small	40	25.0	25.0	81.3
	Medium	30	18.8	18.8	100.0
	Total	160	100.0	100.0	

As has been mentioned, the sample consist of 56 % of micro firms, 25% small firms and 19% medium firms.

b. Forms of organization:

Table 4.2

		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	Sole Proprietorship	80	50.0	50.0	50.0
	Partnership	40	25.0	25.0	75.0
	Company	40	25.0	25.0	100.0
	Total	160	100.0	100.0	

It is observed that 50% of the firms are run by sole proprietors, 25% are partnership concerns and the remaining 25% are of company constitution.

c. Methods of Manufacturing

Table 4.3

		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	Machine Intensive	69	43.1	43.1	43.1
	Labour Intensive	39	24.4	24.4	67.5
	Both Machine and Labour	52	32.5	32.5	100.0
	Total	160	100.0	100.0	

The above table indicates that a large number of firms rely on machine intensive technique for manufacturing. 24.4% however do depend on labour intensive methods for manufacturing.

d. Markets Catered to:

Table 4.4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Local	67	41.9	41.9	41.9
	Regional	59	36.9	36.9	78.8
	National	26	16.3	16.3	95.0
	International	8	5.0	5.0	100.0
	Total	160	100.0	100.0	

About 42% of the sample cater to local markets, 58% of the firms have a reach outside the local boundaries, with 26 firms spanning across the country and 8 firms exporting in international markets as well.

e. Net worth

Table 4.5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	< Rs 1 Cr	54	33.8	33.8	33.8
	Between Rs 1 Cr - Rs 5 Cr	67	41.9	41.9	75.6
	Between Rs 5 Cr - Rs 10 Cr	17	10.6	10.6	86.3
	Between Rs 10 Cr - Rs 20 Cr	18	11.3	11.3	97.5
	Above Rs 20 Cr	4	2.5	2.5	100.0
	Total	160	100.0	100.0	

Most of the firms have a net worth between Rs 1 crore and Rs 5 crores. An equally significant number of firms have net worth below Rs 1 crore. And a small fraction of firms has net worth above Rs 5 crores.

4.1.2: Financial Growth Stages of MSMEs:

Table 4.6

		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	Financial Growth Stage 1	88	55.0	55.0	55.0
	Financial Growth Stage 2	52	32.5	32.5	87.5
	Financial Growth Stage 3	20	12.5	12.5	100.0
	Total	160	100.0	100.0	

Most of the firms, 55%, are in their financial growth stage 1. They rely on personal savings, retained profits, trade credit, bank loans and overdrafts, hire purchase and leasing for their funding activities. 32.5% firms have obtained funds from all the above mentioned sources and have explored long term debt from financial institutions as well as raised capital through new issue markets. About 20 firms are in their decline stage.

SECTION 2:

This section elaborates details of the sample based on cross tabulations. The section is further categorised as follows:

1. MSMEs and Financial Growth Stages
2. Financial Growth Stages (IV) of an MSME and its Financial Inclusion (DV)
3. Financial Literacy (IV) and Financial Inclusion (DV)
4. Financial Literacy and Financial Inclusion Dimensions/Variables

4.2.1. MSMEs Category and Financial Growth Stages

Table 4.7

		FINANCIAL GROWTH STAGES			Total
		Growth Stage 1	Growth Stage 2	Growth Stage 3	
CATEGORY	Micro	53	25	12	90
	Small	20	14	6	40
	Medium	15	13	2	30
Total		88	52	20	160

It is observed that majority of firms in each category are in their financial growth stage 1. It is also pertinent to note that 12.5% of the sample are in their growth stage 3 (decline).

4.2.2. Financial Growth Stages (IV) of an MSME and its Financial Inclusion (DV)

Table 4.8

		FINANCIAL INCLUSION			Total
		High	Medium	Low	
FINANCIAL GROWTH STAGES	Financial Growth Stage 1	28	31	29	88
	Financial Growth Stage 2	33	15	4	52
	Financial Growth Stage 3	4	7	9	20
Total		65	53	42	160

The above table states that most MSMEs in Financial Growth Stage 1 have medium (31 firms) and low (29 firms) financial inclusion. 33 firms out of 52 firms in Financial Growth Stage 2 have high financial inclusion. And 9 out of 20 firms in Financial Growth Stage 3 have low financial inclusion.

4.2.3. Financial Literacy (IV) and Financial Inclusion (DV)

Table 4.9

		FINANCIAL INCLUSION			Total
		High	Medium	Low	
FINANCIAL LITERACY	High	52	21	4	77
	Medium	13	29	17	59
	Low	0	3	21	24
Total		65	53	42	160

It is observed that 65 firms have high financial inclusion and 52 firms out of those (80%) have high financial literacy. The remaining 20% have medium financial literacy. 53 MSMEs have medium financial inclusion, 54.71% have medium financial literacy. 42 MSMEs have low financial inclusion, 50% of those have low financial literacy.

4.2.4. Financial Literacy Dimensions/Variables and Financial Inclusion:

a. Awareness

Table 4.10

		AWARENESS			Total
		High	Medium	Low	
FINANCIAL INCLUSION	High	63	2	0	65
	Medium	40	8	5	53
	Low	12	16	14	42
Total		115	26	19	160

It is observed that 39.37% MSMEs have high financial inclusion due to high awareness. Mostly, awareness levels are high in case of MSMEs. However, 26.25% MSMEs have low financial inclusion despite being aware.

b. Knowledge & Skills:

Table 4.11

		KNOWLEDGE & SKILLS			Total
		High	Medium	Low	
FINANCIAL INCLUSION	High	33	28	4	65
	Medium	6	22	25	53
	Low	1	5	36	42
Total		40	55	65	160

It is observed that 20.62% MSMEs have high financial inclusion due to high knowledge and skills. 13.75% have medium financial inclusion due to medium knowledge and skills and 22.5% have low financial inclusion due to low knowledge and skills.

c. Attitude and Behavior:

Table 4.12

		ATTITUDE & BEHAVIOR			Total
		High	Medium	Low	
FINANCIAL INCLUSION	High	37	25	3	65
	Medium	21	28	4	53
	Low	12	24	6	42
Total		70	77	13	160

It is observed that 23.12% firms have high financial inclusion and high attitude and behaviour. 48.12% firms have medium attitude and behaviour.

SECTION 3:

This section provides the frequencies for the independent construct Financial Literacy and the dependent construct Financial Inclusion.

Table 4.13 - Statistics

		Total Factor 1 (Knowledge and Skills – 100)	Total Factor 2 (Awareness - 100)	Total Factor 3 (Attitude and Behavior - 100)	Total Financial Inclusion (400)	Total Financial Literacy (300)
N	Valid	160	160	160	160	160
	Missing	0	0	0	0	0
Mean		44.8813	80.3125	59.4375	208.90	184.6313
Median		41.7500	100.0000	64.0000	214.00	199.2500
Std. Deviation		25.32490	34.15506	17.00932	107.573	58.12604
Variance		641.351	1166.568	289.317	11571.914	3378.637
Range		91.50	100.00	94.00	340	228.50
Minimum		6.00	.00	.00	16	46.00
Maximum		97.50	100.00	94.00	356	274.50
Sum		7181.00	12850.00	9510.00	33424	29541.00

It is observed that the mean score for financial inclusion is 208.90. The mean score for financial literacy is 184.63.

The following table shows the number of firms falling above and below mean scores of financial inclusion and financial literacy:

Table 4.14

	Financial Inclusion	Financial Literacy
No. of firms falling below the mean score	78	65
No. of firms falling above the mean score	82	95
Total no. of firms	`160	160

It is observed that 48.8% of the firms from the sample fall below the mean with respect to financial inclusion. Further, 40.6% of the firms from the sample fall below the mean with respect to financial literacy.

CHAPTER 5

ANALYSIS OF DATA AND RESULTS

This chapter focuses on analysis of data and findings of the study. It presents the results of the quantitative study based on statistical tests followed by the interpretations of results. The chapter is divided into five sections.

Section 1 deals with data analysis and validation of objective 1 explicitly stated as hypotheses H_1, H_{1a}, H_{1b} and H_{1c}. The findings of the same are supported through Analysis of Variance (ANOVA) technique.

Sections 2 provides empirical support to explore objective 2 of this research. Assumptions for using linear regression technique are discussed in this chapter.

Section 3 discusses the findings with respect to hypothesis H_2. It examines whether there is a relationship between financial literacy and financial inclusion. The hypotheses are tested using simple linear regression. The section further explores the relationship between different dimensions of financial literacy and financial inclusion. Hypotheses H_3, H_{3a}, H_{3b}, **and** H_{3c} are tested using multiple linear regression.

Section 4 deals with validating results pertaining to objective 4 of this research. The findings pertaining to hypotheses H_4 of moderation tests are evaluated for analysis.

Section 5 focuses on examining whether there exists any association between: a. the dependent construct financial inclusion and firm specific characteristics of MSMEs; and b.

the independent construct financial literacy and firm specific characteristics of MSMEs. Chi Squared tests are used to validate objective 5 and 6 pertaining to identifying such association. Hypotheses ***H_5, H_6, H_7, H_8, H_9, H_{10}, H_{11}*, and *H_{12}*** are examined in this section.

SECTION 1:

This section focuses on data analysis and findings pertaining to objective 1 of the research, that being: ***to ascertain the relationship between Financial Inclusion amongst MSMEs and Financial Growth Stages.*** In order to arrive at conclusions, Analysis of Variance (ANOVA) technique is used.

5.1: ANALYSIS OF VARIANCE (ANOVA):

Analysis of variance (One Way ANOVA) is a statistical technique used to determine whether samples from two or more groups are derived from population with equal means (i.e., Do the group means differ significantly?). It is used to compare means of two or more samples. ANOVA examines one dependent variable (Financial Inclusion). It is used to test the differences among three groups, namely Financial Growth Stages 1, 2 and 3. The research questions framed for the same are:

1. Does Financial Inclusion differ significantly across Financial Growth Stages?
2. Between which two Financial Growth Stages of MSMEs is the variance for Financial Inclusion higher?

5.1.1: Testing of Hypothesis H_1, the statistical results and interpretation:

<u>Hypotheses:</u>

> ***H_0: There is no significant difference in Financial Inclusion across Financial Growth Stages of MSMEs.***
>
> ***H_1: There is a significant difference in Financial Inclusion across Financial Growth Stages of MSMEs.***

<u>Result of ANOVA:</u>

The following output is obtained:

Table 5.1

ANOVA					
TOTAL FINANCIAL INCLUSION					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	295771.613	2	147885.807	15.036	.000
Within Groups	1544162.787	157	9835.432		
Total	1839934.400	159			

<u>Interpretation:</u>

It is observed that there exists a statistically significant difference among the means of the groups at the α error level 0.01. The above table indicates that there is a significant difference ($p = 0.000$) between the means of financial inclusion across the three stages of financial growth in MSMEs. The result suggests to rejection of the null hypothesis that all the group means are the same, and coincidently supports that at least one group mean differs from other group means. Hence, we reject the null hypothesis and conclude that ***there is a significant difference in Financial Inclusion across Financial Growth Stages of MSMEs.*** It thus becomes imperative to proceed with the post hoc (Tukey) test to determine the extent of difference between the financial growth stages of a firm.

5.1.2: Testing of Hypotheses *H_{1a}, H_{1b}* and *H_{1c}*, the statistical results and interpretation:

Tukey's Test is a post-hoc test that compares the means of two or more groups. The ANOVA test does not indicate exactly where the differences lie. Hence, Tukey's HSD is run to find out which specific group's means (compared with each other) are different, that is, in which financial growth stages financial inclusion is higher? The test compares all possible pairs of means.

<u>Hypotheses:</u>

H_{1a}*: *Financial Inclusion between Financial Growth Stage 1 and Financial Growth Stage 2 of MSMEs will vary significantly.

H_{1b}*: *Financial Inclusion between Financial Growth Stage 2 and Financial Growth Stage 3 of MSMEs will vary significantly.

H_{1c}*: *Financial Inclusion between Financial Growth Stage 1 and Financial Growth Stage 3 of MSMEs will vary significantly.

<u>Result of Tukey's HSD:</u>

Table 5.2

Multiple Comparisons

Dependent Variable: TOTAL FINANCIAL INCLUSION
Tukey HSD

(I) FINANCIAL GROWTH STAGES	(J) FINANCIAL GROWTH STAGES	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Financial Growth Stage 1	Financial Growth Stage 2	-82.848*	17.347	.000	-123.89	-41.80
	Financial Growth Stage 3	33.114	24.567	.371	-25.02	91.24

Financial Growth Stage 2	Financial Growth Stage 1	82.848*	17.347	.000	41.80	123.89
	Financial Growth Stage 3	115.962*	26.094	.000	54.22	177.70
Financial Growth Stage 3	Financial Growth Stage 1	-33.114	24.567	.371	-91.24	25.02
	Financial Growth Stage 2	-115.962*	26.094	.000	-177.70	-54.22
*. The mean difference is significant at the 0.05 level.						

Interpretation:

Using the Tukey test, it can be concluded that Financial Inclusion in Financial Growth Stage 2 is highest as compared to the other stages. Financial Inclusion in Financial Growth Stage 1 is low as compared to Financial Inclusion in Financial Growth Stage 2. A difference in means to the extent of 82.85 is observed, significance is 0.000. Financial inclusion in Financial Growth Stage 2 is also higher than in stage 3. A difference in means to the extent of 115.96 is observed, significance is 0.000. However, the difference between Financial Inclusion between Financial Growth Stages 1 and 3 is not found to be significant (p = 0.371) since Financial Growth Stage 1 depicts a firm's initial stage whereas Financial Growth Stage 3 depicts a firm's decline stage. Hence we conclude that ***Financial Inclusion between Financial Growth Stage 1 and Financial Growth Stage 2 of MSMEs varies significantly; Financial Inclusion between Financial Growth Stage 2 and Financial Growth Stage 3 of MSMEs varies significantly.*** However we fail to accept that ***Financial Inclusion between Financial Growth Stage 1 and Financial Growth Stage 3 of MSMEs will vary significantly.***

SECTION 2:

This section deals with exploring the data to test and support hypothesis H_2. Linear Regression Technique is used for researching the relationship between Financial Inclusion amongst MSMEs and Financial Literacy. Linear regression will explain the variance in financial inclusion with proportionate increase in financial literacy of an MSME. However, in order to further explore this, the basic assumptions for regression needs to be tested, those being: normality, linearity, homoscedasticity and multicollinearity. This section focuses with testing these assumptions.

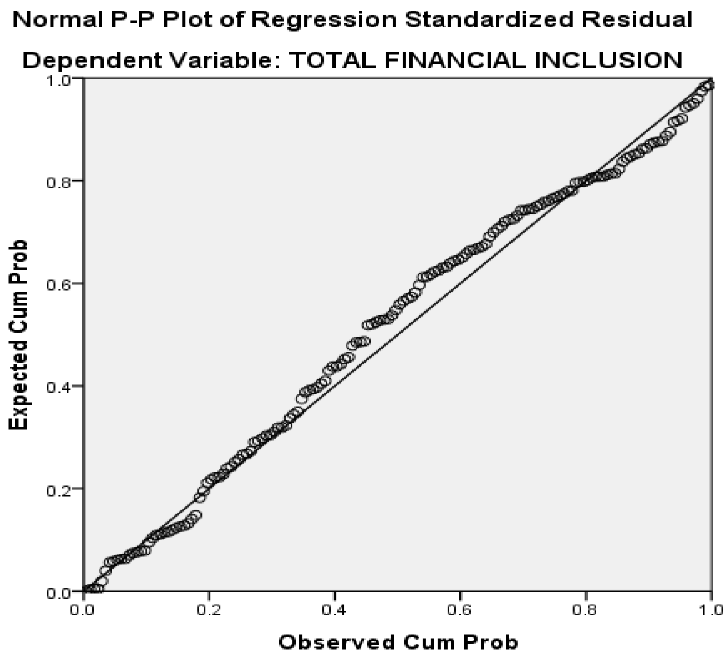
5.2.1: Normality Test:

In order to make valid inferences from regression, the residuals of the regression should follow a normal distribution. The residuals are the error terms, or the differences between the observed value of the dependent variable and the predicted value. The normal probability plot is designed specifically to test for this assumption of normality. The Normal Probability Plot (Chambers et al., 1983) is a graphical technique for assessing whether or not a data set is normally distributed. It provides sufficient evidence to examine if the data is normal or not (Ryan and Joiner, 1976). Generally, histograms, stem-and-leaf plots, box plots, percent-percent (P-P) plots, quantile-quantile (Q-Q) plots, plots of the empirical cumulative distribution function and other variants of probability plots have most application for normality assumption checking. (Das and Imon, 2016).

Normality test for Dependent Construct – Financial Inclusion:

In order to examine a normal Predicted Probability (P-P) plot, the residuals are said to be normally distributed if they conform to the diagonal normality line. Osborne and Waters (2002) state that regression assumes that variables have normal distributions. However, it has been emphasised that only the assumption of normally distributed errors is relevant to regression (Williams, Grajales and Kurkiewicz, 2013).

Figure 6



Interpretation:

From the above probability plot (P-Plot), it is observed that the residuals do follow a normal distribution. Hence, we conclude that the assumption of normality is met since there are no drastic deviations.

5.2.2: Linearity Test:

a. Test for linearity between Financial Inclusion and Factor 1 (Knowledge and Skills):

Table 5.3

ANOVA							
			Sum of Squares	df	Mean Square	F	Sig.
Financial Inclusion * Factor 1	Between Groups	(Combined)	1586620.333	100	15866.203	3.695	.000
		Linearity	978417.953	1	978417.953	227.886	.000
		Deviation from Linearity	608202.380	99	6143.458	1.431	.068
	Within Groups		253314.067	59	4293.459		
	Total		1839934.400	159			

b. Test for linearity between Financial Inclusion and Factor 2 (Awareness):

Table 5.4

ANOVA							
			Sum of Squares	df	Mean Square	F	Sig.
Financial Inclusion * Factor 2	Between Groups	(Combined)	680672.224	2	340336.112	46.092	.000
		Linearity	651912.757	1	651912.757	88.289	.000
		Deviation from Linearity	28759.467	1	28759.467	3.895	.050
	Within Groups		1159262.176	157	7383.836		
	Total		1839934.400	159			

c. Test for linearity between Financial Inclusion and Factor 3 (Attitude and Behavior):

Table 5.5

ANOVA							
			Sum of Squares	df	Mean Square	F	Sig.
Financial Inclusion * Factor 3	Between Groups	(Combined)	374215.773	32	11694.243	1.013	.459
		Linearity	101921.991	1	101921.991	8.831	.004
		Deviation from Linearity	272293.782	31	8783.670	.761	.809
	Within Groups		1465718.627	127	11541.092		
	Total		1839934.400	159			

d. Test for linearity between Financial Inclusion and Financial Literacy

Table 5.6

ANOVA							
			Sum of Squares	Df	Mean Square	F	Sig.
Total Financial Inclusion* Total Financial Literacy	Between Groups	(Combined)	1674807.400	132	12687.935	2.075	.015
		Linearity	997645.399	1	997645.399	163.126	.000
		Deviation from Linearity	677162.001	131	5169.176	.845	.738
	Within Groups		165127.000	27	6115.815		
	Total		1839934.400	159			

Interpretation:

It is observed that there is a linear relationship between all the variables measuring the independent construct Financial Literacy and the dependent construct Financial Inclusion.

Findings can thus be summarised as under:

Table 5.7 – Summary of Test for Linearity:

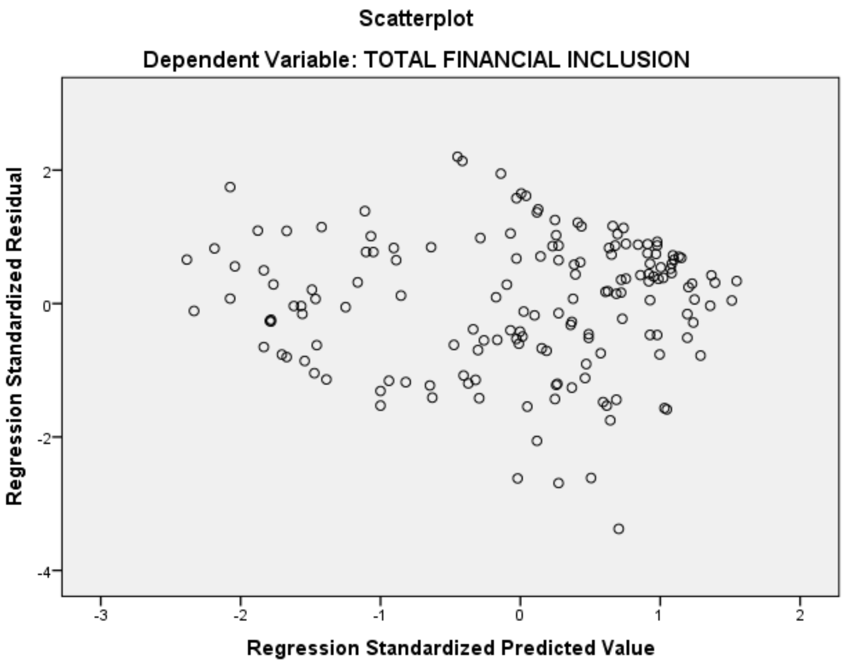
Dependent Variable	**Independent Variable**	**P – Value (Linearity)**	**P – Value (Deviation from Linearity)**	**Interpretation**
FINANCIAL INCLUSION	Factor 1 (Knowledge & Skills)	0.000	0.068	Significant; Relationship between variables is linear
	Factor 2 (Awareness)	0.000	0.050	Significant; Relationship between variables is linear
	Factor 3 (Attitude and Behavior)	0.004	0.809	Significant; Relationship between variables is linear
	Total Financial Literacy	0.000	0.738	Significant; Relationship between variables is linear

It can be concluded that predictor variables (knowledge and skills, awareness and attitude and behavior) in the regression have a straight-line relationship with the outcome variable (financial inclusion), thereby fulfilling the second assumption of linear regression.

5.2.3: Homoscedasticity of the data:

Homoscedasticity refers to whether these residuals are equally distributed, or whether they tend to bunch together at some values, and at other values, spread far apart. This can be checked by plotting the predicted values and residuals on a scatterplot.

Figure 7



Interpretation:

It can be observed from the above scatter plot that there are points equally distributed above and below zero on the X axis, and to the left and right of zero on the Y axis. Hence, we conclude that there exists no problem of heteroskedasticity, validating the third assumption of linear regression.

5.2.4: Absence of Multicollinearity: (for multiple linear regression).

Multicollinearity refers to when your predictor variables are highly correlated with each other. In severe cases (such as a perfect correlation between two or more predictors), multicollinearity can mean that no unique least squares solution to a regression analysis can be computed (Belsley, Kuh, & Welsch, 1980 as quoted in Williams, et al 2013). It is essential that this assumption of linear regression is met before proceeding to analyse the further. To confirm with the absence of multicollinearity Variance Inflation Factor (VIF) should be <10, indicating that there is no multicollinearity between the variables.

Table 5.8

Coefficients[a]									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	208.900	5.485		38.088	.000		
	REGR factor score 1 for analysis 1	56.591	5.502	.526	10.286	.000	1.000	1.000
	REGR factor score 2 for analysis 1	57.893	5.502	.538	10.522	.000	1.000	1.000
	REGR factor score 3 for analysis 1	17.196	5.502	.160	3.126	.002	1.000	1.000
a. Dependent Variable: FINANCIAL INCLUSION								

Interpretation:

From the above table, it is observed that the VIF for all the variables is 1, (< 5), thus enabling us to conclude that there is no multicollinearity between the variables, thereby meeting the fourth assumption of linear regression.

5.2.4: Conclusions:

It is observed that the assumptions for linear regression are met. Hence it propels this research to use parametric tests for data analysis. This research adopts technique of linear regression to test the hypotheses formulated for the purpose of this research.

SECTION 3:

This section aims to provide inferences pertaining to the following objectives: **a.** ***to examine the relationship between Financial Literacy amongst MSMEs and Financial Inclusion.*** **b.** ***to examine the relationship between various dimensions of Financial Literacy amongst MSMEs and Financial Inclusion.***

The following research questions are formulated for the same: 1. Is there relationship between Financial Literacy of MSMEs and Financial Inclusion; 2. What is the strength of relationship between Financial Literacy of MSMEs and Financial Inclusion? Simple Linear Regression technique is used for identifying if there exists a relationship between financial literacy and financial inclusion. This process will also elucidate the strength of such a relationship.

Further, this section aims to examine if any one factor of financial literacy has more impact on financial inclusion. The research question formulated for the same is: What is the strength of relationship between different dimensions of Financial Literacy of MSMEs and Financial Inclusion? The same will be tested using multiple linear regression which will determine the extent of variance in dependent construct due to variance in each of the independent factors.

5.3.1: Testing of Hypothesis H_2, statistical results and interpretation:

Correlation between Financial Literacy and Financial Inclusion:

Table 5.9

Correlations			
		Total Financial Inclusion	Total Financial Literacy
Total Financial Inclusion	Pearson Correlation	1	$.736^{**}$
	Sig. (2-tailed)		.000
	N	160	160

Total Financial Literacy	Pearson Correlation	.736**	1
	Sig. (2-tailed)	.000	
	N	160	160
**. Correlation is significant at the 0.01 level (2-tailed).			

It is observed that there exists a correlation between financial literacy amongst MSMEs and financial inclusion (p=0.000). The strength of the correlation is 0.736. The closer the value to 1, the higher is the correlation.

The simple linear regression model is used to study the relationship between the independent construct Financial Literacy and the dependent construct Financial Inclusion.

Hypotheses:

H_0: There is no significant relationship between Financial Literacy of MSMEs and Financial Inclusion of MSMEs.

H_1: There is a significant relationship between Financial Literacy of MSMEs and Financial Inclusion of MSMEs.

The model for this study can be subsequently expressed through an equation:

$$\boldsymbol{y = \alpha + \beta x + e} \qquad \text{(Equation 1)}$$

Where y = dependent variable Financial Inclusion; α = regression constant, β = coefficient, x = independent variable Financial Literacy, e = error term.

5.3.2: Results of simple linear regression:

Table 5.10

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.736[a]	.542	.539	73.013
a. Predictors: (Constant), Total Financial Literacy				
b. Dependent Variable: TOTAL FINANCIAL INCLUSION				

Interpretation:

The research model predicts financial inclusion. R denotes the correlation between predicted and observed financial inclusion. For this research model, R = 0.736. Since this is a very high correlation, our model predicts financial inclusion. R Square of 0.542 indicates the proportion of variance in the predicted variable financial inclusion that can be "explained" by our predictor variable Financial Literacy.

Table 5.11

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-42.708	19.277		-2.215	.028		
	Total Financial Literacy	1.363	.100	.736	13.680	.000	1.000	1.000
a. Dependent Variable: TOTAL FINANCIAL INCLUSION								

Interpretation:

It is observed that there exists a linear relationship between financial literacy and financial inclusion. The column "Sig." holds the significance levels for our predicted variable (financial inclusion). A beta coefficient is statistically significant if its p-value < *0.05. The* beta coefficient here is 0.000, thus making it statistically significant.

The model, depicted by substituting relevant values in equation 1, can now be stated as:

$$\boldsymbol{y = -42.708 + 1.363 * x + e} \quad \text{(Equation 2a)}$$

$$\boldsymbol{Financial\ Inclusion = -42.708 + 1.363 * Financial\ Literacy + e} \quad \text{(Equation 2b)}$$

The equations stated above implies that a change in *y* is *β* times change in *x*. The relationship is said to be linear when one unit change in the predictor variable *x* (Financial Literacy) will lead to an approximate increase (α) in the predicted variable *y* (Financial Inclusion). Hence, we reject the null hypothesis and conclude that ***there is a significant relationship between Financial Literacy of MSMEs and Financial Inclusion of MSMEs.***

5.3.3: Testing of Hypothesis H_3, the statistical results and interpretation:

Multiple regression is used to research the relationship between Financial Inclusion amongst MSMEs and dimensions of Financial Literacy. The following objective is assessed: ***to examine the relationship between various dimensions of Financial Literacy amongst MSMEs and Financial Inclusion.*** It aims to provide support to the research question: What is the strength of relationship between different dimensions of Financial Literacy and Financial Inclusion?

<u>Hypotheses:</u>

H_0: There is no significant relationship between different dimensions of Financial Literacy of MSMEs and Financial Inclusion of MSMEs.

H_1: There is a significant relationship between different dimensions of Financial Literacy of MSMEs and Financial Inclusion of MSMEs.

It may be recalled that financial literacy is the combination of awareness, knowledge, skills, attitude and behavior. These are identified as dimensions of financial literacy. Exploratory factor analysis conducted for the purpose of this research had identified three factors, namely a. Knowledge and Skills; b. Awareness and c. Attitude and Behavior as the factors/dimensions of financial literacy. Hence, the research model can be expressed by taking into account these three dimensions (factors) of financial literacy as follows:

$$\boldsymbol{y = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + e} \qquad \text{(Equation 3)}$$

Where y = dependent variable Financial Inclusion; α = regression constant, β_1 = coefficient for factor 1, x_1 = independent factor 1 (knowledge and skills), $\beta 2$ = coefficient for factor 2, x_2 = independent factor 2 (awareness), β_2 = coefficient for factor 3, x_3 = independent factor 3 (attitude and behavior), e = error term.

5.3.4: Results of Multiple Linear Regression:

Table 5.12

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.769[a]	.592	.584	69.375
a. Predictors: (Constant), REGR factor score 3 for analysis 1, REGR factor score 2 for analysis 1, REGR factor score 1 for analysis 1				
b. Dependent Variable: TOTAL FINANCIAL INCLUSION				

Interpretation:

The research model predicts financial inclusion. R denotes the correlation between predicted and observed financial inclusion. For this research model, R = 0.769. R Square of 0.592 indicates the proportion of variance in the predicted variable financial inclusion that can be "explained" by our predictor variables knowledge and skills, awareness and attitude and behavior.

Table 5.13

Coefficients[a]									
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	208.900	5.485		38.088	.000		
	REGR factor score 1 for analysis 1	56.591	5.502	.526	10.286	.000	1.000	1.000
	REGR factor score 2 for analysis 1	57.893	5.502	.538	10.522	.000	1.000	1.000
	REGR factor score 3 for analysis 1	17.196	5.502	.160	3.126	.002	1.000	1.000
a. Dependent Variable: TOTAL FINANCIAL INCLUSION								

Interpretation:

It is observed that there exists a linear relationship between the dimensions (factors) of financial literacy and financial inclusion. The column "Sig." holds the significance levels for our predicted variable (financial inclusion). The beta coefficients are statistically significant, (p-value < *0.05).*

The equation derived from the above model statistics can thus be presented as:

$$y = 208.90 + 56.59 * x_1 + 57.89 * x_2 + 17.19 * x_3 + e \qquad \text{(Equation 4a)}$$

$$\text{Financial Inclusion} = 208.90 + 56.59 * (\text{Knowledge and Skills}) + 57.89 * (\text{Awareness}) + 17.19 * (\text{Attitude and Behavior}) + e \qquad \text{(Equation 4b)}$$

Interpretation:

Factor 1 explains 52.6% variance with respect to financial inclusion, factor 2 explains 53.8% and factor 3 has 16% variance. As such, Factor 1 (Knowledge and Skills) predicts more variance as compared to Factor 2 (Awareness) and Factor 3 (Attitude and Behavior). It can be construed that the dimension "awareness" and "knowledge and skills" have more influence on Financial Inclusion and "attitude and behavior" has a lower influence on Financial Inclusion amongst the three dimensions. Hence, we reject the null hypothesis and conclude that ***there is significant relationship between different dimensions of Financial Literacy of MSMEs and Financial Inclusion.***

SECTION 4:

This section explores the fourth objective of this research, that being: ***to examine the role of Financial Literacy as the moderating factor between Financial Growth Stages of a firm and Financial Inclusion.*** The research question formulated is: Does financial literacy significantly moderate relationship between growth stages of an MSME and financial inclusion?

5.4.1: Testing of Hypothesis H_4, the statistical results and interpretation:

Hypotheses researching the moderating effect of Financial Literacy between Financial Inclusion amongst MSMEs and Financial Growth Stages is as follows:

Hypotheses:

H_0: Financial Literacy does not significantly moderate the relationship between Financial Growth Stages of MSMEs and Financial Inclusion of MSMEs.

H_1: Financial Literacy significantly moderates the relationship between Financial Growth Stages of MSMEs and Financial Inclusion of MSMEs.

The research model can be articulated by taking into account the moderation terms. It can be expressed as follows:

$$y = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_1 x_2 + e \qquad \text{(Equation 5)}$$

Where y = dependent variable Financial Inclusion; α = regression constant, β_1 = coefficient for variable 1, x_1 = independent variable 1 (Financial Growth Stages), β_2 = coefficient for variable 2, x_2 = independent variable 2 (Financial Literacy), β_3 = coefficient for interaction term, x_1x_2 = Interaction term of independent variables 1 and 2, e = error term.

5.4.2: Results of Moderation Test:

Table 5.14

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.739[a]	.546	.540	72.956	.546	94.344	2	157	.000
2	.743[b]	.551	.543	72.732	.006	1.967	1	156	.163

a. Predictors: (Constant), Total Financial Literacy, Financial Growth Stages

b. Predictors: (Constant), Total Financial Literacy, Financial Growth Stages, inGSXFACFL

Interpretation:

There are two research models depicted in the above table. **Model 1** predicts the relationship between the dependent variable Financial Inclusion and two independent variables, Financial Growth Stages of a firm and Financial Literacy. R denotes the correlation between predicted and observed financial inclusion. For this research model, R = 0.739. Since this is a very high correlation, our model predicts financial inclusion depending on both the predictor variables rather precisely. R Square of 0.540 indicates the proportion of variance in the predicted variable financial inclusion that can be "explained" by our predictor variables. The model has a p value of 0.000, thereby indicating it to be an ideal model fit.

Model 2 attempts to examine the role of Financial Literacy as a moderating factor in the relationship between Financial Growth Stages and Financial Inclusion. Since the significance is 0.163 ($p > 0.05$), it does not prove to be an ideal fit for the model. Coefficients for the same are explored below:

Table 5.15

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-56.776	23.009		-2.468	.015
	Financial Growth Stages	9.170	8.204	.060	1.118	.265
	Total Financial Literacy	1.361	.100	.735	13.668	.000
2	(Constant)	-4.883	43.534		-.112	.911
	Financial Growth Stages	-20.918	22.960	-.137	-.911	.364
	Total Financial Literacy	1.043	.248	.563	4.212	.000
	inGSXFACFL	.186	.133	.274	1.403	.163

a. Dependent Variable: TOTAL FINANCIAL INCLUSION

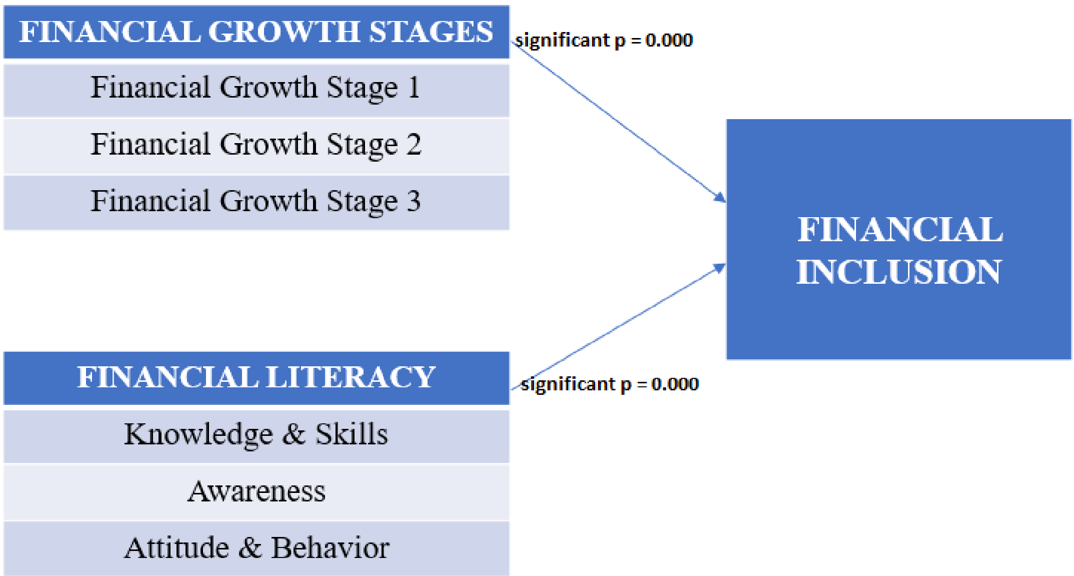
Interpretation:

It is observed that for Model 1 there exists a linear relationship between Financial Growth Stages, Financial Literacy and Financial Inclusion. The column "Sig." holds the significance levels for our predicted variable (financial inclusion). The beta coefficients are statistically significant, (p-value < *0.05).*

If the β_3 coefficient for the x_1x_2 product term in the regression is statistically significant, this is interpreted as a statistically significant interaction between x_1 and x_2 as predictors of y. However, for Model 2 examining the role of financial literacy as a moderator, the significance is 0.163 (p>0.05). Hence it can be noticed that the role of financial literacy as a moderator does not hold true. Thus, we fail to reject the null hypothesis and conclude that ***Financial Literacy does not significantly moderate the relationship between Financial Growth Stages of MSMEs and Financial Inclusion of MSMEs.***

5.4.3: Revised Model depicting Financial Inclusion in Micro, Small and Medium Enterprises (MSMEs): Impact of Financial Growth Stages and Financial Literacy:

Figure 8



5.4.4: Conclusions for hypotheses testing: (Table 5.16):

Number	Hypotheses	p value, significance @ 5%	Interpretation
H_1	***There is a significant difference in financial inclusion across financial growth stages of MSMEs.***	0.000	Significant, Hypothesis Supported
H_{1a}	***Financial inclusion between financial growth stage 1 and financial growth stage 2 of MSMEs will vary significantly.***	0.000	Significant, Hypothesis Supported
H_{1b}	***Financial inclusion between financial growth stage 2 and financial growth stage 3 of MSMEs will vary significantly.***	0.000	Significant, Hypothesis Supported
H_{1c}	***Financial inclusion between financial growth stage 1 and financial growth stage 3 of MSMEs will vary significantly.***	0.371	Not Significant, Hypothesis not supported.
H_2	***There is significant relationship between financial literacy of MSMEs and financial inclusion.***	0.000	Significant, Hypothesis Supported
H_3	***There is a significant relationship between different dimensions of financial literacy of MSMEs and financial inclusion.***	0.000	Significant, Hypothesis Supported
H_{3a}	***There is a significant relationship between knowledge and skills of MSMEs and financial inclusion.***	0.000	Significant, Hypothesis Supported
H_{3b}	***There is a significant relationship between awareness of MSMEs and financial inclusion.***	0.000	Significant, Hypothesis Supported

H_{3c}	***There is a significant relationship between attitude and behavior of MSMEs and financial inclusion.***	0.002	Significant, Hypothesis Supported
H_4	***Financial literacy significantly moderates the relationship between financial growth stages of MSMEs and financial inclusion of MSMEs.***	0.163	Not Significant, Hypothesis not supported.

SECTION 5:

This section deals with finding out if there exists any association between the dependent construct (financial inclusion) and the demographic characteristics of the MSMEs. Similarly, it also tests whether there is any association between the independent construct (financial literacy) and the demographic characteristics of the MSMEs. Chi Squared test of association is used to validate objectives 5 and 6 of this research. The chi-square test for independence, also called Pearson's chi-square test or the chi-square test of association, is used to discover if there is a relationship between two categorical variables. It is used to determine whether there is a significant difference between the expected frequencies and observed frequencies in one or more categories.

5.5.1: Chi-Square Test for Association between Firm Characteristics and Dependent Construct (Financial Inclusion)

One of the objectives of this research is ***to ascertain whether there is any association between Financial Inclusion amongst MSMEs and firm specific characteristics like forms of organization, methods of manufacturing, types of markets they cater to and their total net worth.*** The research questions formulated to test the same is: Is there a significant association between financial inclusion amongst MSMEs and firm specific characteristics?

a. Testing of Hypothesis H_5, the statistical results and interpretation:

H_0: There is no significant association between Financial Inclusion of MSMEs and their forms of organizations.

H_1: There is a significant association between Financial Inclusion of MSMEs and their forms of organizations.

Results:

Table 5.17

Form Of Organization* Financial Inclusion Crosstabulation

			FINANCIAL INCLUSION			Total
			High	Medium	Low	
FORM	Sole Proprietorship	Count	22	28	30	80
		% Within Form	27.5%	35.0%	37.5%	100.0%
		% Within Financial Inclusion	33.8%	52.8%	71.4%	50.0%
	Partnership	Count	20	13	7	40
		% Within Form	50.0%	32.5%	17.5%	100.0%
		% Within Financial Inclusion	30.8%	24.5%	16.7%	25.0%
	Company	Count	23	12	5	40
		% Within Form	57.5%	30.0%	12.5%	100.0%
		% Within Financial Inclusion	35.4%	22.6%	11.9%	25.0%
Total		Count	65	53	42	160
		% Within Form	40.6%	33.1%	26.2%	100.0%
		% Within Financial Inclusion	100.0%	100.0%	100.0%	100.0%

It can be observed that 30 out of 42 firms (71.4%) having low financial inclusion belong to the "sole proprietorship" composition. 65 firms have high financial inclusion, of which 23 firms (57.5%) are of company constitution.

Table 5.18

Chi-Square Tests			
	Value	**Df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	15.174[a]	4	.004
Likelihood Ratio	15.632	4	.004
Linear-by-Linear Association	14.052	1	.000
N of Valid Cases	160		

Interpretation:

The value of the test statistics is 15.174. The degree of freedom for the same is 4. The corresponding p-value of the test statistics is 0.004. Since the p-value is less than our chosen significance level $\alpha = 0.05$, we reject the null hypothesis, and conclude that ***there is an association between financial inclusion and forms of organization.***

b. Testing of Hypothesis H_6, the statistical results and interpretation:

H_0: There is no significant association between Financial Inclusion of MSMEs and methods of manufacturing employed by them.

H_1: There is a significant association between Financial Inclusion of MSMEs and methods of manufacturing employed by them.

Results:

Table 5.19

<table>
<tr><th colspan="7">Methods Of Manufacturing * Financial Inclusion Crosstabulation</th></tr>
<tr><td colspan="3" rowspan="2"></td><td colspan="3">FINANCIAL INCLUSION</td><td rowspan="2">Total</td></tr>
<tr><td>High</td><td>Medium</td><td>Low</td></tr>
<tr><td rowspan="9">Methods of Manufacturing</td><td rowspan="3">Machine Intensive</td><td>Count</td><td>32</td><td>21</td><td>16</td><td>69</td></tr>
<tr><td>% within Methods of Manufacturing</td><td>46.4%</td><td>30.4%</td><td>23.2%</td><td>100.0%</td></tr>
<tr><td>% within Financial Inclusion</td><td>49.2%</td><td>39.6%</td><td>38.1%</td><td>43.1%</td></tr>
<tr><td rowspan="3">Labour Intensive</td><td>Count</td><td>15</td><td>10</td><td>14</td><td>39</td></tr>
<tr><td>% within Methods of Manufacturing</td><td>38.5%</td><td>25.6%</td><td>35.9%</td><td>100.0%</td></tr>
<tr><td>% within Financial Inclusion</td><td>23.1%</td><td>18.9%</td><td>33.3%</td><td>24.4%</td></tr>
<tr><td rowspan="3">Both Machine and Labour</td><td>Count</td><td>18</td><td>22</td><td>12</td><td>52</td></tr>
<tr><td>% within Methods of Manufacturing</td><td>34.6%</td><td>42.3%</td><td>23.1%</td><td>100.0%</td></tr>
<tr><td>% within Financial Inclusion</td><td>27.7%</td><td>41.5%</td><td>28.6%</td><td>32.5%</td></tr>
<tr><td colspan="2" rowspan="3">Total</td><td>Count</td><td>65</td><td>53</td><td>42</td><td>160</td></tr>
<tr><td>% within Methods of Manufacturing</td><td>40.6%</td><td>33.1%</td><td>26.2%</td><td>100.0%</td></tr>
<tr><td>% within Financial Inclusion</td><td>100.0%</td><td>100.0%</td><td>100.0%</td><td>100.0%</td></tr>
</table>

From the above table, it is evident that 32 firms out of 65 firms having high financial inclusion are using machine intensive method of manufacturing. 39 firms out of the total sample (24.4%) use labour intensive technique. However, 32.5% firms use both machine as well as labour intensive methods of manufacturing.

Table 5.20

Chi-Square Tests			
	Value	**Df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	5.032[a]	4	.284
Likelihood Ratio	4.860	4	.302
Linear-by-Linear Association	.735	1	.391
N of Valid Cases	160		

Interpretation:

The value of the test statistics is 5.032. The degree of freedom for the same is 4. The corresponding p-value of the test statistics is 0.284. Since the p-value is more than our chosen significance level $\alpha = 0.05$, we fail to reject the null hypothesis, and conclude that ***there is no association between financial inclusion and methods of manufacturing.***

c. Testing of Hypothesis H_7, the statistical results and interpretation:

H_0: There is no significant association between Financial Inclusion of MSMEs and the markets they cater to.

H_1: There is a significant association between Financial Inclusion of MSMEs and the markets they cater to.

Results:

Table 5.21

Markets Catered To * Financial Inclusion Crosstabulation						
			FINANCIAL INCLUSION			Total
			High	Medium	Low	
Markets Catered To	Local	Count	20	25	22	67
		% within Markets	29.9%	37.3%	32.8%	100.0%
		% within Financial Inclusion	30.8%	47.2%	52.4%	41.9%
	Regional	Count	26	18	15	59
		% within Markets	44.1%	30.5%	25.4%	100.0%
		% within Financial Inclusion	40.0%	34.0%	35.7%	36.9%
	National	Count	14	8	4	26
		% within Markets	53.8%	30.8%	15.4%	100.0%
		% within Financial Inclusion	21.5%	15.1%	9.5%	16.2%
	International	Count	5	2	1	8
		% within Markets	62.5%	25.0%	12.5%	100.0%
		% within Financial Inclusion	7.7%	3.8%	2.4%	5.0%
Total		Count	65	53	42	160
		% within Markets	40.6%	33.1%	26.2%	100.0%
		% within Financial Inclusion	100.0%	100.0%	100.0%	100.0%

The above table depicts that 41.9% firms have market reach limited to local state limits. 42 firms out of the total sample have low financial inclusion, 52.4% of which belong to the "local markets" category. Out of the 65 firms having high financial inclusion, 40% firms cater to regional markets.

Table 5.22

Chi-Square Tests			
	Value	**Df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	7.695[a]	6	.261
Likelihood Ratio	7.917	6	.244
Linear-by-Linear Association	7.049	1	.008
N of Valid Cases	160		

Interpretation:

The value of the test statistics is 7.695. The degree of freedom for the same is 6. The corresponding p-value of the test statistics is 0.261. Since the p-value is more than our chosen significance level α = 0.05, we fail to reject the null hypothesis, and conclude that ***there is no association between financial inclusion and markets that they cater to.***

d. Testing of Hypothesis H_8, the statistical results and interpretation:

> ***H_0: There is no significant association between Financial Inclusion of MSMEs and their net worth.***
>
> ***H_1: There is a significant association between Financial Inclusion of MSMEs and their net worth.***

Results:

Table 5.23

Net Worth * Financial Inclusion Crosstabulation						
			FINANCIAL INCLUSION			Total
			High	Medium	Low	
Net Worth	< Rs 1 Cr	Count	16	17	21	54
		% within Net Worth	29.6%	31.5%	38.9%	100.0%
		% within Financial Inclusion	24.6%	32.1%	50.0%	33.8%
	Between Rs 1 Cr - Rs 5 Cr	Count	22	26	19	67
		% within Net Worth	32.8%	38.8%	28.4%	100.0%
		% within Financial Inclusion	33.8%	49.1%	45.2%	41.9%
	Between Rs 5 Cr-Rs 10 Cr	Count	10	5	2	17
		% within Net Worth	58.8%	29.4%	11.8%	100.0%
		% within Financial Inclusion	15.4%	9.4%	4.8%	10.6%
	Between Rs 10 Cr-Rs 20 Cr	Count	14	4	0	18
		% within Net Worth	77.8%	22.2%	0.0%	100.0%
		% within Financial Inclusion	21.5%	7.5%	0.0%	11.2%
	Above Rs 20 Cr	Count	3	1	0	4
		% within Net Worth	75.0%	25.0%	0.0%	100.0%
		% within Financial Inclusion	4.6%	1.9%	0.0%	2.5%
Total		Count	65	53	42	160
		% within Net Worth	40.6%	33.1%	26.2%	100.0%
		% within Financial Inclusion	100.0%	100.0%	100.0%	100.0%

It is observed that 50% of the firms with net worth below Rs 1 crore have low financial inclusion. Also, 10 firms out of 17 (58.8%) having net worth between Rs 5 crores to Rs 10 crores; 14 firms out of 18 (77.8%) having net worth between Rs 10 crores to Rs 15 crores; and 3 firms out of 4 (75%) having net worth above Rs 20 crores have high financial inclusion.

Table 5.24

Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	23.300[a]	8	.003
Likelihood Ratio	27.590	8	.001
Linear-by-Linear Association	20.168	1	.000
N of Valid Cases	160		

Interpretation:

The value of the test statistics is 23.300. The degree of freedom for the same is 8. The corresponding p-value of the test statistics is 0.003. Since the p-value is less than our chosen significance level α = 0.05, we reject the null hypothesis, and conclude that ***there is an association between financial inclusion and net worth of the MSMEs.***

5.5.2: Chi-Square Test for Association Between Firm Characteristics and Independent Construct (Financial Literacy)

Research objective expressed to assess the same is t***o ascertain whether there is any association between Financial Literacy amongst MSMEs and firm specific characteristics like forms of organization, methods of manufacturing, types of markets they cater to and their total net worth.*** The research questions formulated to test the same is: Is there a significant association between Financial Literacy amongst MSMEs and firm specific characteristics?

a. Testing of Hypothesis *H_9*, the statistical results and interpretation:

H_0: There is no significant association between Financial Literacy of MSMEs and their forms of organizations.

H_1: There is a significant association between Financial Literacy of MSMEs and their forms of organizations.

Results:

Table 5.25

Form Of Organization* Financial Literacy Crosstabulation

			FINANCIAL LITERACY			Total
			High	Medium	Low	
Form	Sole Proprietorship	Count	32	29	19	80
		% within Form	40.0%	36.2%	23.8%	100.0%
		% within Financial Literacy	41.6%	49.2%	79.2%	50.0%
	Partnership	Count	19	17	4	40
		% within Form	47.5%	42.5%	10.0%	100.0%
		% within Financial Literacy	24.7%	28.8%	16.7%	25.0%
	Company	Count	26	13	1	40
		% within Form	65.0%	32.5%	2.5%	100.0%
		% within Financial Literacy	33.8%	22.0%	4.2%	25.0%
Total		Count	77	59	24	160
		% within Form	48.1%	36.9%	15.0%	100.0%
		% within Financial Literacy	100.0%	100.0%	100.0%	100.0%

From the table, it could be seen that 48.1 % firm have high financial literacy, 41.6% of which are sole proprietorship concerns. Out of the 40 firms having partnership and company constitution each, 47.5% and 65% firms respectively have high financial literacy.

Table 5.26

Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	12.944[a]	4	.012
Likelihood Ratio	14.486	4	.006
Linear-by-Linear Association	11.044	1	.001
N of Valid Cases	160		

Interpretation:

The value of the test statistics is 12.94. The degree of freedom for the same is 4. The corresponding p-value of the test statistics is 0.012. Since the p-value is less than significance level α = 0.05, we reject the null hypothesis, and conclude that ***there is association between financial literacy and forms of organization.***

b. Testing of Hypothesis H_{10}, the statistical results and interpretation:

H_0: There is no significant association between Financial Literacy of MSMEs and methods of manufacturing employed by them.

H_1: There is a significant association between Financial Literacy of MSMEs and methods of manufacturing employed by them.

Results:

Table 5.27

Methods Of Manufacturing * Financial Literacy Crosstabulation						
			FINANCIAL LITERACY			Total
			High	Medium	Low	
Methods Of Manufacturing	Machine Intensive	Count	38	23	8	69
		% within Methods Of Manufacturing	55.1%	33.3%	11.6%	100.0%
		% within Financial Literacy	49.4%	39.0%	33.3%	43.1%
	Labour Intensive	Count	15	11	13	39
		% within Methods Of Manufacturing	38.5%	28.2%	33.3%	100.0%
		% within Financial Literacy	19.5%	18.6%	54.2%	24.4%
	Both Machine and Labour	Count	24	25	3	52
		% within Methods Of Manufacturing	46.2%	48.1%	5.8%	100.0%
		% within Financial Literacy	31.2%	42.4%	12.5%	32.5%
Total		Count	77	59	24	160
		% within Methods Of Manufacturing	48.1%	36.9%	15.0%	100.0%
		% within Financial Literacy	100.0%	100.0%	100.0%	100.0%

It is observed that out of the 43.1% firms from the sample following machine intensive method of manufacturing, 55.1% (38 firms) have high financial literacy. Further, 13 firms have low financial literacy and follow labour intensive method of manufacturing. 15% of the total firms follow both labour as well as machine intensive methods and have high financial literacy.

Table 5.28

Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	16.516[a]	4	.002
Likelihood Ratio	15.146	4	.004
Linear-by-Linear Association	.181	1	.670
N of Valid Cases	160		

Interpretation:

The value of the test statistics is 16.51. The degree of freedom for the same is 4. The corresponding p-value of the test statistics is 0.002. Since the p-value is less than our chosen significance level α = 0.05, we reject the null hypothesis, and conclude that ***there is an association between financial literacy and methods of manufacturing.***

c. Testing of Hypothesis H_{11}, the statistical results and interpretation:

H_0: There is no significant association between Financial Literacy of MSMEs and the markets they cater to.

H_1: There is a significant association between Financial Literacy of MSMEs and the markets they cater to.

Results:

Table 5.29 - Markets Catered To * Financial Literacy Crosstabulation						
			FINANCIAL LITERACY			Total
			High	Medium	Low	
Markets Catered To	Local	Count	23	25	19	67
		% within Markets	34.3%	37.3%	28.4%	100.0%
		% within Financial Literacy	29.9%	42.4%	79.2%	41.9%
	Regional	Count	31	25	3	59
		% within Markets	52.5%	42.4%	5.1%	100.0%
		% within Financial Literacy	40.3%	42.4%	12.5%	36.9%
	National	Count	18	7	1	26
		% within Markets	69.2%	26.9%	3.8%	100.0%
		% within Financial Literacy	23.4%	11.9%	4.2%	16.2%
	International	Count	5	2	1	8
		% within Markets	62.5%	25.0%	12.5%	100.0%
		% within Financial Literacy	6.5%	3.4%	4.2%	5.0%
Total		Count	77	59	24	160
		% within Markets	48.1%	36.9%	15.0%	100.0%
		% within Financial Literacy	100.0%	100.0%	100.0%	100.0%

It is observed that 5 out of 8 firms (62.5%) catering to international markets have high financial literacy. Further, 19 out of 67 firms (28.4%) firms catering to the local markets have low financial literacy. Overall, 59 out of 160 firms (36.9%) have medium financial literacy, 42.4% cater to local and regional markets each, 11.9% cater to the national market and 3.4% cater to the international markets.

Table 5.30

Chi-Square Tests			
	Value	**Df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	21.158[a]	6	.002
Likelihood Ratio	21.814	6	.001
Linear-by-Linear Association	13.492	1	.000
N of Valid Cases	160		

Interpretation:

The value of the test statistics is 21.15. The degree of freedom for the same is 6. The corresponding p-value of the test statistics is 0.002. Since the p-value is less than our chosen significance level α = 0.05, we reject the null hypothesis, and conclude that ***there is an association between financial literacy and markets catered to by the MSMEs.***

d. Testing of Hypothesis H_{12}, the statistical results and interpretation:

H_0: There is a significant association between Financial Literacy of MSMEs and their net worth.

H_1: There is a significant association between Financial Literacy of MSMEs and their net worth.

Results:

Table 5.31

Net Worth * Financial Literacy Crosstabulation						
			FINANCIAL LITERACY			Total
			High	Medium	Low	
Net Worth	< Rs 1 Cr	Count	17	20	17	54
		% within Net Worth	31.5%	37.0%	31.5%	100.0%
		% within Financial Literacy	22.1%	33.9%	70.8%	33.8%
	Between Rs 1 Cr - Rs 5 Cr	Count	30	31	6	67
		% within Net Worth	44.8%	46.3%	9.0%	100.0%
		% within Financial Literacy	39.0%	52.5%	25.0%	41.9%
	Between Rs 5 Cr - Rs 10 Cr	Count	12	4	1	17
		% within Net Worth	70.6%	23.5%	5.9%	100.0%
		% within Financial Literacy	15.6%	6.8%	4.2%	10.6%
	Between Rs 10 Cr - Rs 20 Cr	Count	14	4	0	18
		% within Net Worth	77.8%	22.2%	0.0%	100.0%
		% within Financial Literacy	18.2%	6.8%	0.0%	11.2%
	Above Rs 20 Cr	Count	4	0	0	4
		% within Net Worth	100.0%	0.0%	0.0%	100.0%
		% within Financial Literacy	5.2%	0.0%	0.0%	2.5%
Total		Count	77	59	24	160
		% within Net Worth	48.1%	36.9%	15.0%	100.0%
		% within Financial Literacy	100.0%	100.0%	100.0%	100.0%

It is observed that out of the 54 firms having net worth below Rs 1 crore, 31.5% have low financial literacy. It is also evident that 70.8% of firms having low financial literacy fall in the below Rs 1 crore net worth bracket. All firms having net worth above Rs 20 crores have high financial literacy. About 70% firms having net worth above Rs 5 crores and below Rs 20 crores have high financial literacy.

Table 5.32

Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	31.173[a]	8	.000
Likelihood Ratio	33.472	8	.000
Linear-by-Linear Association	23.974	1	.000
N of Valid Cases	160		

Interpretation:

The value of the test statistics is 31.17. The degree of freedom for the same is 8. The corresponding p-value of the test statistics is 0.000. Since the p-value is less than our chosen significance level $\alpha = 0.05$, we reject the null hypothesis, and conclude that ***there is an association between financial literacy and net worth of the MSMEs.***

5.2.3: Summary of Section 5 (Chi-Square Test Results for Association):

Table 5.33:

Dependent Variable	Independent Variable	Test Statistics	P – Value	Result: P Value v/s Test Statistics	Interpretation
FINANCIAL INCLUSION	**Form of Organization**	**15.174**	**0.004**	**p value < 0.05**	**Accept H_5: Association between variables**
	Methods of Manufacturing	5.032	0.284	p value > 0.05	Insignificant relationship; no association between variables
	Markets Catered to	7.695	0.261	p value > 0.05	Insignificant relationship; no association between variables
	Net Worth	**23.30**	**0.003**	**p value < 0.05**	**Accept H_8: Association between variables**
FINANCIAL LITERACY	**Form of Organization**	**12.944**	**0.012**	**p value < 0.05**	**Accept H_9: Association between variables**
	Methods of Manufacturing	**16.516**	**0.002**	**p value < 0.05**	**Accept H_{10}: Association between variables**
	Markets Catered to	**21.158**	**0.002**	**p value < 0.05**	**Accept H_{11}: Association between variables**
	Net Worth	**31.173**	**0.000**	**p value < 0.05**	**Accept H_{12}: Association between variables**

It is observed that there is association between financial inclusion and forms of organization (sole proprietorship / partnership / company) and financial inclusion and net worth of the MSMEs. However, there is no significant association between financial inclusion and methods of manufacturing adopted by the MSMEs as well as the markets that they cater to.

It is evident from the above table that there does exist an association between Financial Literacy and forms of organization; Financial Literacy and methods of manufacturing; Financial Literacy and markets catered to; and Financial Literacy and net worth.

CHAPTER 6

CONCLUSIONS, CONTRIBUTIONS, MANAGERIAL IMPLICATIONS AND FUTURE RESEARCH AREAS

This chapter is divided into four sections. Section 1 lists the summary of conclusions of this research. Section 2 provides the details of contributions made to the existing literature. Section 3 points out the limitations of this research, the implications to the managerial segment and the areas and scope for future research.

SECTION 1:

6.1: SUMMARY OF CONCLUSIONS:

The findings of this research could be summarized as under:

1. It was observed that there is a significant difference between the means of financial inclusion in financial growth stage 1 and 2 and means of financial inclusion in financial growth stage 2 and 3. It could be concluded that financial inclusion in financial growth stage 2 is highest as compared to the financial growth stages 1 and 3.

2. Prior definition by OECD identified five dimensions of financial literacy, namely awareness, knowledge, skills, attitude and behavior. For this research, conduct of Exploratory Factor Analysis, these dimensions were regrouped into three dimensions (factors) of financial literacy, namely, a. knowledge and skills, b. awareness and c. attitude and behavior. These three dimensions explained a total of 64.69 % of the variance in the pattern of relationships among the 12 items that were used to measure financial literacy.

3. In this research, after conducting exploratory factor analysis, it was observed that there exists a significant relationship between financial literacy and financial inclusion amongst MSMEs. Both the constructs were found to be highly correlated. It could be concluded that as financial literacy increases, there will be an increase in financial inclusion of the MSMEs.

4. All the three dimensions of financial literacy, as identified through exploratory factor analysis revealed to have a significant relationship with financial inclusion. It was construed that the dimensions "awareness" and "knowledge and skills" have more influence on financial inclusion, as compared to "attitude and behavior".

5. This research attempted to determine whether an MSME in its financial growth stage one, otherwise having low financial inclusion will have high financial inclusion if it is high on financial literacy. The results do not provide significant support to the moderating role of financial literacy.

6. This research tested association between firm specific characteristics and financial inclusion. It was found that the two firm specific characteristics, namely forms of organization and net worth of MSMEs had a significant association with financial inclusion. This meant that financial inclusion differed depending upon the forms of organization and its net worth.

7. This research also tested association between firm specific characteristics and financial literacy. It was found that four firm specific characteristics, namely forms of organization, methods of manufacturing, markets catered to by the MSMEs and net worth of the MSMEs had a significant association with financial literacy. This meant that financial literacy differed depending upon the above firm specific characteristics.

SECTION 2:

6.2: CONTRIBUTIONS OF THIS RESEARCH TOWARDS EXISTING LITERATURE (THEORETICAL CONTRIBUTIONS)

Contributions to existing literature could be divided into the following areas a. Inclusion of MSMEs as a weaker section; b. Small business finance gaps, c. Financial Growth Stages of a firm and Financial Inclusion; d. Financial Literacy and Financial Inclusion; e. Dimensions of Financial Literacy and Financial Inclusion; f. Moderating role of financial literacy; g. Contributions relating to Firm Specific Characteristics.

6.2.1: Inclusion of MSMEs as a weaker section:

Extant literature (Kumar and Mohanty, 2011; Vighneswara, 2011) have studied financial inclusion with respect to individuals. Kodan et al, (2011) interpreted “financial inclusion as the delivery of financial services at an affordable cost to vast sections of disadvantaged and low-income group of the society, including households, enterprises, traders, etc”. This study identified MSMEs as weaker section of the economy and studied financial inclusion with respect to MSMEs as a weaker section and found that MSMEs are disadvantaged with respect to financial inclusion.

6.2.2: Contribution Towards Study of Small Business Finance Gaps:

Scott and Pam, 1991 highlighted that the problems experienced by small businesses in financing operations are normally attributed to the “small business finance gap.”. The said gap consists of two parts; firstly, relating to limited knowledge regarding availability of funds and secondly, higher costs of financing. These two components act as the biggest restraint to borrowings from financial institutions. This research addresses the first gap relating to the limited knowledge, namely, financial literacy, and found a relationship between financial literacy and financial inclusion, thereby affirming the first part of the small business finance gap.

Kumar and Rao, 2015, further stressed upon gaps relating to SMEs. They stated that SMEs encounter the following gaps: (1) accessibility of limited financial sources (demand gap) due to the effect of various quantitative and qualitative variables on capital structure of SMEs, (2) limited availability of finance for SMEs (supply gap), (3) lack of awareness about the approachability towards potential sources of finance (knowledge gap) and (4) reluctance of financial institutions in providing funds to SMEs (benevolence gap). They concluded that there exists a financing gap for SMEs which originates in a firm's life cycle and the prominence of the gap can be studied only by analysing the financing preferences of SMEs.

The present study affirmed the presence of demand gap (addressed as financial inclusion) and the knowledge gap (addressed as financial literacy). The study established the existence of a relationship between the financial inclusion (demand gap) and financial literacy (knowledge gap) and found that these gaps have strong correlation (r = 0.736). This can be explained as it is the knowledge gap which is primarily responsible for the demand gap. This research affirmed that financial literacy significantly affects financial inclusion of an MSME.

6.2.3: Financial Growth Stages of a Firm and Financial Inclusion:

Dodge and Robbins (1992) defined growth stages through 4 stages, namely formation, early growth, later growth and stability and concluded that firms in stage 1 faced financing problem as a key obstacle. Orser, Hogarth-Scott and Riding (2000) categorised MSMEs into three stages, those being growth, decline and other and highlighted that access to capital was the main problem in the growth stage of a firm. The parameters used for categorising MSMEs into various growth stages in both these studies were firm age, size, employee number and sales growth. Mac an Bhaird (2010) described a financial growth life cycle model adapted from Weston and Brigham (1970), wherein capital structures were tested and categorised by five sources of equity and two sources of debt, and presented across six financial age groups. These stages were based on use of sources of finance, namely, owners' resources, retained profits, trade credit, bank loans and overdrafts, hire purchase and leasing, longer term finance from financial institutions including loans and new market issue. This research adapted the framework of Mac an Bhaird, 2010 and classified the MSMEs into three financial growth stages to measure their financial inclusion.

It could be observed that the above studies focussed on life cycles / growth stages of a firm and access to finance. Hence, instead of studying only access, this research contributed to the existing literature by studying financial inclusion which is a comprehensive construct (combination of access, availability, usage and quality) amongst MSMEs. It further examined the relationship between financial inclusion and financial growth stages of MSMEs. This study established that there is a difference in financial inclusion amongst financial growth stages of MSMEs. It further emphasised that financial inclusion is highest in financial growth stage 2.

6.2.4: Financial Literacy and Financial Inclusion:

Cisneros, 2013 has identified a number of factors affecting financial inclusion of individuals, the most important ones being financial literacy, unsustainable growth, insufficient infrastructure and product cost. According to Triki & Faye (2013), there exists a lack of financial and management skills and financial literacy across firms, translating into poor financial accounting, record keeping or inappropriate business plans. The works of Andoh & Nunoo (2012), Gartner et al (2004) empirically investigated the linkage between awareness of financial products, financial skills and utilization of financial services by SMEs. They concluded that better and more financially literate entrepreneurs were more likely to utilize financial services. The above studies focused on relationship between financial literacy and access to finance.

This research conceptualised financial literacy as the attainment of knowledge, skills of financial planning, awareness of different financial products, attitude and behavior of MSMEs towards financial decision making. This research contributes to the literature by studying financial literacy and financial inclusion in its entirety. It determines the role of financial literacy in addressing the problem of lack of finance (low financial inclusion) amongst MSMEs. This research contributes to the existing literature by establishing a relationship between financial literacy and financial inclusion (combination of access, availability, usage and quality). The relationship between financial literacy and financial inclusion was found to be significant. It reasons that financial literacy of an MSME is a strong predictor of its financial inclusion. That is, the more financially literate the MSME, the more likelihood of it being well included in the formal financial set up.

6.2.5: Dimensions of Financial Literacy and Financial Inclusion:

Dahmen and Rodriguez (2014) contended that those owners who do not regularly review their financial statements nor perform financial analysis were experiencing financial difficulties. They argued that the reason for not reviewing or performing financial analysis was because of the "lack of understanding of what to look at and how to look at it – in other words, inadequate financial literacy and quantitative literacy in relation to business management". Guliman (2015), highlighted that most of the owners of enterprises who have low levels of financial knowledge and skills also have low levels of financial literacy.

This research contributes to the existing literature by determining whether there exists a relationship between the different dimensions of financial literacy and financial inclusion in an MSME sector. Through Exploratory Factor Analysis, this research identifies three dimensions of financial inclusion, namely a. knowledge and skills, b. awareness and c. attitude and behavior as against five given by OECD (awareness, knowledge, skills, attitude and behavior). This study was able to find a positive and significant relationship between the three dimensions of financial literacy and financial inclusion. It was established that "awareness" and "knowledge and skills" had more influence on financial inclusion as compared to "attitude and behavior" of MSMEs.

6.2.6: Moderating Role of Financial Literacy:

A study by Adomako, Danso and Damoah, (2016) introduced financial literacy as a moderator of the relationship between access to finance and firm growth. Their empirical findings suggested that financial literacy positively enhances the access to finance and firm growth relationship. However, since their study considered only the access dimension of financial literacy, a need was felt to explore the role of financial literacy as a moderating factor between financial growth stages of a firm and its financial inclusion in its entirety (access, availability, usage and quality).

This research attempted to determine whether an MSME in its financial growth stage one, otherwise having low financial inclusion will have high financial inclusion if it is high on financial literacy. The results do not provide significant support to the moderating role of financial literacy. The prior literature (Orser, Hogarth-Scott & Riding 2000, Moy and Luk 2007, Kumar and Rao, 2015) has often asserted that the SMEs in initial growth stage have severe problems associated with obtaining finance, particularly in developing nations. The overriding effect of this relationship could be the reason for not finding any moderation of financial literacy between financial growth stages and financial inclusion. However, further study could throw more light on reasons for the lack of moderation effect of financial literacy.

Hence this research did not provide significant results to validate that an entrepreneurs' level of financial literacy moderates the relationship between financial growth stages and financial inclusion.

6.2.7: Firm Specific Characteristics:

Baker et al, 2017, elucidated how owner/manager characteristics affect preferences and practices of external funding of SMEs. They have empirically examined the differences in financing preferences across firm characteristics like forms of organization, growth stages, methods of manufacturing and export orientation. They concluded that ownership structure and firm type are important factors in deciding on the type of funds that firms use. Singh and Janor (2013) stated that the factors that influence the financing choices are different depending on the structure of the firm. They posited that financing pattern adopted by SMEs is not similar across different types of firms with different forms of organizations.

This research explored the possibility of financial inclusion in its entirety having association with four demographic characteristics of MSMEs, namely forms of organization, methods of manufacturing, markets catered to and net worth of the firm. It contributes to the existing literature by identifying significant association of financial inclusion with respect to MSMEs' forms of organization and their net worth. It identifies that sole proprietorship concerns managed by the owners themselves have low financial inclusion as compared to companies. Further, it could be observed that most firms having low net worth had low financial inclusion.

This research also identified the existence of significant association of financial literacy with respect to firm specific characteristics. It contributed to the literature by establishing that Financial literacy did have an association with all the firm specific characteristics considered for this research. It was observed that financial literacy was high when the firm was of company constitution or a partnership concern. The research also highlighted that firms following machine intensive technique of manufacturing had high financial literacy as compared to those firms having labour intensive method of manufacturing. The firms catering to international markets were exhibiting high financial literacy while those catering to local markets had mostly low financial literacy. Further, this study pointed out that the firms having more net worth had high financial literacy.

6.2.8: Scale Development:

Measurement scales to measure financial inclusion of individuals (AFI Policy Paper, 2010; A Report on Financial Inclusion in Africa, 2013) and financial literacy of individuals (OECD Toolkit, 2014) were reviewed in literature. For measuring Financial Inclusion, the items included pertain to access to financial products (distance and physical proximity to nearest financial service provider), the extent of usage of these products (actual usage of the product, frequency of use) and the quality of service associated with these financial products (meeting consumer needs) with respect to individuals and households. For measuring financial literacy, the items cover a mixture of questions pertaining to awareness of financial products, detailed information and knowledge about the products, skills required for money management at household level, planning for shorter and longer term financial goals for individuals, attitudes and behavior relating to topics such as and awareness and choice of financial products available to households. As research for financial inclusion was conducted only for individual weaker section, the instrument for measuring firm level financial inclusion and financial literacy had be developed for this study.

Considering the above mentioned sources as a base, an instrument was devised to measure financial inclusion and financial literacy amongst micro, small and medium enterprises. It included measurement parameters to evaluate a firm's financial management aspect. Measurement of financial inclusion involved measuring access by MSMEs to financial products, ease and affordability (availability) of these products, demand and usage of the financial products by MSMEs and the quality of financial services provided by financial institutions to the MSMEs. Financial Literacy of MSMEs was measured by focusing on items pertaining to awareness about financial products and services relating to MSMEs, knowledge about the financial products and financial practices (basic accounting), skills required for efficient management of business and decision making (budgeting, preparing formal business plans, capital budgeting techniques) and attitude and behavior (actions and decisions taken in business situations namely, evaluating options at the time of availing credit, and behavior during cash crunch) with respect to conduct of business on a day to day basis. (See Annexure 1)

Content validity test as well as reliability test conform to the use of this scale to measure the dependent construct financial inclusion and the independent construct financial literacy. The scale with overall 23 items held a S-CVI/UA of 23, S-CVI/UA of 22 and S-CVI/UA of 23 corresponding to relevance, clarity and simplicity respectively. Further, coefficient of Cronbach's (alpha) was 0.849, indicating a high degree of internal consistency.

This research contributes a measurement instrument (questionnaire) for measuring financial inclusion and financial literacy with respect to Micro, Small and Medium Enterprises.

SECTION 3:

6.3: LIMITATION OF THE STUDY

This research restricts to the study of MSMEs in the manufacturing sector. Service sector units were not studied for this research. This could be considered as a limitation for this study.

6.4: MANAGERIAL IMPLICATIONS:

1. The outcome of this study is to bring to the attention of the banks, financial institutions and policy makers the difficulties faced by MSMEs with respect to access to finance, availability of finance, the extent of usage of different financial products and services and quality of such financial services offered. This will prove to be a bridge to the gap between demand for credit by the MSMEs and their supply from various financial institutions. Further, it would be considered as a stepping stone to inculcate various initiatives to bring this weaker section of the economy under the purview of the formal financial set up.

2. The study focuses on the much talked about aspect in today's industrial scenario, that being Financial Literacy. This research will help in identifying specific areas pertaining to awareness, knowledge and skills, attitude and behavior of MSMEs where intervention is

required in order to equip them with necessary expertise. Various initiatives could be incorporated by the policy makers to enhance financial literacy that would enable the MSMEs to have better access to credit, take accurate financial decisions thereby leading to an effective and efficient business set up.

3. As identified through this study, Financial Literacy and Financial Inclusion were found to be lesser among sole proprietorship and partnership concerns. Financial institutions could try to liberalise the terms and conditions for granting the loans to sole proprietorship and partnership concerns, as well as those with low net worth. Workshops and seminars conducted to bring them on par would go a long way in eliminating this difference. Presence of adequate financial literacy will help the entrepreneurs in efficient conduct of business and sound financial decision making.

4. The Government of India's Make in India Campaign encourages firms to produce more in the country. The MSMEs in the manufacturing sector are thus given adequate facilities to make sure there is more production happening in the country rather than relying on imports. However, the extent to which finance is made available for operations is a concern amongst many MSMEs. This highlights the role of financial inclusion as a prominent aspect in the success of the Make in India campaign. Also, financial literacy of the MSMEs will be of prime focus in accelerating the country's economic growth through this campaign. Adequate measures to create awareness about new and emerging sources of finance like private equity and venture capital will go a long way in achieving this objective. Such efforts would help in providing a more conducive financial environment for MSMEs.

6.5: SCOPE FOR FUTURE RESEARCH:

1. The role of financial literacy as a moderating factor between financial growth stages and financial inclusion was not supported in this research. Further study could throw more light on reasons for the lack of moderation effect of financial literacy.

2. This research has attempted to study the demand gap and knowledge gap pertaining to MSMEs. The supply side gaps which are more pertinent to financial institutions' role in financial inclusion could be considered as an area for future research.

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ANNEXURES

A: FINAL MEASUREMENT INSTRUMENT:

ANNEXURE 1:

FINANCIAL INCLUSION IN MICRO, SMALL & MEDIUM ENTERPRISES (MSMEs) QUESTIONNAIRE

OBJECTIVES:

1. To ascertain the financial growth stages of a firm.
2. To measure the extent of financial literacy.
3. To measure the extent of financial inclusion.

SECTION A: FIRM CHARACTERISTICS:		
1. Name of the enterprise:		
2. Date of inception:		
3. Products manufactured:		
4. Whether registered:	**YES**	**NO**
5. Form of organization: a. Sole Proprietorship b. Partnership c. Company		
6. Category: a. Micro b. Small c. Medium		
7. Methods of manufacturing: a. Machine Intensive b. Labor Intensive		
8. Markets: a. Local b. Regional c. National d. International		

9. Employee type and number: a. Skilled b. Semi skilled c. Unskilled		
10. Net worth: (Total Assets – Total Liabilities) a. Less than Rs 1 crores (please specify the approx amount) b. Between Rs 1 crores to Rs 5 crores c. Between Rs 5 crores to Rs 10 crores d. Between Rs 10 crores to Rs 20 crores e. Above Rs 20 crore		
11. Net Tangible Assets: (Total Assets – Intangible Assets like goodwill, patents and trademarks) a. Above Rs 15 crores b. Between Rs 10 crores to Rs 15 crores c. Between Rs 5 crores to Rs 10 crores d. Between Rs 3 crores to Rs 5 crores e. Less than Rs 3 crores (please specify the approx amount)		
12. Turnover is the last five years: a. b. c. d. e.		
SECTION B: LIFE CYCLE		
1. Kindly state whether you have used any of the following sources of finance:	**YES**	**NO**
a. Personal Savings and “f” connections		
b. Retained profits		
c. Trade credit		
d. Bank loans and overdrafts		
e. Hire purchase and leasing		

f. Long term debt from financial institutions		
g. New market issue		
h. Others (please specify):		
2. Is your firm in the process of withdrawing funds from the business due to any of the following reasons:	**YES**	**NO**
a. Firm to be taken over		
b. Share repurchase		
c. Liquidation		
d. Any other (please specify)		
SECTION C: FINANCIAL LITERACY		
A: Awareness:		
Are you aware of the following:	**YES**	**NO**
1. Different banks and institutions that provide short term finance for business.		
2. Different banks and institutions that provide long term finance for business.		
3. Different schemes of financial assistance available to MSMEs.		
4. Different schemes of financial assistance provided by the Government to MSMEs.		
B: Knowledge:		
Kindly respond to the below mentioned questions:	**YES**	**NO**
1. I have knowledge about obtaining finance through the following sources of funds for short term needs:		
a. Personal savings and “f” connections		
b. Retained profits		
c. Commercial banks		
d. Government grants		
e. Micro finance		
f. Business angels		
g. Venture capitalists		
h. Any other (please specify)		

2.	I have knowledge about obtaining finance through the following sources of funds for long term needs:	**YES**	**NO**
a.	Personal savings and “f” connections		
b.	Retained profits		
c.	Commercial banks		
d.	Government grants		
e.	Micro finance		
f.	Business angels		
g.	Venture capitalists		
h.	Any other (please specify)		
3.	Do you know about:	**YES**	**NO**
a.	Double entry system of accounting.		
b.	Different books of accounts to be maintained by the provisions of law.		
c.	Computerized system of accounting		
C: Skills:			
1.	Do you use the following techniques for financial planning in the short run:	**YES**	**NO**
a.	Cash Budget		
b.	Sales Budget		
c.	Any Tools of Working Capital Analysis		
2.	Do you use the following techniques for planning your financial operations?	**YES**	**NO**
a.	Estimation of production cost		
b.	Estimation of total variable cost		
c.	Estimation of contribution margin		
d.	Calculation of variations and analysis thereof		
3.	Do you use (Have you used) the following techniques for future planning/ new investments:	**YES**	**NO**
a.	Preparation of a formal business plan		
b.	Net Present Value		
c.	Internal Rate of Return		
d.	Payback Period		

e. Calculation of Return on Investment		
D: Attitude and Behavior:		
1. Kindly answer the following:	**YES**	**NO**
a. Before I consider external capital, I carefully consider whether I can afford it.		
b. I am prepared to risk some of my own money while making an investment.		
c. I keep a close personal watch on my financial affairs.		
d. I tend to live for today and let tomorrow take care of itself.		
e. I find it more satisfying to spend money than to save it for the long term		
2. Please indicate your preference with respect to the following:	**YES**	**NO**
At times when I run into deficit, I overcome the problem by:		
a. Drawing money out of savings or transfer savings into current account		
b. Cut back on spending, spend less, do without		
c. Sell something that the enterprise owns		
d. Work overtime, earn extra money		
e. Borrow money from family or friends		
f. Pawn something that I own		
g. Take a loan from my savings and loans clubs		
h. Use authorised, arranged overdraft or line of credit		
i. Use credit card for a cash advance or to pay bills		
j. Take out a personal loan from a financial service provide		
k. Take out a loan from an informal provider/moneylender		
l. Fall behind/ go beyond arranged amount		
SECTION D: FINANCIAL INCLUSION:		
A: Access:		
Kindly respond to the below mentioned set of questions:	**YES**	**NO**
1. Is your office located within a distance of 3 km to the nearest service point at which first-order retail finance services can be undertaken, and includes ATM and other origination points?		

2. Is your office located within a distance of 3 km to the nearest accessible device at which an electronic (other than ATM) service can be undertaken?		
B: Availability:		
Please indicate your opinion about the following:	**YES**	**NO**
1. Products offered by financial institutions meet my needs.		
2. Products offered by financial institutions are available to me at a reasonable cost.		
C: Usage:		
Please indicate your opinion about the following:	**YES**	**NO**
1. Whether you are using the following products and services:		
a. Current a/c		
b. Overdraft		
c. Leasing		
d. Hire purchase		
e. Any other term loans (please specify):		
2. Whether you have availed finance from:		
a. Commercial Banks		
b. Government Institutions		
c. State Finance Corporations		
d. Merchant Bankers		
e. Angel Investors		
f. Private Equity		
3. For each of the following types of external financing, please indicate if your needs increased, remained unchanged or decreased over the past six months?		
a. Commercial Banks — INC / UNCH / DEC		
b. Micro Finance — INC / UNCH / DEC		
c. Business Angels — INC / UNCH / DEC		
d. Venture Capitalists — INC / UNCH / DEC		
e. Government Grants — INC / UNCH / DEC		

D: Quality:		
Please respond to the below mentioned set of questions:	**YES**	**NO**
1. Do you have any restrictions to operate your bank a/c?		
2. Do you have any restrictions in dealing with a micro finance institution?		
3. Do you have any restrictions in dealing with credit cooperative institution?		
4. Do you find the bank's products changing to suit your needs?		
5. Do you find the bank's services being flexible as per your requirements?		
6. Do you get adequate and timely information from the bank and financial institutions regarding the different products and services offered by them?		

B: MEASUREMENT OF CONSTRUCTS

ANNEXURE 2: Measurement of Financial Growth Stages:

SECTION B: LIFE CYCLE		
1. Kindly state whether you have used any of the following sources of finance:	**YES**	**NO**
a. Personal Savings and "f" connections	FGS 1	
b. Retained profits	FGS 1	
c. Trade credit	FGS 1	
d. Bank loans and overdrafts	FGS 1	
e. Hire purchase and leasing	FGS 1	
f. Long term debt from financial institutions	FGS 2	
g. New market issue	FGS 2	
h. Others (please specify):	FGS 2	
2. Is your firm in the process of withdrawing funds from the business due to any of the following reasons:	**YES**	**NO**
a. Firm to be taken over	FGS 3	
b. Share repurchase	FGS 3	
c. Liquidation	FGS 3	
d. Any other (please specify)	FGS 3	

FGS: Financial Growth Stage.

FGS 1: Inception (Wherein only owners' resources are used) and Growth 1 (Use of owners' resources + retained profits, trade credit, bank loans and overdrafts, hire purchase and leasing).

FGS 2: Growth 2 (All of the above sources + longer term finance from financial institutions including loans.) and Growth 3 (All of the above + new market issue).

FGS 3: Decline (Withdrawal of finance: firm taken over / share repurchase / liquidation)

ANNEXURE 3: Measurement of Financial Literacy:

SECTION C: FINANCIAL LITERACY		
A: Awareness:		
Are you aware of the following:	**YES**	**NO**
1. Different banks and institutions that provide short term finance for business.	25	
2. Different banks and institutions that provide long term finance for business.	25	
3. Different schemes of financial assistance available to MSMEs.	25	
4. Different schemes of financial assistance provided by the Government to MSMEs.	25	
B: Knowledge:		
Kindly respond to the below mentioned questions:	**YES**	**NO**
1. I have knowledge about obtaining finance through the following sources of funds for short term needs:		
a. Personal savings and "f" connections	5	
b. Retained profits	5	
c. Commercial banks	5	
d. Government grants	5	
e. Micro finance	5	
f. Business angels	5	
g. Venture capitalists	5	
h. Any other (please specify)	5	

2. I have knowledge about obtaining finance through the following sources of funds for long term needs:	**YES**	**NO**
a. Personal savings and “f” connections	5	
b. Retained profits	5	
c. Commercial banks	5	
d. Government grants	5	
e. Micro finance	5	
f. Business angels	5	
g. Venture capitalists	5	
h. Any other (please specify)	5	
3. Do you know about:	**YES**	**NO**
a. Double entry system of accounting.	6.6	
b. Different books of accounts to be maintained by the provisions of law.	6.6	
c. Computerized system of accounting	6.6	
C: Skills:		
1. Do you use the following techniques for financial planning in the short run:	**YES**	**NO**
a. Cash Budget	8.33	
b. Sales Budget	8.33	
c. Any Tools of Working Capital Analysis	8.33	
2. Do you use the following techniques for planning your financial operations?	**YES**	**NO**
a. Estimation of production cost	8.33	
b. Estimation of total variable cost	8.33	
c. Estimation of contribution margin	8.33	
d. Calculation of variations and analysis thereof	8.33	
3. Do you use (Have you used) the following techniques for future planning/ new investments:	**YES**	**NO**
a. Preparation of a formal business plan	8.33	
b. Net Present Value	8.33	
c. Internal Rate of Return	8.33	
d. Payback Period	8.33	

e. Calculation of Return on Investment	8.33	
D: Attitude and Behavior:		
1. Kindly answer the following:	**YES**	**NO**
a. Before I consider external capital, I carefully consider whether I can afford it.	10	
b. I am prepared to risk some of my own money while making an investment.		10
c. I keep a close personal watch on my financial affairs.	10	
d. I tend to live for today and let tomorrow take care of itself.		10
e. I find it more satisfying to spend money than to save it for the long term		10
2. Please indicate your preference with respect to the following:	**YES**	**NO**
At times when I run into deficit, I overcome the problem by:		
a. Drawing money out of savings or transfer savings into current account		4.16
b. Cut back on spending, spend less, do without	4.16	
c. Sell something that the enterprise owns		4.16
d. Work overtime, earn extra money	4.16	
e. Borrow money from family or friends	4.16	
f. Pawn something that I own		4.16
g. Take a loan from my savings and loans clubs		4.16
h. Use authorised, arranged overdraft or line of credit	4.16	
i. Use credit card for a cash advance or to pay bills	4.16	
j. Take out a personal loan from a financial service provide	4.16	
k. Take out a loan from an informal provider/moneylender		4.16
l. Fall behind/ go beyond arranged amount		4.16

ANNEXURE 4: Measurement of Financial Inclusion:

SECTION D: FINANCIAL INCLUSION:		
A: Access:		
Kindly respond to the below mentioned set of questions:	**YES**	**NO**
1. Is your office located within a distance of 3 km to the nearest service point at which first-order retail finance services can be undertaken, and includes ATM and other origination points?	50	
2. Is your office located within a distance of 3 km to the nearest accessible device at which an electronic (other than ATM) service can be undertaken?	50	
B: Availability:		
Please indicate your opinion about the following:	**YES**	**NO**
1. Products offered by financial institutions meet my needs.	50	
2. Products offered by financial institutions are available to me at a reasonable cost.	50	
C: Usage:		
Please indicate your opinion about the following:	**YES**	**NO**
1. Whether you are using the following products and services:		
a. Current a/c	8	
b. Overdraft	8	
c. Leasing	8	
d. Hire purchase	8	
e. Any other term loans (please specify):	8	
2. Whether you have availed finance from:		
a. Commercial Banks	6.66	
b. Government Institutions	6.66	
c. State Finance Corporations	6.66	
d. Merchant Bankers	6.66	
e. Angel Investors	6.66	
f. Private Equity	6.66	

3. For each of the following types of external financing, please indicate if your needs increased, remained unchanged or decreased over the past six months?					
a. Commercial Banks	INC	UNCH	DEC	4	
b. Micro Finance	INC	UNCH	DEC	4	
c. Business Angels	INC	UNCH	DEC	4	
d. Venture Capitalists	INC	UNCH	DEC	4	
e. Government Grants	INC	UNCH	DEC	4	
D: Quality:					
Please respond to the below mentioned set of questions:				**YES**	**NO**
1. Do you have any restrictions to operate your bank a/c?					16.66
2. Do you have any restrictions in dealing with a micro finance institution?					16.66
3. Do you have any restrictions in dealing with credit cooperative institution?					16.66
4. Do you find the bank's products changing to suit your needs?				16.66	
5. Do you find the bank's services being flexible as per your requirements?				16.66	
6. Do you get adequate and timely information from the bank and financial institutions regarding the different products and services offered by them?				16.66	

B: CONTENT VALIDITY TEST:

Dear Expert,

Kindly refer to the description of scale items in annexure 1 and give your score and description for the scale items by referring to the instructions.

Thanking you for your cooperation.

Mamata Shriram Kane.

RATING GUIDELINES

The rater is required to review the test items based on the relevance, clarity and simplicity of the content in each of the dimensions. In the rating sheet provided, the rater is required to indicate the following:

1. Relevance: (for all dimensions): Indicate on a scale ranging from 1 to 4 whether the specified item is relevant as a measure for which it is intended. The quantifiers are given as under:
    1. Non relevant
    2. Item needs some revision
    3. Relevant but needs minor revision
    4. Very relevant
2. Clarity: (for all scale dimensions): Indicate on a scale ranging from 1 to 4 whether the specified item has clarity understanding. The rating may be represented thus:
    1. Not clear
    2. Item needs some revision
    3. Clear but needs some minor revision
    4. Very clear
3. Simplicity: (for all scale dimensions): Indicate on a scale ranging from 1 to 4 whether the specified item is simple to understand. The rating may be represented thus:
    1. Not simple
    2. Item needs some revision
    3. Simple but needs some minor revision
    4. Very simple

C: CONTENT VALIDITY INDEX TESTS:

1: Calculation of CVI (Relevance):

SR NO	ITEMS	EXP 1	EXP 2	EXP 3	EXP 4	EXP 5	AGREE-MENT	ITEM CVI	S - CVI / UA	MEAN EXPERT PROPOR-TION
		RELEVANCE								
1	FGS 1	4	4	4	4	4	5	1		
2	FGS 2	4	4	4	4	4	5	1		
3	F L (Awareness)	4	4	4	4	4	5	1		
4	F L (Knowledge 1)	4	4	4	4	4	5	1		
5	F L (Knowledge 2)	4	4	4	4	4	5	1		
6	F L (Knowledge 3)	4	4	4	4	4	5	1		
7	F L (Skills 1)	4	4	4	4	4	5	1		
8	F L (Skills 2)	4	4	3	4	4	5	1		
9	F L (Skills 3)	4	4	3	4	4	5	1		
10	F L (A & B 1)	4	4	4	4	4	5	1		
11	F L (A & B 2)	4	4	4	4	4	5	1	**23**	**1**
12	F I (Access 1)	4	4	4	4	4	5	1		
13	F I (Access 2)	4	4	3	4	4	5	1		
14	F I (Availability)	3	4	4	4	4	5	1		
15	F I (Usage 1)	4	4	4	4	4	5	1		
16	F I (Usage 2)	4	4	4	4	4	5	1		
17	F I (Usage 3)	4	4	3	4	4	5	1		
18	F I (Quality 1)	3	4	4	4	4	5	1		
19	F I (Quality 2)	4	4	4	4	4	5	1		
20	F I (Quality 3)	4	4	4	4	4	5	1		
21	F I (Quality 4)	4	4	4	4	4	5	1		
22	F I (Quality 5)	4	4	4	4	4	5	1		
23	F I (Quality 6)	4	4	4	4	4	5	1		

2: Calculation of CVI (Clarity):

SR NO	ITEMS	EXP 1	EXP 2	EXP 3	EXP 4	EXP 5	AGREE-MENT	ITEM CVI	S - CVI / UA	MEAN EXPERT PROPOR-TION
				CLARITY						
1	FGS 1	3	4	3	4	4	5	1		
2	FGS 2	3	4	3	4	4	5	1		
3	F L (Awareness)	4	3	4	4	4	5	1		
4	F L (Knowledge 1)	4	4	4	4	4	5	1		
5	F L (Knowledge 2)	4	3	4	4	4	5	1		
6	F L (Knowledge 3)	4	3	4	4	4	5	1		
7	F L (Skills 1)	4	3	4	4	4	5	1		
8	F L (Skills 2)	4	4	4	4	4	5	1		
9	F L (Skills 3)	3	4	3	4	4	5	1		
10	F L (A & B 1)	4	4	4	4	4	5	1		
11	F L (A & B 2)	3	4	4	4	4	5	1		
12	F I (Access 1)	3	3	4	4	4	5	1	**22**	**0.9565**
13	F I (Access 2)	3	2	3	3	4	4	0.8		
14	F I (Availability)	3	3	4	4	4	5	1		
15	F I (Usage 1)	4	3	4	4	4	5	1		
16	F I (Usage 2)	4	3	4	4	4	5	1		
17	F I (Usage 3)	3	3	4	4	4	5	1		
18	F I (Quality 1)	3	3	4	4	4	5	1		
19	F I (Quality 2)	4	3	4	4	4	5	1		
20	F I (Quality 3)	4	3	4	4	4	5	1		
21	F I (Quality 4)	4	4	4	4	4	5	1		
22	F I (Quality 5)	3	4	4	4	4	5	1		
23	F I (Quality 6)	4	4	4	4	4	5	1		

3: Calculation of CVI (Simplicity):

SR NO	ITEMS	EXP 1	EXP 2	EXP 3	EXP 4	EXP 5	AGREE-MENT	ITEM CVI	S – CVI / UA	MEAN EXPERT PROPOR-TION
1	FGS 1	4	4	4	4	4	5	1	23	1
2	FGS 2	4	4	4	4	4	5	1		
3	F L (Awareness)	4	3	4	4	4	5	1		
4	F L (Knowledge 1)	4	4	4	4	4	5	1		
5	F L (Knowledge 2)	4	3	4	4	4	5	1		
6	F L (Knowledge 3)	4	3	4	4	4	5	1		
7	F L (Skills 1)	4	3	4	4	4	5	1		
8	F L (Skills 2)	4	4	4	4	4	5	1		
9	F L (Skills 3)	4	4	4	4	3	5	1		
10	F L (A & B 1)	4	4	4	4	3	5	1		
11	F L (A & B 2)	3	4	3	3	3	5	1		
12	F I (Access 1)	3	3	4	4	3	5	1		
13	F I (Access 2)	3	3	3	3	3	5	1		
14	F I (Availability)	4	3	4	4	4	5	1		
15	F I (Usage 1)	4	3	4	4	4	5	1		
16	F I (Usage 2)	4	3	4	4	4	5	1		
17	F I (Usage 3)	3	3	4	4	4	5	1		
18	F I (Quality 1)	3	3	4	4	4	5	1		
19	F I (Quality 2)	4	3	4	4	4	5	1		
20	F I (Quality 3)	4	3	4	4	4	5	1		
21	F I (Quality 4)	4	4	4	4	4	5	1		
22	F I (Quality 5)	3	4	4	4	4	5	1		
23	F I (Quality 6)	4	4	4	4	4	5	1		

D: Questionnaire used for Exploratory Study:

OBJECTIVES:

a) To find out the factors affecting financial inclusion in MSMEs
b) To find out the different barriers and obstacles faced by MSMEs in meeting their financial needs.

Section A:

Name of the enterprise:

Date of inception:

Form of organization:

Category: MICRO / SMALL / MEDIUM

Products manufactured:

Methods of manufacturing:

Markets:

Employee type:

Section B:

Name of the owner:

Name of manager (if employed):

Major functions carried out by:

a. Owner
b. Manager

Organizational chart:

Section C:

1. Which of the following is your most preferred source of funding for long term needs? Please rate them:
    a. Personal Savings and “f” connections
    b. Retained profits
    c. Long term debt
    d. Venture capital
    e. Business angels and private investors
    f. Short term bank loans and overdraft
    g. Government grants and equity
2. What percentage does long term debt comprise of your total capital?

3. Which of the following is your most preferred source of funding for short term needs? Please rate them:
    a. Personal Savings and “f” connections
    b. Retained profits
    c. Long term debt
    d. Venture capital
    e. Business angels and private investors
    f. Short term bank loans and overdraft
    g. Government grants and equity
4. From which bank/institution have you availed financial assistance? Why?
    a.
    b.
    c.
5. Are you aware about the different schemes of financial assistance available to MSME?
    a. Yes
    b. No
6. Can you list them?
7. Are you aware about the different banks/financial institutions that provide:
    a. Short term funds? Can you list a few of them?
    b. Long term funds? Can you list a few of them?

Section D:

1. Did you face any difficulty while borrowing funds:
    a. At the time of availing credit:
    b. At the time of servicing:
    c. For expansion:
    d. With respect to collateral:
    e. With respect to documentation:
    f. Any other (please specify):
2. Are you comfortable with the rate of interest charged on different services/schemes offered by these financial institutions?
3. Have you ever faced any difficulty in paying the borrowed amount?
4. Have you ever faced acute financial crunch any time? How did you deal with the same.

5. Are you satisfied with the credit period granted by your creditors? If no, why?
6. Have you ever changed your source of borrowing? If yes, why?
7. What according to you are the advantages and disadvantages associated with obtaining debt funds?
8. What according to you are the risks that are associated with obtaining debt funds?
9. How can these risks be eliminated?

- THANK YOU -

D: Questionnaire used for Supplementary Research:

Available at: https://www.bseindia.com/downloads1/BSE_SME_Platform.pdf

Financial Literacy and Other Factors Affecting the Usage of SME Platform of BSE, by SMEs in Goa

QUESTIONNAIRE

A: FIRM DETAILS:

Name of the enterprise:

Date of inception:

Form of organization: Sole Proprietorship / Partnership / Company

Category: SMALL / MEDIUM

Products manufactured:

Methods of manufacturing:

Markets:

Employee type and number:

a. Skilled
b. Semi skilled
c. Unskilled

Turnover is the last five years:

Net worth: (Total Assets – Total Liabilities)

a. Less than Rs 1 crores (please specify the approx amount)
b. Between Rs 1 crores to Rs 5 crores
c. Between Rs 5 crores to Rs 10 crores
d. Between Rs 10 crores to Rs 20 crores
e. Above Rs 20 crore

Net Tangible Assets: (Total Assets – Intangible Assets like goodwill, patents and trademarks)

a. Above Rs 15 crores
b. Between Rs 10 crores to Rs 15 crores
c. Between Rs 5 crores to Rs 10 crores
d. Between Rs 3 crores to Rs 5 crores
e. Less than Rs 3 crores (please specify the approx amount)

B: FINANCIAL LITERACY:

AWARENESS:

1. Do you know about raising money by issuance of an IPO (initial public offer)?
   - a. Yes
   - b. No
2. Are you aware about the Bombay Stock Exchange?
   - a. Yes
   - b. No (if No, kindly go to Knowledge Section)
3. Are you aware about the SME Platform of the Bombay Stock Exchange as a medium of raising capital?
   - a. Yes
   - b. No

KNOWLEDGE:

1. What according to you are the benefits of raising capital through capital markets?
2. What according to you are the difficulties in raising finance through capital markets?
3. Please share your knowledge about the following concepts:
   - a. Venture Capital Funds
   - b. Private Equity Funds
   - c. Retail Investors
   - d. Banks
   - e. Qualified Institutional Buyers (QIB)
   - f. Foreign Institutional Investors (FII)
   - g. Non-Banking Finance Companies (NBFC)
   - h. Angel Investors
   - i. High Networth Individuals
   - j. Registrars to the Issue
   - k. Merchant Bankers
   - l. Market Makers
   - m. Member Brokers and sub brokers
   - n. Financial Advisors

SKILLS:

1. Who is responsible for day-to-day decisions about money in your organization?
   - a. Owner
   - b. Partners

c. Manager

d. Finance manager

e. Any other (Please specify)

2. How many years of experience does the above person hold in handling financial matters?

3. Do you consult any expert for raising finance? If yes please provide details of consultants.

4. Has anyone suggested to you BSE Platform for raising funds? If yes, please provide details.

5. Does your company have a practice of preparing budgets?

a. Yes

b. No

6. Have you raised finance through any of the below mentioned entities?

	Yes	No
a. Venture Capital Funds		
b. Private Equity Funds		
c. High Networth Individuals		
d. Retail Investors		
e. Banks		
f. Qualified Institutional Buyers (QIB)		
g. Foreign Institutional Investors (FII)		
h. Non-Banking Finance Companies (NBFC)		
i. None of the above		
f. Any other (pl. specify)		

BEHAVIOR & ATTITUDE:

1. What is the current financial structure of your firm; Please mention in percentages:

a. Owners Resources
b. Retained profits
c. Trade credit
d. Short term bank loan
e. Overdraft
f. Hire purchase
g. Leasing
h. Long term finance
i. Micro Finance Loan
j. Stocks and Shares

k. Any other (please specify)

2. Would you be interested in raising finance through an IPO?

   a. Yes

   b. No

3. If yes, would you do the same through SME Platform of the Bombay Stock Exchange?

4. If no, please specify why?

   A. Lack of knowledge about process and procedures about going public
   B. Lack of knowledge about BSE
   C. Lack of knowledge about BSE SME Portal
   D. Does not have confidence in capital markets and its functioning
   E. Fear of Loss of control
   F. Cost aspects
   G. Does not meet qualifying criteria: (please select the criterion that is not met by your firm)
      a. FINANCIALS:
         i. The post-issue paid up capital of the company shall be at least Rs. 1 crore.
         ii. Net worth (excluding revaluation reserves) of at least Rs.1 crore as per the latest audited financial results.
         iii. Net Tangible assets have to be at least Rs.1 crore as per the latest audited financial results.
         iv. Distributable profits in terms of Section 205 of the Companies Act 1956 for at least two years out of immediately preceding three financial years (each financial year has to be a period of at least 12 months). Extraordinary income is not considered for the purpose of calculating distributable profits.

             Or

             The net worth shall be at least Rs.3 crores.
      b. OTHERS:
         i. It is mandatory for a company to have a website.
         ii. It is mandatory for the company to facilitate trading in demat securities and enter into an agreement with both the depositories.

iii. There should have been no change in the promoters of the Company in the one year preceding the date of filing application to BSE for listing on SME segment.

H. Any other (please specify)

5. Would you require any help in raising finance? Please specify.

6. Would you require any help in raising finance through BSE platform? Please specify.

7. Would you consider raising finance through SME Platform of the Bombay Stock Exchange if sufficient help is provided to you?

    a. Yes

    b. No

8. What would you suggest to make the SME platform more popular in Goa?

----------THANK YOU----------