LIST OF PUBLICATIONS


2. Paper titled “A Significant Role of Commercial Banks in the Growth of Microfinance Sector in India” is published in J-GIBS (Vol. 5, No.1, Jan-Dec 13)


COPIES OF MANUSCRIPTS
AN EMPIRICAL TESTING OF RELATIONSHIP BETWEEN MICROFINANCE AND ECONOMIC GROWTH IN INDIA

Dr. G.L. Sharma*, Himanshu Puri**

ABSTRACT

Microfinance is the provision of a broad range of financial services such as deposits, loans, payment services, money transfers and insurance to poor & low-income households and micro enterprises. Microfinance sector in India has grown manifold from its inception. This has given a great opportunity to the rural poor to attain reasonable economic, social and cultural empowerment, leading to better living standard and quality of life for participating households. Microfinance has been a panacea for poverty reduction in India and thus is profoundly promoted by our financial system throughout the economy. Moreover the phenomenon has a two way linkage with economic growth. The present study intends to look into various aspect and try to derive the inter relationship between these two factors. Two variables, i.e. GDP and Micro loans to Self Help Groups (SHG), have been taken for the study. Their annual data from the financial year 2006-07 to 2011-12 have been taken for analysis. The tools like coefficient of correlation and regression have been used to get an insight into the relationship of the selected variables. The result shows a very high level of correlation, i.e. 0.96, between the variables and a significant impact of Microloans on GDP.

Keywords: Correlation, Economic Growth, GDP, Microfinance, Micro Loans, Regression, Self Help Groups (SHG)

Introduction

The microfinance concept introduced by Bangladeshi Professor in Economics, Muhammad Yunus, in 1970 has grown into worldwide movement & is gathering momentum to become a major force in India. Before this, the world’s poorest people were almost underserved by financial institutions as they were unable to offer the necessary collateral to secure loans. Along with it, most banks did not consider small loans to be appropriate as high transaction costs were prohibitive. Here in India, many poor people lacks formal banking services. In the absence of formal access to financial services, the poor have no choice but to go to local money lenders at the time of need, which exploits and charges interest rates ranging from 30% to 120%.

Microfinance, as a boom, came to rescue such poor. Microfinance, through granting very small loans, enables poor people to run small businesses and earn livelihood. Microfinance is an economic development approach that involves providing financial services through institutions to low income clients. Microfinance is the practice of providing small scale financial services to the world’s poor, mainly loans and savings and increasingly other products like insurance and money transfer. Also referred to as “banking for the poor”,

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Microfinance has emerged as a simple and viable way to provide financial assistance to the underprivileged. It also helps in pulling them out of the poverty and thus acclaimed recognition across the globe as a silver bullet to reduce poverty and bring in social empowerment. The study will look into the basic concept of microfinance. Thereafter, the study will focus on depicting the relation between the economic growth and the innovative financial tool called microfinance. The two representative variables have been taken where GDP will represent the economic growth and Micro loans to SHG will symbolize the state of microfinance. The tools like coefficient of correlation and regression analysis have been used for empirically testing the relationship. The study would also be helpful to all academicians, researchers and practitioners in this field.

**Objective of the study**

The main objectives of the study are as follows:
- To understand the concept of Microfinance
- To understand the relationship between the microfinance activities and economic growth.
- To know whether microloans have an impact on GDP of India

**Hypothesis**

- **a)** There is no correlation between the microloans to SHG and GDP of India
- **b)** There is no significant impact of microloans on GDP of India

**Literature Review**

Barr (2005) evaluated the relationship between the microfinance and financial development. He argued that millennium developmental goals would only be achieved if the new financial reforms will focus more on microfinance to curb the poverty and thus achieving financial development. He emphasized on making microfinance an integral part of the overall financial development strategy of any developing economy.

Khandker (2005) in his article scrutinized the effects of microfinance on poverty reduction at both the participant and the aggregate levels using panel data from Bangladesh. The results suggested that the access to microfinance contributes to poverty reduction, especially for female participants, and to overall poverty reduction at the village level. Microfinance thus helps not only poor participants but also the local economy.

Tulchin (2006) in his policy working paper examined microfinance as a sustainable tool for urban poverty alleviation in Latin America and the impact that government actors have on the sector. The paper begins by defining the value of microfinance and its role in development within the urban Latin American context. As per the author, Government actors in developing nations impact the sector through economic policy, financial institution regulation, and supervision. Governments and their implementing agencies shape the overall environment in which microfinance institutions operate. They can also be influential in linking microfinance to other productive financial flows, particularly remittances. ‘Sustainable microfinance’ was also defined and then considered in light of two goals: on a macro level, financially self-sufficient institutions able to provide services without external funding; and on a macro level, industry ‘massification’ to rapidly extend outreach to reach more people and make microfinance a meaningful vehicle for poverty alleviation. Test factors of sustainability included: 1) market-driven cost of services to clients; 2) institutional financial soundness; 3) repeat clients; and 4) an ongoing industry. Actor behavior was evaluated based on the success of these indicators. Lastly, the paper provided a research agenda to develop deeper support for policy recommendations.

Sengupta and Aubuchon (2008) have focused on achievement made by Prof. Muhammad Yunus and
the Grameen Bank for their efforts to create economic and social development from below. Their article was
intended as a non-technical overview on the growth and development of microcredit and microfinance. The
Grameen bank and its achievement were reviewed. They emphasized on the group lending mode of granting
microfinance and how it is beneficial. The paper also reviewed the microfinance in different economies and its
future.

Vanroose & D’Espallier (2009), in their paper analyzed the relationship between performance of
microfinance institutions (MFIs) and the development of the formal financial sector of the country in which the
MFI is active. They found indications of interdependencies between MFI performance and formal financial
sector development and also found that the MFIs reach more clients and are more profitable where access to
the formal financial system is low.

Kumar, Bohra and Johari (2010) in their descriptive paper analyzed the present microfinance sector of
India focusing on economic problems like population, under employment, low rate of education, low per capita
income etc. that has actually resulted in poverty. Another major factor, as per the authors, resulting in poverty
is the low asset base. The paper also centers its attention on microfinance in rural sector of our economy and
how marketing of microfinance takes place in such areas. The paper concluded that the rural people have very
low access to institutionalized credit especially from commercial banks which needs to be improved.

Pillai and Nadarajan (2010) in their paper provided evidences about Microfinance being a powerful
tool to alleviate poverty and empowering rural women and also in bringing social and economic changes in
the rural India. Microfinance and self help groups were found to be successful in promoting empowerment
of women leading to development. Their paper analyzed the impact of microfinance on the empowerment of
SHG leaders in psychological, economic, social aspects, managerial skills and their attitudes in Kanyakumari
District.

Awojobi and Bein (2011) in their paper have established a causal relationship between the variables
selected and evaluated it with the “t-test” statistic. The relevance of the independent variables in explaining
the subject has been justified based on the F-statistic test and R2 coefficient of multi-determination. They
also used a lin-log regression model, where economic growth has been regressed on poverty level in Nigeria.
Results showed that about 93 percent variation in GDP is explained by changes in microloans and savings.
And 79 percent change in poverty was due to growth and unemployment. It was also observed that poverty
is multifaceted and it is because of the lack of productive resources in the country. It was revealed that the
standard of living of the Nigerian people can be improved by providing them finance (Capital). Because of
which there can be extensive participation in economic activities which could improve their lives.

Devaraja (2011) has described the evolution of the Microfinance revolution in India. The study stated that
the outreach of such activities has been low along with the question mark on the profitability and sustainability
of MFIs. This paper defined the three distinct aspects where government needs to play a significant role. The
first was to protect the rights of the micro-borrower. The second was that of prudential oversight of risk-
taking by firms operating in microfinance. The third was a developmental role, emphasizing scale-up of the
microfinance industry where the key issues are diversification of access to funds, innovations in distribution
and product structure, and the use of new technologies such as credit bureaus and the UID. He also suggested
having proper regulation mechanism for the microfinance industry.

Krishnan (2011) emphasized on the well functioning of financial system for the long-run economic
growth of a country. The paper looked at how the financial development of an economy can be measured. It
then traced the financial development of India through the 1990s to the present, assessing the development of
each segment of financial markets. In doing so, it highlighted the dualistic development of the financial sector. Finally, the paper made an attempt to offer an explanation of this dualistic development and proposed a road map for the future development of financial markets in India.

Research Methodology

The study begins with the collection of the data pertaining to Microloans to SHG and GDP of India.

Data and its source

The present study uses 6 years annual data for the financial year 2006-07 to 2011-12 for the following variables, namely, GDP at factor cost and Micro loans disbursed to SHG. The major source of data for the above variables is Handbook of Statistics on Indian Economy maintained by Reserve Bank of India (RBI) and specifically for Microloans to SHG, it is the Status of Microfinance Report published by NABARD.

Variables in the study

The major variables used in this study are briefly explained below:

GDP: Gross domestic product (GDP) is the market value of all officially recognized final goods and services produced within a country in a given period of time. GDP per capita is often considered an indicator of a country’s standard of living. GDP per capita is not a measure of personal income. Under economic theory, GDP per capita exactly equals the gross domestic income (GDI) per capita. GDP is related to national accounts, a subject in macroeconomics.

Micro Loans to SHG: Microcredit is the extension of very small loans (microloans) to impoverished borrowers who typically lack collateral, steady employment and a verifiable credit history. It is designed not only to support entrepreneurship and alleviate poverty, but also in many cases to empower women and uplift entire communities by extension. Modern microcredit is generally considered to have originated with the Grameen Bank founded in Bangladesh in 1983. Many traditional banks subsequently introduced microcredit despite initial misgivings. As of 2012, microcredit is widely used in developing countries and is presented as having enormous potential as a tool for poverty alleviation.

Statistical tools and techniques

Correlation: In statistics, the Pearson correlation coefficient or Pearson’s r is a measure of the correlation (linear dependence) between two variables X and Y, giving a value between +1 and −1 inclusive. It is widely used in the sciences as a measure of the strength of linear dependence between two variables. It was developed by Karl Pearson from a related idea introduced by Francis Galton in the 1880s. It is also defined as the covariance of the two variables divided by the product of their standard deviations. Pearson’s correlation coefficient when applied to a population is commonly represented by the Greek letter ρ (rho) and may be referred to as the population correlation coefficient or the population Pearson correlation coefficient. The formula for ρ is:

$$\rho_{X,Y} = \frac{\text{cov}(X, Y)}{\sigma_X \sigma_Y} = \frac{E[(X - \mu_X)(Y - \mu_Y)]}{\sigma_X \sigma_Y}$$

Pearson’s correlation coefficient when applied to a sample is commonly represented by the letter r and may be referred to as the sample correlation coefficient or the sample Pearson correlation coefficient. We can obtain a formula for r by substituting estimates of the covariances and variances based on a sample into the formula above. That formula for r is:

$$r = \frac{\sum_{i=1}^{n}(X_i - \bar{X})(Y_i - \bar{Y})}{\sqrt{\sum_{i=1}^{n}(X_i - \bar{X})^2} \sqrt{\sum_{i=1}^{n}(Y_i - \bar{Y})^2}}$$
An equivalent expression gives the correlation coefficient as the mean of the products of the standard scores. Based on a sample of paired data \((X_i, Y_i)\), the sample Pearson correlation coefficient is

\[
    r = \frac{1}{n-1} \sum_{i=1}^{n} \left( \frac{X_i - \bar{X}}{s_X} \right) \left( \frac{Y_i - \bar{Y}}{s_Y} \right)
\]

Where,

\[
    \frac{X_i - \bar{X}}{s_X}, \bar{X}, \text{ and } s_X
\]

are the standard score, sample mean, and sample standard deviation, respectively.

**Regression:** Regression analysis is a statistical technique for estimating the relationships among variables. It includes many techniques for modeling and analyzing several variables, when the focus is on the relationship between a dependent variable and one or more independent variables. More specifically, regression analysis helps one understand how the typical value of the dependent variable changes when any one of the independent variables is varied, while the other independent variables are held fixed. Most commonly, regression analysis estimates the conditional expectation of the dependent variable given the independent variables — that is, the average value of the dependent variable when the independent variables are fixed. Less commonly, the focus is on a quantile, or other location parameter of the conditional distribution of the dependent variable given the independent variables. In all cases, the estimation target is a function of the independent variables called the regression function. In regression analysis, it is also of interest to characterize the variation of the dependent variable around the regression function, which can be described by a probability distribution. Regression analysis is widely used for prediction and forecasting, where its use has substantial overlap with the field of machine learning. Regression analysis is also used to understand which among the independent variables are related to the dependent variable, and to explore the forms of these relationships. In restricted circumstances, regression analysis can be used to infer causal relationships between the independent and dependent variables.

In linear regression, the model specification is that the dependent variable, \(Y_i\) is a linear combination of the parameters (but need not be linear in the independent variables). For example, in simple linear regression for modeling \(n\) data points there is one independent variable: \(x_i\), and two parameters, \(\beta_0\) and \(\beta_1\):

**Straight line:** \(y_i = \beta_0 + \beta_1 x_i + \varepsilon_i, \quad i = 1, \ldots, n.\)

(In multiple linear regressions, there are several independent variables or functions of independent variables.)

**Data Analysis**

**Descriptive Statistics**

From the Table 1, it can be seen certain descriptive statistics of the variables selected, i.e. GDP and Microloans. The mean average GDP for the duration selected is Rs. 4369269.8 cr. whereas for microloans it is 12201.5 crore rupees. The median point is Rs.4333156.5 and Rs 13353.4. For GDP and Microloans respectively. The kurtosis is -1.25 for GDP data and -1.09 for Microloans. The standard deviation, range, and sum for GDP are 615793.75, 1638150 and 26215781, respectively. Similarly, the standard deviation, range, and sum for Microloans are 3802.68, 9964.38 and 73208.96, respectively.
Table 1: Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>GDP</th>
<th>Micro Loans to SHG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>4369296.833</td>
<td>12201.49333</td>
</tr>
<tr>
<td>Standard Error</td>
<td>251396.7476</td>
<td>1552.441574</td>
</tr>
<tr>
<td>Median</td>
<td>4333156.5</td>
<td>13353.405</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>615793.7547</td>
<td>3802.689712</td>
</tr>
<tr>
<td>Sample Variance</td>
<td>3.79202E+11</td>
<td>14460449.05</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-1.258863857</td>
<td>-1.093470182</td>
</tr>
<tr>
<td>Skewness</td>
<td>0.106060072</td>
<td>-0.603005358</td>
</tr>
<tr>
<td>Range</td>
<td>1638150</td>
<td>9964.38</td>
</tr>
<tr>
<td>Minimum</td>
<td>3564364</td>
<td>6570.39</td>
</tr>
<tr>
<td>Maximum</td>
<td>5202514</td>
<td>16534.77</td>
</tr>
<tr>
<td>Sum</td>
<td>26215781</td>
<td>73208.96</td>
</tr>
<tr>
<td>Count</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

Correlation Analysis

Table 2 clearly specifies that there is high level of positive correlation between the variables. The GDP and Microloans to SHG is having 0.96 of coefficient of correlation. Both the variables move in the same direction together. Hence we reject the null hypothesis that there is no correlation between the microloans and economic growth represented by GDP.

Table 2: Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>GDP</th>
<th>Micro Loans to SHG</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>1</td>
<td>0.960035958</td>
</tr>
<tr>
<td>Micro Loans to SHG</td>
<td>0.960035958</td>
<td>1</td>
</tr>
</tbody>
</table>

Regression Analysis

Regression analysis also proves the point that the microfinance has a strong impact on the economic growth of our country. The model's R square is 0.9216 which specifies that the 92.16% of variation in GDP is explained by Microloans to SHG. Both the intercept and the coefficient of variable are significant as it can be seen by the P value as well as T statistic. The P value for both the intercept and coefficient of micro loans is less than 0.05. It can be interpreted that the microloans have a significant impact on GDP of India, thus rejecting our null hypothesis.

Conclusion

The microfinance sector is able to reach the large population below poverty line which aims to bring every assisted family above the poverty line, by creating a self employment opportunity through micro credit taken. The Industry as a whole is on an upswing. The study rightly pinpoints the relationship between the microfinance and economic growth. The study shows a high level of positive coefficient of correlation between the variables and also significant impact of microloans on GDP of India.
Table 3:
Regression

<table>
<thead>
<tr>
<th>Regression Statistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.960035958</td>
</tr>
<tr>
<td>R Square</td>
<td>0.921669041</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>0.902086301</td>
</tr>
<tr>
<td>Standard Error</td>
<td>192689.0383</td>
</tr>
<tr>
<td>Observations</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>2472394.909</td>
<td>8.600476572</td>
<td>0.001</td>
</tr>
<tr>
<td>Micro Loans to SHG</td>
<td>155.4647347</td>
<td>6.860421081</td>
<td>0.00236</td>
</tr>
</tbody>
</table>

RESIDUAL OUTPUT

<table>
<thead>
<tr>
<th>Observation</th>
<th>Predicted GDP</th>
<th>Residuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3493858.848</td>
<td>70505.15238</td>
</tr>
<tr>
<td>2</td>
<td>3848142.768</td>
<td>48493.23244</td>
</tr>
<tr>
<td>3</td>
<td>4377383.591</td>
<td>-218707.5906</td>
</tr>
<tr>
<td>4</td>
<td>4719373.359</td>
<td>-211736.3593</td>
</tr>
<tr>
<td>5</td>
<td>4734053.894</td>
<td>151900.1058</td>
</tr>
<tr>
<td>6</td>
<td>5042968.541</td>
<td>159545.4594</td>
</tr>
</tbody>
</table>

No doubt, micro finance has come a long way but it has to climb the ladder further. Microfinance institutions have not been completely successful in its pursuits because of some inherent weaknesses and restraints. The industry have made impressive gains in coverage of rural population with financial services but mainstreaming of impact assessment and incorporation of local factors in service delivery to maximize its impact on achievement of goals of poverty alleviation has to be considered. In spite of weakness and various constraints, microfinance remains a powerful tool for the development of economy, poverty alleviation and social empowerment. It may be a drop in the ocean, but it has made people self sufficient and fuelled economic growth.

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EMPIRICAL TESTING OF SIGNIFICANT ROLE OF COMMERCIAL BANKS IN THE GROWTH OF MICROFINANCE SECTOR IN INDIA

G.L. Sharma¹
Himanshu Puri²

ABSTRACT

Microfinance is a buzz word which aims at providing ambit of affordable financial services to the poor strata of the society to empower them economically and socially. RBI and NABARD, i.e. the pillars of our financial system, are basically pushing the concept forward by regulating the activities of various Commercial Banks, Regional Rural Banks (RRBs) and Cooperative Banks. The objective of this paper is to understand that how the banking sector of our economy, especially commercial banks, is playing a crucial role in developing this sector. In this paper, microfinance and two models viz., SHG - Bank Linkage model and MFI - Bank Linkage model for rendering microfinance services, has been discussed. The special emphasis put in and challenges faced by commercial banks have also been talked about. The six year data for the period 2006-2012 on the variables like savings of SHGs with banks, bank loan disbursed to SHGs, and bank loans provided to MFIs has been collected for all commercial banks, RRBs, and cooperative banks for testing the significant role played by commercial banks in comparison to others. Two sample T-test has been used for the purpose. All the six null hypotheses formulated have been rejected and thus the study shows that the commercial banks are the foundation for pushing the microfinance intensely into the economy.

Keywords: Microfinance, Commercial Banks, Self Help Groups (SHGs), Microfinance Institutions (MFIs).

INTRODUCTION

The issue of financial inclusion has emerged as a policy concern primarily to ensure provision of credit to small and medium enterprises that are normally denied access to credit. This goal of financial inclusion is being taken seriously by our financial system and the efforts have been made stronger to flourish the concept of microfinance everywhere. The emerging microfinance revolution with appropriate designed financial products and services enable the poor to expand and diversify their economic activities, increase their incomes and improve their social well-being. The microfinance concept introduced by Bangladeshi Professor in Economics, Muhammad Yunus, in 1970 has grown into worldwide movement & is gathering momentum to become a major force in India also. Before this, the world’s poorest people were almost underserved by financial institutions as they were unable to offer the necessary collateral to secure loans. Along with it, most banks did not consider small loans to be appropriate as high transaction costs were prohibitive. Here, in India around 42% of people lack formal banking services. In the absence of formal access to financial services, the poor have no choice but to go to local money lenders at the time of need, who charge interest rates ranging from 30 to 120%. Microfinance, through granting very small loans, enables poor people to run small businesses. It also helps in pulling them out of poverty and thus acclaimed recognition across the globe as a silver bullet for poverty reduction & brings in social empowerment. This paper focuses on the prime role played by commercial banks in the development and growth of above stated concept of microfinance. Commercial Banks have been expanding their reach in rural areas and other cooperative and RRBs are also playing their role for promoting the microfinance services. This paper tries to emphasise on dominant role being played by commercial banks in comparison to other cooperative and RRBs in microfinance services like savings account to SHGs, Loans to SHGs and Loans to MFIs. T test has been used to empirically test the significant difference in microfinance services between these banks.

LITERATURE REVIEW

The review of literature has been done for the studies related to the context.

Nair (2000) in his study has documented the rapid increase in the Indian rural branch network and rural credit and savings share after bank nationalization in 1969, and the subsequent slowdown post 1990.

Sriram and Upadhyayula (2002) discussed the growth and transformation of microfinance organisations (MFO) in India. As per the authors, issues that have triggered transformation include size, diversity, sustainability, focus, and taxation. Transformation experiences in India are few. To move to the mainstream, non-governmental organisations (NGOs) choose from three popular forms of organisations: non-banking finance companies (NBFCs), banks, and cooperatives. Regulatory changes are needed to allow MFOs to graduate to

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other legal forms as they grow organically. NGOs must be permitted to invest in the equity of MFOs, as is the case in Bolivia and Africa. Norms for setting up MFOs under current legal forms should not be eased. Regulations should ensure that they help genuine MFOs and not others masquerading as MFOs.

Barr (2005) evaluated the relationship between the microfinance and financial development. He argued that millennium developmental goals would only be achieved if the new financial reforms will focus more on microfinance to curb the poverty and thus achieving financial development. He emphasized on making the microfinance an integral part of the overall financial development strategy of any developing economy.

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Krishnan (2011) emphasized on the well-functioning of financial system for the long-run economic growth of a country. The paper looked at how the financial development of an economy can be measured. It then traced the financial development of India through the 1990s to the present, assessing the development of each segment of financial markets. In doing so, it highlighted the dualistic development of the financial sector. Finally, the paper made an attempt to offer an explanation of this dualistic development and proposed a road map for the future development of financial markets in India.

OBJECTIVES OF THE STUDY

Following are the major objectives of the present study:

(a) To understand the basic concept behind Microfinance and the major role played and challenges faced by commercial banks in providing microfinance services in specific

(b) To empirically test the significant role played by the commercial banks in comparison to Regional Rural Banks(RRBs) and cooperative banks in overall growth of Microfinance sector in India

RESEARCH METHODOLOGY

Hypothesis of the Study

The following 6 null hypothesis have been formulated to prove one of our objectives:

(a) \( H_0: \) There is no significant difference between the SHGs’ savings with the commercial banks and SHGs’ savings with the regional rural banks

(b) \( H_0: \) There is no significant difference between the SHGs’ savings with the commercial banks and SHGs’ savings with the cooperative banks

(c) \( H_0: \) There is no significant difference between the loans disbursed to SHG by commercial banks and loans disbursed to SHG by regional rural banks

(d) \( H_0: \) There is no significant difference between the loans disbursed to SHG by commercial banks and loans disbursed to SHG by cooperative banks

(e) \( H_0: \) There is no significant difference between the bank loan provided to MFIs by commercial banks and bank loan provided to MFIs by regional rural banks

(f) \( H_0: \) There is no significant difference between the bank loan provided to MFIs by commercial banks and bank loan provided to MFIs by cooperative banks

Data and its Source

The study is totally focused on secondary data analysis and is descriptive in nature. Various secondary literatures have been collected to understand the concept of microfinance and the delivery methods used by banks in India. For testing the significant role played by commercial banks vis-à-vis RRBs and cooperative banks, 6 years of annual data for financial year 2006-12 on Total SHGs’ savings, Total loans disbursed to SHG and the Bank Loan provided to MFIs by the
Two Sample t-Test with Equal Variance

The data has been tested by the use of T-test. For the purpose, Microsoft excel 2007 has been used. A t-test is any statistical hypothesis test in which the test statistic follows a Student's t distribution if the null hypothesis is supported. It can be used to determine if two sets of data are significantly different from each other, and is most commonly applied when the test statistic would follow a normal distribution if the value of a scaling term in the test statistic were known. When the scaling term is unknown and is replaced by an estimate based on the data, the test statistic (under certain conditions) follows a Student's t distribution. This test is only used when both:

(a) the two sample sizes (that is, the number, n, of participants of each group) are equal;
(b) It can be assumed that the two distributions have the same variance.

The t statistic to test whether the means are different can be calculated as follows:

\[ t = \frac{\bar{X}_1 - \bar{X}_2}{S_{X_1X_2} \cdot \sqrt{\frac{2}{n}}} \]

Where,

\[ S_{X_1X_2} = \sqrt{\frac{1}{2} (S^2_{X_1} + S^2_{X_2})} \]

Here \( S_{X_1X_2} \) is the grand standard deviation (or pooled standard deviation), \( 1 = \) group one, \( 2 = \) group two. The denominator of \( t \) is the standard error of the difference between two means. For significance testing, the degree of freedom for this test is \( 2n - 2 \) where \( n \) is the number of participants in each group.

RESULTS AND DISCUSSIONS

Microfinance is an innovation in financial services for the low income groups and self-employed persons who face difficulty in gaining access to banking facilities and banking services. Also referred to as “banking for the poor”, microfinance has emerged as a simple and viable way to provide financial assistance to the underprivileged for their economic and social empowerment. According to Oxford dictionary, microfinance is defined as:

“A world in which as many poor and near-poor households as possible have permanent access to an appropriate range of high quality financial services, including not just credit but also savings, insurance, and fund transfers.”

The idea behind the microfinance is very naive to generate appropriate change in financial systems all over the world. As the traditional financial system provided benefits and safety to the rich segment of the society, the main object of microfinance is to lift the poor segment of the society from the circle of poverty and able them to contribute and participate in the economic activities and development. According to International Labor Organisation (ILO):

“Microfinance is an economic development approach that involves providing financial services through institutions to low income clients.”

The typical micro finance clients are low-income persons who do not have access to formal financial institutions. Microfinance clients are typically self-employed, often household-based entrepreneurs. In rural areas, they are usually small farmers and others who are engaged in small income-generating activities such as food processing and petty trade.

Banking Sector’s Role in Microfinance – Delivery Models

Banking Sector in our country has been playing a leading role in promoting the microfinance. Banks have joined hands proactively with informal delivery channels to give microfinance sector the necessary momentum. It is indeed essential for the banks to be involved in microfinance services for poverty reduction and overall development of the economy. Banks have the necessary management expertise, systems and physical infrastructure in place to push the microfinance services. The experiences of those relatively few privately owned commercial banks that have successfully moved into microfinance show that with a high level of commitment, the right advice, and appropriate policies, it is possible to attain competitive advantage in the industry. The banks are contributing to this sector in two ways or models of micro credit in the country and they are:

SHG-BANK Linkage Model: This model involves the SHGs being financed directly by the banking agencies viz. Commercial Banks (Public Sector and Private Sector), Regional Rural Banks (RRBs) and Co-operative Banks. The SHGs have merged as a form of “social collateral” substituting other forms of ‘collateral security’ insisted upon by banks.

MFI-BANK Linkage Model: This model covers financing of Micro Finance Institutions (MFIs) by banking agencies for on-lending to SHGs and other small borrowers covered under microfinance sector. In India, majority of micro credit activity is under the Bank-SHG Linkage model and 10-15% of the activity is through ‘MFI-BANK linkage model’.

Stepping Stone by Commercial Banks towards Microfinance Growth

(a) Training and Capacity building: Banks organize / sponsor training programmes and exposure visits for the benefit of officials of banks, NGOs, SHGs and
government agencies to enhance their effectiveness in the field of microfinance.

(b) Creation of funds for Microfinance’s development: Banks also contribute to the fund being created with the basic objective of raising the level of microfinance services in India.

(c) Micro Enterprise Development Programme for skill Development: Banks launch certain programmes from time to time for enhancing the capacities of the members of matured SHGs to take up micro enterprises through appropriate skill up-gradation / development in existing or new livelihood activities.

(d) Joint liability Groups: Banks promote the financing of joint liability groups because of simplified documentation, group dynamics, timely repayment culture and prospects of credit enhancement to quality clients.

(e) Support to SHGs’ Federations: SHGs’ Federations nurture the SHGs by enhancing the bargaining powers of group members and livelihood promotion. Banks introduced a flexible scheme to support such Federations also.

(f) Support to Activity-Based Groups (ABGs): Banks also introduced schemes for supporting small-scale activity-based groups wherein capacity building, production and investment credit and market-related support was extended. The scheme focuses on forming and nurturing groups engaged in similar economic activities, such as farmers, handloom weavers, craftsmen, fishermen, etc., to improve efficiency of their production and realize better terms from the market through economies of aggregation and scale.

(g) Capital Support to Micro Finance Institutions (MFIs): Banks provide capital support to MFIs. This would help MFIs in providing financial services at an affordable cost to the poor.

Challenges Faced By Commercial Banks in Microfinance Business

The various challenges or problems which a bank faces while indulging in microfinance services are:

(a) Banks distrust the poor and NGO’s: The large majority of commercial bankers had little positive experience of banking with the poor because of non-payment factor. They also distrust NGOs that provide financial services to micro-entrepreneurs, because they are not-for-profit institutions and not subject to regulation.

(b) Government regulation: Standards and regulatory requirements with which commercial banks have to comply, particularly regarding unsecured lending and interest rates, are inappropriate for microfinance operations. Moreover, the majority of banks that undertook microfinance lending do so because it was required of them by their governments mandate to lend to this sector rather than for business.

(c) Risk in microfinance business: Bankers perceive small businesses and micro enterprises as bad credit risks. Many insolvent state-owned agricultural banks seemed to prove that small farmer clients could not or would not repay their loans. The perception is that small clients do not have stable, viable businesses for which to borrow and from which to generate repayment. Moreover, these potential clients lack traditional collateral to guarantee their loans.

(d) Commitment: The commitment of commercial banks (particularly the larger banks) to micro-entreprise lending is often fragile, and generally dependent on one or two visionary board members rather than based solidly in its institutional mission. The commitment from banking sector is still not seen to the extent which is required.

(e) Organisational structure: The organisational structures, procedures, products and methodologies of commercial banks are not suited to microfinance and changing them can be difficult, time consuming and expensive. This is one of the biggest challenge that banks have to meet.

(f) Human resources: Given that microfinance programs differ so radically from traditional banking, banks was required to recruit and retain specialized staff to manage these programs. Issues of recruitment, training, and performance-related incentives are again a challenge which needs special consideration.

(g) Cost-effectiveness/High transaction cost: Micro loans are costly because of the small size. Moreover, banks cannot operate them with their traditional mechanisms and overhead structures. The challenge is to achieve the cost effectiveness.

(h) Inadequate Outreach: Generally, poor people are reluctant to go to the bank because of their limited knowledge and ability to bear transportation costs. Therefore, to extend outreach, micro-financial services should be made available as close as possible, everywhere the poor are located. But until now the outreach of our banking sector is still falling short than the requirements.

(i) Lack of Information technology: Another constraint faced by banks is the lack of information and communication technology, especially in public sector commercial banks. They are still working on the traditional and old platforms.

(j) Banks Profitability: Many a times, banks are not able to generate profit because of high transaction cost. Their
profitability and revenue are not enough to fulfill their cost of operation when indulging in microfinance business.

As stated, the Microsoft Excel was used to calculate two sample t-test assuming equal variances from data solver function. One by one each hypothesis was tested and the results for them are as follows:

**Table 1: SHGs’ Savings – Commercial Banks and RRBs**

<table>
<thead>
<tr>
<th>t-Test: Two-Sample Assuming Equal Variances</th>
<th>Commercial Bank</th>
<th>RRB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (RsCrore)</td>
<td>3133.345</td>
<td>1391.57</td>
</tr>
<tr>
<td>Variance</td>
<td>1063740.366</td>
<td>96336.43664</td>
</tr>
<tr>
<td>Observations</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Pooled Variance</td>
<td>580038.4015</td>
<td></td>
</tr>
<tr>
<td>Hypothesized Mean Difference</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Df</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>t Stat (t&lt;0) one-tail</td>
<td>3.961177528</td>
<td></td>
</tr>
<tr>
<td>t Critical one-tail</td>
<td>1.812461102</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;0) one-tail</td>
<td>0.001340666</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;0) two-tail</td>
<td>0.002681332</td>
<td></td>
</tr>
<tr>
<td>t Critical two-tail</td>
<td>2.228138842</td>
<td></td>
</tr>
</tbody>
</table>

It can be clearly observed from Table 1 that the P value is .002 which is less than .05 and thus our null hypothesis 1 is rejected and thus alternative hypothesis is accepted. That means there is a significant difference in the amount of SHGs savings at Commercial Banks in comparison to SHGs Savings at RRBs. The Commercial Banks have dominant role to perform for this microfinance product.

**Table 2: SHGs’ Savings – Commercial Banks and Cooperative Banks**

<table>
<thead>
<tr>
<th>t-Test: Two-Sample Assuming Equal Variances</th>
<th>Commercial Bank</th>
<th>Cooperative Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (RsCrore)</td>
<td>3133.345</td>
<td>910.1033333</td>
</tr>
<tr>
<td>Variance</td>
<td>1063740.366</td>
<td>136438.8845</td>
</tr>
<tr>
<td>Observations</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Pooled Variance</td>
<td>600089.6254</td>
<td></td>
</tr>
<tr>
<td>Hypothesized Mean Difference</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Df</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>t Stat (t&lt;0) one-tail</td>
<td>4.970948242</td>
<td></td>
</tr>
<tr>
<td>t Critical one-tail</td>
<td>1.812461102</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;0) one-tail</td>
<td>0.000280438</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;0) two-tail</td>
<td>0.000560876</td>
<td></td>
</tr>
<tr>
<td>t Critical two-tail</td>
<td>2.228138842</td>
<td></td>
</tr>
</tbody>
</table>

It can be seen from Table 2 that the P value is .0005 which is less than .05. Thus our null hypothesis 2 is also rejected and thus alternative hypothesis is accepted. That means there is a significant difference in the amount of SHGs savings at Commercial Banks in comparison to SHGs Savings at Cooperative Banks.

**Table 3: SHGs’ Loans – Commercial Banks and RRBs**

<table>
<thead>
<tr>
<th>t-Test: Two-Sample Assuming Equal Variances</th>
<th>Commercial Bank</th>
<th>RRB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (RsCrore)</td>
<td>7805.023333</td>
<td>3242.486667</td>
</tr>
<tr>
<td>Variance</td>
<td>6616997.462</td>
<td>991625.2144</td>
</tr>
<tr>
<td>Observations</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Pooled Variance</td>
<td>3804311.338</td>
<td></td>
</tr>
<tr>
<td>Hypothesized Mean Difference</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Df</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>t Stat (t&lt;0) one-tail</td>
<td>4.051622453</td>
<td></td>
</tr>
<tr>
<td>t Critical one-tail</td>
<td>1.812461102</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;0) one-tail</td>
<td>0.001158764</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;0) two-tail</td>
<td>0.002317529</td>
<td></td>
</tr>
<tr>
<td>t Critical two-tail</td>
<td>2.228138842</td>
<td></td>
</tr>
</tbody>
</table>

It can be seen from Table 3 that the P value is .002 which is again less than .05 and thus our null hypothesis 3 is also rejected. This means that there is a significant difference in the amount of loan disbursed to SHGs by Commercial Banks in comparison to SHGs Loans disbursed by RRBs. The Commercial Banks have dominant role to perform for this microfinance product as well.

**Table 4: SHGs’ Loans – Commercial Banks and Cooperative Banks**

<table>
<thead>
<tr>
<th>t-Test: Two-Sample Assuming Equal Variances</th>
<th>Commercial Bank</th>
<th>Cooperative Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (RsCrore)</td>
<td>7805.023333</td>
<td>1153.98</td>
</tr>
<tr>
<td>Variance</td>
<td>6616997.462</td>
<td>177877.3311</td>
</tr>
<tr>
<td>Observations</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Pooled Variance</td>
<td>3397437.396</td>
<td></td>
</tr>
<tr>
<td>Hypothesized Mean Difference</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Df</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>t Stat (t&lt;0) one-tail</td>
<td>6.249923094</td>
<td></td>
</tr>
<tr>
<td>t Critical one-tail</td>
<td>4.75309E-05</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;0) one-tail</td>
<td>1.812461102</td>
<td></td>
</tr>
<tr>
<td>P(T&lt;0) two-tail</td>
<td>9.50619E-05</td>
<td></td>
</tr>
<tr>
<td>t Critical two-tail</td>
<td>2.228138842</td>
<td></td>
</tr>
</tbody>
</table>
It can be seen from Table 4 that the P value is less than .05 and \( t \) stat is 6.24 which is way above the critical \( t \) stat, i.e. 2.22. Based on that, our null hypothesis 4 is rejected. This means that there is a significant difference in the amount of loan disbursed to SHGs by Commercial Banks in comparison to SHGs Loans disbursed by cooperative banks.

<table>
<thead>
<tr>
<th>Table 5: MFI Loans – Commercial Banks and RRBs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>t-Test: Two-Sample Assuming Equal Variances</strong></td>
</tr>
<tr>
<td><strong>Commercial Bank</strong></td>
</tr>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>Variance</td>
</tr>
<tr>
<td>Observations</td>
</tr>
<tr>
<td>Pooled Variance</td>
</tr>
<tr>
<td>Hypothesized Mean Difference</td>
</tr>
<tr>
<td>Df</td>
</tr>
<tr>
<td>( t ) Stat</td>
</tr>
<tr>
<td>( P(t &lt; \cdot \cdot \cdot) ) one-tail</td>
</tr>
<tr>
<td>( t ) Critical one-tail</td>
</tr>
<tr>
<td>( P(t &lt; \cdot \cdot \cdot) ) two-tail</td>
</tr>
<tr>
<td>( t ) Critical two-tail</td>
</tr>
</tbody>
</table>

Table 5 illustrates the significant difference between the amount of loan given to MFI by commercial Banks and same type of loans given by RRBs. The P value is again quite less than .05 and \( t \) stat is also higher than the critical value. With that it can be concluded that the null hypothesis 5 is rejected proving the significant role played by Commercial banks in providing loan to MFIs.

<table>
<thead>
<tr>
<th>Table 6: MFI Loans – Commercial Banks and Cooperative Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>t-Test: Two-Sample Assuming Equal Variances</strong></td>
</tr>
<tr>
<td><strong>Commercial Bank</strong></td>
</tr>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>Variance</td>
</tr>
<tr>
<td>Observations</td>
</tr>
<tr>
<td>Pooled Variance</td>
</tr>
<tr>
<td>Hypothesized Mean Difference</td>
</tr>
<tr>
<td>Df</td>
</tr>
<tr>
<td>( t ) Stat</td>
</tr>
<tr>
<td>( P(t &lt; \cdot \cdot \cdot) ) one-tail</td>
</tr>
<tr>
<td>( t ) Critical one-tail</td>
</tr>
<tr>
<td>( P(t &lt; \cdot \cdot \cdot) ) two-tail</td>
</tr>
<tr>
<td>( t ) Critical two-tail</td>
</tr>
</tbody>
</table>

Table 6 illustrates the significant difference between the amount of loan given to MFI by Commercial Banks and same type of loans given by Cooperative Banks. The P value is again quite less than .05 and \( t \) stat is also higher than the critical value. With that it can be concluded that the null hypothesis 6 is also rejected proving the significant role played by Commercial Banks in providing loan to MFIs.

**CONCLUSION AND SUGGESTIONS**

After this study, one can easily conclude that there is no denying the fact that commercial banks have been and are the base for the microfinance sector to rise. Their activities towards its growth and development are increasing year by year. The number of clients of banks, bank’s funding to MFIs, outstanding loan of banks to SHGs, micro savings at banks all are mounting over the period of study depicting the importance of Commercial Banks in this area. As per the results of the study there is a significant difference in the amount of SHGs savings, Loan disbursed to SHGs, Bank loan provided to MFIs by Commercial Banks in comparison to same services provided by RRBs and Cooperative Banks. Commercial banks are being seen as a vital institution in comparison to RRBs and other cooperative banks. Banks do have to face certain challenges like high transaction cost, lack of IT, manpower, structural changes etc. for being in this business but as this concept is growing they would easily be able to overcome all these problems soon. The need of the hour is to make our financial system more strong so that our economy could move towards prosperity. Commercial banks can focus on following suggestions to improve upon and solidify their role in the arena of Microfinance:

(a) Commercial banks have to change their attitude towards poor people by making a trade-off between profitability (economic objective) and serving society (social objective).

(b) Commercial banks can focus on providing more training to SHGs and thus motivating those to finally achieve reduced NPA level.

(c) Government and RBI need to financially empower RRBs and other cooperative banks and may also make some guidelines flexible.

(d) Banks should work out on reducing on transaction cost by mass rendering of microfinance services and creating efficient IT systems.

(e) More business correspondents reaching to the internal regions of India should be recruited and trained.

**REFERENCES**


AN EMPIRICAL ANALYSIS OF CAUSAL RELATIONSHIP BETWEEN MICRO-LOANS AND VARIOUS ECONOMIC INDICATORS OF INDIA

1Sharma G.L., 2Puri Himanshu, 3Chhatwal Hartika

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2Research scholar, Mewar University, Rajasthan, India
3Delhi Institute of Advanced Studies, Guru Gobind Singh Indraprastha University, Delhi

ABSTRACT
Microfinance is the provision of a broad range of financial services such as deposits, loans, payment services, money transfers and insurance to poor & low-income households and micro enterprises. Microfinance sector in India has grown manifolds from its inception. This evolutionary growth process has given a great opportunity to the rural poor to attain reasonable economic, social and cultural empowerment, leading to better living standard and quality of life for participating households. Microfinance has been a panacea for poverty reduction in India and thus it is profoundly affected by other economic indicators as well and thus adds value to the economic growth as a whole. And if economy grows it improves the financial system and thus such financial tools. Apart from this direct relation, micro loans would be, in a way, linked to other economic indicators as well and thus provides us with a great area to focus on. For the same purpose, various variables, i.e. GDP, WPI, IIP, IAP, SENSEX and Micro loans to Self Help Groups (SHG), have been taken for the study. Their annual data from the financial year 1992-93 to 2011-12 (20 years) have been taken for the analysis. The study investigates the dynamic relationship between these variables selected. The objectives of the study are examined by employing ADF test to check the stationarity and Granger Causality test to know the cause and effect relationship between the variables.

KEYWORDS: Microfinance, Self Help Groups (SHG), Micro Loans, GDP, Economic Indicators, ADF Test, Granger Causality Test.

INTRODUCTION
The microfinance concept introduced by Bangladeshi Professor in Economics, Muhammad Yunus, in 1970 has grown into worldwide movement & is gathering momentum to become a major force in India. Before this, the world’s poorest people were almost underserved by financial institutions as they were unable to offer the necessary collateral to secure loans. Along with it most banks did not consider small loans to be appropriate as high transaction costs were prohibitive. Here in India, many poor people lacks formal banking services. In the absence of formal access to financial services, the poor have no choice but to go to local money lenders at the time of need, which exploits and charges interest rates ranging from 30 to 120%. Microfinance, as a boom, came to rescue such poor. Microfinance, through granting very small loans, enables poor people to run small businesses and earn livelihood. Microfinance is an economic development approach that involves providing financial services through institutions to low income clients. Microfinance is the practice of providing small scale financial services to the world's poor, mainly loans and savings and increasingly other products like insurance and money transfer. Also referred to as “banking for the poor”, microfinance has emerged as a simple and viable way to provide financial assistance to the under privileged. It also helps in pulling them out of rut of poverty and thus acclaimed recognition across the globe as a silver bullet to reduce poverty & bring in social empowerment. The study will look into the basic concept of Microfinance. There after the study will focus on depicting the relationship between the various economic indicators and the innovative financial tool called microloans. Six variables namely, GDP, WPI, IIP, IAP, SENSEX and Micro loans to Self Help Groups (SHG) symbolizing the state of microfinance, has been used for the analysis. The tools like ADF Test has been used to check the stationarity and Granger causality test have been used for empirically testing the relationship that which variable has a cause and effect relationship with other. The study would also be helpful to all academicians, researchers and practitioners in this field.

OBJECTIVE OF THE STUDY
In this study the major objective is to find out the causal relationship, if any, between the Micro loans to SHG and real economic variables. It will shed light on the degree of integration of the macroeconomic variables and Microloans and how they affect each other. The specific sets of objectives of the study are as follows:
• To understand the relationship between Microloans in the economy with other economic indicators and between various indicators as well.
To examine the cause and effect relation between various macro-economic variables and microloans to SHG.

HYPOTHESIS
H0- There is no stationarity in the data series related to particular variable under study.
H0- There is no cause and effect relation between various macro economic variables & Micro loans to SHG.

LITERATURE SURVEY
Barr (2005) evaluated the relationship between the microfinance and financial development. He argued that millennium developmental goals would only be achieved if the new financial reforms will focus more on microfinance to curb the poverty and thus achieving financial development. He emphasized on making the microfinance an integral part of the overall financial development strategy of any developing economy.

Husain (2006) has examined the causal relationship between stock price and real sector variables of Pakistan economy, using annual data from 1959-60 to 2004-05. It had divided the data into two halves- pre and post liberalization and had studied the causal relationship between them using various econometric techniques like ECM, Engle-Granger co integrating regressions and Augmented Dickey Fuller (ADF) Unit Root tests. By using this data set and methodology, this analysis indicated the presence of a long run relationship between the stock prices and real sector variables.

Kandir (2008) investigated the role of macroeconomic factors in explaining Turkish stock returns. Macroeconomic variables used in this study were, growth rate of industrial production index, change in consumer price index, growth rate of narrowly defined money supply, change in exchange rate, interest rate, growth rate of international crude oil price and return on the MSCI World Equity Index. Empirical findings revealed that exchange rate, interest rate and world market return seem to affect all of the portfolio returns, while inflation rate was significant for only three of the twelve portfolios. On the other hand, industrial production, money supply and oil prices did not appear to have any significant affect on stock returns.

Sengupta and Aubuchon (2008) have focused on achievement made by Prof. Muhammad Yunus and the Grameen Bank for their efforts to create economic and social development from below. Their article was intended as a non-technical overview on the growth and development of microcredit and microfinance. The Grameen bank and its achievement were reviewed. Paper also emphasized on the group lending mode of granting microfinance and how it is beneficial. Paper also reviewed the microfinance in different economies and its future.

Vanroose & D’Espallier (2009), in their paper analyzed the relationship between performance of microfinance institutions (MFIs) and the development of the formal financial sector of the country in which the MFI is active. They found indications of interdependencies between MFI-performance and formal financial sector development and also found that the MFIs reach more clients and are more profitable where access to the formal financial system is low.

Kumar, Bohra and Johari (2010) in their descriptive paper had analyzed the present microfinance sector of India focusing on economic problems like population, under employment, low rate of education, low per capita income etc. that has actually resulted in poverty. Another major factor, as per the authors, resulting in poverty is the low asset base. The paper also centers its attention on microfinance in rural sector of our economy and how marketing of microfinance takes place in such areas. The paper concluded that the rural people have very low access to institutionalized credit especially from commercial banks which needs to be improved.

Awojobi and Bein (2011) in their paper has established a causal relationship between the variables selected and evaluated it with the ‘t-test’ statistic. The relevance of the independent variables in explaining the subject has been justified based on the F-statistic test and R2 coefficient of multi-determination. They also used a lin-log regression model, where economic growth has been regressed on poverty level in Nigeria. Results showed that about 93 percent variation in GDP is explained by changes in micro loans and savings. And 79 percent change in poverty was due to growth and unemployment. It was also observed that poverty is multifaceted and it is because of the lack of productive resources in the country. It was revealed that the standard of living of the Nigerian people can be improved by providing them finance (capital). Because of which there can be extensive participation in economic activities which could improve their lives.

Devaraja (2011) has described the evolution of the Microfinance revolution in India. The study stated that the outreach of such activities has been low along with the question mark on the profitability and sustainability of MFIs. This paper defined the three distinct aspects where government needs to play a significant role. The first was to protect the rights of the micro-borrower. The second was that of prudential oversight of risk-taking by firms operating in microfinance. The third was a developmental role, emphasizing scale-up of the microfinance industry where the key issues are diversification of access to funds, innovations in distribution and product structure, and the use of new technologies such as credit bureaus and the UID. He also suggested having proper regulation mechanism for the microfinance industry.

Krishnan (2011) emphasized on the well functioning of financial system for the long-run economic growth of a country. The paper looked at how the financial development of an economy can be measured. It then traced the financial development of India through the 1990s to the present, assessing the development of each segment of financial markets. In doing so, it highlighted the dualistic development of the financial sector. Finally, the paper made an attempt to offer an explanation of this dualistic development and proposed a road map for the future development of financial markets in India.

RESEARCH METHODOLOGY
The study begins with the collection of the data pertaining to the macro economic variables. (GDP, Micro loans to SHG, WPI, IIF, IAP, and SENSEX)

Data and its source
The present study uses 20 year annual data for the period 1992-93 to 2011-2012 for India on the following
macroeconomic variables, namely, GDP, Micro loans disbursed to SHG, Index of industrial production (IIP), wholesale price index (WPI), Index number for Agricultural Production (IAP) and SENSEX. The major source of data of all the above macro economic variables is Handbook of Statistics on Indian Economy maintained by Reserve Bank of India (RBI). For SENSEX, it is the official website of Bombay Stock Exchange (www.bseindia.com). The Data on microloans have been collected from the reports published by NABARD.

**Variables in the study**
The major economic variables used in this study are briefly explained below:

**Gross domestic product (GDP):** GDP is the market value of all officially recognized final goods and services produced within a country in a given period of time. GDP per capita is often considered an indicator of a country's standard of living. GDP per capita is not a measure of personal income. Under economic theory, GDP per capita exactly equals the gross domestic income (GDI) per capita. GDP is related to national accounts, a subject in macroeconomics.

**Micro Loans to SHG:** Microcredit is the extension of very small loans (microloans) to impoverished borrowers who typically lack collateral, steady employment and a verifiable credit history. It is designed not only to support entrepreneurship and alleviate poverty, but also in many cases to empower women and uplift entire communities by extension. Modern microcredit is generally considered to have originated with the Grameen Bank founded in Bangladesh in 1983. As of 2012, microcredit is widely used in developing countries and is presented as having enormous potential as a tool for poverty alleviation.

**Wholesale price index (WPI):** For any country's economy to grow, low rate inflation serves as an inducing tonic. Slow rise in prices are supposed to induce the producers to increase the production which in turn ensure more and more employment opportunities in the country. But uncontrolled inflation or even deflation has serious repercussions for the economy. To measure this inflation Government of India (GoI) has various indices, amongst which WPI is the one which is believed to be a very comprehensible and lucid measure. It is the only general index capturing price movements in a comprehensive way. It is an indicator of movement in prices of commodities in all trade and transactions. The new series of WPI has about 435 items in its commodity basket. In its new series ‘Primary Articles’ contribute 98 items, ‘Fuel, Power, Light and Lubricants’ 19 items and ‘Manufactured Products’ provide 318 items.

**Index of Industrial production (IIP):** IIP, in simplest terms, is an index which details out the growth of various sectors in an economy. E.g. Indian IIP will focus on sectors like mining, electricity, Manufacturing & General. Also base year needs to be decided on the basis of which all the index figures would be arrived at. In case of India the base year has been fixed at 1993-94 hence the same would be equivalent to 100 Points but now it changed its based year to 2004-2005. Index of Industrial Production (IIP) is an abstract number, the magnitude of which represents the status of production in the industrial sector for a given period of time as compared to a reference period of time.

**S&P BSE SENSEX:** It was first compiled in 1986 and calculated on a "Market Capitalization-Weighted" methodology of 30 component stocks representing large, well-established and financially sound companies across key sectors. S&P BSE SENSEX today is widely reported in both domestic and international markets through print as well as electronic media. Since September 1, 2003, S&P BSE SENSEX is being calculated on a free-float market capitalization methodology. The "free-float market capitalization-weighted" methodology is a widely followed index construction methodology on which majority of global equity indices are based; all major index providers like MSCI, FTSE, STOXX, and Dow Jones use the free-float methodology.

**Index Number for Agricultural Production (IAP):** In India, Index number on Agricultural Production is being compiled at all India and state levels. Construction of IAP started only after independence. The Directorate of Economics and Statistics (DES) had adopted Triennium Ending (T.E.) 1981-82 as base year for the purpose of Index Numbers of Area, Production and Yield in Agriculture until 1999-2000. In 2000-2001, it decided to adopt T.E. 1993-94 as a way of updating the base to a recent year and keep it in harmony with the other series of indices such as Index of Industrial Production, Wholesale Price Index and the series of National Accounts Statistics.

**STATISTICAL TOOLS AND TECHNIQUES**

To check the hypothesis, following tests were used to examine the causality between various economic indicators and micro loans:

- ADF-Augmented Dickey Fuller test to check the stationarity of the data series.
- Granger Causality test to check the causality

**Augmented Dicky Fuller test**

Augmented Dickey Fuller test has been applied to test the stationary status of the data using E-view software. In the ADF test that has been conducted on all the variables to check their stationary in order to fulfill the precondition of Granger causality. In any model, it is necessary to analyze whether the prices are stationary or not. If the mean and variance of a series remain constant no matter at what point we measure, then the series is stationary, i.e. they are time invariant. A series of prices that grow without bound in time is not stationary, and, in this case, the mean is not constant. Even if a price series has a constant mean, if fluctuations around that mean become increasingly larger with time, the series is again not stationary. If a time series is not stationary it is called as non-stationary time series. Stationary time series is important because if it is non-stationary, its behaviour can be studied only for the time period under consideration. Each set of time series data will therefore be for a particular episode. As a consequence it is not possible to generalize it to other time periods. Therefore, for the purpose of forecasting, such non stationary time series may be of little practical value. To test the stationarity of the data, we used ADF.
An empirical analysis of causal relationship between micro-loans and various economic indicators of India

(Augmented Dickey Fuller) test. The ADF test is applied to the model:

\[ \Delta y_t = \alpha + \beta t + \gamma y_{t-1} + \delta \Delta y_{t-1} + \varepsilon_t \]

Where \( \alpha \) is a constant, \( \beta \) the coefficient on a time trend and \( p \) the lag order of the autoregressive process.

**Granger Causality Test**
A statistical approach proposed by Clive W Granger (1969) to assess whether there is any potential predictability power of one indicator for the other (Foresti, 2007). A time series is said to Granger cause other if the past values of the former improve the forecast of the latter (Enders, 2008). A Granger causality test is testing for the causal relationship between two stationary series \( X_t \) and \( Y_t \) in the following two equations:

\[
X_t = \delta_0 + \sum_{k=1}^{m} \delta_k X_{t-k} + \sum_{k=1}^{m} \phi_k Y_{t-k} + v_t
\]

\[
Y_t = \alpha_0 + \sum_{k=1}^{m} \beta_k Y_{t-k} + \sum_{k=1}^{m} \varphi_k X_{t-k} + u_t
\]

Where \( \alpha, \beta, \delta, \phi, \gamma \)'s are constants and \( m \) is the optimal lag length and \( u_t \) and \( v_t \) are assumed to be white noise i.e., disturbance terms with zero mean and finite variance. Granger causality test seeks to answer whether changes in \( Y_t \) causes changes in \( X_t \)? If \( Y_t \) causes \( X_t \), lags of \( Y_t \) should be significant in the equation for the latter i.e., \( \phi_k \neq 0 \). If this is the case and not vice-versa (i.e., \( \phi_k = 0 \) ) it would be said that \( Y_t \) Granger causes \( X_t \) or that there exists unidirectional causality from \( Y_t \) to \( X_t \). On the other hand, if \( X_t \) causes \( Y_t \), lags of \( X_t \) should be significant in the equation for \( Y_t \). If both sets of lags were significant, it would be said that there exists ‘bi-directional causality’ or ‘bi-directional feedback’. Also, if there exists uni-directional Granger causality from \( Y_t \) to \( X_t \), then \( Y_t \) is said to strongly exogenous in the equation of \( X_t \). If neither set of lags are statistically significant in the equation for the other variable, then it is said to be independent of each other.

**DATA ANALYSIS AND INTERPRETATION**

**ADF Test**
While testing for the stationarity of series using ADF test, the hypothesis is:

- **H0**: presence of unit root i.e., non-stationary series.
- **H1**: no unit roots i.e., stationary series.

It can be seen from the table 1 to table 6 that all the variable series, i.e. series for GDP, IAP, IIP, LoanSHG, SENSEX and WPI, are not stationary in its level form. But there is evidence of stationarity in the first difference form. The \( p \) value at first difference level is less that .05 in every variable case and thus the null hypothesis is rejected. The series is made stationary at first level of difference.

<table>
<thead>
<tr>
<th>TABLE 1: Results of Stationarity at first difference for GDP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Null Hypothesis</strong>: D(GDP,2) has a unit root</td>
</tr>
<tr>
<td><strong>Exogenous</strong>: Constant</td>
</tr>
<tr>
<td><strong>Lag Length</strong>: 0 (Automatic based on SIC, MAXLAG=4)</td>
</tr>
<tr>
<td><strong>t-Statistic</strong></td>
</tr>
<tr>
<td>Augmented Dickey-Fuller test statistic</td>
</tr>
<tr>
<td>Test critical values: 1% level</td>
</tr>
<tr>
<td>5% level</td>
</tr>
<tr>
<td>10% level</td>
</tr>
<tr>
<td>*MacKinnon (1996) one-sided p-values. Warning: Probabilities and critical values calculated for 20 observations and may not be accurate for a sample size of 17</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TABLE 2: Results of Stationarity at first difference for IAP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Null Hypothesis</strong>: D(IAP,2) has a unit root</td>
</tr>
<tr>
<td><strong>Exogenous</strong>: Constant</td>
</tr>
<tr>
<td><strong>Lag Length</strong>: 0 (Automatic based on SIC, MAXLAG=4)</td>
</tr>
<tr>
<td><strong>t-Statistic</strong></td>
</tr>
<tr>
<td>Augmented Dickey-Fuller test statistic</td>
</tr>
<tr>
<td>Test critical values: 1% level</td>
</tr>
<tr>
<td>5% level</td>
</tr>
<tr>
<td>10% level</td>
</tr>
<tr>
<td>*MacKinnon (1996) one-sided p-values. Warning: Probabilities and critical values calculated for 20 observations and may not be accurate for a sample size of 17</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TABLE 3: Results of Stationarity at first difference for IIP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Null Hypothesis</strong>: D(IIP,2) has a unit root</td>
</tr>
<tr>
<td><strong>Exogenous</strong>: Constant</td>
</tr>
<tr>
<td><strong>Lag Length</strong>: 1 (Automatic based on SIC, MAXLAG=4)</td>
</tr>
<tr>
<td><strong>t-Statistic</strong></td>
</tr>
<tr>
<td>Augmented Dickey-Fuller test statistic</td>
</tr>
<tr>
<td>Test critical values: 1% level</td>
</tr>
<tr>
<td>5% level</td>
</tr>
<tr>
<td>10% level</td>
</tr>
<tr>
<td>*MacKinnon (1996) one-sided p-values. Warning: Probabilities and critical values calculated for 20 observations and may not be accurate for a sample size of 17</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TABLE 4: Results of Stationarity at first difference for LoanSHG</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Null Hypothesis</strong>: D(LOANSHG,2) has a unit root</td>
</tr>
<tr>
<td><strong>Exogenous</strong>: Constant</td>
</tr>
<tr>
<td><strong>Lag Length</strong>: 1 (Automatic based on SIC, MAXLAG=4)</td>
</tr>
<tr>
<td><strong>t-Statistic</strong></td>
</tr>
<tr>
<td>Augmented Dickey-Fuller test statistic</td>
</tr>
<tr>
<td>Test critical values: 1% level</td>
</tr>
<tr>
<td>5% level</td>
</tr>
<tr>
<td>10% level</td>
</tr>
<tr>
<td>*MacKinnon (1996) one-sided p-values. Warning: Probabilities and critical values calculated for 20 observations and may not be accurate for a sample size of 17</td>
</tr>
</tbody>
</table>

Galley Proof
### TABLE 5: Results of Stationarity at first difference for SENSEX

<table>
<thead>
<tr>
<th>Null Hypothesis: D(SENSEX,2) has a unit root</th>
<th>Exogenous: Constant</th>
<th>Lag Length: 1 (Automatic based on SIC, MAXLAG=4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Augmented Dickey-Fuller test statistic</td>
<td>t-Statistic</td>
<td>Prob.*</td>
</tr>
<tr>
<td>Test critical values: 1% level</td>
<td>-6.065778</td>
<td>0.0002</td>
</tr>
<tr>
<td>5% level</td>
<td>-3.920350</td>
<td></td>
</tr>
<tr>
<td>10% level</td>
<td>-2.673459</td>
<td></td>
</tr>
</tbody>
</table>


Warning: Probabilities and critical values calculated for 20 observations and may not be accurate for a sample size of 16

### TABLE 6: Results of Stationarity at first difference for WPI

<table>
<thead>
<tr>
<th>Null Hypothesis: D(WPI,2) has a unit root</th>
<th>Exogenous: Constant</th>
<th>Lag Length: 0 (Automatic based on SIC, MAXLAG=4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Augmented Dickey-Fuller test statistic</td>
<td>t-Statistic</td>
<td>Prob.*</td>
</tr>
<tr>
<td>Test critical values: 1% level</td>
<td>-7.651966</td>
<td>0.0000</td>
</tr>
<tr>
<td>5% level</td>
<td>-3.886751</td>
<td></td>
</tr>
<tr>
<td>10% level</td>
<td>-2.666593</td>
<td></td>
</tr>
</tbody>
</table>


Warning: Probabilities and critical values calculated for 20 observations and may not be accurate for a sample size of 17

The optimal lag values were chosen on the basis of VAR Lag Order Selection Criteria. As can be seen from table 7, the optimal lag length, 'p' for the model is 2.

### TABLE 7: Results for optimal lag length

<table>
<thead>
<tr>
<th>VAR Lag Order Selection Criteria</th>
<th>Endogenous variables: GDP IIP LOANSHG SENSEX WPI</th>
<th>Exogenous variables: C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lag</td>
<td>LogL</td>
<td>LR</td>
</tr>
<tr>
<td>0</td>
<td>-632.2063</td>
<td>NA</td>
</tr>
<tr>
<td>1</td>
<td>-527.6215</td>
<td>139.4464</td>
</tr>
<tr>
<td>2</td>
<td>-466.2069</td>
<td>47.76694*</td>
</tr>
</tbody>
</table>

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

After this, pair-wise Granger causality test have been used to estimate the cause and effect relationship between all the variables selected for the study. The results show that there is bi-directional causality relationship between IAP and GDP, GDP Granger Cause IAP and IAP Granger Cause GDP as the null hypothesis is rejected because p value is less than 0.05. Null hypothesis that GDP does not Granger Cause LOANSHG is also rejected. It can be very well interpreted that when the GDP grows it makes the micro loans grow and caused it significantly. No significant causal relationship has been found between GDP and IIP. Similar is the case with GDP and WPI. Also, unidirectional relationship has been observed where GDP is granger causing Sensex. Another major interpretation can be made regarding the relationship of Micro loans and IAP. There is a bi-directional causal relationship. The Index for Agricultural productions cause microloans and vice versa. This is the outcome because microloans are majorly taken in the rural sector by the farmers. Null hypothesis of SENSEX does not Granger cause IAP is also rejected at p value of 0.018. Another bi-directional relationship between SENSEX and Micro loans is there.

<table>
<thead>
<tr>
<th>Null Hypothesis</th>
<th>Obs</th>
<th>F-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IAP does not Granger Cause GDP</td>
<td>18</td>
<td>4.05460</td>
<td>0.0428</td>
</tr>
<tr>
<td>GDP does not Granger Cause IAP</td>
<td></td>
<td>5.08207</td>
<td>0.0234</td>
</tr>
<tr>
<td>IIP does not Granger Cause GDP</td>
<td>18</td>
<td>0.54389</td>
<td>0.5931</td>
</tr>
<tr>
<td>GDP does not Granger Cause IIP</td>
<td></td>
<td>1.31296</td>
<td>0.3024</td>
</tr>
<tr>
<td>LOANSHG does not Granger Cause GDP</td>
<td>18</td>
<td>2.74748</td>
<td>0.1011</td>
</tr>
<tr>
<td>GDP does not Granger Cause LOANSHG</td>
<td></td>
<td>4.94789</td>
<td>0.0252</td>
</tr>
<tr>
<td>WPI does not Granger Cause GDP</td>
<td>18</td>
<td>0.32514</td>
<td>0.7281</td>
</tr>
<tr>
<td>GDP does not Granger Cause WPI</td>
<td></td>
<td>0.32774</td>
<td>0.7263</td>
</tr>
</tbody>
</table>

Galley Proof
An empirical analysis of causal relationship between micro-loans and various economic indicators of India

SENSEX does not Granger Cause GDP 18 0.53790 0.5964
GDP does not Granger Cause SENSEX  4.97573 0.0249
IIP does not Granger Cause IAP 18 0.29052 0.7526
IAP does not Granger Cause IIP  0.26681 0.7699
LOANSHG does not Granger Cause IAP 18 5.01249 0.0243
IAP does not Granger Cause LOANSHG  3.72585 0.0526
WPI does not Granger Cause IAP 18 0.93024 0.4192
IAP does not Granger Cause WPI  0.00811 0.9919
SENSEX does not Granger Cause IAP 18 5.55616 0.0180
IAP does not Granger Cause SENSEX  0.49451 0.6209
LOANSHG does not Granger Cause IIP 18 0.18727 0.8314
IIP does not Granger Cause LOANSHG  0.00435 0.9957
WPI does not Granger Cause IIP 18 2.79948 0.0975
IIP does not Granger Cause WPI  0.16189 0.8522
SENSEX does not Granger Cause IIP 18 0.02905 0.9714
IIP does not Granger Cause SENSEX  0.20262 0.8191
WPI does not Granger Cause LOANSHG 18 0.07572 0.9275
LOANSHG does not Granger Cause WPI  0.65343 0.5365
SENSEX does not Granger Cause LOANSHG 18 5.72375 0.0165
LOANSHG does not Granger Cause SENSEX  10.0499 0.0023
SENSEX does not Granger Cause WPI 18 0.05572 0.9460
WPI does not Granger Cause SENSEX  0.56756 0.5803

CONCLUSION
The microfinance sector in India is on a growth. It cannot be denied that it shares a causal relationship with other economic indicators. The empirical analysis proves that it is on the nascent stage and when the economy grows, it causes useful growth in micro loans. Also, unidirectional relationship was observed where GDP is granger causing Sensex. Another major interpretation that was made regarding the relationship of Micro loans and IAP is that there is a bi-directional causal relationship between IAP and microloans. A causal relationship between these two variables is quite obvious as microloans are majorly being taken in rural areas. The Index for Agricultural productions cause microloans and vice versa. Another bi-directional relationship between SENSEX and Micro loans was there. No doubt, micro finance has come a long way but still it has to climb the ladder more. The days are not that far where Microloans would be significantly causing the GDP of India. The industry have made impressive gains in coverage of rural population with financial services but mainstreaming of impact assessment and incorporation of local factors in service delivery to maximize its impact on achievement of goals of poverty alleviation has to be considered. Inspite all weakness and constraints microfinance remains a powerful tool for development of economy. It may be a drop in the ocean, but it has made people self-sufficient and let economies grow.

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Galley Proof
“Effectiveness of Microfinance: A Literature Survey”

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Professor and Dean, Finance, LBSIM, India¹
Research Scholar, Finance, Mewar University, India²
glsharma@lbsim.ac.in¹, purihiman@gmail.com²

ABSTRACT - Poverty reduction & social empowerment, the prime objectives of any developing economy seem to be a wild-goose-chase for them as it requires 100% financial inclusion. In the developing country like India where around 42% of the population lacks banking services, Microfinance, i.e. ‘Banking for the poor’, offers an appropriate solution. It provides various financial services i.e. micro credit, micro savings, micro insurance, and other financial products to the economically weakened strata of the society as it plays like an innovative agent of economic change. It was always been in question regarding its effectiveness, as a financial tool, to bring in economic growth and social empowerment in the society. This study intends to critically evaluate the effectiveness of Microfinance and will look into the studies conducted by various academicians, researchers, scholars etc. The present paper is basically the compilation of various views and opinions documented by various authors. A complete literature survey has been done to evaluate various dimensions relating to the microfinance’s effectiveness. Microfinance has definitely empowered women and acted as a social empowerment tool. It has influenced the poverty reduction positively but it was argued that it has still not been able to reach the larger poor masses and thus some regulatory changes are required. Microfinance has come a long way but still it has to climb more steps of the ladder.

Keywords: Microfinance, MFIs, Poverty Reduction, Economic Growth, Social Empowerment

1, INTRODUCTION

The microfinance concept introduced by Bangladeshi Professor in Economics, Muhammad Yunus, in 1970 has grown into world wide movement & is gathering momentum to become a major force in almost all the developing economies these days. Before this, the world’s poorest people were almost underserved by financial institutions as they were unable to offer the necessary collateral to secure loans. Along with it most banks did not consider small loans to be appropriate as high transaction costs were prohibitive. Here in India, around 42% of people lack formal banking services. In the absence of formal access to financial services, the poor have no choice but to go to local money lenders at the time of need, who charge interest rates ranging from 30 to 120%. Microfinance, through granting very small loans, enables poor people to run small businesses. It also helps in pulling them out of rut of poverty and thus acclaimed recognition across the globe as a silver bullet to reduce poverty & bring in social empowerment. In India, it has expanded at an average of 62% over the past five years in terms of customers and 88% in terms of credit. Its industry has grown into $7 Billion. It has around $6.7 Billion in
outstanding loans to 30 million borrowers (Till February 2011). But on the contrary, this innovative financial tool has not been able to produce the desired results in many other economies. And thus, this phenomenon has always been put into question regarding its effectiveness and desired outcome. This paper will be undergoing the various studies that have already been done relating to evaluating the microfinance’s effectiveness. The study intends to look into the effectiveness level of microfinance being described by various authors of this domain area.

2, OBJECTIVE OF THE STUDY
The major objective of undertaking this study is to get into the in-depth analysis of Microfinance as a financial innovative tool. The study has the sole objective of learning about the effectiveness level of microfinance that is playing a crucial role for the economic growth, poverty reduction and social empowerment.

3, LITERATURE SURVEY

3.1 Effectiveness in Reducing Poverty
For developing economies, it has been observed that poverty is the root cause of many other economic problems. The microfinance is expected to prove as a tool for reducing down the same. An Indonesian case study conducted by Cloud, Rositan and Panjaitan-Drioadisuryo (1999) reported that the income of microfinance participants increased by 112% and the income of 90% of those families increased enough to lift them above the poverty line. Park (2001) evaluated the effect of microfinance on poverty via targeting, sustainability and impact. Survey methodology was used for conducting the research and focused on the household level as their main unit of analysis. The stratified random sample based on three strata typified by the amount of governmental involvement in the microfinance program was used. A high level of repayment activity suggested profits for the lending institution and thus a high repayment rate also necessarily suggested a sustainable microfinance program. And also change in household income was observed to measure the impacts of microfinance. This change in household income was an indication that people are trying to come out of the vicious circle of poverty. Simanowitz and Walter (2002) observed that the microfinance does not reach the poorest of the poor because of discrimination by the loans officers. Just as there are large divides in wealthy countries between the rich and poor, impoverished communities may have social segregation between the poor and the destitute. The destitute, also referred to as the very poor or the poorest of the poor, may be shunned from the rest of society. Sometimes it is discrimination from the “richer” poor that drives the destitute away from society, and consequently, away from MFI programs, but often it is the destitute who segregate themselves. “Microfinance has tended to exclude those than cannot use the one-size-fits-all services provided. The services that have been developed tend to meet the needs of a particular segment of the client market, and have led to the exclusion of those who cannot use or pay for these services”. And thus the poverty reduction, as the objective, has
become difficult to achieve. Weiss, Montgomery and Kurmanalieva (2003) brought together all the evidences on the impact of microfinance activities on poverty reduction. Their paper focused on knowing the extent to which microfinance activities helped in pulling household permanently out of poverty. Paper also tried to answer questions like; Does microfinance services reaches to the core poor people and how far microfinance is a cost effective mean of transferring income to the poor. The paper concludes that poverty, no doubt, had a positive impact on poverty reduction but it is not that simple tool which can be reached to core poor people so easily. Amin, Rai & Topa (2003) studied the ability of microfinance to reach the poor and vulnerable so that they can actually fight against poverty. They tried answering a concern that microfinance is only serving people slightly above or below the poverty line, however the really poor and destitute are being systematically excluded. They used Quasi-experimental time series design for their research and collected their sample from two villages in Bangladesh and followed the respondents over two years. The focus was on the household level only. The sampling method employed was the multi-stage cluster probability sampling method. They selected 2 villages and then sample the entire female led households and used a probability sample of the male households. It was concluded that the ability of a household to maintain its real consumption level regardless of fluctuations in household income implies less vulnerability. Khandker (2005) in his article scrutinized the effects of microfinance on poverty reduction at both the participant and the aggregate levels using panel data from Bangladesh. The results suggested that the access to microfinance contributes to poverty reduction, especially for female participants, and to overall poverty reduction at the village level. Microfinance thus helps not only poor participants but also the local economy. Imai and Arun (2008) in their study analyzed the impact of access to Micro Finance Institutions (MFIs) on household poverty in India. Propensity score matching (PSM) and the treatment effects model were employed to estimate the poverty-reducing effects of access to MFIs and loans from them used for productive purposes, such as investment in agriculture or nonfarm businesses. These models take into account the endogenous binary treatment effects and the sample selection bias associated with access to MFIs. Despite some limitations e.g. those arising from the un-observability of potentially important determinants of access to MFIs, significantly positive effects of MFI access on the multidimensional welfare indicator were confirmed by both models, implying a poverty reducing role for MFIs. They found that loans for productive purposes were more important in poverty reduction in rural than in urban areas. They also showed that, in urban areas, significant poverty reducing effects of MFIs were observed only for the moderately poor, not for the poor, while they were significant for both groups in rural areas. Kimos, Thankom, Arun, and Hossain (2009) have evaluated the contribution of Sinapi Aba Trust towards poverty reduction. They used a cross-sectional data from 547 respondents for the same purpose. The study found out that the participation by the poor people in the programme has actually achieved the objective where clients now owned the saving deposits and subscribed to welfare scheme which served as insurance to pay off debts in times of illness or death. Established clients were also found to be in a better position to contribute towards the education of their children and payment of
healthcare for members of their households as well as contribution towards the purchase of household durables. The study noted that programmes that are financially sustainable have greater effects on participants, and that there is the need for clients’ graduation to benefit most from participation in such programmes. **Chowdhury (2009)** is his paper attempted to provide a critical appraisal of the debate on the effectiveness of microfinance as a universal poverty reduction tool. He stated that the credit is not the only factor for the poor to fight against poverty. It requires having enough knowledge and skill to use that fund for betterment. The borrowers of microfinance possibly benefit from learning-by-doing and from self-esteem. The paper also suggested that for any significant dent on poverty, the focus of public policy should be on growth-oriented and equity-enhancing programs, such as broad-based productive employment creation. **Katsushi, Thankom, and Samuel (2010)** in their study inspected whether household access to microfinance reduces poverty. Using national household data from India, treatment effects model was employed to estimate the poverty-reducing effects of MFIs loans for productive purposes. Significant positive effect of MFI productive loans on multidimensional welfare indicator was observed. They also found that the productive loans were more relevant for poverty eradication in rural than in urban areas. However in urban areas, simple access to MFIs has larger average poverty-reducing effects than the access to loans from MFIs for productive purposes. **Mamun and Adaikalam (2011)** investigated the effect of Amanah Ikhtiar Malaysia’s (AIM) Urban Microfinance Program on their client’s quality of life in Peninsular Malaysia. This study employed a cross sectional design with stratified random sampling method. A quality of life index using eleven selected indicators was developed. Findings of this study extend the literature by providing empirical evidence that access to microfinance improved quality of life of participating households in urban Peninsular Malaysia and thus helped them in coming out of poverty. The findings showed that the respondent’s participation status is associated with the size and quality of clients’ houses. It was recommended that AIM should focus on increasing the outreach by targeting ‘low income clients’ in urban Peninsular Malaysia. Moreover it should also review and re-organize their programs in order to present a dynamic and well-diversified microfinance program that fulfills the financial needs of their urban clients.

3.2 Effectiveness in Economic and Financial Growth

Growth is the final aim of any economy and it is supported by the growth in financial and banking sector and most importantly in Microfinance sector. Microfinance sector, if grown properly, can push the country’s economic growth. **Sriram and Upadhyayula (2002)** discussed the growth and transformation of microfinance organizations (MFO) in India. As per the authors, to move to the mainstream, non-governmental organizations (NGOs) choose from three popular forms of organizations: non-banking finance companies (NBFCs), banks, and cooperatives. Regulatory changes are needed to allow MFOs to graduate to other legal forms as they grow organically. NGOs must be permitted to invest in the equity of MFOs, as is the case in Bolivia and Africa. Norms for setting up MFOs under current legal forms should not be eased. Regulations should ensure that they help genuine MFOs and not others masquerading as MFOs.
This growth in MFOs will be a foundation for the sector’s growth and thus our economy. Barr (2005) evaluated the relationship between the microfinance and financial development. He argued that millennium developmental goals would only be achieved if the new financial reforms will focus more on microfinance to curb the poverty and thus achieving financial development. He emphasized on making the microfinance an integral part of the overall financial development strategy of any developing economy. Dichter (2007), in a book entitled, What’s Wrong with Microcredit, says that it is unrealistic to “expect microfinance to noticeably affect growth or successful business development”. Most people, he writes, “poor or otherwise, are not entrepreneurs, so there is little reason to think that mass credit would in general lead to viable business start-ups”. Sengupta and Aubuchon (2008) have focused on achievement made by Prof. Muhammad Yunus and the Grameen Bank for their efforts to create economic and social development from below. Their article was intended as a non-technical overview on the growth and development of microcredit and microfinance. Paper also reviewed the microfinance in different economies and its future. Vanroose & D’Espallier (2009) in their paper analyzed the relationship between performance of microfinance institutions (MFIs) and the development of the formal financial sector of the country in which the MFI is active. They found indications of interdependencies between MFI-performance and formal financial sector development and also found that the MFIs reach more clients and are more profitable where access to the formal financial system is low. They concluded that MFIs growth will take a lead for expanding the financial sector. Awojobi and Bein (2011) in their paper has established a causal relationship between the variables selected (GDP and Micro Loans) and evaluated it with the ‘t-test’ statistic. The relevance of the independent variables in explaining the subject has been justified based on the F-statistic test and R2 coefficient of multi-determination. They also used a lin-log regression model, where economic growth has been regressed on poverty level in Nigeria. Results showed that about 93 percent variation in GDP is explained by changes in micro loans and savings. It was also observed that poverty is multifaceted and it is because of the lack of productive resources in the country. It was revealed that the standard of living of the Nigerian people can be improved by providing them finance (Capital). Because of which there can be extensive participation in economic activities leading to growth of economy. Devaraja (2011) stated that the outreach of such activities has been low along with the question mark on the profitability and sustainability of MFIs. This paper defined the three distinct aspects where government needs to play a significant role. The first was to protect the rights of the micro-borrower. The second was that of prudential oversight of risk-taking by firms operating in microfinance. The third was a developmental role, emphasizing scale-up of the microfinance industry where the key issues are diversification of access to funds, innovations in distribution and product structure, and the use of new technologies such as credit bureaus and the UID. He also suggested having proper regulation mechanism for the microfinance industry. Rahman and Luo (2012) examined the sustainability of nongovernmental organisation (NGO)-type microfinance service providers (MSPs) in Shaanxi province, China in comparison with Grameen Bank (GB), Bangladesh. Despite geographical restrictions, the selected MSPs successfully expanded their services to
isolated mountainous regions where formal financial institutions were not in existence earlier. Overall business performance of the sample institutions were found well. They built a strong financial and informational network with Plan China (country office of Plan International), China Association of Microfinance and women federation (Shaanxi province). However, the lack of funds, limited service provisions and restrictive policy environment shackles the industry from further expansion; necessitating urgent remedial steps for resolving existing barriers and allowing these institutions to participate in China's growth. Thus overcoming of such limitations for Microfinance service providers becomes essential before expecting the economic growth.

3.3 Effectiveness in Socially Empowering Society and Women

In many economies, it has been seen that social empowerment has been achieved when they had access to microfinance services. Hashemi, Schuler, Riley (1996) and Kabeer (1998) stated that microfinance empowered women in Bangladesh. Murdoch and Haley (2002) stated that microfinance is potentially harmful to women. For most of history, women were excluded from public or income-generating activities; only recently they have started to speak up about gender equality and the right to equal economic opportunity with men. Some men feel that women’s independence is a direct threat to traditional patriarchal power. In some cultures, if a man’s wife works, and most especially if she generates more income than he does, it degrades the man’s sense of masculinity. (Cheston and Kuhn 2002) confirmed the argument of Murdoch and Haley and restated that it can also lead to a power struggle as the man attempts to regain dominance over the household and in some cases; it escalates to domestic violence against women. Another challenge that women face with microfinance is that they have a double workload of running a business and childcare. So, women in many economies were made to be excluded from the services of microfinance. Kalpana (2008) showed the diversity of bypass strategies implemented by women (arrangements with the staff and with bankers, use of intermediaries, etc.) to do “as if” they were using microcredit for “productive use”. The paper concluded that there is ample of women’s capacity to negotiate access to resources and use them for their livelihood promotion. Shastri (2009) emphasized on the role played by the government and NGOs in promoting the microfinance activities in India. Such initiatives indicated that the national social and economic impacts were significant. Mummidi (2009) discussed in her paper that women should entitled the work with the utilization of resources through MFIs. Along with this, how efficiently they utilize resources has also been discussed. The paper suggests that a better understanding of the diversity of women’s livelihood and a better understanding of the range of constraints, motivations, skills and capabilities of women through the livelihood framework might help to understand the impact of microfinance. Pillai and Nadarajan (2010) in their paper provided evidences about Microfinance being a powerful tool for empowering rural women and also in bringing social and economic changes in the rural India. Microfinance and self help groups were found to be successful in promoting empowerment of women leading to development. Their paper analyzed the impact of microfinance on the empowerment of SHG leaders in psychological, economic, social aspects, managerial skills and their attitudes in Kanyakumari
District. **Rajendra (2010)** concluded that there is a definite improvement of psychological, economical, social; and managerial skills among the SHG leaders in Vellore district of Tamilnadu. **Amin and Patel (2012)** stated that to have faster development of any segment, contribution of the woman is essential. In India, 48% population is of woman and literacy ratio of woman is 54.16%, but still their contribution in the economy is very negligible. Micro finance institutes play the most significant role to provide woman empowerment in to the Indian economy. Such foundation not only gives them empowerment with finance only but also revolutionizes their social, cultural and behavioural pattern which is helpful for development of the economy. This paper focussed on development of the woman sector with such SHG and other financial institutions.

4, CONCLUSION

The microfinance sector is able to influence the people below poverty line positively by creating a self employment opportunity through Micro credit taken. The Industry as whole is rising. The loan disbursement to SHG, MFIs and individual SHG along with credit mobilized is rising. But on the contrary, it has been stated by many authors that many MFIs are not able to reach to the large population and thus there is a need for some regulatory and infrastructural changes to get the maximum benefit from such financial tool No doubt, micro finance has come a long way but still it has to climb more steps of the ladder. MFIs have not been completely successful in its pursuits because of some inherent weaknesses and restraints. The industry have made impressive gains in coverage of rural population with financial services but mainstreaming of impact assessment and incorporation of local factors in service delivery to maximize its impact on achievement of goals of poverty alleviation has to be considered. Microfinance has also changed the life of many women through empowering them. Many social changes have been brought at local level in the society as well. Inspite of all weakness and constraints, Microfinance remains a powerful tool for development of the economy, poverty alleviation and social empowerment. It may be a drop in the ocean, but it has made people self sufficient.

5, REFERENCES


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BIOGRAPHY
Mr. Himanshu Puri is an Assistant Professor in the area of finance at IMM, Institute of Marketing & Management, Qutab Institutional Area, Delhi. He has been into academics from the last 5 years with the organizations like AMITY University, Gurgaon, IILM, G.Noida and Delhi Institute of Advanced Studies, Delhi (Affiliated to GGSIP University). He has been teaching MBA, PGDM, BBA, and B.com. students. He is pursuing PhD in finance and holds the masters degree in Business Administration and Commerce both (MBA and M.Com). He has cleared JRF and NET qualification conducted by UGC. He has also done various certification courses in financial markets, Capital Market, Security Market, Derivative Market and Investment Management from NSE of India Ltd and thus attained the NCMP Level 2 (NSE Certified Market Professional). He has enrich experience in teaching courses like Accounting for Management, Cost Management, Mergers and Acquisition, Financial Institution and Market, Security Analysis and Portfolio Management etc. He has organized and attended various FDP’s, national and international conferences, symposiums and seminars. He has also presented research papers in many of these conferences as well. He has always been into mentoring, guiding and counseling students. He has taken various Personality Development sessions on Body language, Interviewing skills, GDs etc. pan India. His research areas are Microfinance, Financial Markets and Merger & Acquisition. He is into writing research papers, articles and book reviews on a regular basis on these research areas. There are many research paper publications to his credit in various refereed national and international journals like Metamorphosis (Journal by IIM Lucknow), APJMRI (Journal by SAGE Publications), Paradigm (Journal by IMT Ghaziabad), Abhigyan (Journal by Fore School of Management), International Journal of Financial Management, Journal of Accounting and Finance, IMS Manthan, European Journal of Commerce and Management Research, Pranjana, International Journal of Research in Commerce, Economics and Management, Vimarsh, Journal of Indian Research, The Alternative, Saaransh etc.
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"REGIONAL DISPARITY IN MICROFINANCE ACTIVITIES IN INDIA"

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ABSTRACT
Microfinance is the provision of a broad range of financial services such as deposits, loans, payment services, money transfers and insurance to poor & low-income households and micro enterprises. Microfinance sector in India has grown manifolds from its inception. This evolutionary growth process has given a great opportunity to the rural poor to attain reasonable economic, social and cultural empowerment, leading to better living standard and quality of life for participating households. Microfinance has been a panacea for poverty reduction in India and thus it is profoundly promoted by our financial system throughout the economy. But there has been a great extent of disparity in region wise growth and presence of such activities across the country. This disproportionate region wise presence of microfinance has been pointed out by many research scholars, microfinance institutions, banks etc. The presence of microfinance has always been enormous in southern part of the country. The present study intends to look into the very same aspect by getting an insight of such variation and analysing it through various saving, borrowing and participation ratios such as; No. of SHG having savings in particular region to total no. of SHG involved in savings with banks, Savings by SHG in particular region to total savings by SHG in the economy, No. of SHG bank loan borrowers in southern region to no. of SHG bank loan borrowers in particular region, Amount of SHG bank loan in southern region to amount of SHG bank loan in particular region, SHG bank loan outstanding in particular
region to total SHG bank loan outstanding across nation, Participation in MEDP program in particular region to participation across nation, Participation in training to SHG in southern region to participation in training to SHG in particular region, for 3 years of data. The paper attempts to derive the reasons for disparities and making useful suggestions for the same. It is comprehended that there are regions like southern and eastern region which holds the maximum market for microfinance business. The region like north and north east India are still lacking far behind in terms of microfinance activities.

Keywords: Microfinance, Regional Disparity, Self Help Groups (SHG), India

INTRODUCTION

The microfinance concept introduced by Bangladeshi Professor in Economics, Muhammad Yunus, in 1970 has grown into worldwide movement & is gathering momentum to become a major force in India too. Before this, the world’s poorest people were almost underserved by financial institutions as they were unable to offer the necessary collateral to secure loans. Along with it most banks did not consider small loans to be appropriate as high transaction costs were prohibitive. Here in India around 42% of people lack formal banking services. In the absence of formal access to financial services, the poor have no choice but to go to local money lenders at the time of need, who charge interest rates ranging from 30 to 120%. Microfinance, through granting very small loans, enables poor people to run small businesses. It also helps in pulling them out of rut of poverty and thus has acclaimed recognition across the globe as a silver bullet to reduce poverty & bring in social empowerment. The issue of financial inclusion has also emerged as a policy concern primarily to ensure provision of credit to small and medium enterprises that are normally denied access to credit. This goal of financial inclusion is being taken seriously by our financial system and the efforts have been made stronger to flourish the concept of microfinance everywhere. But the sad part is that the phenomenon is growing in a disproportionate manner. It is well-known that microfinance penetration in India has an extremely uneven geographic distribution – while the largest state, Uttar Pradesh (and a number of others, mostly in the north), is relatively un-served. The southern state of Andhra Pradesh (AP) and its neighbours show a very different story. AP has more microfinance clients than any other country in the world except for Bangladesh. This paper focuses on this uneven presence and growth of microfinance activities in our country. The study will look into the basic concept of microfinance and would be analyzing the current scenario of it in India with regard to its uneven regional presence. It tries to get an insight of such variation and analyses it through various saving, borrowing and participation ratios. The paper attempts to derive the reasons for disparity and make useful suggestions for the same.
OBJECTIVES OF THE STUDY

The objectives of this study are as follows:

- To understand the concept & scenario of micro finance in India.
- To get the insight about the region wise variation in micro finance activities in India.
- To analyze the quantum of such variation with the help of ratio analysis technique.
- To understand the reasons for such disparity and thus providing useful suggestions.

LITERATURE REVIEW

There are very few studies focused on the issue of regional disparity. The review of literature has been done for the studies related to the context.

Sriram and Upadhyayula (2002) discussed the growth and transformation of micro finance organizations (MFO) in India. As per the authors, Issues that have triggered transformation include size, diversity, sustainability, focus, and taxation. Transformation experiences in India are few. To move to the mainstream, non-governmental organizations (NGOs) choose from three popular forms of organizations: Non-Banking Finance Companies (NBFCs), banks, and cooperatives. Regulatory changes are needed to allow MFOs to graduate to other legal forms as they grow organically. NGOs must be permitted to invest in the equity of MFOs, as is the case in Bolivia and Africa. Norms for setting up MFOs under current legal forms should not be eased. Regulations should ensure that they help genuine MFOs and not others masquerading as MFOs.

Amin, Rai & Topa (2003) studied the ability of micro finance to reach the poor and vulnerable. They tried answering a concern that micro finance is only serving people slightly above or below the poverty line, however the really poor and destitute are being systematically excluded. They used Quasi-experimental time series design for their research and collected their sample from two villages in Bangladesh and followed the respondents over two years. The focus was on the household level only. The sampling method employed was the multi-stage cluster probability sampling method. They selected 2 villages and then sample the entire female led households and used a probability sample of the male households. It was concluded that the ability of a household to maintain its real consumption level regardless of fluctuations in household income implies less vulnerability.

Gobezie (2005) examined the constraints limiting both the supply and demand of micro finance in very poor countries like Ethiopia. Paper reveals that the good intentions for expansion of supply is facing difficulties due to poorly designed regulations and policies, organizational behaviors, the incentive problem and weak capacity of institutions implementing it. Many problems remain on the demand side as well. For the majority poor, the communication system in rural areas, particularly the road network, bars them from
accessing the service. Where the access is granted, clients low skill achievement in business development dictates their business' absorptive capacity to remain weak. Many are risk averse, or don't like (for cultural reasons) to venture into non-traditional activities, while others have a very low income perspective and simply don't have the demand for such income-improving services. The paper recommended the closure of the supply and demand gap through the committed involvement by micro finance practitioners, government, non-government organizations, donors, etc

Guangwen (2008) portrayed the demand of micro finance in Chinese market. He focused on answering some of the questions like; what sectors of the population are demanding micro finance services? How large is the demand for micro credit? Is there a potential market for micro finance investors? After an empirical based analysis of financial service demand and an analysis of the potential micro credit market, it was found that there are some 249 million rural households, more than 8 million registered unemployed workers and more than 42 million SMEs and micro enterprises in China. These figures confirmed the existence of a potentially huge micro credit market. The current low rural coverage, limited outreach and high loan/deposit ratio of formal financial service institutions also indicated a large potential micro finance market.

Sengupta and Aubuchon (2008) have focused on achievement made by Prof. Muhammad Yunus and the Grameen Bank for their efforts to create economic and social development from below. Their article was intended as a non-technical overview on the growth and development of micro credit and micro finance. The Grameen bank and its achievement were reviewed. Paper also emphasized on the group lending mode of granting micro finance and it's benefit. Paper also reviewed the micro finance in different economies and its future.

Kumar, Bohra and Johari (2010) in their descriptive paper had analyzed the present micro finance sector of India focusing on economic problems like population, under employment, low rate of education, low per capita income etc. that has actually resulted in poverty. Another major factor, as per the authors, resulting in poverty is the low asset base. The paper also centers its attention on micro finance in rural sector of our economy and how marketing of micro finance takes place in such areas. The paper concluded that the rural people have very low access to institutionalized credit especially from commercial banks which needs to be improved.

Devaraja (2011) has described the evolution of the Micro finance revolution in India. The study stated that the outreach of such activities has been low along with the question mark on the profitability and sustainability of MFIs. This paper defined the three distinct aspects where government needs to play a significant role. The first was to protect the rights of the micro-borrower. The second was that of prudential oversight of risk-taking by firms...
operating in microfinance. The third was a developmental role, emphasizing scale-up of the microfinance industry where the key issues are diversification of access to funds, innovations in distribution and product structure, and the use of new technologies such as credit bureaus and the UID. He also suggested having proper regulation mechanism for the microfinance industry.

**MICROFINANCE IN INDIA**

Microfinance is an innovation in financial services for the low income groups, self employed persons who face difficulty to take an access towards banking facilities and banking services. Also referred to as “banking for the poor”, microfinance has emerged as a simple and viable way to provide financial assistance to the underprivileged for their economic and social empowerment. According to oxford dictionary, microfinance is defined as:

"A world in which as many poor and near-poor households as possible have permanent access to an appropriate range of high quality financial services, including not just credit but also savings, insurance, and fund transfers."

The idea behind the microfinance is very naive to generate appropriate change in financial systems all over the world. As the traditional financial system provided benefits and safety to the rich segment of the society, the main object of microfinance is to lift the poor segment of the society from the circle of poverty and able them to contribute and participate in the economic activities and development. According to International Labor Organization (ILO):

"Microfinance is an economic development approach that involves providing financial services through institutions to low income clients."

The typical microfinance clients are low-income persons who do not have access to formal financial institutions. Microfinance clients are typically self-employed, often household-based entrepreneurs. In rural areas, they are usually small farmers and others who are engaged in small income-generating activities such as food processing and petty trade. *Some of the major Microfinance services are:*

- **Micro Credit:** It is a small amount of money loaned to a client by a bank or other institution.

- **Micro Savings:** These are deposit services that allow one to save small amounts of money for future use. These savings accounts allow households to save in order to meet unexpected expenses and plan for future expenses.

- **Micro Insurance:** It is a system by which people, businesses and other
organizations make a small payment to share risk. Access to insurance enables entrepreneurs to concentrate more on developing their businesses while mitigating other risks affecting property, health or the ability to work.

- **Micro Remittances**: These are transfer of small funds from people at one place to people at another, usually across borders to family and friends.

According to a latest report by 'Intellecap', an independent industry research firm; The Indian microfinance industry would cross 11 crore borrowers and Rs 1,35,000 crore ($30 billion) in loan portfolio by 2014 and will require a huge capital inflow both in debt and equity. They have put the total estimated demand for micro-credit in India at $ 51.4 billion (Rs. 2,40,000 crore). There is a huge demand for Microfinance in India. The poor continue to lack access to formal credit and are mainly relying upon informal sources to meet their needs. Microfinance Institutions (MFIs) are trying to bridge the gap between demand and supply. The Indian states, including Bihar, Uttar Pradesh and West Bengal, have 421 million “poor” people, the study found. This is more than 410 million poor in the poorest African countries. Thus the demand for microfinance services – savings, credit and insurance – is apparently insatiable in India. In that sense, India is perhaps the largest emerging market for microfinance services. There are two main models of micro credit in the country and they are 'banking model (SHG linked) ' and the 'MFI model'.

- **SHG Bank Linkage Model**: In a way, SHGs are co-operative (credit) societies linked to a commercial bank rather than an apex cooperative bank. Once linked to the bank, the SHGs may access a given multiple of the pooled savings for disbursement to its members. Group selects its leader and the selection of the leader is based on rotation. The SHGs have, moreover, emerged as a form of "social collateral" substituting other forms of 'collateral security' insisted upon by banks. High repayment rate has encouraged banks to institutionalize SHGs under the bank-SHG linkage model.

- **MFI Model**: In the 'MFI model', SHGs are formed and financed by the MFIs that obtain resource support from various channels. In India, majority of micro credit activity is under the 'Banking model' (NABARD's Bank-SHG Linkage) and 10-15% of the activity is through 'MFI model'.

**UNEVEN GEOGRAPHIC DISTRIBUTION**

The condition of the SHG movement varies from state to state, and within states from one district to another. Till now the microfinance as a tool for poverty eradication is prevalent much in southern part of India. Its presence in northern region is very limited. The general
perception is that the northern states are rich and hence microfinance is not required in this particular region, this being the prime reason of Punjab being neglected in this aspect. But this did not mean that the poor of north does not require micro loans. All the major MFIs have their base at South & East India. They have less presence and outreach in North India. The North Indian states like Delhi, Haryana, Rajasthan & even Punjab are now being pursued very aggressively by major players of the sector like SKS, Ujjivan, Equitas etc. But after an on ground survey it was observed that in reality there is a big need of microfinance in the region which is presently being catered to by an unorganized sector of money lenders who are charging exorbitantly high rate of interest upto 120% per annum. The microfinance movement started late in the northern region and is confounded by many regional complexities that must be understood, appreciated and incorporated into policy if the plans to make affordable loans to low income groups in the region are to bear any fruit. The SHG movement is yet to take off in major way in Arunachal Pradesh. In Manipur, too, it is not significant despite, or perhaps because, many traditional systems of organising savings and lending still hold sway. Andhra Pradesh tops the list because few top micro finance entrepreneurs like SKS, Basix, Spandana are in Andhra Pradesh. They started much earlier than others. Tamil nadu is at second spot. The table below gives the real picture of the uneven distribution. Many northern and north east states like Punjab, UP, Haryana, J&K, Sikkim, Nagaland etc. has rural household coverage between 0- 20% only. But many southern states like AP, Karnataka, Keral, Tamil Nadu etc. has more than 100% coverage.

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<tr>
<td>0-20</td>
<td>9</td>
<td>Bihar, Haryana, J&amp;K, Jharkhand, M.P, Nagaland, Punjab, Sikkim, And Uttar Pradesh</td>
</tr>
<tr>
<td>21-50</td>
<td>10</td>
<td>Arunachal Pradesh, Assam, Chhattisgarh, Delhi, Gujarat, HP, Manipur, Meghalaya, Rajasthan, and Uttaranchal</td>
</tr>
<tr>
<td>51-75</td>
<td>5</td>
<td>Lakshadweep, Maharashtra, Mizoram, Tripura and West Bengal</td>
</tr>
<tr>
<td>76-100</td>
<td>2</td>
<td>Goa and Orissa</td>
</tr>
<tr>
<td>&gt;100</td>
<td>7</td>
<td>Andaman &amp; Nicobar Island, A.P, Chandigarh, Karnataka, Kerala, Pondicherry and Tamil Nadu</td>
</tr>
</tbody>
</table>
RESEARCH METHODOLOGY

The paper is based on the exploratory and descriptive research method. Firstly the region-wise data was collected from the official reports of NABARD which is compiled after collecting the information from all the banks and MFIs in all regions. The three year data, from 2008-09 to 2010-11, has been used to analyze the variation with the help of various saving, borrowing and participation ratios such as:

- **SHG Savers Ratio:** This ratio tells about the percentage of SHG savers with banks in various regions in relation to total number of SHG savers in all regions. The ratio gives the picture about the percentage regional market for savers.

  \[ \text{SHG Savers Ratio} = \frac{\text{No. of SHG having savings in particular region}}{\text{Total no. of SHG involved in savings with banks}} \]

- **SHG Savings Ratio:** This ratio tells about the percentage of SHG savings with banks in various regions in relation to total number of SHG savings in all regions. The ratio is helpful in portraying the percentage savings in specific region out of all.

  \[ \text{SHG Savings Ratio} = \frac{\text{Savings by SHG in particular region}}{\text{Total savings by SHG in the economy}} \]

- **SHG Borrowers Ratio:** The ratio has a great importance as it portrays the strength of southern market in terms of number of borrowers than all other regions. The ratio shows the relationship between numbers of SHG bank loan borrowers in southern region in relation to borrowers in different regions.

  \[ \text{SHG Borrowers Ratio} = \frac{\text{No. of SHG bank loan borrowers in southern region}}{\text{No. of SHG bank loan borrowers in particular region}} \]

- **SHG Borrowing Ratio:** This ratio also reveals the strength of southern market in terms of total borrowings than all other regions. The ratio shows the relationship between the amount of SHG bank loan borrowings in southern region in relation to borrowings in different regions.

  \[ \text{SHG Borrowing Ratio} = \frac{\text{Amount of SHG bank loan in southern region}}{\text{Amount of SHG bank loan in particular region}} \]

- **SHG Loan Outstanding Ratio:** The ratio explains the relationship between the loan outstanding in a region to the loan outstanding in all regions.

  \[ \text{SHG Loan Outstanding Ratio} = \frac{\text{SHG bank loan outstanding in region}}{\text{Total SHG bank-loan outstanding across nation}} \]

- **Participation in MEDP Program Ratio:** The number of participation in the micro enterprise development program gives the impression of the microfinance activities being conducted in that region. So, this ratio will evaluate region-wise the number of participants in such program.
Participation in MEDP Ratio = \frac{\text{Participation in MEDP program in particular region}}{\text{Participation in MEDP program across nation}}

- **Participation in Training Program Ratio**: Similar to participation in MEDP ratio, this also tends to analyse the identical thing. It tells the relationship between the number of participants in training to SHGs in southern region in relation to the participation for the same in other regions.

  \text{Participation in Training Program Ratio} = \frac{\text{Participation in training to SHG in southern region}}{\text{Participation in training to SHG in particular region}}

**ANALYSIS AND DISCUSSION**

It is clearly visible that the southern India market is dominating the microfinance business as comprehended from the literature that is studied. The ratios that have been calculated to empirically test and prove the said phenomenon.

**Table-2**

<table>
<thead>
<tr>
<th>Region</th>
<th>Years</th>
<th>SGH Savers Ratio</th>
<th>SHG Savings Ratio</th>
<th>SHG Borrowers Ratio</th>
<th>SHG Borrowing Ratio</th>
<th>SHG Loan Outstanding Ratio</th>
<th>Participation in MEDP Ratio</th>
<th>Participation in Training Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>2008-09</td>
<td>5.08%</td>
<td>4.09%</td>
<td>25.02 times</td>
<td>30.09 times</td>
<td>2.99%</td>
<td>0.65%</td>
<td>6.41 times</td>
</tr>
<tr>
<td></td>
<td>2009-10</td>
<td>5.05%</td>
<td>5.51%</td>
<td>26.64 times</td>
<td>36.04 times</td>
<td>2.91%</td>
<td>7.80%</td>
<td>1.87 times</td>
</tr>
<tr>
<td></td>
<td>2010-11</td>
<td>4.99%</td>
<td>4.68%</td>
<td>17.08 times</td>
<td>29.13 times</td>
<td>2.89%</td>
<td>11.23%</td>
<td>4.13 times</td>
</tr>
<tr>
<td>North East</td>
<td>2008-09</td>
<td>3.92%</td>
<td>1.84%</td>
<td>30.09 times</td>
<td>36.94 times</td>
<td>2.06%</td>
<td>2.39%</td>
<td>0.83 times</td>
</tr>
<tr>
<td></td>
<td>2009-10</td>
<td>4.21%</td>
<td>1.96%</td>
<td>20.19 times</td>
<td>38.44 times</td>
<td>2.41%</td>
<td>5.47%</td>
<td>0.79 times</td>
</tr>
<tr>
<td></td>
<td>2010-11</td>
<td>4.36%</td>
<td>1.87%</td>
<td>18.47 times</td>
<td>34.26 times</td>
<td>2.22%</td>
<td>3.45%</td>
<td>2.18 times</td>
</tr>
<tr>
<td>East</td>
<td>2008-09</td>
<td>20.15%</td>
<td>28.79%</td>
<td>4.51 times</td>
<td>7.35 times</td>
<td>13.32%</td>
<td>56.01%</td>
<td>0.15 times</td>
</tr>
<tr>
<td></td>
<td>2009-10</td>
<td>19.76%</td>
<td>18.07%</td>
<td>3.58 times</td>
<td>7.16 times</td>
<td>13.17%</td>
<td>24.16%</td>
<td>0.45 times</td>
</tr>
<tr>
<td></td>
<td>2010-11</td>
<td>20.47%</td>
<td>20.07%</td>
<td>2.93 times</td>
<td>6.79 times</td>
<td>13.46%</td>
<td>43.28%</td>
<td>0.77 times</td>
</tr>
<tr>
<td>Central</td>
<td>2008-09</td>
<td>11.64%</td>
<td>6.97%</td>
<td>10.57 times</td>
<td>11.64 times</td>
<td>9.01%</td>
<td>12.25%</td>
<td>0.77 times</td>
</tr>
<tr>
<td></td>
<td>2009-10</td>
<td>11.01%</td>
<td>8.28%</td>
<td>12.79 times</td>
<td>17.46 times</td>
<td>8.78%</td>
<td>20.22%</td>
<td>0.76 times</td>
</tr>
<tr>
<td></td>
<td>2010-11</td>
<td>10.53%</td>
<td>8.59%</td>
<td>14.89 times</td>
<td>18.09 times</td>
<td>7.57%</td>
<td>4.83%</td>
<td>1.94 times</td>
</tr>
<tr>
<td>West</td>
<td>2008-09</td>
<td>13.01%</td>
<td>11.97%</td>
<td>8.53 times</td>
<td>15.58 times</td>
<td>6.84%</td>
<td>3.43%</td>
<td>0.91 times</td>
</tr>
<tr>
<td></td>
<td>2009-10</td>
<td>13.59%</td>
<td>14.94%</td>
<td>6.67 times</td>
<td>17.06 times</td>
<td>4.88%</td>
<td>1.88%</td>
<td>50.68 times</td>
</tr>
<tr>
<td></td>
<td>2010-11</td>
<td>12.88%</td>
<td>11.82%</td>
<td>7.89 times</td>
<td>17.56 times</td>
<td>3.99%</td>
<td>8.21%</td>
<td>4.09 times</td>
</tr>
<tr>
<td>South</td>
<td>2008-09</td>
<td>46.18%</td>
<td>46.31%</td>
<td>1 times</td>
<td>1 times</td>
<td>65.75%</td>
<td>25.26%</td>
<td>1 times</td>
</tr>
<tr>
<td></td>
<td>2009-10</td>
<td>46.36%</td>
<td>51.21%</td>
<td>1 times</td>
<td>1 times</td>
<td>67.88%</td>
<td>40.41%</td>
<td>1 times</td>
</tr>
<tr>
<td></td>
<td>2010-11</td>
<td>46.76%</td>
<td>52.96%</td>
<td>1 times</td>
<td>1 times</td>
<td>69.85%</td>
<td>28.94%</td>
<td>1 times</td>
</tr>
</tbody>
</table>
The above table gives the summary picture of all the ratios calculated region-wise for the past three years. If we see SHG savers ratio, it is explicitly visible that 46.76% of micro savers are in south India in year 2010-11 which is approximately same as in the past years. Only 4.99% and 4.36% of savers belong to north and north east India in the year 2010-11. Moreover in north India the numbers of savers have minutely fallen too from 5.08% in 2008-09. The eastern India still hold the decent percentage of savers (approx 20%). When it comes to total saving in the particular region out of all, the north east states lag behind with just 1.87% of saving amount from total savings across nation by SHG. In fact the amount of savings has all the more reduced from the past year for the west, north and north east states. The point to be emphasised upon is that the percentage of the saving in southern region has increased from 46.31% in year 2008-09 to 52.96% in year 2010-11. The SHG borrowers ratio emphasis on southern market to be stronger in terms of the number of borrowers than other regional market. The SHG loan borrowers in south were 17.08 times than in north region in year 2010-11. Earlier in 2008-09 it was 25.02 times but now it's reduced as there was some improvement in the number of borrowers in north region. Similarly southern market is 18.47 times, 2.93 times, 14.89 times and 7.89 times stronger in terms of number of borrowers than north-east, eastern, central and western India respectively in year 2010-11. In terms of bank loan borrowed by SHG, the southern market is again extremely strong as it is 29.13 times, 34.26 times, 6.79 times, 18.09 times and 17.56 times stronger than north, north-east, eastern, central and western India respectively in year 2010-11. SHG loan outstanding which represents the quantum of business and the loans remaining unpaid also proves the phenomenon. The southern states are again showing an exceptional figure of 69.85% in year 2010-11 increasing from 65.75% in year 2008-09. The participation in various programs also gives an idea regarding the quantum of microfinance activities happening in that region. The eastern region has 43.28% of MEDP participation followed by southern region at 28.94%. Remaining of the regions stands at 11.23%, 3.45%, 4.83%, and 8.31% for north, north east, central and west regions respectively which imply less number of participation from all these states. Similar are the results for the participation in SHG members training with eastern region visiting highest number of participations followed by southern region in year 2010-11. This was not the case year back. The above analysis proves the dominance of southern region in microfinance business. The eastern India is still having great deed of presence but the region like west; north and north east are way back in such activities. These regions should now be focussed more rather than just offering such services to southern part only. With the help of thorough analysis following reasons were derived which are causing this regional disparity in microfinance activities:

- **MFIs Base in South**: The major region for less microfinance services in north and north east is because the MFIs are present mostly in the southern part of the country.
• **Level of NPAs:** The level of NPA's as percentage of loans outstanding is quite high in the regions like North and North east at 7.05% and 8.42% respectively in comparison to NPA's of 4.31% and 3.79% in eastern and southern region in year 2010-11. This becomes an obvious reason for MFIs and banks to serve less in these regions for such reasons.

• **Rich States:** It has been a usual perception that northern states are rich states and thus may not be requiring the services for poor.

• **Awareness:** In fact the poor of north and north east states are very meagrely aware of such beneficial services available to them.

• **Regions Not Accessible:** Talking specifically about North east states there is almost 70 % of the region which is hilly and the rail network is poor. These problems pose a great challenge for such service to reach there.

• **Market Scope:** The market is also not viable to all the banks and MFIs working in those north and north east nation. The demand is too less to make their business model becoming profitable.

• **Banker's Perception:** The perception is that small clients do not have stable, viable businesses for which to borrow and from which to generate repayment. Moreover, these potential clients lack traditional collateral to guarantee their loans.

• **Corruption:** Unfortunately, corruption is also more in the North. Therefore, probably there is little freedom for NGOs to work there. That may be reason why constructive NGO operations are lesser there.

**SUGGESTIONS**

Following are the suggestions provided for removing such regional disparity in microfinance activities:

• There should be more awareness about microfinance in the markets of north and north eastern India. Microfinance institutions should organize compulsory group training programs to inform clients about the interest rates etc. and should improve their awareness of products and services.

• MFIs should start extending their outreach to the nations that are having less microfinance services. Banks should also try to reach near to the poor by extending its outreach by opening more and more branches in the northern and north eastern areas.

• In light of uneven geographic coverage, need based incentive schemes should be
devised for a faster and even growth of the sector in all parts of the country in consultation with Ministry of Finance and RBI.

- Commercial banks in spite of their huge share in SHG linked programmes should undertake targeted branch expansion. The banks need to bring out innovative products for tapping small savings by providing SHGs from north and north east states with incentives and suitable back-end technology support.

- To develop a strong and viable MFI sector and a suitable environment for sustainable growth, there is need for a legal framework covering regulatory mechanism and provision for capital adequacy, prudential norms, risk fund, etc. to be stronger for the MFIs working in the north and north eastern Indian states.

- Microfinance institutions and banks should effectively cater to a range of clients, with different livelihoods and financial needs and capacities.

- Banks and MFIs should use such technological innovations to increase operational efficiency and employee productivity, which in turn would minimize cost and time making it feasible to operate in northern and north eastern Indian markets.

- It is critical for the banks and MFIs to make sure that the borrower pays back the loan granted. This requires not only a good understanding of micro-credit analysis, but also a good monitoring system that enables the lenders to take appropriate measures.

- As the illiteracy rate is higher in north and north eastern states, financial services for the poor should be simple enough to understand. Banks should apply this simplicity principle in all aspects of the operations, including product design, systems and procedures, forms, requirements and reporting.

**CONCLUSION**

It has been wisely concluded that the presence of microfinance activities is more in the region of south and east India. Also MFIs have their base at South & East India. It will take sometime to spread their outreach in North India. The North Indian states like Delhi, Haryana, Rajasthan & even Punjab are now being pursued very aggressively by major players of the sector like SKS, Ujjivan, Equitas etc. What is required is a multi-pronged strategy to overcome many challenges the region poses. Banks, policymakers and NGOs - the major actors in the field of micro-finance - must come together to think through suitable modifications in policy. Banks may have to change their system of assessing risks. There is need for capacity building and expansion of infrastructure. In some cases, the SHG model may have to be replaced by other models.
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