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Impact of it Revolution on Microfinance Institutions in India

Dr. Ambika Bhatia

Associate Professor

Punjabi University Regional Centre for Information Technology and Management, Mohali

Chhavi Kiran

Junior Research Fellow

Punjabi University Regional Centre for Information Technology and Management, Mohali

Abstract

"A good information system is a necessary tool for managing an MFI successfully."

Microfinance Institutions (MFIs) play an important role in the upliftment of economically and socially disadvantaged sections of society. Access to credit enables households to accumulate wealth and assets, which allow them to better cope with their economic and social vulnerabilities. MFIs include non-governmental organizations (NGOs), credit unions, non-bank financial intermediaries, and even a few commercial banks. Microfinance industry in India is at the very stage of growth and diversification where technology's potential has highlighted its importance. IT can be a strategic tool in making Microfinance Institutions (MFIs) more efficient and effective. MFIs can reach more people in a more economical way by implementing the right Management Information System (MIS) and by adopting different strategies as integration of products and services. In today's era of technology revolution, IT has made an impression on almost all segments of the industry be it manufacturing, marketing, human resource management and so on. This paper makes an attempt to highlight the extent to which Microfinance Institutions (MFIs) use IT to deliver business services and increase outreach.

1. INTRODUCTION

Microfinance is a source of financial services for people lacking access or without full access to the financial sector. Microfinance enables them to take out loans to build or expand businesses and to make savings deposits. RBI defines microfinance as the provision of thrift, credit and other financial services and products of very small amounts to the poor in rural, semi-urban and urban areas for enabling them to raise their income levels and improve their standards of living. The microfinance industry has made good progress in improving understanding about issues related to institutional performance. For further enhancing the performance of MFIs technology can and has been acting as a catalyst for the delivery of multiple services.

2. OBJECTIVE

The objective of this paper is to highlight the importance of Information Technology initiatives and to study that how these innovations in information technology have supported the growth of various Microfinance institutions.

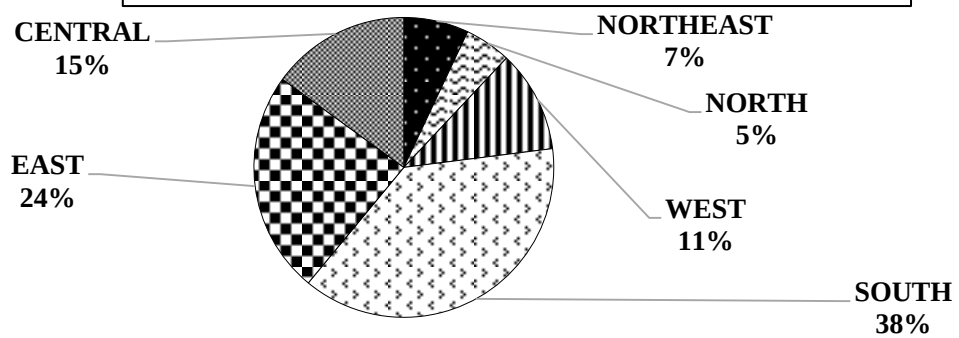
3. RESEARCH METHODOLOGY

Available secondary data was extensively used for the study. Different news articles, Books and Web were used which were enumerated and recorded.

4. MICROFINANCE

Microfinance has also come to be referred to as small-scale financial services provided to people who work in agriculture, fishing and herding; who operate small or microenterprises; who provides services; who work for wages or commission; and other individuals and groups at the local levels of developing countries both rural and urban [Robinson 1996]. ADB defines microfinance as the provision of a broader range of services such as deposits, loans, payment services, money transfers and insurance to poor and low income households and their microenterprise [ADB 2000]. World Development Report (2000/2001) describes microfinance as a market-based formal mechanism to

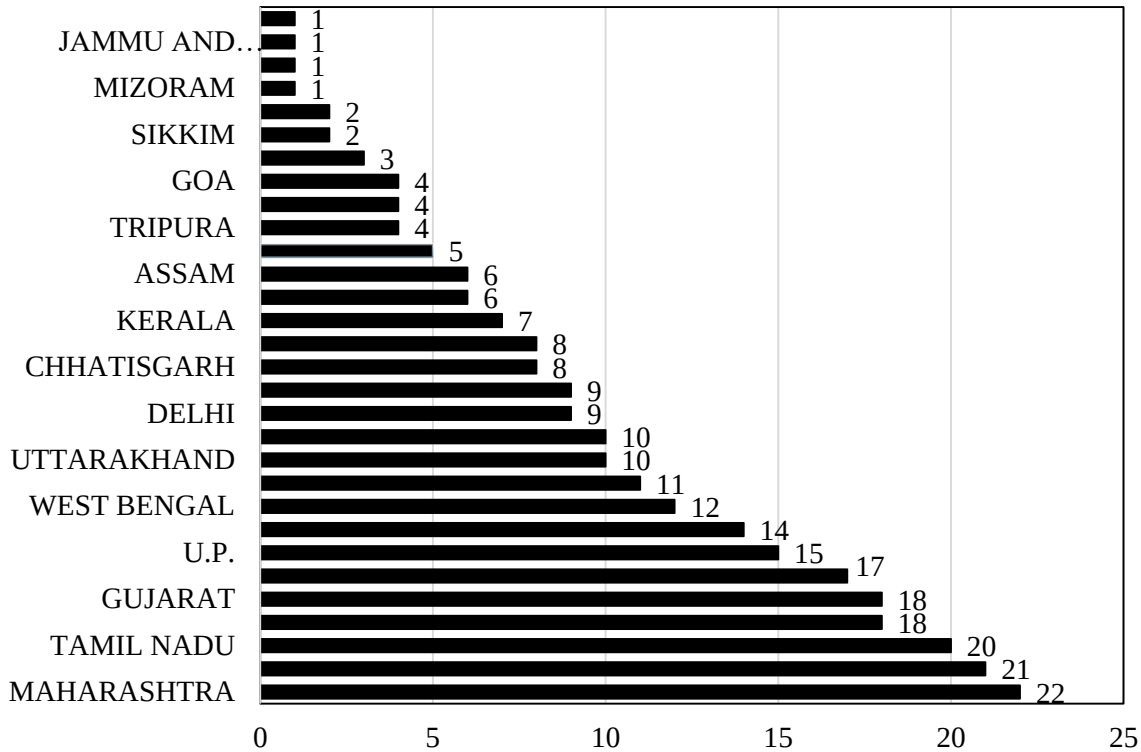
FIGURE 1: REGION-WISE BREAKUP OF CLIENT OUTREACH IN INDIA



SOURCE: THE BHARAT MICROFINANCE REPORT 2015

mitigate he risks faced by poor people as against the informal group based mechanisms like savings and credit association. Microfinance Industry refers to all the institutions which share a commitment to serving clients with low-incomes that have been excluded from the formal banking sector (Morduch, 1999). Microfinance products and services are extended by various Microfinance Institutions (MFIs). Microfinance products include loan facility, savings facility and even insurance products. Figure 1 shows the region-wise breakup of client outreach in India. Out of the total client base of 371 lakhs in 2015, South alone contributes to 39% followed by 25% in East. Central region and West have 15% and 11% of total outreach respectively. Northeast and North have the least client outreach numbers with 6% and 4% respectively. Share in outreach has expanded only in case of Central and North east regions from 13 to 15 % and 5 to 6 % respectively. Figure 2 shows the presence of NBFC-MFIs across states in Financial Year 2014 highest being in Maharashtra followed by Madhya Pradesh, Tamil Nadu, Gujarat, Bihar, Uttar Pradesh and so on with the lowest number in Mizoram, Manipur, Jammu and Kashmir.

FIGURE 2: NBFC-MFIs PRESENCE ACROSS STATES (FY 2014)



SOURCE: MICROMETER ISSUE 9, 2014

5. INFORMATION TECHNOLOGY

Information Technology (IT) is a generic term that covers the acquisition, processing, storage and dissemination of information. It involves the application of computers and

communication technology in the task of information handling and information flow from the generation to the utilization levels. Weill and Vitale (2001) identified the following nine components of IT hierarchy:

5.1. **Applications infrastructure:** An application is a software program that resides on a computer for the purpose of translating electronic input into meaningful form. Applications management includes purchasing software, developing proprietary applications, modifying applications, providing installation and technical support, and other tasks related to ensuring that applications are meeting the needs of the organization.

5.2. **Communications:** Technology that facilitates digital communication both within the organization and with the outside world is relevant here. It includes the management of hardware and software to facilitate communication via computer, telephone, facsimile, pagers, mobile phones, and other communication and messaging services. It includes the cabling and any other communication linkages required to create an effective communications network, in addition to the necessary hardware and applications to meet the needs of the organization.

5.3. **Data management:** This refers to the way the organization structures and handles its information resources. Data may be sourced from internal or external databases. Data management includes data collection, database design, sorting and reporting information, creating links to external databases, assuring data compatibility, and other activities surrounding the effective management of electronic information.

5.4. **IT management:** Information technology management includes many of the professional and strategic activities of the information technology group including negotiation, IS planning, project management, and other tasks.

5.5. **Security:** To protect data, equipment, and processing time, organizations restrict access to certain data and protect data and applications from manipulation and contamination. Recovery refers to the need for a plan to maintain computer operations and information should a disaster occur.

5.6. **Architecture and standards:** Information technology architecture is a set of policies and rules that govern the use of information technology and plot a migration path to the way business will be done in the future. In most firms it provides technical guidelines rather than rules for decision-making. Architecture has to cope with both business uncertainty and technological change, making it one of the most difficult

tasks for a firm. A good architecture evolves over time and is documented and accessible to all managers in the firm. A standard is a detailed definition of the technical choices to implement architecture. Five elements of architectures and standards are important: data, technology, communications, applications, and work.

5.7. **Channel management:** New and emerging technologies allow direct connections or distribution channels to customers.

5.8. **IT research and development:** The information systems market develops rapidly, particularly with the rise of new e-business technologies. It is thus necessary to continually test applications and hardware to assist with planning decisions. IT research and development includes identifying and testing new technologies for business purposes and evaluating proposals for new information systems initiatives.

5.9. **IT education:** Training and education in the use of IT can be defined as formal classes, individual training, and technology-based self-training programs for users ensuring hands-on computer proficiency levels meeting corporate requirements. IS management education can be defined as education aimed at senior levels in the firm designed to generate value from IT use.

Microfinance loans tend to have high interest rates in order to recover the high costs of loan administration. Information and communication technologies (ICT) can allow MFIs to lower the cost of loan administration, and thus, offer more affordable and flexible loan products to clients. In addition, ICT can also help MFIs to expand their service coverage by providing logical, strategic and analytical support.

6. INFORMATION TECHNOLOGY AND MFIs

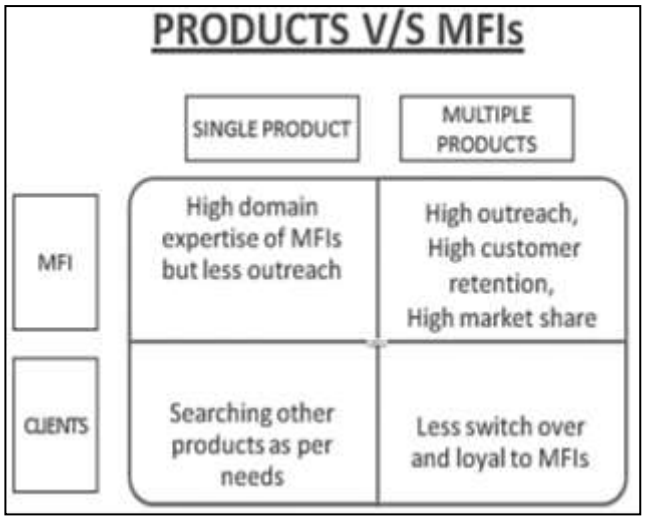
Technology's potential has shown its importance by offering easy and affordable means of providing microfinance products and services. Table 1 shows some of the technologies used in different MFIs, the time at which those respective services are used in the organization and their primary functionalities.

TABLE 1: BASIC TECHNOLOGIES USED BY MFIS

Technology	Time of Entry into the Institution	Primary Functionality
Information System Technologies (MIS)	First form of technology in any organization.	Data and information recording and reporting
Point of Sale (POS) Technologies	Second level of intervention after information systems, provides	Increasing operational efficiency, maximizing

	additional functionality	outreach, reducing costs
Integration Technologies	Introduced in large organizations that are on a growth plateau and usually leverage POS technologies	Integrating organizational processes and systems through shared platforms: MIS, POS, and networking Technologies.

Following are a few benefits derived by MFIs through usage of Information Technology.

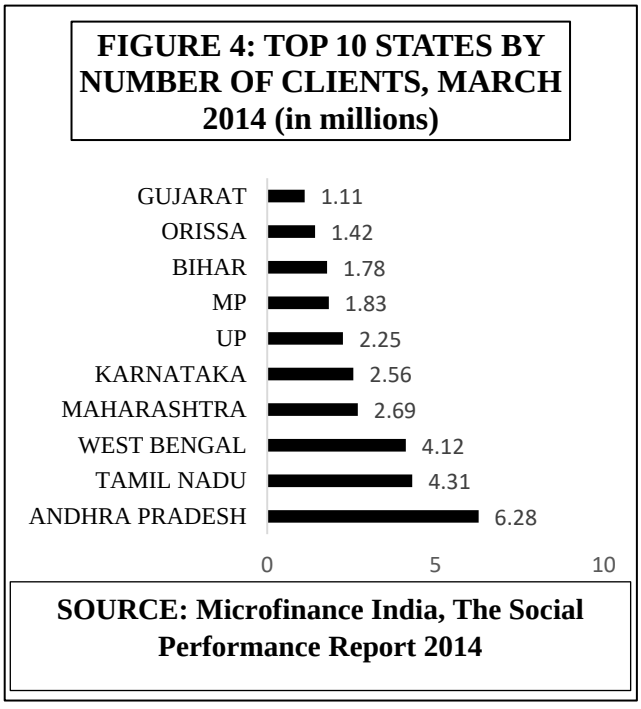


6.1. **Facilitating integration**:

MFIs have come up with the provision of various microfinance products together as a package or as an individual product to the clients. For example; MFIs provide credit, savings, money transfer, insurance etc. together. ADHIKAR Micro fin in collaboration with ICICI bank had financed Rs 20,000 to 530 poor households for construction and repair of the house, provided life insurance and provided payment transfer services to clients. Its remittance work started from Gandhidham.

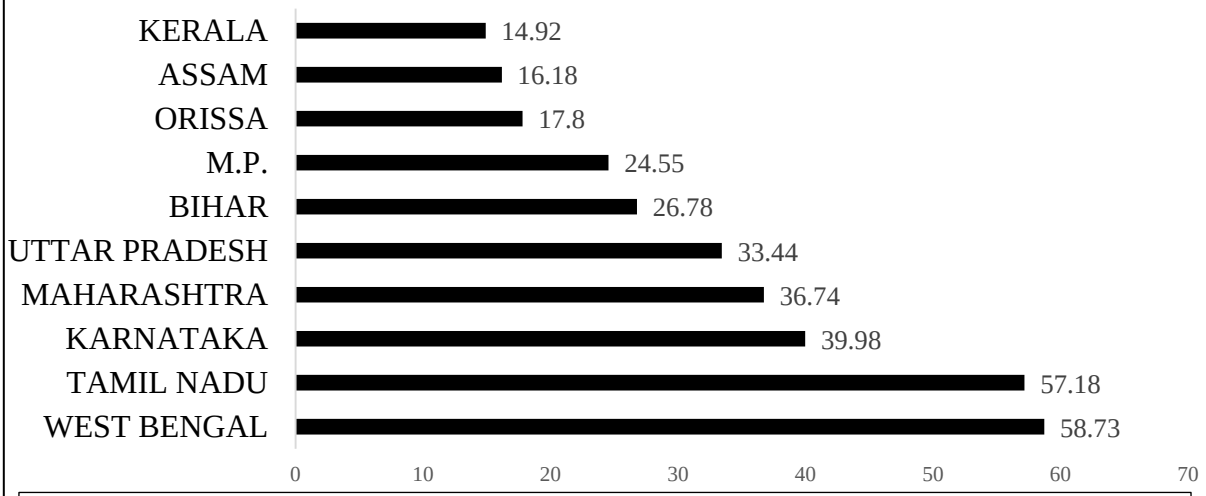
6.2. **Improving outreach**:

There are many banks operating on a large scale with wide reach and capital access which could ease many problems associated with microfinance but they were reluctant to extend their services for rural poor due to massive costs involved in establishment and maintenance of physical bank branches at different areas across the nation. To deal with it, various initiatives have been



taken using developments in ICT such as smart cards, handhelds, and modified ATMs, to dodge the traditional methods of providing bank services. This has enabled the banks to lower their transaction costs and increase their outreach.Another way of increasing outreach of an MFI is to customize the products according to the needs of

FIGURE 5: TOP 10 STATES BY AMOUNT OF LOAN DISBURSED IN FINANCIAL YEAR 2014 (Rs. Billion)



SOURCE: Microfinance India, The Social Performance Report 2014

the customers. For example, Union Bank of India has designed a "biometric smart card technology" for

the hawkers of Mumbai. Even an illiterate hawker can transfer the amounts instantly through the bank network spread across India. It was done to protect the hawkers from private moneylenders (for loans) and non-formal agencies (for savings).

6.3. Manageable Identity issues:

People residing in rural area often face problem while getting loans due to improper identity proofs. By providing secure identification, new ICTs such as smart cards and biometrics are compensating for this, allowing many to access credit from formalized institutions for the first time. PRODEM, for example, is using ICTs to verify the identity of its customers. It utilizes a combination of smart card technology combined with biometrics to allow fingerprint ID verification at all of its branches and ATMs. The use of fingerprint verification ensures that only the account holder can complete a transaction, making it more secure than traditional ATMs that only require a PIN

number. The system is also easier to use for customers not familiar with PINs, passwords, or other identifiers that require memorizing an identification code. The smart cards store all of the customer's personal and financial data. As a result, the ATMs are able to verify the customer's identity and complete transactions without being electronically connected to the central office. As of May 2003, PRODEM had 32,000 smart card account holders. A new effort to explore such cooperative approaches, and the ICT tools to make them possible, is the Microdevelopment Finance Group (MFG), an initiative convened by technology giant Hewlett-Packard as part of its pro bono initiative under the UNICT Task Force working group on entrepreneurship. The MFG is developing new "end-to-end" technology solutions for microfinance as well as new organizational forms that could increase cooperative efforts such as credit bureaus or pooling loans across many MFIs to access capital markets.

6.4. Efficiency:

ICTs also allow microfinance organizations to increase their efficiency, thereby lowering their overhead costs, and helping them to achieve sustainability. The Dhan Foundation, for example, is streamlining its microfinance activities using a combination of handhelds and smart cards. The technology results in time savings for loan officers, while also ensuring more accurate accounting and record keeping. Because all the information is stored on a smart card, field officers can make decisions on the spot, reducing the number of visits required to complete a transaction.

6.4.1. *BASIX*, India's largest microfinance organization, is experimenting with handhelds and smart card technology to automate the loan process and keep track of repayments, in order to reduce labor and cash handling costs. BASIX's Mobile Portfolio Management System also helps to minimize accounting errors.

6.4.2. *Swayamkrushi*, a women's lending cooperative in India, has also experienced an increase in efficiency since it computerized its operations. The computers used in the microfinance operations are also being used by members to access the Internet, providing additional benefits to the women.

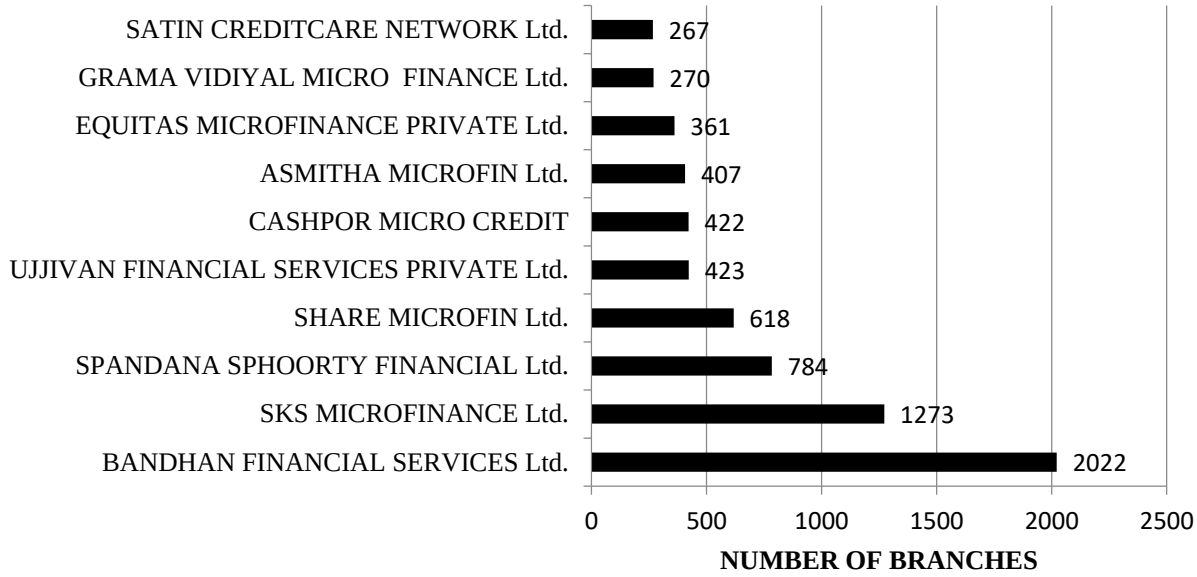
6.4.3. Indian MFI *Sahayata* used technology very wisely. Through an innovative operational model in which they strictly delineate tasks among staff, Sahayata’s loan officers, or field credit officers (FCO), are able to spend the vast majority of their time working with clients rather than on data entry and other administrative

tasks. At the center of Sahayata's model is the central processing unit (CPU) in Jaipur where a team of about 14 data entry specialists receive scanned forms from the branches by email and duly enter the information in the MFI's information system, BR.net by Craft Silicon. At the end of each day, they email a set of reports to each branch so the branch staff are prepared when they arrive the next morning.

Global microfinance market is expected to grow at 19% annually for the next five years, rising from US$5.7b in 2014 to nearly US$14b in 2019. (Microfinance Market Outlook 2015). With the advent of Information Technology, various MFIs were able to expand their branches across the nations and it became easy for them to manage data by using Management Information System(MIS).

Figure 6 shows that Bandhan Financial Services has got the highest number of branches in India. Bandhan Financial services has its branches spread across 22 states and Union territories has disbursed 1,601 Crore rupees up to June, 2015 and has 13067 employees working with it.

FIGURE 6: TOP 10 MFIs IN TERMS OF BRANCH NETWORK



SOURCE: THE BHARAT MICROFINANCE REPORT 2015

TABLE 2: SOME TECHNOLOGIES USED BY MFIS		
Technology	**Purpose**	**Website**
Artoo	Empowers social enterprises to capture,	http://artoo.in/

	analyze and process information remotely through smartphones / tablets.	
Infrasoft Tech	Has developed OMNI Enterprise Microfinance Solution which is a robust & scalable platform that automates core business processes of your organization on a single technology backbone.	www.infrasofttech.com
Datavision Software Solution Pvt. Ltd	Has developed MICROMATE a mobile based application tailored for field personnel.	www.datavsn.com
FINO	Has worked on linking the back-end data with the front-end for smart cards.	www.fino.co.in
MFIFlex	It has a cloud based banking solution designed for Micro-Finance Institutions.	www.mfiflex.com
Ekgaon	Has proposed ICT solutions.	www.ekgaon.com

7. CONCLUSION

Globally, microfinance has witnessed tremendous growth and is now viewed as a sustainable and profitable business model for initiating broad economic and social development. This enormous expansion has brought with it a number of challenges that the sector needs to tackle in order to improve service delivery and build capacity over the long term. Microfinance Institutions (MFIs) are beginning to look at technological solutions to make their operations faster, easier, and more transparent and have adopted lot of technological solutions successfully so far. The technologies like Biometric systems, Automated Teller Machines and use of Management Information System (MIS) have proved to be a boon for microfinance industry in India. In a nutshell we can say that IT developments have enables MFIs to reach every corner of the nation from north to south and from east to west. Different need based technologies are still being developed to meet the growing demand of different segments of nation.

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