

Impact of Management Information System on Microfinance Banks' Operations, in Oyo State, Nigeria

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Abstract

This study examined the Impact of Management Information System (MIS) on Microfinance Banks (MFBs) Operations in Oyo State, Nigeria. Specifically, the study examined the existing management information system products that support microfinance banks operation and assessed the relationship between MIS and Microfinance Banks' operations. 10 percent of the microfinance banks were selected using random sampling technique through balloting. Primary data was collected with the aid of questionnaire, while sixty-six respondents from the employees of the microfinance banks in Oyo State were selected. Descriptive statistics were employed to examine the existing MIS products that support microfinance banks operation, while the relationship between MIS and Microfinance Banks' operations was assessed using inferential statistical tool of Pearson Product Moment Correlation coefficients (PPMC). Results revealed that Short Messaging Service (SMS) was the dominant MIS products that support Microfinance Banks operations in the study area. Also, there is significant relationship between MIS and Microfinance Banks' operations.

Keywords: MIS, MIS products, microfinance banks, Short Messaging Service.

1. Introduction

The idea of the Management Information System (MIS) has developed over a period of time encompassing different aspects of the organizational task. Management Information System is an essential of all the organizations. The early idea of Management Information System was to process data from the organization and offerings it in the form of the report at steady intervals. The scheme was capable of handling the data from gathering to processing. Previous researchers described Management Information system to be a series of processes and actions put up in capturing raw data, analysing the data into usable information, while disseminating the information to users in the form needed. To make decisions, management and shareholders need both the financial statements and various other reports, particularly reports that present the activity of the loan portfolio. Also, numerous pointers can be calculated to ease analysis of the Microfinance Banks in decision making process.

Microfinance is the delivery of a wide range of financial services which include savings, loans, payment services, money transfers, and insurance to poor and low-income persons, households and their micro enterprises. The services of microfinance are provided by three types of institutions which are Formal institutions, Semi-formal institutions, and Informal sources.

Institutional microfinance is termed to mean microfinance services rendered by both formal and semi-formal institutions whose main business is the delivery of microfinance services. Microfinance banks are licensed and supervised by Central Bank of Nigeria (CBN) to provide microfinance services.

Lately, management information systems have arisen as a dominant device to lessen operating costs, making it viable for financial institutions to expand to low-income areas. Information and Communication Technology (ICT) can be a tactical tool in making Microfinance Institutions (MFIs) more proficient and efficient. Although a few MFIs are making good use of technology, a good number are facing problems in getting the right solution for reasons which include; risk of failure of the MIS, diversity of geography and language, insufficient Organizational, human capacity and unavailability of suitable MIS, and high cost of information technology solution. Research studies have shown significant and positive correlation between Information Technology (IT) and banking performance (Mahmood and Garry 2000; Adewoye 2007; Keramati 2007).

Many Microfinance Banks use Management Information System (MIS) internally to support their business operations and externally to deliver financial services to clients. MIS products implementation in key functional areas such as Short Messaging Services (SMS banking), Automated Teller Machine (ATMs), Points of Sales Transaction (POS), Close Circuit Television (CCTV) is still negligible or missing. There is dearth of research on the impact of MIS on the MFBs operations in Nigeria, which forms the basis for this study. Therefore, the extent to which MIS adoption has influenced Microfinance banks operation in Oyo state is the main focus of this study.

2. Concept of Management Information System

The Management information system (MIS) is a concept of the last two decades. It has been understood and described in a number of ways. It is also known as the Information System, the Information and Decision System, the computer based Decision System. Information is the life blood of an organization, particularly in the case of

system approach management.

Management Information System is a concept which is connected with man, machine, marketing and methods for gathering information from the internal and external source and processing this information for the purpose of encouraging the process of decision-making of the enterprise. MIS is not new, only the computerization is new, ahead of computers MIS techniques existed to provide bosses with the information that would permit them to plan and control business operations. Computer has added on more dimensions such as speed, accuracy and increased volume of data that allow the consideration of more alternatives in decision-making process.

An organization with a well-defined information system will generally have a competitive advantage over organization with poor MIS and no MIS (Rao, 2004). The organizational information system which in general relates to the planning, operation and control of an enterprise are the most important among them. Therefore, MIS is a set of computer-based system and procedures imbibed to help executives in their regular work of decision-making and planning, growth and development.

The aim of MIS is to make available the information for a decision support process of management. This should help in a way that the business objectives are attained in the most proficient way. As the decision-making is not limited to a particular level, the MIS is expected to aid all the hierarchies of the management in carrying out the business operations.

Hence MIS focuses on:

- i. Organization-wide information
- ii. Decision-making process
- iii. Managerial control and analysis
- iv. Computer-based system

Management Information Systems derives data and further resources of IT infrastructure as inputs from the environment and process them to satisfy the information requirements of different enterprise linked with the business entity.

3. Evolution of Microfinance Banks in Nigeria

Recently, the Central Bank of Nigeria launched the Microfinance Policy, Regulatory and Supervisory Framework for Nigeria to empower the vulnerable and poor people by enhancing their access to factors of production, mostly capital. To achieve the goals of this phase of its banking reforms agenda, the apex bank seeks to re-brand and re-capitalise hitherto community banks, to come under three categories of microfinance banks. These are Microfinance banks that are licensed to run as a unit within local governments and the second is licensed to operate in the state or the federal capital territory (FCT) as the third category is licensed to operate in more than one state including the FCT with a minimum paid up capital base and shareholders' funds of N20million, N100million and N2billion respectively (CBN 2011). Microfinance recognize poor and micro entrepreneurs who are denied access to financial services on the basis of their inability to pledge tangible assets as collateral for financial advances (Jamil, 2008). The main objective of micro credit according to Maruthi, Smith and Laxmi (2011) is to improve the welfare of the poor as a result of better access to small loans which are not provided by the conventional financial institutions. Microfinance bank assists to mobilise savings in the economy, draw foreign donor agencies, reinforce entrepreneurship and catalyze development in the economy.

The two major approaches of MFIs are Outreach and Financial Sustainability. Outreach to the poor is the traditional social mission of microfinance. Financial sustainability, on the other hand, is the ability of a microfinance provider to cover all of its cost. Achieving financial sustainability require minimizing costs, offering products and services that meet client needs, finding innovative ways to reach the unbanked poor and charging interest rates and fees that covers costs. MIS can add substantial value in achieving both approaches.

3.1 Benefits of MIS to Microfinance Banks' Operation

- The main benefit of MIS to microfinance banks operation is that it offers easy contact to accurate and complete information. For instance, credit officers obtain information on credits that require follow-up, manager's can check daily growth of the branch, and management can obtain a full picture of the portfolio performance and quality. Clients too obtain rapid information on their accounts, payments and balances.
- Full information is captured on clients and their transactions that can be used to measure customer business to evaluate impact.
- Transactions, such as disbursements, repayments, deposits, withdrawals and money transfers are done faster and well controlled, with the accompany substantial degree of accuracy.
- Generated Information come in user-needed formats, promotes better understanding, setting priorities, objectives and strategy.
- Major performance indicators offer an overview of the enterprise performance, efficiency and effectiveness of business procedures for quick and timely adjustments when required.
- MIS usage assists make MFI services more users friendly, accessible and transparent.

- MIS offers full flexibility to design products and services to the needs of its aimed group.
- Staff efficiency and productivity is increased, as a result of the inherent ability to manage more products, clients, and activities in less time.
- Introduction of new products and setting procedures is simple and can be rapidly applied all over the branch network to meet target market.
- Through MIS, flexibility to integrate with other applications and delivery mechanisms is also provided.

4. Methodology

Seventy respondents were selected from the staff of the selected banks. The sampling technique used for this study was scientific in nature, list of all Microfinance Banks in Oyo State which was divided into 5 areas was used in the selection of sample size using clustered random sampling, and 10% of all Microfinance Banks in Oyo State were considered using systematic sampling while simple random sampling was used to pick a total of 7 banks as the sample size. 10 questionnaires were given to each bank to finally form 70 respondents for the study. Out of the 70 questionnaire distributed, a total of 66 were completed and returned, representing a response rate of 94 percent. The justification for Oyo state was that hardly could you get to a local government council area without a sight of a microfinance bank.

The source of data for the study was primary source, obtained directly from the selected sample of respondents. Closed ended questionnaire, rated on a five points likerts scale rated from strongly agree to strongly disagree was used.

Descriptive statistics of mean and standard deviation distribution was employed to examine the existing MIS products that support Microfinance Banks operations in Oyo state. While, Pearson Product Moment Correlation coefficients was selected to asses relationship between MIS and Microfinance Banks operations in Oyo state, as it is used to measure the strength and direction of association that exist between two variables.

The model of the study and its specification is as displayed below:

$$Y_{it} = \alpha_0 + \beta_1 \text{ATM}_{it} + \beta_2 \text{POS}_{it} + \beta_3 \text{CCTV}_{it} + \beta_4 \text{SMS}_{it} + e_{it}$$

Y_{it} = Operation, proxied by clients patronage

SMS = SMS Transaction Alert

ATM = Financial Service Enquiry

POS= Fund Transfer

CCTV=Video Surveillance

α_0 = Base Constant

e_{it} = Stochastic error term.

5. Results and Discussion

Table 1(Appendix 1) revealed that the employees of Microfinance Banks in Oyo state acknowledged that, out of the existing management information system products in their banks, only Short Messaging Service (SMS) supports their operation, with the highest values of Mean (10,205.70), and Standard Deviation (5768.036).This finding is in conformity with Mishra and Manesh (2013), stated that, conventional banks officials were generally more aware about the various technologies than Microfinance Institutions officials.

Table 2(Appendix 1) shows the correlation matrix between MIS adoption and microfinance banks operation. The correlation coefficients indicates that management information system adoption has a positive significant relationship with microfinance banks' operation ($r = 0.4533^*$; 0.2523^* , $P < 0.05$). The result revealed further that only two of the examined MIS Products' SMS($r = 0.4533^*$), and CCTV($r = 0.2523^*$) were significantly related with impact of operation of Microfinance banks. This implies that adoption of MIS by Microfinance banks influence positively on their operations. MIS adoption enables MFIs to extend their provision of financial services to very poor and very distant borrowers in the long tail of banking. The microfinance industry, if properly enabled by the appropriate technologies, holds great potential for reducing global poverty (David, 2012).

6. Conclusion

The study established that Short Messaging Service was the dominant management information system product that supports microfinance banks operation in Oyo state, Nigeria. Also the result of the analysis indicates that adoption of management information system has a positive impact on microfinance banks operation in Oyo State. There are indeed significant relationships between management information system and microfinance banks operations in Oyo State.

Arising from the above, it could be observed that the level of MIS products adoption by the Nigeria microfinance banks is low. This implies that the two objectives of Outreach and Sustainability of microfinance are been threatened, meeting the target needs, introduction of new products, and expansion to low-income area are almost impossible.

From the findings above, it could be recommended to the operators and the policy makers of microfinance

banks that, progressive policies that make management information system products accessible and affordable should be formulated by them so as to encourage the use of management information system within microfinance banks and for the development of the banking subsector.

Further research suggested to be carried out to determine factors responsible for low level of management information system products adoption by Nigerian microfinance banks.

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APPENDIX 1

Table 1: Existing Management Information System products that Support Microfinance Banks Operation in Oyo state.

Variables	Obs	Mean	Std. Dev.	Min	Max
Existing MIS products in Mfbs in Oyo state	66	.91	.290	0	1
Dominant range of average customer base in Mfbs in Oyo state	66	10,205.70	5768.036	1000	24,000
Number of Mfbs customer using SMS transaction alerts on their accounts	66	9115.12	5751.452	0	17000
Number of ATM/cards issued by Mfbs in Oyo state to customers in the last 5 years	66	0	0	0	0
Fund transfer transaction via POS in the last 5 years	66	2.27	13.677	0	100
Review of Surveillance recorded in CCTV in the last 5 years by MFB.	66	24.85	69.575	0	260

Source: Field Survey, 2015.

Table 2: Correlation matrix showing relationship between management information system adoption and microfinance banks operations.

	MIS adoption and MFBs operation	MIS adoption and MFBs operation	MIS adoption and MFBs operation
MIS adoption and MFBs operation	1.0000		
MIS adoption and MFBs operation	0.4533*	1.0000	
MIS adoption and MFBs operation	0.2523*	0.3360*	1.0000

Source: Field Survey, 2015.