Article Citation Format

Adelusi, B.S & Adeniji, O.D. (2019) Analyzing the Usage of Accounting Software for Short Medium Services (SMS) using Panel Data to improve Business competitiveness of Microfinance. Journal of Digital Innovations & Contemp Res. In Sc., Eng & Tech. Vol. 7, No. 1. Pp 95-110

Article Progress Time Stamps

Article Type: Research Article
Manuscript Received: 15th December, 2019
Review Type: Blind
Final Acceptance:: 28th March, 2019
Article DOI: [dx.doi.org/10.22624/AIMS/DIGITAL/V7N1P8](https://doi.org/10.22624/AIMS/DIGITAL/V7N1P8)

Analyzing the Usage of Accounting Software for Short Medium Services (SMS) using Panel Data to improve Business competitiveness of Microfinance.

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ABSTRACT

There is a significant gap that exists between the perceived demand for investment and the availability of domestic resources. The result of the perceived demand may be inefficient financial institutions, limited private capital inflow, low government budgetary provisions and inability of market forces (demand and supply) to function actively. Accounting Management Systems have been widely used by many organizations to automate and integrate their business operations. However, analyzing the qualitative usage of accounting software for short medium services is the major problem in an economic system. The characteristic of any Accounting Management System can be maintained if there is sound internal control system. Internal control is run to ensure the achievement of operational goals and performance. In this research we develop an Accounting Software for Short Medium Services (ASFSMS) that provides information on short medium services empowerment to manage Savers, Loaner, and Shareholder. The developed software facilitates management decision making, internal controls, and provides quality financial report which plays an important role in an economic system.

Keywords: Microfinance, SMS, SAAS , ASFSMS , performance measurement

1. INTRODUCTION

Banking Supervision Annual Report (2005) noted that Microfinance bank shall be allowed to engage in the provision of normal but less sophisticated banking services to its clients, except foreign exchange transactions and international electronic fund transfer; cheques clearing activities; dealing in land for speculative purposes and real estate except for its use as office accommodation; allow any facility for speculative purposes; acceptance of public sector deposits except for the provision of payment services such as salary, gratuity, and pension for the various tiers of government and provision of loan disbursement services for the delivery of credit programs of government, agencies, groups and individuals, for poverty alleviation on a non-recourse basis.

However, some of the functions performed by Microfinance banks include: acceptance of various types of deposits from individuals, groups and organizations, safe keeping of valuables like certificates in their vaults for their customers, maintenance and operation of different types of accounts with other banks in the country, credits to their customers and provides supervisory function in respect to the use of the loan as to enhance maximal productivity. the microfinance banking system can be viewed, in terms of the complexity of its operations and services carried out, as a small services or medium services organization (Acha Ikechukwu, 2012). More specifically, Microfinance provides financial services such as – deposits, loans, payment services, money transfers and insurance products – to the poor and low-income households, for their microenterprises and small businesses, to enable them to raise their income levels and improve their living standards. The first example of an organized microcredit institution is generally accepted as being the

2. LITERATURE REVIEW

Grameen Bank in Bangladesh in 1976 focus on women, especially poor women, the Grameen bank success posits a model that serves a beacon of hope that microfinance is possible, feasible and economically viable especially among people with major economic disadvantages as shown below in fig 1.

Figure 1: The Grameen Bank Model

(Source: <https://image.slidesharecdn.com/grameenbankpptfinal-161105113512/95/grameen-bank-ppt-final-3-638.jpg?cb=1478345844>)

Grameen Bank says that it encourages borrowers eventually to become savers so that their local capital can be converted into new loans. It claims that, since 1995, 90% of its loans have been funded by interest income and deposits collected and that it converts deposits made in villages into loans for those most in need in the villages. This is quite notable and ensures that pockets of vibrant local economies are being created as shown below.

Figure 22.1 Microcredit and the Grameen Bank.

Source: <https://newint.org/books/reference/world-development/case-studies/poverty-microcredit-grameen-bank/>, Retrieved Jan 25, 2018)

Figure 1.3: The graph above shows the growth of Grameen Bank's portfolio - notice how closely its total deposits have followed its loan disbursements.

Source: <http://nexus.som.yale.edu/grameen/?q=node/124>, Retrieved JAn.25,2018)

Data was gleaned from the Central Bank of Nigeria spanning from 2005 to 2014. The Ordinary Least Square method of multiple regression analysis and Granger Causality Test were employed to determine the short run relationship and the causality between the variables utilizing E-view 6 package. In Nigeria, there has been various poverty intervention programmes carried in the past: most of them were targeted at providing the financial inclusion for the rural and urban poor, enhancing financial empowerment and upliftment through unrestricted access to financial services.

These include: the people's bank, the rural banking scheme, DIFFRI, FEAP, NAPEP, SMEDAN and the Community Banking Scheme. Unfortunately, these interventions failed to yield the desired results as poverty and poverty related derivatives continue to escalate in Nigeria. The emergence of microfinance in the past three decades is viewed as another critical component in the fight against global poverty (Khandker, 2005; Mosley, 2001; Shaw, 2004). Microfinance is defined as the provisioning of financial services to poor or low-income clients, including consumers and entrepreneurs who would otherwise not be served by traditional financial institutions (Ledgerwood, 2000). Microcredit is a subset of microfinance where microfinance institutions (MFIs) administer loans to individuals and small businesses that would otherwise be rejected at a traditional lending institution due to perceived high risk or excessive loan administration costs.

Kauffman and Riggins (2012) describe the current state of ICT in the microfinance industry and propose a number of research directions for this emerging area of IS research. The use of ICT has succeeded in bringing efficiency in terms of cost and client management, yet ICT adoption in MFIs needs a policy overhaul especially in terms of regulatory and infrastructure issues taking into account the aspirations and problems of all the stakeholders to microfinance sector. (Singh & Padhi, 2015). Sravani (2013) further opines that as a result, microfinance practitioners' motivations to use technology interventions are the same as those for any other similar business model: technology's ability to speed up the flow of information and capital, automate transactions, control and analyze data, improve customer experience, reduce transaction costs, and increase efficiency and customer outreach. Technology's potential has, therefore, led Microfinance stakeholders to believe that technology can have a profound impact on their operations.

2.1 Accounting Management System (AMS)

Accounting Management System (AMS) has positive impact on organizations by the following: better adaptation to a changing environment, better management of arm's length transactions and a high degree of competitiveness. Ogah (2012) reveals that high level of profitability is not dependent on the use of accounting information. The low explained variability implies that other variables apart from AMS positively impact on the bank's profitability. Thus, the successful integration of AMS will depend on how well other factors are efficiently put in place to facilitate its operation. AMS can only be useful in organizational operations when appropriate factors are put in place and operated harmoniously. (netGuru, 2017). Based on several research findings, a theoretical framework was proposed by Yaser et al (2014) as Factors Affecting Successful Adoption of Management Information Systems in Organizations towards Enhancing Organizational Performance. Technological characteristics, organizational roles and people characteristics were identified as key themes which ultimately influenced the perceived usefulness and user satisfaction derived from accounting management systems. These ultimately had an organizational performance impact. It is important to note that perceived usefulness of information management systems and user satisfaction of information systems are irrevocably tied to the ease of use of such an information system.

Figure 2: Factors influencing Accounting Management System Buy-in

SAAS (Software as a Service), has been changing . Typically, the SAAS software vendor hosts the application on its web servers, which the customer can download on his mobile device or computer terminal on an on-demand basis. This system provides MFIs 24/7 access from anywhere in the world, real time information, data security and automatic backup. With a SAAS system an organization pays monthly “rent”, or in some cases a variable fee based on usage levels, for access to the software provider’s application. Instead of “buying” the software and using it in isolation, the purchaser gains access to the provider’s online cloud, and utilize the internet to deposit, organize, and access their information.

3. METHODOLOGY

The developed system only provides a dynamic solution to the existing methods and minimizes the challenges recognized with the existing system. The waterfall methodology is chosen due to the familiarity of the developed system with the problem domain. The Waterfall model was also used as it met the project requirements of being used when the requirements are very well known, clear and fixed. However the existing system is completely driven by manual processes and procedures that deeply depend on human skills and abilities. Below fig 3.1 shows the data flow of the existing system.

Fig 3.1: Data flow diagram of the existing system

The storage and management of transaction data is difficult, error prone and unsecured. With the human memory being a liability in handling data items when updated frequently, as is the case with daily contributions. Also the labor-intensive nature of financial services delivery can result into an unpredictable workload on the staff strength. The entire system can experience an unbearable workload or even burnout during peak periods. This leads to inefficiency and loss of service quality. The interrelated impact of the problems of the existing system among all actors is further depicted graphically below in fig 3.2.

Fig 3.2: Data flow diagram of interrelated impact of the existing system

The Developed System ASFSMS

The previously itemized problems are the strengths and conditions upon which the developed system is made up with satisfactory solutions. The figure 3.3 below shows the Data Flow Diagram / Activity Diagram for the **Developed System ASFSMS** core entities.

Figure 3.3: DFD for Developed ASFSMS system

Fig 3.4: Entity Relationship Diagram (ERD) for ASFSMS system

Based on the System Design step of the software development model that was used, figure 3.4 (above) depicts the ERD of the Accounting Management system. The proposed system also takes into account the cashless policy implementations of the Federal Government of Nigeria. This is done through the introduction of the ATM entity, where transfers, withdrawals and deposit operations can be performed. The figure below provide the loan application processing.

Fig 3.5: A subsection of the ERD focusing on the loan application process.

The implementation of the developed system was done with Visual Studio IDE, VB.Net programming

language with the .NET framework. MS Visio was used for diagramming. Microsoft Server was used as the OS server testing environment. Table 4.1 below shows the database schema of the system.

Fig 3.1: Database schema of the system

4. DISCUSSION OF RESULTS

Empirical Analysis of Accounting Software for Short Medium Services. involves the conversion of manual procedures into automated ones. The Log table that was created indicate the volume of log in actions, the login activities and the user Id of the individuals who performed such actions. This is especially useful in tracking and tracing activity on the application to ensure transparency and for security purposes.

Table 4.1: Amount collected with numbers of clients.

No of Clients	Amount
76	30,000.00
115	40,000.00
117	50,000.00
17	60,000.00
26	70,000.00
4	80,000.00
7	100,000.00
2	350,000.00

Amount collected with numbers of clients in six (6) months from January - June 2016 is shown in Table 4.2 above.

Fig 4.1: Volume of log of system.

Analysis of the customer group table indicating the size of the groups being managed by the Account officers is depicted in fig 4.2 .

Fig 4.2: Analysis of the customer group table.

The customer register dB indicating that there are more married folks keen on cooperative savings and investment than single. The number of null responses is also indicated is shown in fig 4.3..

Fig 4.3: The customer register dB.

Further drilling customer register dB indicating that there are more married folks who are also students keen on cooperative savings and investment than single. This is quite sensible noting the responsibilities of marriage driving them as shown in figure 4.4.

Fig 4.5: The customer register dB investment.

The GL Databased for visualization for WEMA and ZENITH was compared as shown in figure 4.6 and 4.7.

Fig 4.6: GL database visualization For Wema

Fig 4.7: GL database visualization For Zenith

5: CONCLUSION:

The database which was visualized with volume of transaction shows the inference of data used. The rate at which people borrow money with zenith and wema bank shows that GL balance of Zenith was 4,860,260 while wema was 3,592,000. The information provided by the two banks shows that client receives more satisfaction from Zenith as compared with Wema. However, business competitiveness of Microfinance when decided by client was analyzed. The software was able to analysis the data in packed Bubble visualization showing the service charge, borrowing account, shared capital and current year profit are primary in establishing a good SMS in microfinance bank.

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