# A Novel Framework for Prosperous Adoption and Deployment of ICTs by SACCOS: A Study from Moshi Municipal, Tanzania

Abswaidi Ramadhani Department of Information and Communication Technology, Moshi Co-operative University P.O.BOX 474, Moshi, Tanzania

Abstract - Tanzania is one of the third world countries and among the world's poorest county. It depends on agriculture which provides 80% of all employment and contributes to about 1/4 of GDP. Its financial sector has inflated in the recent years as a result of competition with foreign commercial banks. In line with good services they provide, the interest rates of these banks are higher thing which creates trouble to customers during loan repayments. Also their loan provision criteria include collateral which is defined as the huge obstacle to low income earners and those who live below poverty line. The alternative way which enables lower-income group to access loan is Savings and Credit Co-operative Societies (SACCOS). Contribution of SACCOS in Tanzania economy is of outstanding importance, but yet the country lags far behind. For SACCOS to continue to exist and stay aggressive it must adoption and use ICTs. Literatures show that there are several SACCOS which are not using ICTs. For those few which managed to adopt ICTs, it had been discovered that they are facing numerous challenges. So this study aimed at identifying factors which hinder SACCOS from adopting ICTs in their operations as well as recommending approaches which their implementations will motivate ICTs adoption. Primary and secondary data were collected by using observation and desk research technique. findings shows that factors which hold back SACCOS from adopting ICTs are poor infrastructure, absence of electricity, low capital, lack of ICT expert and bylaw. Based on findings, researcher proposed framework that will guide and enable SACCOS to adopt ICTs. Proposed framework contains four significant components which are members of SACCOS, government, donors and Banks.

Keywords: Savings and Credit Co-operative Society, ICT, adoption, framework, implementation

# I. INTRODUCTION

#### A. Background information

Tanzania is a third world countries and among of the world's poorest county (IDA, 2015). The wealth of Tanzania depends on agriculture which provides 80% of all employment and contributes to about <sup>1</sup>/<sub>4</sub> of GDP (Indexmundi, 2015). Its financial sector has inflated in the recent years as a result of competition with foreign commercial banks. Competition of these banks also resulted into advance in services they provide to its customers. In the line with good services provided, the interest rates of these banks are relatively high thing which

creates trouble to customers during loan repayments (Simpasa, 2011). Not only that but also their loan provision criteria includes collateral which is defined as the huge obstacle to low income earners and those who live below poverty line. The alternative way which enables lowerincome group to access loan is Savings and Credit Cooperative Societies (SACCOS) (Josephine Philip Churk, 2015). The popularity of SACCOS is increasing in Tanzania since it acts as the source of finance to lowincome earners. Their ability to provide loans at low interest rates, absence of collateral, and their locations which does not depend on government infrastructure has attracted many members to join it.

In Tanzania, SACCOS has commendable impact on their member's life as it provides financial services to their members who are largely found in rural areas. According to (Benson Otieno Ndiege, 2013) about 56% of all members of SACCOS in Tanzania are found in rural areas while 44% found in urban areas. It has been found that SACCOSs has many members simple because it is easy to form them. People who have common bonds like same area, same job, same office and same employment can swiftly organize and form SACCOS (Dibissa, 2015). Literatures show that there are several SACCOS in Moshi Municipal which are not using ICTs even though the status of ICT allows computerization of SACCOS. For those few SACCOS which managed to adopt ICTs, it had been discovered that most of them are facing challenges including insufficient adaptation and use of ICTs (Matto, 2011). This is to say that, some SACCOSs were computerized without set of ideas (Framework) to support their prosperous and sustainability. (Baryamureeba, 2014) advocate that for SACCOS to operate efficiently and successfully there should be a framework that supports, manage, and enabling the introduced idea. Proper uses of ICT in daily operations can be taken as a sophisticated tool towards reforming SACCOS into efficient and effective poverty eradicator. It had been advocated that computerized SACCOS serves its members in economic way than non computerized SACCOS (Matto, 2011).

### B. Statements of the Problem

Currently the world had noted a remarkable increase in application of ICTs in an organization. The use of ICTs resulted in some forms of revolution in daily operations. Worldwide, ICT has changed the manner in which organizations conducts their daily operations. However there is sizeable support to demonstrate that SACCOS in third world countries including Tanzania are not harvesting the benefits brought by adoption and uses of ICTs when you weigh against developed countries. Despite the facts that contribution of SACCOS in Tanzania economy is of outstanding importance, yet the country lags far behind. For SACCOS to continue to exist and stay aggressive there must be sustainable strategies towards effective adoption and use of ICTs so as to arrive at a level of full exhaustion of competitive advantages which available in line with applications of ICTs. In Tanzania, there is no framework which supports SACCOS in the successfully adoption and utilization of ICTs. This calls researcher's attention to work on the said problem.

#### C. Main Objective of the Study

The main objective of this study is to categorize all factors which hinder Tanzanian SACCOS from adopting uses of ICTs in daily operations. Study also planned to recommend approaches which their implementations will motivate the adoption of ICTs by Tanzanian SACCOS. The designed approach was expected to solve the existing problem of not having reasonable framework for successful application of ICTs.

#### D. Specific objectives

- i. To identify factors which affects SACCOS from adopting ICTs in their operation
- ii. To design a structural framework which will enable SACCOS to adoption ICTs in their operations

# E. Research Questions

- i. Which factors affecting SACCOS in adopting ICTs in their operations?
- ii. Which structural framework is suitable for enabling SACCOS to adopt and use ICTs in their daily operations?

# *F. Scope of the study*

The study concentrated on factors which hold back SACCOS from implementing and using ICTs in their daily operations. It identified in detail all factors which hinders computerization of SACCOS. The identified obstacles were used as an input in designing framework for successful adoption and use of ICTs in all SACCOS in Tanzania. The task of implementing and validating the proposed framework was left as future work for other researchers to work on it.

# G. Significance of the study

Outcome of this paper opens a way to SACCOS's members, planners, decision makers and other stakeholders. By reading this result, SACCOS's members will be aware of factors which prevent them from adopting ICT in their operations. Government planners and other

decision makers will use the proposed framework to ensure successful adoption and application of ICTS by all SACCOS in Tanzania. Publication of this paper will trigger researchers to work more on this topic and finally come out with permanent solution on the discussed problem.

# II. LITERATURE REVIEW

### A. Definition of terms

### A. Savings and Credit Co-operative Society (SACCOS)

Savings and Credit Co-operative Society (SACCOS) as a microfinance institution are defined as private and cooperative financial intermediary where membership is open and voluntary (Nathaniel Towo, 2013). SACCOS is belongs to its members who manage it democratically. It aims at fulfilling the monetary demand of its member by encouraging savings and granting loans to the members. SACCOS have to attain profitable management on an ongoing basis in order to satisfy its members since it is concerned about its own financial stability (Tesfamariam, 2015). The mission of the SACCOS is to make available on site, to anyone wishing to join it, financial services under the best conditions, while enabling the co-operative to cover its operating expenses and providing for the economic education for its members (Yarumba, 2015).

# B. SACCOS in Kilimanjaro

Kilimanjaro has noted marvellous increase in number of SACCOS in a period of not more than six years due to government efforts on poverty reduction. The number of registered SACCOS in Kilimanjaro region in 2005 were 122 (CRMP, 2005), but statistics of 2013 shows that Kilimanjaro has total of 221 registered SACCOS which accommodated 106,409 members.

# C. Significance of SACCOS

Tanzanian government pays a special attention to their SACCOS due to their significance in poverty mitigation as well as their economic development in general. There are several features of SACCOS which defines it as a key financial institution in Tanzania. These features includes but not limited to; Accessibility, majority microfinance institutions are found in countryside areas where other financial institution like banks cannot be introduced. This brings financial services closer to members and increase entrepreneurial morale to them (Jeje, 2014). Another significance of SACCOS is flexibility, SACCOS are established by its members and therefore it is more flexible than banks. By laws of SACCOS are flexible and can be accommodated even by extremely poor members. The use of security substitutes is an added advantage. SACCOS does not need collateral in order to issue loans to its members. This enables their members who are most poor to access loan. Collateral substitute like assembly guarantee and non surveyed houses are used as a security to its members. In addition to that, SACCOS, encourage savings to their members (Josephine Philip Churk, 2015). As microfinance institution, SACCOS encourages their members to adopt and practice the culture of saving. These saving can be used as a security for getting loan. Also members receive dividends at the end of each year; these

dividends can be used as a part of income or capital for investment. Low loan pricing is another advantage, SACCOS has low pricing cost since it is determined by their members. Also it target to serve the poor. All SACCOS are based on poor groups. It is very rare to find SACCOS which their members are rich peoples. The viewing of best members is done by members themselves. Management of SACCOS and all other activities are taken by its members. This reduces the cost of screening members in case of any default. Employment is a crucial significance of SACCOS as it provides income to its members. Each SACCOS comes with employees whose work on behalf of other members (Kembo Bwana, 2013).

# D. Information and Communications Technology (ICT)

ICT has several definitions but both carry almost the same meaning. According to (Elisha, 2006) ICT is the term that includes any communication device or application, it takes in: radio, television, cellular phones, computer, network hardware, satellite systems and software just to mention few. Another author (Khatkar, 2011) advocates that "a good way to think about ICT is to consider all uses of digital technology that exist to help individuals, businesses and organizations use information". Any device that posses the properties and capability of storage, retrieve, manipulate, transmit or receive information electronically in a digital form is grouped in ICT (Ken Baldauf, 2014). In general we can say that ICT deals with storage of data, retrieval, manipulation, diffusion or receipt of digital data.

# E.Status of ICT in Tanzania

According to current report of Tanzania Communication Regulatory Authority (TCRA), there is a huge and notable development and revolution of communication markets in Tanzania. Tanzania had managed to enter into Converged Licensing Framework (CLF) which enabled it to acquire four categories of licence which are Network facilities, Network services and application services. These licences enables the country to have content Services for radio and television broadcasting, operate applications related to value added services and deploy and posses an infrastructures related to networking. It had been reported by TCRA that, currently Tanzania had 31,862,656 mobile subscribers, 151, 274 fixed line subscribers and 11,000,000 internet service subscribers. These rate is expected to increase as availability of broadband networks prosperous (TCRA, 2015).

# F. Communication in Moshi Municipal

Moshi Municipality is among of few municipals in Tanzania which covered by reliable communication services. It has good infrastructure in terms of roads which are accessible in all weather conditions. Also there are internet, postal, landline and mobile phones. In addition to that Moshi has a number of local radio stations which are KILI FM, KIBO FM, MOSHI FM and Radio Sauti ya Injili (MMC, 2013b).

### III. METHODOLOGY

### A. Description of the study area

Moshi is among of six districts of Kilimanjaro region. It is the head quarter of the region. It is located at 3°18'S and 37°20' east of Greenwich and surrounded by two districts which are Hai in the west and Moshi Rural in the East, North and South (MMC, 2013a). Moshi has population of about 184,292 peoples

### B. Research Design and Data Collection Methods

In this study, two techniques were used to collect both primary and secondary data. The first technique was desk research. Researcher employed desk research to collect secondary data based on obstacles hinders SACCOS from adopting ICTs in their operations. Data was collect from both published and unpublished materials. Published materials which found in internet, libraries and SACCOS's offices were used as the main source of data. Primary data were collect by observation method. Researcher visited several SACCOS in Moshi Municipal to see their ICT status plus infrastructure factors which contribute as impediment towards ICT adoption. The aim of using these two techniques was to gain deep insight on challenges which holdup SACCOS from implementing ICT for their daily operations. All of the data used in this study were collected in August 2015.

#### VI. FINDINGS

# A. General challenges facing SACCOS in Tanzania

Findings show that several researchers had worked on challenges which face microfinance institutions in Tanzania. SACCOS as a microfinance institution, it is automatically faces those problems. It had been advised that Tanzanian SACCOS faces many challenges which need immediate action to rescue the situation. In his study (Boa, 2010), pointed out that challenges which faces our SACCOS includes but not limited to insufficient capital, poor loan repayment and few products. Insufficient capital from member's contribution hinders SACCOS from having infrastructure offices, office's equipments, ICTs and other many things. Poor loan repayment reduces SACCOS's ability to issue loans. Few products mean few sells, few incomes. Limited services which offered by SACCOS, poor supervision of SACCOS wealth, lack leaders who have wide knowledge on SACCOS and absence of emergency fund for solving SACCOS's emergence were pointed out as a common impediments (Dibissa, 2015). Another blockage is flows of fund from commercial banks to SACCOS (Benson Otieno Ndiege, 2013).

#### B. Factors affects SACCOS from adopting ICTs

Results show that SACCOSs located in Moshi Municipal faces numerous challenges which in one way or another weigh down them from implementing ICTs in their operations. Researcher observed that some SACCOS has poor infrastructure which includes poor offices. Some SACCOSs has poor offices which is not safe for ICT equipments. Absence of electricity in some offices was another problem which observed by researcher. In other hand, record shows that computerization of SACCOSs needs capital which many SACCOS lack. To employ ICT experts, buying ICT equipments and their maintenances needs reasonable capital. Another problem which advocated by many literatures were bylaw. SACCOS guided by bylaw which also guides decision making. So the decision of adopting ICTs depends on member's decision and not status of SACCOS.

# V. DESIGNING

Based on findings, I proposed framework that will guide and enable SACCOS to adopt ICTs in their operations. Proposed framework contains four significant components which are members of SACCOS, government, donors and Banks. For the SACCOS to attain ICT adoption, members of SACCOS must repay loans in time, be flexible in decision making, increase savings, build or rent good office, develop tendency of accepting changes and Train their employee ICT based skills. To make this possible, the donors pressure is needed to encourage people to form SACCOS before offer them any support. Also favor of support should be directed to groups of people like SACCOS. Here in this framework, input from government expected to be to subsidize the price of ICTs equipment. Other inputs are to encourage SACCOS to adopt ICT and to set better policy for SACCOS. Encourage people to form modern SACCOS is also expected to be input from government. Contribution of Banks in this framework is to provide low interest rates loan to SACCOS and to encourage their customers to use ICT to access service. In this framework, members of SACCOS have to initiate themselves to adopt ICTs while donors, government and Banks act as external support.



Figure 1: Framework for Prosperous Adoption of ICTs by SACCOS

#### VI. DISCUSSION AND CONCLUSION

A framework which supports SACCOS in the productively adoption and utilization of ICTs were designed. This framework can be adopted by any Microfinance institution but it was mainly designed for SACCOS. Based on findings of this study, it can be conclude that factors which hold back SACCOS from adopting ICTs in their operations are poor infrastructure, absence of electricity, low capital, lack of ICT expert and bylaw which guides SACCOS's decision. These impediments can be overcome by implementing the proposed framework. The proposed framework had four components which show how each of them will contribute towards enabling SACCOSs to adopt ICT in their operations.

#### REFERENCE

- Baryamureeba, V. (2014). On Using Technology to Enhance Service Delivery in a SACCoS, Keynote Address at the Wazalendo SACCOS 10-12 November 2014 at Hotel Paradise Jinja-Uganda.
- [2] Benson Otieno Ndiege, T. B. H., Isaac Kazungu (2013). Relationship between Sources of Funds and Outreach in Savings and Credits Cooperatives Societies: Tanzanian case. [Paper]. European Journal of Business and Management, 5(9), 188-196.
- [3] Boa, P. H. (2010). Positive contribution of Saving and Credit Cooperatives Societies in the development of Rombo District: a case study of Mashati SACCOS. A dissertation submitted in partial fulfillment of the requirement of an award of masters degree in Business administration of the Open University of Tanzania 2010.
- [4] CRMP. (2005). United Republic of Tanzania, The Cooperative Reform and Modernization Program.
- [5] Dibissa, N. (2015). Determinants of Savings and Credit Cooperatives Societies (SACCOs) outreach in Addis Ababa, A thesis Submitted to the Department of Accounting and Finance, College of Business and Economics, Addis Ababa University, in Partial Fulfillment of the Requirements for Degree of Masters of Business Administration (MBA) in Finance.
- [6] Elisha, M. (2006). The Application of Information and Communication Technology (I.C.T.) in Nigerian Academic Libraries Prospects and Problems. The Information Manager, Volume 6(1&2).
- [7] IDA. (2015). International development association at work in the poorest countries. Indexmundi. (2015). Tanzania Economy Profile 2014. [Report]. Jeje, K. (2014). Intensive Growth Strategies and Outreach Performance of Tanzania-Based Savings and Credit Cooperative Societies. International Journal of Business and Management; Vol. 10, No. 1; 2015
- [8] ISSN 1833-3850 E-ISSN 1833-8119, Published by Canadian Center of Science and Education Josephine Philip Churk. (2015). Contributions of Savings and Credit Cooperative Society on Improving Rural Livelihood in Makungu ward Iringa, Tanzania. Proceedings of the Second European Academic Research Conference on Global Business, Economics, Finance and Banking (EAR15Swiss Conference) ISBN: 978-1-63415-477-2 Zurich-Switzerland, 3-5 July, 2015 Paper ID: Z550.
- [9] Kembo Bwana, J. M. (2013). Issues in SACCOS Development in Kenya and Tanzania: The Historical and Development Perspectives. Developing Country Studies, ISSN 2224-607X (Paper) ISSN 2225-0565 (Online), Vol.3, No.5, 2013 www.iiste.org
- [10] Ken Baldauf, B. A., Kyle Gower-Winter (2014). Supplement for Emerge with Computers & Emerge with Computer Concepts Version 5.0.

- [11] Khatkar, V. (2011). Information and Communication Technology in Furtherance of Governance – Some use Cases. International Journal of Computing and Business Research, ISSN (Online) : 2229-6166, Volume 2 Issue 3 September 2011
- [12] Matto, G. (2011). Designing a Secure System for Customer Information and Portfolio Tracking in Microfinance Institutions, the case of selected SACCoS in Moshi, Tanzania, A Dissertation Submitted in (Partial) Fulfillment of the Requirements for the Degree of Master of Science (Computer Science) of the University of Dar es Salaam.
- [13] MMC. (2013a). Moshi municipal Investment Profile, Moshi municipal Council, Kilimanjaro Region. Moshi: Moshi municipal Council.
- [14] MMC. (2013b). United Republic of Tanzania, Moshi Municipal Investment Profile, Moshi Municipal Council-Kilimanjaro Region.
- [15] Nathaniel Towo, P. K. (2013). Warehouse Receipt System: A Solution towards Smallholder Farmers Financial Constraints.
- [16] Simpasa, A. M. (2011). Competitive conditions in the Tanzanian commercial banking industry. African development review, 23(1), 88-98.
- [17] TCRA. (2015). Public notice on the issue of tariffs in the ICT sector, The united republic of Tanzania, Tanzania Communications Regulatory Authority ISO 9001: 2008 Certified. Dar es salaam.
- [18] Tesfamariam, K. (2015). Savings and Credit Cooperatives in Ethiopia: Development and Challenges Journal of Economics and Sustainable Development, ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online), Vol.6, No.5, 2015, www.iiste.org.
- [19] Yarumba, T. (2015). The Impact of E-Salary System in The operations of Saccos: A Case of Wazalendo SACCOS. International Journal of Economics, Commerce and Management, United Kingdom Vol. III, Issue 5, May 2015, Licensed under Creative Common Page 1082, ISSN 2348 0386, http://ijecm.co.uk/