SUCCESSFUL IMPLEMENTATION OF INFORMATION SYSTEMS IN THE FINANCIAL SECTOR: A CASE STUDY OF SAVINGS AND CREDIT COOPERATIVE SOCIETIES IN KENYA

By

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DECLARATION

This Management Research Project is my original work and has not been presented for a degree in any other university

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This Management Research Project has been submitted for examination with my approval as University supervisor.

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DEDICATION

In memory of my Late Mum Beatrice Igoki Kaburu and to my dad Elijah Kaburu for the great sacrifice and support in my studies to make my academic dreams come true;

To my dear wife Mercy Kiogora for the understanding, support encouragement despite a myriad of frustrations during the entire period of study;

And most importantly to the Almighty God, for everything

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Finally, I offer my special THANKS to God for giving strength, good health, a sound mind and all that He provided during this period. I know it is by Him and through Him that I came to see the completion of this programme despite the many challenges encountered.

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ACRONYMS

BOSA	Back Office Services
FOSA	Front Office Services
ICT	Information and Communications Technology
ISs	Information Systems
IT	Information Technology
LAN	Local Area Network
MFIs	Micro finance Institutions
MIS	Management Information Systems
SACCO	Savings and Credit Cooperatives Society
SDLC	Systems Development Life Cycle
SPSS	Statistical Package for Social Sciences
WAN	Wide Area Network

ABSTRACT

The Primary objective of this study was to investigate which factors contribute to successful implementation of computerized management information systems by SACCOs in Kenya. The rationale behind the selection is that there is no comprehensive documentation about computerization in the SACCOs which are perceived to be the least computerized group of financial services providers in the country and yet information and communications technology systems have become a strategic tool critical to their survival.

This study adopted a survey design to provide details of the variables of interest. The main instrument for data collection was a structured questionnaire which was administered to persons in charge of ICT services in SACCOs in Kenya targeting 50 respondents through judgmental sampling. The drop-and pick later approach was used to collect the questionnaires. Out of 50 questionnaires distributed, 44 were filled and returned giving a response rate of 88%. The data was collected, cleaned, coded and analyzed with the using SPSS package.

The findings of the Status of IS implementation in SACCOS indicate that most SACCOs have attempted to implement computerized information systems with varying degrees of success. Although the approaches adopted have assisted SACCOs to implement ISs, there is lack of established IT departments to spearhead ISs implementations. Further, SACCOS lack appropriate policies to manage ICT activities.

The study further established that success in IS implementation Kenyan SACCOs is influenced by several key factors including: Quality of systems, Time schedules set, IT project funding,

existence of appropriate ICT Policies, existence of ICT project monitoring mechanism, Procurement procedures, adequate planning, System compatibility, IT project leadership, existence of technical expertise, communication before and during the IS implementation and change management factors.

In conclusion the study established that the following groups of factors are critical to successful information systems implementation in the SACCOs. Quality management, adequate project funding, existence of ICT policy, appropriate project monitoring, best practice procurement process for IS implementation, adequate project planning, systems design and compatibility, project leadership, management involvement, existence of technical expertise, change management and user involvement and communication of success criteria to all stakeholders.

CHAPTER ONE: INTRODUCTION

1.1. Background

Though financial institutions have realized that they need good information systems for their prosperity, stories of failure and frustration abound. Inadequately developed information systems standout as major weaknesses for most financial institutions yet ISs are required to support the organization's operations. Many are the stories of computer based information systems that either never work right or are more prone to crashes (Ochieng, 1998). Why do these systems fail to deliver as expected? What factors cause failure or conversely contribute to successful implementation of information systems?

Over the past decade, there has been a rapid adoption of computerized management information systems(MIS) for managing organizational information gathering, processing, transfer and dissemination for feedback and decision making purposes. Since these systems are complex and require large investment and are object of ever increasing demands by the end-users, managers in organizations have become concerned about the performance of the computer-based information systems (Ndulu, 2004).

The use of computer information systems (IS) effectively and efficiently demands a thorough understanding of the technology and its implications for the company strategy. Many companies have invested heavily but have failed to secure the full benefits available (O'Brien, 1993). Information technology systems implementation has often been relegated to relatively junior managers who lack sufficient knowledge, experience and authority. There has been a rapid diffusion of information systems throughout the economy for more than a decade. With electronic revolution companies are gaining access to extraordinary amounts of

information as fast as they want forcing executives to re-examine their practices more closely (Ochieng, 1998).

Information systems are transforming our economic and recreational activities and it merits careful attention as one of the most important sociologically phenomena of the century. Without doubt, Information system has had one of the single most powerful effects in the office environment. It has changed not only the way people work, but also their ability to produce work (Scott, 1986).

1.1.1 Successful Information Systems Implementation

Information system implementation is usually said to be successful when it satisfies the project objectives which are normally in multiple criteria such as time, cost, quality, safety (Hayfield, 1986). There is usually a trade off among the criteria but the satisfaction of the key project participants is always crucial to the project success. Indirect benefits include factors such as increased cash flows through efficient processing of transactions, better customer service or faster and more accurate information. Information systems are a critical resource in the attainment of strategic and operational objectives of an organization including those offering financial services to a large segment of the population such as Savings and credit cooperatives societies (SACCOs).

Various methodologies have been developed to attempt to quantify the success of systems implementation. Key performance analysis is one such technique whereby one identifies and set the standards required for the system but the end product is usually an organizational standard. The degree of success achieved through the use of an implemented computer based IS will depend on the cumulative success of all the previous stages in the systems development methodology.

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Difficulties in defining success criteria is problematic because of the wide variety of goals different IS attempt to achieve (Lambert, 1993).

Land (1992) demonstrated that a company's approach to IS systems adoption affects other strategies in a way that significantly affects economic performance. The main purpose of IS is to monitor performance in the whole range of the organization's critical operations so as to help control direction (Cole, 1985). Growing appreciation of the changing role of information systems has highlighted the need to focus on different approaches to information system planning which aligns information systems plans with business plans. Information systems have now become sufficiently powerful drivers to have become interdependent with business strategies and may therefore require planning approaches which support or even initiate their roles as leaders of business strategies (Cole, 1985).

Information systems need to be integrated with the organization processes and structure to achieve lasting advantage. Information systems can influence change in the organization processes, products and even its markets (Kovacevik, 1993).

The Information System (IS) is the foundation for all credit union operations. It is critical that the decision-makers in credit unions have a framework for evaluating their existing systems, determining present and future IS needs and weighing costs versus benefits when purchasing upgrades or new systems. Aspects to consider include functionality, flexibility and expandability, usability, reporting capabilities, standards and compliance, administration and support, security, technical requirements and costs(WOCCU,2010).

1.1.2 Savings and Credit Cooperative Societies (SACCOS) in Kenya

The financial sector in Kenya includes both formal and informal financial services providers. Banks, Microfinance institutions and Savings and Credit cooperatives, also known as credit unions, provide financial services to a significant proportion of the population in Kenya. The credit unions form largest number of financial services providers amongst the formal financial institutions and are collectively referred to as the cooperative movement.

The cooperative movement is over 100 years old having started with Dairy Societies in 1908. There are more than 5,000 registered SACCOs in Kenya, holding over 30% of the country's savings, which amounts to over Kshs.150 billion with a membership of over 7 million that impacts 72% of the country's population directly and indirectly. The movement ccontributes to the direct employment of over 250,000 people and indirectly through establishment of linkages between firms, farms, market centres and provision for collective and individual investments.

These SACCOs have assets worth over Kenya shillings 200 billion. The SACCO movement in Kenya is the biggest in the continent, holding over 80% of Africa's US $ 3.6 billion assets, and the seventh largest in the world (Cooperative Bank, 2010).

According to Cooperative Bank reports, out of the registered 5000 SACCOs, 180 have Front office Savings Operations (FOSAs) offering basic banking services across the country. Some of the challenges facing SACCOS as identified by Cooperative bank include changing legal environment, stiff Competition from other formal and informal financial institutions, members ever changing needs and demands, frauds and forgeries due to weak internal controls, financial

management, capitalization inadequacy and low adoption of information and communications technology (ICT).

Due to rapid growth and management challenges witnessed in the cooperative movement the government has enacted new legislation to regulate the institutions (SACCOs). The new legislation enacted by the legislative arm of government, referred to as the SACCO ACT 2008, has implications on reporting and information management requirements by SACCOs. SACCOs are expected to be fully compliant to the legislation by the year 2014.

In the new legislation the SACCOs have been classified into two categories namely those offering FOSA services and those not offering FOSA services. SACCOs are member owned institutions that mobilize savings and provide credit financial services to their members. The FOSA based SACCOs offer limited banking services to their clients and members. Membership in the 5000 registered SACCOs varies with some having over 150,000 members and with branches country wide.

According to the Investment Policy for the Cooperative Societies (June, 2008) by the Ministry of Co-operative Development and Marketing, ICT is increasingly becoming an essential tool for efficient operations of investments and cooperatives should be encouraged to use technology. However, it has been noted that many cooperatives are not computerized while others are partially computerized. The extent of computerization is yet to be formally evaluated which should lead to formulation of comprehensive ICT policy for the SACCOs to facilitate effective adoption of ICT in the SACCOs.

1.2   Statement of the Problem

A study conducted by Hivos in Mozambique, Kenya, Tanzania, Uganda in October 2006 established that majority of the sampled SACCOs did not have automated systems, or else they were dissatisfied with their current systems. The study further concluded that before SACCOS and MFIs can start thinking about new and innovative distribution channels such as e-banking, mobile banking and smart card solutions, they must ensure that their MIS is in place and functioning well, with solid information management procedures in place. Effective information management is crucial to the efficient and effective functioning of an MFI or SACCO, and the key expansion, to introducing new products, and to decreasing operational costs (www.hivos.nl).

An Impact study conducted jointly by the Ministry of Co-operatives Development and Marketing and the World Council of Credit Unions (WOCCU) in 2005 on 148 SACCOs in Kenya found out that the computer systems as a whole were found to be old and very weak, only a handful of SACCOs had adequate computer systems, some of SACCOs that did have adequate systems the management were not sufficiently knowledgeable on their own systems,   majority of the systems are unable to provide adequate financial reports to management,   the computer systems were unable to monitor delinquent loans, the SACCOs were purchasing new computer systems for the front office (FOSA) services but the system for the back-office (BOSA) was old, antiquated and not integrated with the newer system, or it was manual, Some SACCOs were still operating manual systems and the process of reconciling is impossible due to the tremendous amount of members that they had,   majority of the SACCOs did not properly back up their computer systems nor did they have a disaster recovery program or IT policy.

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Many SACCOs do not understand the full implications of introducing new Information systems. The success of an institution depends on how it implements its information system that will store, manipulate and present this information to its users to make sound management decisions (Ndulu, 2004). As the financial industry grows with more financial institutions entering the market and existing ones expanding, the intensity of competition for clients increase and need for efficient service delivery mechanisms becomes a necessity (Ochieng, 1998).

The implementation of a large computer based information system is one of the most complex activities undertaken by organizations. The number of staff involved and the resources consumed often make computer development projects one of the most costly of all projects undertaken. In addition many of these systems do not meet user needs, exceed their projected development costs and time scale (Hevner,1992).

Although Information system is an agent of transformation, significant technical problems still exist which constrain effective deployment in local business domain. This implies that information systems implementation is no longer a sequential process but an iterative process which spans different domains, business strategy, organizational infrastructure and processes. The rapid expansion of IS has not been matched by a corresponding understanding of the impact that it has had on the working environment (Taylor, 1991). There is need for a study to be done in order to establish the key factors that influence the successful implementation of information systems in the SACCOs in Kenya.

A number of studies have been done focusing on different aspects of information systems Kipngetich (1991) studied management satisfaction with information systems, Gatune (1993) studied the factors considered important in implementing local area networks, Nyambane (1996) studied the evaluation of the extent of and factors limiting information technology usage in publicly quoted companies in Kenya. Ochieng (1998) studied success factors in IS implementation in commercial banks, Ndulu (2004) studied the causes of failure of computerized systems in microfinance institutions, Borura (2009) studied IS implementation challenges in Kenyan parastatals. None of the studies above have addressed the pertinent issue: what are the factors considered important in successful implementation of information systems and their relative importance in the current era of new technologies and emergent regulatory framework affecting an important group of financial service providers such as the SACCOs.

This study sought to determine the factors contributing to successful implementation of computerized management information systems by SACCOs in Kenya.

The research question for this study is; what are the key factors contributing to the success and failure of information systems implementation in the SACCOs?

1.3   Study Objectives

The objectives of the study are;

   (a) To determine the status of information systems implementation in SACCOs in Kenya.

   (b) To determine the factors that influence the success rate in the implementation of information systems in the SACCOs in Kenya

1.4   Significance of the Study

a. **Government:** the study is expected to be of interest to the government policy makers as it highlights IS implementation practices in the SACCOs. Policy makers could folowup pertinent issues identified by the study to develop policies that will enable the SACCOs be better prepared to manage information as required in the new SACCO ACT and SACCO Rules and regulations.

b. The study will form a basis of for interested **scholars and practitioners** to research on and also add to the body of knowledge on management information systems. Managers of SACCOs may use the study to enhance system implementation success.

c. Information system **designers and vendors** may use this study to improve the performance of heir systems and systems implementation approaches

CHAPTER TWO: LITERATURE REVIEW

2.1   Introduction

An information system is a set of people, procedures and resources that collects, transforms, and disseminates information in an organization (Heeks, 1995). Today managers rely on many types of information systems. This study focuses on computer based information systems that use hardware, software, telecommunications and other forms of information technology to transform data resources into a variety of information products. Information systems may be based on any combination of human endeavors, paper based methods and information technology. The concern is with the efficient utilization of resources for providing the required level of information support for the management of business operations.

Milestones in the development of IT were first the big expensive mainframe computers introduced in the 1960's to handle large scale operations.   The development of integrated circuits led to the production of smaller, less costly but powerful minicomputers. The second half of the 1980's saw the wide adoption of personal computers throughout the organizations widely due to the low price of personal computers and the development of a wide range of user friendly software packages. Initially, early computer based systems tendered to be associated with scientific applications with   commercial applications developed later.   These applications were inevitably centered around the data processing functions with their impact being felt only at the operational level of information preparation and decision making.   This trend was reinforced because the prime justification for computerization during this period was cost saving and it was more focused on operational areas (O'Brien, 1993).   Linkages through   communication   networks   increased dramatically   in the 1990's and with the

coming of the global network, lowering of taxes paid on computers more companies are gaining access to what used to be the domain for rich companies.

Within a period spanning barely a decade, computers have dominated the world and firms are hastening to keep abreast with the new technology as computers became more and more affordable, so does the exploitation of them spread and individuals find themselves obligated to be computer literate. The full potential of computers remains under-utilized, a research of about 500 US firms indicated that only 9 percent of the executives were happy with the services they were getting from their information technologies (Mirani, 1993).

Information Technology has emerged from its initial stage as a labor saving and cost cutting function and now exerts an all pervasive influence which encompasses corporate organization and structure, product development, manufacturing process distribution, customer relation, retailing, marketing and advertising. The transition from an industrial to an information era is evidenced by the decrease of industrial employment and increasing employment of service and information workers. There has been a radical growth of computer literacy with improved communications resulting in the spread of communication related activities such as tele-banking and teleconferencing, since it is cheaper to move information than it is to move people and goods (Reck, 1987).

The potential of Information and Communications Technology should be appreciated as was that of its predecessors - the introduction of steam, the internal combustion engine or electricity. IS is now a powerful driving force and management's task is to drive that technology to their advantage and not be driven by it. The new technologies such as electronic commerce are having dramatic impact on the way national and international business is being conducted. The information

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revolution is fundamentally changing the way we do business, communicate with our clients, market our products, source suppliers and find buyers. In addition, new virtual industries that exist electronically but do not have the physical premises such as virtual shopping malls and virtual banks have sprung up in the past few years. As the impact of the information era permeates into society, it will induce structural changes, new desires and attitudes to which successful business must respond. The momentum of interaction between technology and society is likely to accelerate in the years ahead.

2.2   Developments in Information Systems Implementation

Implementation can be viewed as the process that carries out operational plans developed at the information systems planning process. More specifically the implementation follows the investigation, analysis, and design stages of the systems development process. Implementation should be addressed in the initial plan and throughout the IS development process. Without clear criteria for implementation, there is a likelihood of the projects failing to meet their objectives. Organizations have to attribute priority to each of the component elements of the implementation, because some aspects of the system may be important in fulfilling corporate objectives than others. Implementation is concerned with putting the systems design into practice. Implementation goes beyond the physical environment thus management must carefully plan for the whole process.

Although a clear and consistent relationship between information systems investment and financial performance is yet to emerge, companies have continued their large investments in IS. This is so despite the dissatisfaction expressed by general managers in measuring the value of IS to their organizations. If managers have been rational in such investments, it is possible that research may not have captured the true benefits that companies derive from IS (Mitra et al., 1996).

Most benefits are difficult to predict and have proved elusive in many cases because the benefits are future oriented and difficult to quantify. The benefits should not be aimed at cost cutting rather at the more intangible company wide benefits. The process by which IS reduces operating costs is not well understood (Maier, 1997).

The information effect refers to the better control, monitoring and decision making that IS provides to management. Such effects are harder to identify and quantify because their impact may be felt in various areas of the organization as well as in the performance indicators that may seem unrelated to IS.

We cannot overlook the role of information in sustaining successful relationships, via the critical progression from data to information to knowledge and a competitive edge. Indeed information systems value added in the organization must be defined in terms of its value added in the market, where business knowledge is ultimately put to work.. It is only then that the dreams of systems designers to enhance organization effectiveness and its capital and labor productivity truly became a reality. Information systems no longer just support existing business activities; it shapes organizations identity (Lambert, 1993).

2.3   Factors Impacting Successful Information Systems Implementation

The implementation process begins after management has accepted the new system. Implementation consists in installing the new system and the removing the current systems. It involves hardware, software and people. The implementation process is often the most difficult (Ochieng, 1998). During implementation, problems that had not been anticipated during the study and design effort often appear. Solutions to these problems usually require modification to the

original design. The analyst should be willing to accept changes where necessary, but should prevent extreme distortions of the original design.

Successful implementation of IS depends on successful linking or integration of demand, supply and application development and providing an ongoing framework for organization decision making. Organizations need to review their structure and emphasis to ensure that they have within their departments the appropriate resources to meet the demands placed on them and are prepared to continually review issues critically to ensure they are making the most effective use of organizational resources (Lambert, 1993).

2.3.1. Change Management Factors

Implementing IS involves change and this change needs to be managed if the IS strategy is to be successfully implemented; this requires IS to be closely integrated with the people, strategy and culture of the organization. Human resource policies can create a climate conducive to adopting new technology and thus reducing the associated resistance to change (Peppard et al, 1993).

Changes to the organization culture are likely to elicit resistance to change by the people affected by the new system development and implementation initiatives. This is likely to yield undesired results in systems implementation.

2.3.2 Cost Factors

Establishing and allocating realistic budgets is probably the most important element in the successful implementing of IS. This is done at the initial stages of the development process. It is vital to have tight control over the project cost to ensure that the budget limits are not unnecessarily exceeded.

Cost control is a continuous process and should be monitored continuously using various tools for example network diagrams, project evaluation and review techniques and Budgets.

2.3.3 Design Factors

The detailed analysis stage identifies the problems with the current system. It involves analyzing the information needs of end users, the organizational environment, and any system presently used. It also develops the input, output, storage and control requirements of a system that can meet the needs of the end users (Cutts, 1993).

The design stage involves developing specifications for the hardware, software, people (specialist and end-users), data resources, and information products that will satisfy the information needs of end users. Design will address both computerized and manual procedures in data capture, program design, output design, file design and security. The aim of the phase is to arrive at a detailed statement of how the system is to be made operational (Ndulu, 2004).

2.3.4 Quality Factors

System quality can be evaluated on several bases including the time taken to develop and implement the system in relation to budget and project schedule. Alternatively, system quality can be valuated based on the appropriateness and effectiveness of the system features such as functionality, which is the ability to comprehensively cater for business operations; flexibility and expandability in relation to coping with institutional growth needs; usability which is the ease of use by the various end users; reporting which is the system capacity to generate useful information for decision making in a timely manner; security, which relates to robustness, backups and recovery features of a system; technical

specification that includes the performance of the programs, databases, software, hardware and networks (www.woocu.org).

2.4   Conclusion

With the tremendous improvements in information and communications technologies, information systems have become essential components of implementation of virtually all corporate strategies. The increasing emphasis on the competitiveness has led to a new emphasis on the competitive advantage through effective utilization of information systems. Thus organizations are focusing on buying solutions to the business problems rather than buying the newest and fastest systems (Ochieng, 1998).

Borura (2009) observed that information system challenges arise out of the management of human, technical, financial and change related issues and recommended further studies to investigate the role they play in influencing the success of IS implementation in various sectors and industries other than the public sector he studied.

This study highlights the current state of affairs in IS implementation based on the issues raised in the literature review and explores the practical application of success factors in the unique SACCO type of organization.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Research Design

A survey study was undertaken to provide details of the variables of interest. Survey studies are used when the researcher intends to describe the characteristic of certain groups, to estimate the proportion of people who behave in a certain way or to make specific predictions (Churchill, 1991).

3.2 Population

The population of the study consisted of all registered SACCOs in Kenya from a list that was obtained from the Ministry of Cooperative Development and Marketing, Nairobi Province Office. The rationale behind the selection is that the SACCOs are considered to be among the major financial services providers in the country and information and communications technology systems have become a strategic tool critical to their survival.

3.3 Sample

There are about 5000 registered SACCOs in Kenya. Given the large size of the population, a sample study was done. Judgmental sampling was used to select the sample of 50 respondents from active SACCOs.

Nkari (1984) did a study on tourism with a sample of 20 Tour Operators and Muthuri (2001) did a study on export marketing on the internet with a sample of 30 exporting firms in Nairobi and both studies were successful. This sample was considered adequate for this study due to time and resources constraints.

3.4   Data Collection

The study made use of primary data collected using questionnaires. The questionnaires were distributed using 'drop and pick later' method. The tool used for collecting data is as detailed in Appendix 1 and 2.

The questionnaires contain statements that reflect the research problem and comprised three sections. Section A sought to capture data about the profile of the SACCO, Section B has relates to the success rate of Information systems implementation in the SACCOs and Section C sought to establish factors affecting successful implementation of IS in the SACCOs. The questionnaire was addressed to the persons in charge of the information and communications technology in the SACCOs as they were expected to have the necessary information.

3.5   Data Analysis

The data collected from the respondents was coded, edited for completeness, labeled and keyed into the computer for analysis with the aid of Statistical Package for Social Sciences (SPSS).

Data relating to Section A and B of the questionnaire was analyzed sing as percentages, means and proportions and presented in tables. Data relating to Section C was analyzed using Factor Analysis. Factor Analysis was done to establish relative importance of the various factors in Section C.

Factor Analysis summarizes important information contained in the data by a few numbers of factors and the identification of the constructs or dimensions that underlie the observed variables. It isolates and eliminates variables that do not seem to belong with the rest of the

variables, as well as to name the dimension captured by a measure. Thus the principal component analysis reveals how several measures of a domain can be combined in a single measure.

To improve interpretation, the principal component solutions was orthogonal rotated using varimax rotation, empirical evidence indicates that varimax tends to produce loading that are more interpretable resulting to isolation of factors underlying a set of observable variables. Principal component analysis is used to transform a set of interrelated variables into a set of unrelated linear combinations of these variables. Thus the principal component analysis reveals how several measures of a domain can be combined in a single measure, the first component, to produce maximum discrimination among objects along a single dimension. The variation accounted for by each component also indicates when independent dimensions or components are needed to adequately define the domain under investigation.

CHAPTER FOUR: DATA ANALYSIS AND FINDINGS

4.1 Overview

This chapter specifically presents the findings, interpretation and analysis of the data obtained in the study. This chapter provides information of the study sample in relation to the status of information system implementation and the factors that affect the success rate in the implementation of information system in the SACCOs in Kenya.

Respondents targeted in this study were managers of ICT services in SACCOs. A total of 50 questionnaires were distributed. The questionnaire was used to get the required information on Information systems implementation practices. The total number of respondents was 44 out of 50 representing an 88% response rate.

The analysis of the data was used to establish the status of IS implementation and factors affecting success rate of IS implementation in the SACCOs.

4.2 SACCOs Profiles

The respondents were asked to give basic operational details about their SACCOs. The data was collected and results were analyzed as percentages, proportions and averages computed to make inferences for the various characteristics observed in the SACCOs. All the respondents were persons in charge of ICT services in the SACCOs.

Table 4.1: Year of SACCO registration

Response	Percentage
1975-1985	59
1986-1995	27
1996-2005	14
2006-2010	0
Total	**100**

According to Table 4.1, majority (59%) of the SACCOs had been registered between years 1975 and 1985, while 27% were registered between the years 1986 and 1995, 14% between the years 1996 and 2005, and none between the years 2006 and 2010. This means that majority of the SACCOs have been operating for more than 25 years.

Table 4.2: Number of Members in SACCOs

Number of Members	Frequency	Percentage
less than 1000	31	70.5
1001-2000	2	5.5
2001-3000	2	4.5
3001 and Above	3	7.8
Total	44	100

Table 4.2 shows that majority (70.5%) of the SACCOs had less than 1000 members while 29.5% had more than 1000 members. Thus majority of the SACCOs are those with a small membership base of less than 1000 members.

Table 4.3: Whether the SACCOs offered FOSA

Response	Frequency	Percentage
Yes	14	32
No	30	68
Total	44	100

Table 4.3 shows that majority (68%) of the SACCOs did not have FOSA Services. This means that majority of the SACCOs only offered back office services (BOSA).

Table 4.4: Branch networks in SACCOs

Number of Branches	Frequency	Percentage
1	36	82
2	6	14
3 and Above	2	4
Total	44	100

Table 4.4 shows that majority (82%) of the SACCOs had only one branch, 14% had 2 branches and only 2% had more than two branches. This can be attributed to the fact that majority of the SACCOS as also shown Table 4.2 had less than 1000 members who were served adequately by one branch.

Table 4.5: Establishment of an IT Department in the SACCO

Response	Frequency	Percentage
YES	17	39
NO	27	61
Total	**44**	**100**

Table 4.5 shows that majority of the SACCOs (61%) did not have a fully fledged information technology (IT) services department. Most of the SACCOs had ICT services being managed under other functional departments such as accounting and administration.

Table 4.6: Types of computer networks that exist in the SACCOS

Response	Frequency	Percentage
Local Area Network	24	55
Wide Area Network	4	9
None	6	14
Total	44	100

Table 4.6 shows that majority (55%) of the SACCOs had at least a Local Area Network (LAN), while 9% had WAN and 14% did not have any computer based network.

Table 4.7: Existence of IT Projects Steering committee

Response	Frequency	Percentage
YES	26	43
NO	18	57
Total	44	100

Table 4.7 shows that majority (57%) of the SACCOs did not have an IT projects steering committee to oversee implementation of IT projects.

The respondents were asked to rate the quality of information systems in their SACCOs. A numerical score of 1=Very High; 2= High; 3=Medium; 4=Low; and 5=Very Low was coded and used to analyze the results as shown in Table 4.8.

Table 4.8: Rating of the quality of the information systems

	Mean	Std. Deviation
Overall score	2.52	.943

Table 4.8 shows that the overall rating of quality was a weighted mean score of 2.52. This means that the quality of the systems was rated as being medium from the scale.

The respondents were asked to rate the extent to which the information systems in their SACCOs were implemented within the set budget. A numerical score of 1=Always; 2= Sometimes; 3=Rarely; and 4=Never was coded and used to analyze the results as shown in Table 4.9

Table 4.9: Extent of IS being implemented within budget

	Mean	Std. Deviation
Overall score	1.81	.943

Reponses in Table 4.9 indicate that the overall rating of ISs being implemented within set budgets was a weighted mean score of 1.81 which means that the ISs implementation budget was being met "sometimes".

The respondents were asked to rate the extent to which the information systems in their SACCOs were implemented within the set time schedule. A numerical score of 1=Always; 2= Sometimes; 3=Rarely: and 4=Never was coded and used to analyze the results as shown in Table 4.10

Table 4.10: Extent of IS being implemented within time schedule

	Mean	Std. Deviation
Overall Score	1.78	.832

Reponses in Table 4.9 indicate that the overall rating of ISs being implemented within the set time schedules was a weighted mean score of 1.81 which means that the ISs implementation budget was being met "sometimes".

4.3   Status of information systems implementation

The first objective of the study was to determine the current status of IS implementation in the SACCOs. The questionnaire had four questions that addressed this objective. From the respondents who filed the questionnaire the results were tabulate using means, percentages and correlations. The respondents were asked to state whether their SACCO has attempted to implement information systems, reasons for not implementing computerized information systems, overall success rating of the IS and various aspects of the system.

Table 4.11: Whether the SACCO had attempted to implement computerized IS

Response	Frequency	Percentage
Yes	37	84
No	7	16
Total	44	100.

Table 4.11 shows that majority (84%) of the SACCOs had attempted to implement computerized information system while 16% had not attempted and were still using manual systems.

For those SACCOs which had not attempted to implement information systems they were asked to indicate reasons for not attempting to implement computerized information systems. The responses are summarized in Table 4.12.

Table 4.12: The reasons for not implementing computerized information systems

Reason	Frequency	Percentage
Inadequate funding for ICT projects	30	67
Lack of consensus between senior managers	4	8
Lack of required expertise in the SACCO	10	25
Total	44	100

From Table 4.12, 67% of the respondents indicated that the SACCOs did not manage to implement information system due to inadequate finding for ICT projects, 8% due to lack of consensus between senior managers and 25% due to lack of required expertise in the SACCO. This means that inadequate funding is the main reason why SACCOs may not attempt to implement ISs.

In order to assess the overall success rate of IT projects implementation, the respondents were asked to rate the success of IT projects their SACCOs. The responses are summarized in the Table 4.13.

Table 4.13: The overall success rate of IT projects

Response	Frequency	Percentage
Very Successful	14	36
Somewhat Successful	22	56
Not Successful at All	3	8
Total	44	100.

According to the Table 4.13, 92% of the respondents indicated that they considered the overall success rate of IT projects in their SACCOs as being either successful or somewhat successful. 8% indicated that the IT projects were not successful.

The respondents were further asked to indicate the extent to which there IS was successful in meeting several specific aspects. The Reponses were coded as 1=Successful, 2=somewhat successful and 3= Not Successful at all and the results summarized in Table 4.14 using means cores for each specific system aspect as listed as follows.

1. User friendliness, comfortable and easy to use	12. System security
2. Ability to connect to existing networks	13. Ability to meet current information requirements
3. Reliability of Support and maintenance services	14. Provides for future information requirements
4. Duration for Installation of new equipment	
5. Reliability of Emergency backup facilities	15. Ability to recover after system failure
6. Documentation with user friendly instructions	16. Reduction of user resistance to change
7. Ability to Integrate with the current systems	
8. Support for product development	17. Positive influence to the organization culture
9. Acceptable Cost of system implementation	
10. Improved service delivery	18. Improved communication
11. Expandability and upgradeability	19. Timeliness of information generated

Table 4.14: Success of IS in meeting various aspects of IS implementation

	Mean	Std. Deviation
User friendliness, comfortable and easy to use	1.59	.706
Ability to connect to existing networks	1.53	.687
Reliability of Support and maintenance services	1.62	.590
Duration for Installation of new equipment	1.69	.668
Reliability of Emergency backup facilities	1.37	.589
Documentation with user friendly instructions	1.50	.697
Ability to Integrate with the current systems	1.43	.555
Support for product development	1.61	.766
Acceptable Cost of system implementation	1.61	.688
Improved service delivery	1.36	.487
Expandability and upgradeability	1.67	.756
System security	1.55	.686
Ability to meet current information requirements	1.50	.609
Provides for future information requirements	1.78	.702
Ability to recover after system failure	1.59	.686
Reduction of user resistance to change	1.42	.604
Positively influenced organization culture	1.60	.695
Improved communication within the organization	1.57	.603
Timeliness of information generated	1.38	.594

The results are shown in Table 4.14 indicate that the mean scores for all the aspects under investigation lies between 1.0 and 2.0 which according to the scale used imply that most of the respondents were satisfied with the performance of their information systems.

Further analysis was done to examine the relationship between the overall success rate of IT projects and the rating of quality, cost and time schedule factors in IS implementation from the data collected. Using Pearson's correlation analysis the results are tabulated in the Table 4.15.

Table 4.15: Correlation between Overall success rate of IT projects and Quality, Cost and time factors

	Rating of the overall success of IT projects in the SACCOs	Rating of the quality of ISs in the SACCO	Rating of the extent to which ISs are implemented within the set time schedule	Rating of the extent to which ISs are implemented within the set budget
Rating of the overall success of IT projects in the SACCOs	1	.657	.593	.536
Rating of the quality of ISs in the SACCO	.657	1	.703	.663
Rating of the extent to which ISs are implemented within the set time schedule	.593	.703	1	.687
Rating of the extent to which ISs are implemented w within the set budget	.536	.663	.687	1

Correlation is significant at the 0.01 level (2-tailed)

From Table 4.15 it can be deduced that there is a positive correlation between the quality, cost and time schedule of IS implementation process and the overall success rate of the projects. This means that success rate of the IT projects in the Respondents was significantly influenced by the quality, cost and time factors in the implementation process.

4.4   Factors affecting success rate in information systems implementation

The second objective of the study sought to determine the Factors affecting success rate in information systems implementation in SACCOs in Kenya. From the literature review the researcher identified 31 variables (practices) that could be used to assess practices that influence e the success of information systems implementation in SACCOs. The variables were listed as follows.

1. The SACCO sets clearly established success criteria for information systems
2. The SACCO communicates success criteria to all information systems projects participants
3. There is adequate planning for information systems projects
4. There are adequate controls for information systems Projects
5. There are adequate reporting procedures in place
6. IT managers have Business/Administrative skills apart from technical Skills
7. Staff Movement in the IT department disrupts implementation process
8. New technology is tested before being used in the SACCO
9. There is a clear acquisition policy for IT products
10. The SACO has a strategic policy for IT
11. There is established Quality Assurance unit to certify system changes and system tests
12. User training is an ongoing process
13. The SACCO's IT services suppliers offer facilities for emergency backup purposes
14. The SACCO considers the suppliers Financial position and industry market prospects
15. Suppliers offers adequate after sales services
16. The SACCO ensures that new Information systems are compatible with existing systems
17. Adequate change procedures are put in place before the implementation is started
18. The IT manager or Person in charge of IT services has sufficient influence and authority
19. Continuous communication between all projects Participants is maintained
20. There is active participation during decision making and problem solving by all participants
21. Emphasis is placed on proper coordination between IT staff, the users and the management during the implementation process
22. The SACCO sets realistic schedules
23. New systems pose legal challenges during the implementation
24. The SACCO makes accurate initial costs estimates for the new information systems
25. IT projects get adequate funding
26. Management are committed to established implementation schedules
27. Management are committed to technical performance goals of the information systems
28. Users are committed to established implementation schedules
29. Users are committed to established technical performance goals
30. Information Systems implementation scope is strictly adhered to
31. The SACCO conducts a post implementation review to monitor performance of information systems

The 31 variables were included in the questionnaire and the respondents were asked to state the extent to which they agreed with the statements. A Likert scale with; 5=Strongly Agree, 4=Agree, 3= indifferent, 2=Disagree, 1= Strongly Disagree use used to analyze the responses. From factor analysis a total of 8 components with Eigen values greater than 1 accounted for 80.9% of the factor variance. The process and results of factor analysis are discussed in this section (Section 4.4).

Communality is the proportion of variance that each item has in common with other items. The proportion of variance that is unique to each item is then the respective item's total variance minus the communality. Table 4.16 shows the communalities. The extraction method was the principle component analysis.

Table 4.16: Communalities

Factors affecting Success rate of IS implementation	Initial	Extraction
The SACCO sets clearly established success criteria for information systems	1	0.899
The SACCO communicates success criteria to all information systems projects participants	1	0.750
There is adequate planning for information systems projects	1	0.843
There are adequate controls for information systems Projects	1	0.890
There are adequate reporting procedures in place	1	0.820
IT managers have Business/Administrative skills apart from technical Skills	1	0.778
Staff Movement in the IT department disrupts implementation process	1	0.739
New technology is tested before being used in the SACCO	1	0.899
There is a clear acquisition policy for IT products	1	0.838
The SACO has a strategic policy for IT	1	0.920
There is established Quality Assurance unit to certify system changes and system tests	1	0.803
User training is an ongoing process	1	0.568
The SACCO's IT services suppliers offer facilities for emergency backup purposes	1	0.905
The SACCO considers the suppliers Financial position and industry market prospects	1	0.739
Suppliers offers adequate after sales services	1	0.832
The SACCO ensures that new Information systems are compatible with existing	1	0.786

systems		
Adequate change procedures are put in place before the implementation is started	1	0.600
The IT manager or Person in charge of IT services has sufficient influence and authority	1	0.703
Continuous communication between all projects Participants is maintained	1	0.845
There is active participation during decision making and problem solving by all participants	1	0.822
Emphasis is placed on proper coordination between IT staff, the users and the management during the implementation process	1	0.897
The SACCO sets realistic schedules	1	0.886
New systems pose legal challenges during the implementation	1	0.885
The SACCO makes accurate initial costs estimates for the new information systems	1	0.797
IT projects get adequate funding	1	0.783
Management are committed to established implementation schedules	1	0.930
Management are committed to technical performance goals of the information systems	1	0.872
Users are committed to established implementation schedules	1	0.818
Users are committed to established technical performance goals	1	0.740
Information Systems implementation scope is strictly adhered to	1	0.638
The SACCO conducts a post implementation review to monitor performance of information systems	1	0.860

Table 4.17: Total Variance Explained- Factors Affecting IS Implementation

	Total Variance Explained								
Compo nent	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Varian ce	Cumulat ive %	Total	% of Varian ce	Cumulative %	Total	% of Varia nce	Cumulative %
1	10.9	35.1	35.1	10.9	35.1	35.1	4.3	14.0	14.0
2	3.0	9.8	44.9	3.0	9.8	44.9	4.1	13.1	27.1
3	2.9	9.2	54.1	2.9	9.2	54.1	4.0	12.9	40.0
4	2.2	6.9	61.0	2.2	6.9	61.0	3.2	10.2	50.2
5	2.1	6.7	67.7	2.1	6.7	67.7	2.8	8.9	59.1
6	1.6	5.1	72.8	1.6	5.1	72.8	2.6	8.4	67.5
7	1.4	4.4	77.2	1.4	4.4	77.2	2.4	7.8	75.2
8	1.1	3.7	80.9	1.1	3.7	80.9	1.8	5.7	80.9
9	1.0	3.2	84.1						
10	0.9	2.8	86.9						
11	0.8	2.5	89.5						
12	0.6	2.0	91.4						
13	0.6	1.8	93.3						
14	0.5	1.5	94.8						
15	0.4	1.3	96.1						
16	0.3	0.9	97.0						
17	0.2	0.7	97.7						
18	0.2	0.7	98.3						
19	0.2	0.6	98.9						
20	0.1	0.5	99.4						
21	0.1	0.4	99.8						
22	0.0	0.2	99.9						
23	0.0	0.1	100.0						
24	0.0	0.0	100.0						
25	0.0	0.0	100.0						
26	0.0	0.0	100.0						
27	0.0	0.0	100.0						
28	0.0	0.0	100.0						
29	0.0	0.0	100.0						
30	0.0	0.0	100.0						
31	0.0	0.0	100.0						

Table 4.17 represents the total original variance of all factors. Principle component analysis was used to extract factors which totaled to 31. Eigen values indicate the relative importance of each factor accounting for a particular set and hence those with a small Eigen values were left out. According to Table 4.15, only 8 factors were considered significant for analysis.
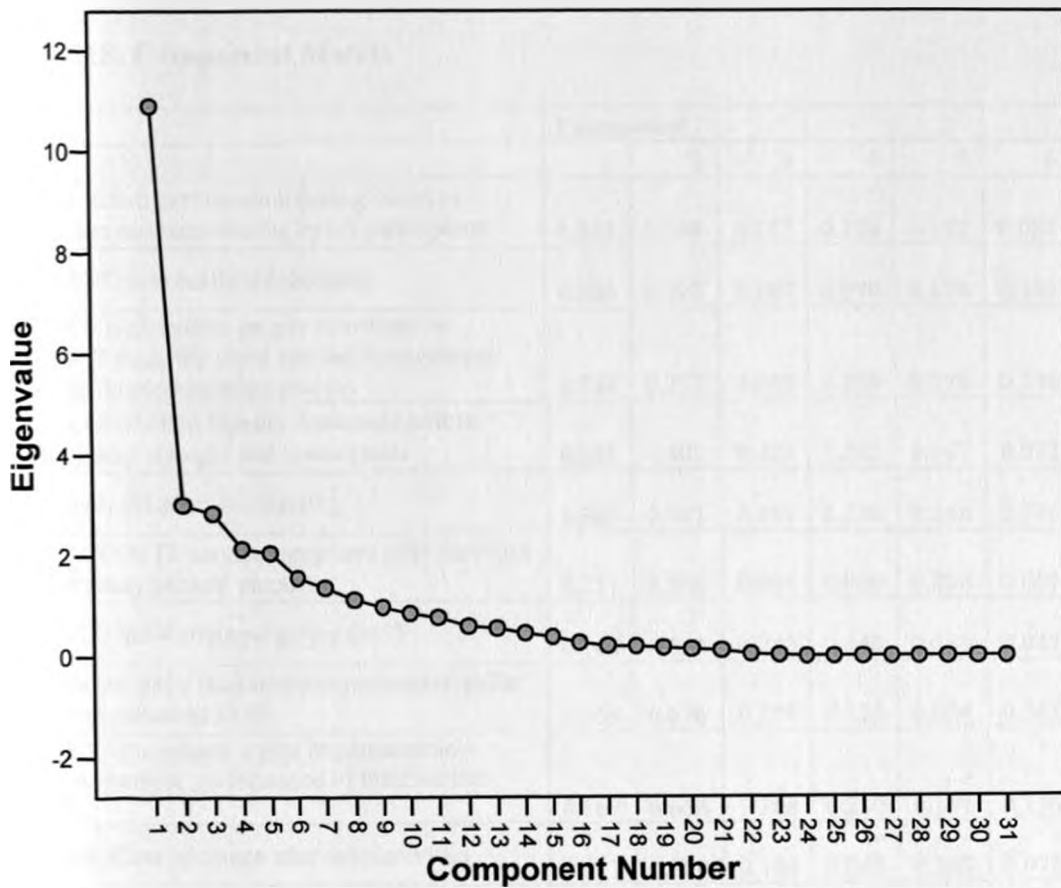
Scree Plot

The Scree plot is a plot of factor Eigen values against the components numbers. According to Scree plot below, we only consider 8 factors because the curve tents to flatten from the eighth component onwards, due to relatively low factor Eigen value.

Factor analysis, Principal Component Analysis was used to extract the key factors affecting implementation success rate. This required Varimax with Kaizer Normalization which gave a rotation and converged in 12 iterations. The results are displayed in Table 4.18.

Table 4.18: Component Matrix

Factor	Component							
	1	2	3	4	5	6	7	8
There is active participation during decision making and problem solving by all participants	**0.841**	0.199	0.127	0.129	0.152	0.084	0.109	0.024
The SACCO sets realistic schedules	**0.830**	0.198	0.187	-0.070	0.178	0.192	-0.114	0.189
Emphasis is placed on proper coordination between IT staff, the users and the management during the implementation process	**0.768**	0.237	0.085	0.289	0.279	0.178	0.138	0.177
There is established Quality Assurance unit to certify system changes and system tests	**0.581**	0.407	0.323	0.382	-0.167	-0.032	0.047	0.135
IT projects get adequate funding	**0.505**	-0.041	0.457	0.236	-0.168	0.376	0.046	-0.299
The SACCO's IT services suppliers offer facilities for emergency backup purposes	0.251	**0.856**	0.096	0.000	0.288	0.099	0.033	0.081
The SACO has a strategic policy for IT	0.148	**0.840**	0.243	0.140	0.083	-0.043	-0.200	-0.255
IT managers have Business/Administrative skills apart from technical Skills	0.369	**0.676**	0.259	0.130	-0.084	0.145	0.119	0.242
The SACCO conducts a post implementation review to monitor performance of information systems	0.169	**0.668**	0.168	0.210	-0.141	0.156	0.358	0.376
Suppliers offers adequate after sales services	-0.017	**0.580**	0.184	-0.068	0.560	-0.072	0.343	0.143
User training is an ongoing process	0.137	**0.435**	0.243	0.052	0.360	-0.081	0.303	0.263
Information Systems implementation scope is strictly adhered to	0.399	**0.405**	0.106	0.261	-0.016	0.290	0.328	0.207
New technology is tested before being used in the SACCO	0.116	0.184	**0.799**	0.206	0.166	0.194	0.068	0.317
The SACCO makes accurate initial costs estimates for the new information systems	0.474	-0.087	**0.732**	0.069	0.038	0.119	-0.080	-0.052
There is a clear acquisition policy for IT products	0.164	0.372	**0.723**	0.358	-0.103	0.083	-0.027	-0.061
The SACCO considers the suppliers Financial position and industry market prospects	0.081	0.353	**0.712**	0.082	0.272	-0.021	0.093	0.101
There are adequate reporting procedures in place	0.017	0.323	**0.611**	0.528	0.195	0.131	0.088	-0.023
The IT manager or Person in charge of IT services has sufficient influence and authority	0.494	0.235	**0.523**	0.111	0.108	0.226	0.074	0.223
There is adequate planning for information systems projects	0.219	-0.001	-0.010	**0.766**	0.178	0.183	0.372	0.066
The SACCO sets clearly established success criteria for information systems	0.009	0.093	0.421	**0.764**	0.073	0.313	-0.051	-0.151

The SACCO communicates success criteria to all information systems projects participants	0.133	0.098	0.108	**0.764**	0.168	0.092	-0.275	0.123
The SACCO ensures that new Information systems are compatible with existing systems	0.072	0.173	0.105	0.295	**0.765**	0.155	0.181	-0.104
Users are committed to established implementation schedules	0.338	0.147	0.150	-0.085	**0.711**	0.293	-0.231	0.093
New systems pose legal challenges during the implementation	0.118	-0.254	0.024	-0.103	**0.684**	0.492	0.282	-0.078
Management are committed to established implementation schedules	0.196	-0.025	0.133	0.119	0.179	**0.895**	-0.047	-0.152
Management are committed to technical performance goals of the information systems	0.275	0.122	0.203	-0.150	-0.025	**0.798**	0.014	0.284
Staff Movement in the IT department disrupts implementation process	-0.166	-0.106	0.145	0.030	0.233	-0.027	**0.777**	0.138
Adequate change procedures are put in place before the implementation is started	0.195	0.031	0.175	-0.092	0.006	-0.107	**0.656**	-0.283
There are adequate controls for information systems Projects	0.419	0.112	0.122	0.556	0.012	0.220	**0.569**	-0.074
Continuous communication between all projects Participants is maintained	0.486	0.130	0.146	0.051	-0.048	-0.007	-0.088	**0.747**
Users are committed to established technical performance goals	0.121	0.282	0.361	-0.090	0.373	0.335	-0.263	**0.432**
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.	Rotation converged in 12 iterations.							

The Component matrix contains the relative Eigen values in respect of each factor. Each factor belongs to one of the 8 sets of factors extracted, and is determined by the Eigen values of the factors relative to each set. Table 4.18 shows which set of each factor falls into.

From the component transformational matrix shown as Table 4.18, all the factors showed a positive correlation with each other. The correlation is significant at 0.01 level (2-tailed). The analysis confirms that no single factor can independently influence the success rate of information systems implementation.

Factor isolation involves isolating each of the variable factors and grouping them by these 4 extracted factors based on their factor loadings on each set. Table 4.19 shows the factors grouped with a minimum correlation of 0.4.

Table 4.19: Isolation of factors

Factors affecting success rate in information systems implementation	Factor Component
There is active participation during decision making and problem solving by all participants	**Factor 1- Quality, Time and project funding factors**
The SACCO sets realistic schedules	
Emphasis is placed on proper coordination between IT staff, the users and the management during the implementation process	
There is established Quality Assurance unit to certify system changes and system tests	
IT projects get adequate funding	
The SACCO's IT services suppliers offer facilities for emergency backup purposes	**Factor 2 - Policy and project monitoring factors**
The SACCO has a strategic policy for IT	
IT managers have Business/Administrative skills apart from technical Skills	
The SACCO conducts a post implementation review to monitor performance of information systems	
Suppliers offers adequate after sales services	
User training is an ongoing process	
Information Systems implementation scope is strictly adhered to	
New technology is tested before being used in the SACCO	**Factor 3 - Procurement factors**
The SACCO makes accurate initial costs estimates for the new information systems	
There is a clear acquisition policy for IT products	
The SACCO considers the suppliers Financial position and industry market prospects	
There are adequate reporting procedures in place	
The IT manager or Person in charge of IT services has sufficient influence and authority	

There is adequate planning for information systems projects	
The SACCO sets clearly established success criteria for information systems	
The SACCO communicates success criteria to all information systems projects participants	**Factor 4 - Project Planning factors**
The SACCO ensures that new Information systems are compatible with existing systems	
Users are committed to established implementation schedules	**Factor 5 - Legal and System compatibility factors**
New systems pose legal challenges during the implementation	
Management are committed to established implementation schedules	
Management are committed to technical performance goals of the information systems	**Factor 6 - Project leadership and technical factors**
Staff Movement in the IT department disrupts implementation process	
Adequate change procedures are put in place before the implementation is started	**Factor 7 - Change management factors**
There are adequate controls for information systems Projects	
Continuous communication between all projects Participants is maintained	
Users are committed to established technical performance goals	**Factor 8 - Communication factors**

The factor extraction gave eight components. The variable components were the factors which are practices of IS implementation. From the Table 4.19, Group factor 1 was composed of Quality, Time and project funding factors. These include: There is active participation during decision making and problem solving by all participants, the SACCO sets realistic schedules, emphasis is placed on proper coordination between IT staff, the users and the management during the implementation process, there is established Quality Assurance unit to certify system changes and system tests and IT projects get adequate funding.

Group Factor 2 comprised of policy and project monitoring factors which include: The SACCO's IT services suppliers offer facilities for emergency backup purposes, the SACCO has a strategic policy for IT, IT managers have Business/Administrative skills apart from technical Skills, the SACCO conducts a post implementation review to monitor performance of information systems, suppliers offers adequate after sales services, user training is an ongoing process and information systems implementation scope is strictly adhered to.

Group factor 3 comprised of procurement factors which include: The SACCO makes accurate initial costs estimates for the new information systems, there is a clear acquisition policy for IT products, the SACCO considers the suppliers financial position and industry market prospects, there are adequate reporting procedures in place and the IT manager or Person in charge of IT services has sufficient influence and authority.

Group factor 4 comprised of project planning factors that include: There is adequate planning for information systems projects, the SACCO sets clearly established success criteria for information systems and the SACCO communicates success criteria to all information systems projects participants.

Group factor 5 comprised of legal and system compatibility factors that include: The SACCO ensures that new information systems are compatible with existing systems, users are committed to established implementation schedules and new systems pose legal challenges during the implementation.

Group factor 6 comprised of project leadership and technical factors that include: Management are committed to established implementation schedules and technical performance goals of the information systems.

Group factor 7 comprised of change management factors which include: Staff Movement in the IT department disrupts implementation process, adequate change procedures are put in place before the implementation is started and there are adequate controls for information systems Projects.

Group factor 8 comprised of communication factors which include: continuous communication between all projects participants is maintained and users are committed to established technical performance goals.

It is clear that most of the factors listed in the questionnaire were grouped together by their correlation with each other, which brought down to a total of 8 main group factors. The most number of factors elements were in groups 1 to 3.

CHAPTER FIVE: SUMMARY, CONLUSION AND RECOMMENDATIONS

5.1   Summary

This chapter summarizes and makes conclusions on the findings of the study in relation to the objectives as indicated in Chapter One. This chapter further discusses the limitations of the study and makes recommendations for improvement in IS implementation and suggestions for further research.

This research focused on "To determine the status of information systems implementation in SACCOs in Kenya", as well as "To determine the factors that influence the success rate in implementation of information systems in the SACCOs in Kenya".

A sample of 50 respondents was selected through judgmental sampling which is a non-probability sampling technique. Data collection involved administering of questionnaires. Refusal to respond to questionnaires and partly answered questions were some of the problems encountered during the research.

5.1.1 SACCO profiles

The respondents were persons in charge of ICT services in the selected SACCOs. The study established that majority of the SACCOs studied had the following attributes: 59% of the SACCOs are more than 25 years old in operations, 70.5% of the SACCOs had less than 1000 members, 71% of the SACCOS do not have FOSA Services, 82% of the SACCOs had only one branch, 61% of the SACCOs did not have a fully fledged IT department and 57% of the SACCOs did not have an IT projects steering committee to oversee IS implementation.

5.1.2 Status of IS implementation in SACCOS

One of the objectives of the study was to establish the Status of IS implementation in SACCOS. Descriptive statistics was used to analyze the data colected, the results were presented in graphs and tables. The findings of the Status of IS implementation in SACCOS indicate that most SACCOs have attempted to implement computerized information systems with varying degrees of success. Although the approaches adopted have assisted SACCOs to implement ISs, there is lack of established IT departments to spearhead ISs implementations. Further, SACCOS lack appropriate policies to manage ICT activities.

5.1.3 Factors affecting successful implementation of IS in SACCOs

The second objective of the study sought to determine the Factors affecting success rate in information systems implementation in SACCOs in Kenya. Factor analysis was used to group the factors influencing success rate of IS implementation in the SACCOs. The study found that success in IS implementation Kenyan SACCOs is influenced by the following factors: Quality of systems, Time schedules set, IT project funding, existence of appropriate ICT Policies, existence of ICT project monitoring mechanism, Procurement procedures, adequate planning, System compatibility, IT project leadership, existence of technical expertise, communication before and during the IS implementation stage and change management factors.

5.2 Conclusion

The findings established that majority of the SACCOs have attempted to implement information systems. The findings showed that majority of the SACCOs were using basic information systems that did not incorporate features such as mobile phone, web based transactions and automatic teller machines.

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While most of the respondents indicated satisfaction with the most of the IS aspects in the SACCOs, it was observed that there is no dedicated quality assurance units to set standards and ensure quality control in the IS implementation process. This can be attributed to the fact that ICT function in most of the Respondents is not well defined as it was observed that most of them did not have dedicated IT departments nor did they have an IT steering committee to manage the IT projects. The study also established that majority of the IS implementation projects exceed the set budgets.

The study established that the following groups of factors are critical to successful information systems implementation in the SACCOs. Quality management, adequate project funding, existence of ICT policy, appropriate project monitoring, best practice procurement process for IS implementation, adequate project planning, systems design and compatibility, project leadership, management involvement, existence of technical expertise, change management and user involvement and communication of success criteria to all stakeholders.

5.3 Recommendation

To improve the success of information systems implementation in SACCOs, the study recommends; development of a comprehensive ICT policy for the industry that will promote the establishment of ICT departments to specifically oversee implementation of ICT projects within the SACCOs and regulate the procurement policy of outsourced services. To mitigate the ICT skills gap the study recommends capacity building through user training, knowledge and skills transfer. The study also recommends embracing best practices and standards to improve on quality of IS in the industry.

5.4   Limitation of Study

Whereas there are many stages of IS development, the study was limited to implementation stage of the SDLC. The limitation of the resources, made it difficult to obtain responses of all the SACCOs in the country, in addition some of the SACCOs did not have an established IS hence, they had a problem in responding to the questionnaires provided thus limiting the response rate. The study therefore targeted only persons in charge of ICT services in the SACCOs, the study did not interview other stakeholders like end users such as key personnel from business departments like credit departments, finance and human resources and customers who could have given more insights on IS implementation issues.

5.5   Recommendations for Further Study

Based on the study findings, the following study areas may provide additional insights through further research:

1. Factors contribution to innovation in ICT services in the financial sector

2. Cost benefit analysis of computer based ICT services

3. Implications of regulatory environment on the SACCO information requirements

REFERENCES

Borura C.M. (2002). Information Systems Implementation Challenges In Kenyan Parastatals. Unpublished MBA project, University of Nairobi.

Churchill G.A. (1991). Marketing Research Methodological Foundations. Dryden Press.

Cole R.E. (1985). Information for competitive Performance. Harvard. Business Review, May/June. pp 100 - 109.

Cutts G. (1993). Structured Systems Analysis and Design Methodology. Alfred Waller Ltd Publishers.

Gatune, J.(1993). Factors considered Important in Implementing Local Area Networks. Unpublished MBA project, University of Nairobi.

Hayfield F. (1986). Project Success and Failure, Project Management in Progress, Elserview Science Publishers.

Heeks R.(1995). Information Systems Strategy - A five minute guide for public managers. Information Technology for Development, No. 6, pp 139 - 143.

Hevner A.R. (1992). An Integrated Systems Development Environment with Box Structures,Challenges And Strategies For Research in Systems Development. James Wiley & Sons publications, pp 135-147.

Kipngetich, J.K. (1991). Management Satisfaction with Performance of Computer mediated Information systems: The case of clients of selected computer Vendors. Unpublished MBA project, University of Nairobi.

Kovacevic A. et al. (1993). Six Stages of IT Strategic Management, Sloan Management Review, pp 77 - 87.

Lambert Rob (1993). Implementing IS/IT strategies, Information Technology for Business. Pitman publishing, Great Britain, pp 252 -268.

Land et al. (1992). Technology Transfer: Organisational Factors Affecting Implementation - Some preliminary findings, Challenges And Strategies For Research in Systems Development, James Wiley & Sons publications, pp 65-79.

Maier J.L. et al. (1997). Environmental Scanning for Information Technology: An empirical Investigation, Journal of Management Information System. Vol. 14 No 2, pp 177-200.

Mickey G. (1993). Strategy IS/IT Planning, Information Technology for Business, Pitman publishing, Great Britain, pp 75 -99.

Mirani R et al.(1993). Making Promises: The key benefits of proposed IS systems, Journal of Systems Management.

Mitra et al. (1996). Analyzing Cost effectiveness of organizations: The impact of IT spending. Journal of Management Information System, Vol. 13 No 2, pp 29 - 57.

Muthuri J.(2001). Export Marketing In The Internet. The Case Of The Floriculture Industry In Kenya, Unpublished MBA project, University of Nairobi.

Nkari M. (1984). The Marketing Of Kenya's Tourist Attractions. Unpublished MBA project, University of Nairobi.

Ndulu J.K. (2004). Survey of The Causes Of Information Systems Failure Among Micro Finance Institutions In Kenya.   Unpublished MBA project, University of Nairobi.

Nyambane T. (1996). An Evaluation of the Extent of and Factors Limiting Information technology Usage in Public quoted companies in Kenya, Unpublished MBA Project, University of Nairobi.

O'Brien J. (1993). Information Systems: A Managerial EndUser Perspective. Irwin Publishers.

Ochieng B.J. (1998). Analysis Of Factors Considered Important In The Successful Implementation Of Info Systems: A Case Study Of Commercial Banks In Kenya. Unpublished MBA project, University of Nairobi.

Peppard J et al. (1993). Managing change in IT/IS Implementation, Information Technology for Business. Pitman publishing, Great Britain, pp 269 -291.

Reck R.(1987). Implications of transition from an Industrial Era to one of Information. Industrial Management and Data Systems, pp 308.

Scott G. M.(1986). Principles of Management Information Systems. McGraw – Hill.

Taylor T.(1991).   Making Information Technology work: The right environment. Industrial Management and Data Systems, Vol. 91, No 3, pp 17 -19.

Websites:

WWW.WOCCU.ORG

WWW.COOPERATIVEBANK.CO.KE

WWW.HIVOS.NL

WWW.COOPERATIVE.GO.KE

APPENDICES

Appendix 1:   Letter of Introduction

Dear Sir/Madam

RE: RESEARCH ON SUCCESSFUL IMPLEMENTATION OF INFORMATION SYSTEMS IN THE FINANCIAL SECTOR: A CASE STUDY OF SAVINGS AND CREDIT COOPERATIVES IN KENYA

I am a postgraduate student at the School of Business, University of Nairobi. As part of my postgraduate course requirements, I am undertaking a research project on: SUCCESSFUL IMPLEMENTATION OF INFORMATION SYSTEMS IN THE FINANCIAL SECTOR: A CASE STUDY OF SAVINGS AND CREDIT COOPERATIVES IN KENYA.

To satisfy the information requirement for this research I am administering a questionnaire to persons involved in the implementation of Information systems in SACCOs.

I would like your assistance in completing the attached questionnaire. I would be most grateful if you can spare sometime to answer these questions to the best of your knowledge and ability. The information requested is needed for purely academic purposes and will be treated in strict confidence and will not be used for any other purpose other than for my research.

Any additional information you might think is necessary for this study is most welcome and can be written on the back side of the questionnaire.

Your assistance in completing the questionnaire is greatly appreciated.

Yours Sincerely

KABURU A.K.

Appendix 2: Questionnaire

Please answer the following questions in respect for the SACCO for which you work by placing a tick (√) in the space provided or give details as may be necessary.

SECTION A: SACCO PROFILE

1. When was the SACCO registered?_____(Year)

2. How many members does your SACCO have?_____

3. Does your SACCO offer FOSA Services? Yes ( )   No( )

4. How many branches is your SACCO operating in Kenya? _____

5. How much savings has the SACCO mobilized to date? _____

6. What is your SACCO's loan portfolio in Kshs to date? _____

7. How many of your SACCO branches have installed computers? _____

8. How long has the SACCO been using computers (in years)? _____

9. Does the SACCO have an IT Department? Yes( ) No( )

10. If your answer in Qn.9 above is "No" Under which department in the SACCO are the IT services? _____

11. How many IT services personnel are working in your SACCO? _____

12. Who is in charge of the IT services in the SACCO (Give title)? _____

13. To whom does the person in charge of IT services report to (Please Tick one option below or specify as may be necessary)?

a. Board of Directors ( )   b. Chief Executive Officer ( )   c. Other (Specify) _____

14. Which of the following aspects of the SACCO operations have been computerized in your SACCO (you may tick more than one or specify as may be necessary)?

Front Office Services (FOSA) ( )   Back Office Services (BOSA) ( )

General Ledger System ( )   Guarantorship ( )

Fixed Assets ( )   Member records ( )

Customer records ( )   Foreign Exchange Transactions ( )

Loan Accounts ( )   Savings accounts ( )

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Inquiries (   )   Customer relationship management (   )

Which of the following aspects of the SACCO operations have been computerized in your SACCO (you may tick more than one or specify as may be necessary)?

Human resources management (   )   Mobile phone transactions (   )

Internet based transactions (   )   Automatic Teller Machines (ATM) (   )

Others (specify)   _____

15. Does the SACCO outsource any of the following IT operations (you may tick more than one or specify as may be necessary)?

Training (   )   Information Systems Development (   )   Systems Maintenance (   )

Others (Please Specify) _____

16. What types of computer networks exist in the SACCO? (you may tick more than one or specify as may be necessary)

Local area network (   )   Wide Area network (   )   None (   )   Other (Please Specify)_____

17. Are there training programmes for information system users in the SACCO?

Yes (   )   No (   )

18. Does the SACCO have a steering committee to undertake new IT projects?
Yes (   )   No (   )

19. How do you rate the quality of information systems in your SACCO?
Very High (   )   High (   )   Medium (   )   Low (   )   Very Low (   )

20. To what extent are the information systems in your SACCO implemented within the set budget? Always (   )   Sometimes (   )   Rarely (   )   Never (   )

21. To what extent are the information systems in your SACCO implemented within the set time schedule?   Always (   )   Sometimes (   )   Rarely (   )   Never (   )

22. Which information systems implementation method is preferred by your SACCO?
Plunge (   )   Parallel (   )   Phased (   )   Pilot (   )

Others (please specify) _____

SECTION B: SUCCESS RATE OF INFORMATION SYSTEM IMPLEMENTATION

1. Has your SACCO attempted to implement computerized information systems?

        Yes ( )   No ( )

2. If your answer in Qn.1 above is No. what are the reasons for not implementing computerized information systems? (Please tick as appropriate and give additional reasons as may be necessary)

	Reason	Tick here (You may tick more than one option)
(A)	Inadequate funding for ICT projects	
(B)	Resistance to change	
(C)	Lack of consensus between senior managers	
(D)	Lack of required expertise in the SACCO	
(E)	Other (please specify):	

3. How would you rate the overall success of IT projects in your SACCO?

        Very Successful ( )   Some what successful ( )   Not successful at all ( )

4. To what extent do you consider your current information system successful in respect of the following aspects (Tick against Successful, Somewhat successful or Unsuccessful)

	Successful	Somewhat Successful	Not Successful at All
(A) User friendliness, comfortable and easy to use			
(B) Ability to connect to existing networks			
(C) Reliability of Support and maintenance services			
(D) Duration for Installation of new equipment			
(E) Reliability of Emergency backup facilities			
(F) Documentation with user friendly instructions			
(G) Ability to Integrate with the current systems			
(H) Support for product development			
(I) Acceptable Cost of system implementation			
(J) Improved service delivery			
(K) Expandability and upgradeability			
(L) System security			
(M) Ability to meet current information requirements			
(N) Provides for future information requirements			
(O) Ability to recover after system failure			
(P) Reduction of user resistance to change			
(Q) Positively influenced organization culture			
(R) Improved communication within the organization			
(S) Timeliness of information generated			
(T) Others (Please Specify)			

SECTION C: FACTORS AFFECTING SUCCESS RATE OF INFORMATION SYSTEMS IMPLEMENTATION

The following are statements in respect of factors that contribute to successful implementation of information systems. Please tick in the boxes below to specify the degree to which you agree with each statement as they apply to information systems implementation in your SACCO.

		Strongly Agree	Agree	Indifferent	Disagree	Strongly Disagree
1	The SACCO sets clearly established success criteria for information systems					
2	The SACCO communicates success criteria to all information systems projects participants					
3	There is adequate planning for information systems projects					
4	There are adequate controls for information systems Projects					
5	There are adequate reporting procedures in place					
6	IT managers have Business/Administrative skills apart from technical Skills					
7	Staff Movement in the IT department disrupts implementation process					
8	New technology is tested before being used in the SACCO					
9	There is a clear acquisition policy for IT products					
10	The SACO has a strategic policy for IT					
11	There is established Quality Assurance unit to certify system changes and system tests					
12	User training is an ongoing process					
13	The SACCO's IT services suppliers offer facilities for emergency backup purposes					
14	The SACCO considers the suppliers Financial position and industry market prospects					
15	Suppliers offers adequate after sales services					
16	The SACCO ensures that new Information systems are compatible with existing systems					

The following are statements in respect of factors that contribute to successful implementation of information systems. Please tick in the boxes below to specify the degree to which you agree with each statement as they apply to information systems implementation in your SACCO.

		Strongly Agree	Agree	Indifferent	Disagree	Strongly Disagree
17	Adequate change procedures are put in place before the implementation is started					
18	The IT manager or Person in charge of IT services has sufficient influence and authority					
19	Continuous communication between all projects Participants is maintained					
20	There is active participation during decision making and problem solving by all participants					
21	Emphasis is placed on proper coordination between IT staff, the users and the management during the implementation process					
22	The SACCO sets realistic schedules					
23	New systems pose legal challenges during the implementation					
24	The SACCO makes accurate initial costs estimates for the new information systems					
25	IT projects get adequate funding					
26	Management are committed to established implementation schedules					
27	Management are committed to technical performance goals of the information systems					
28	Users are committed to established implementation schedules					
29	Users are committed to established technical performance goals					
30	Information Systems implementation scope is strictly adhered to					
31	The SACCO conducts a post implementation review to monitor performance of information systems					
32	Others (Please specify)...........					

THANK YOU FOR YOUR COOPERATION

Appendix 3: List of Respondent SACCOs in Kenya

1. Uchumi SACCO
2. TEAL SACCO
3. NASSEFU SACCO
4. NEWA-(Bank kuu Sacco)
5. Songa(Tyson) SACCO
6. Sheria Sacco
7. Nacico SACCO
8. Magerezza SACCO
9. IDB Capital SACCO
10. Surgi SACCO
11. LiSCO SACCO
12. DEFICO SACCO
13. MWITO SACCO
14. Taasisi SACCO
15. TOPPEEZ SACCO
16. Mhasibu SACCO
17. Shujaa SACCO
18. Amalgamated SACCO
19. KIOO SACCO
20. Mwalimu SACCO
21. Home Sacco
22. Teleposta SACCO
23. SIMIEL SACCO
24. Chai Sacco
25. Muramati SACCO
26. Afya SACCO
27. Tin Tin Restaurant SACCO
28. Panafrica SACCO
29. nation staff Sacco
30. PRUDIA SACCO
31. TARDA SACCO
32. Kenya Re SACCO
33. Cooperative Bank SACCO
34. Kenya Alliance Sacco
35. Arya Sacco
36. Exams Sacco
37. Mutangazaji Sacco
38. Regency SACCO
39. Nyayo Sacco
40. Chuna Sacco
41. Wanakukopesha SACCO
42. Bunge Sacco
43. Kiwi Sacco
44. Alloca Sacco
45. Joshansen SACCO
46. Afrosen SACCO
47. Zabibu SACCO
48. Bansetters Sacco
49. Haco Sacco
50. Ufundi Sacco

Appendix 4:   University Letter

UNIVERSITY OF NAIROBI
SCHOOL OF BUSINESS
MBA PROGRAM – LOWER KABETE CAMPUS

DATE... 30|09|2010

TO WHOM IT MAY CONCERN

The bearer of this letter .... ANTHONY KIOGORA KABERU

Registration No ... D61/7294/2002

is a Master of Business Administration (MBA) student of the University of Nairobi.

He/she is required to submit as part of his/her coursework assessment a research project report on a management problem. We would like the students to do their projects on real problems affecting firms in Kenya. We would, therefore, appreciate if you assist him/her by allowing him/her to collect data in your organization for the research.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organizations on request.

Thank you.

UNIVERSITY OF NAIROBI
SCHOOL OF BUSINESS
MBA OFFICE
P. O. Box 30197
NAIROBI

DR. W.N. IRAKI
CO-ORDINATOR, MBA PROGRAM