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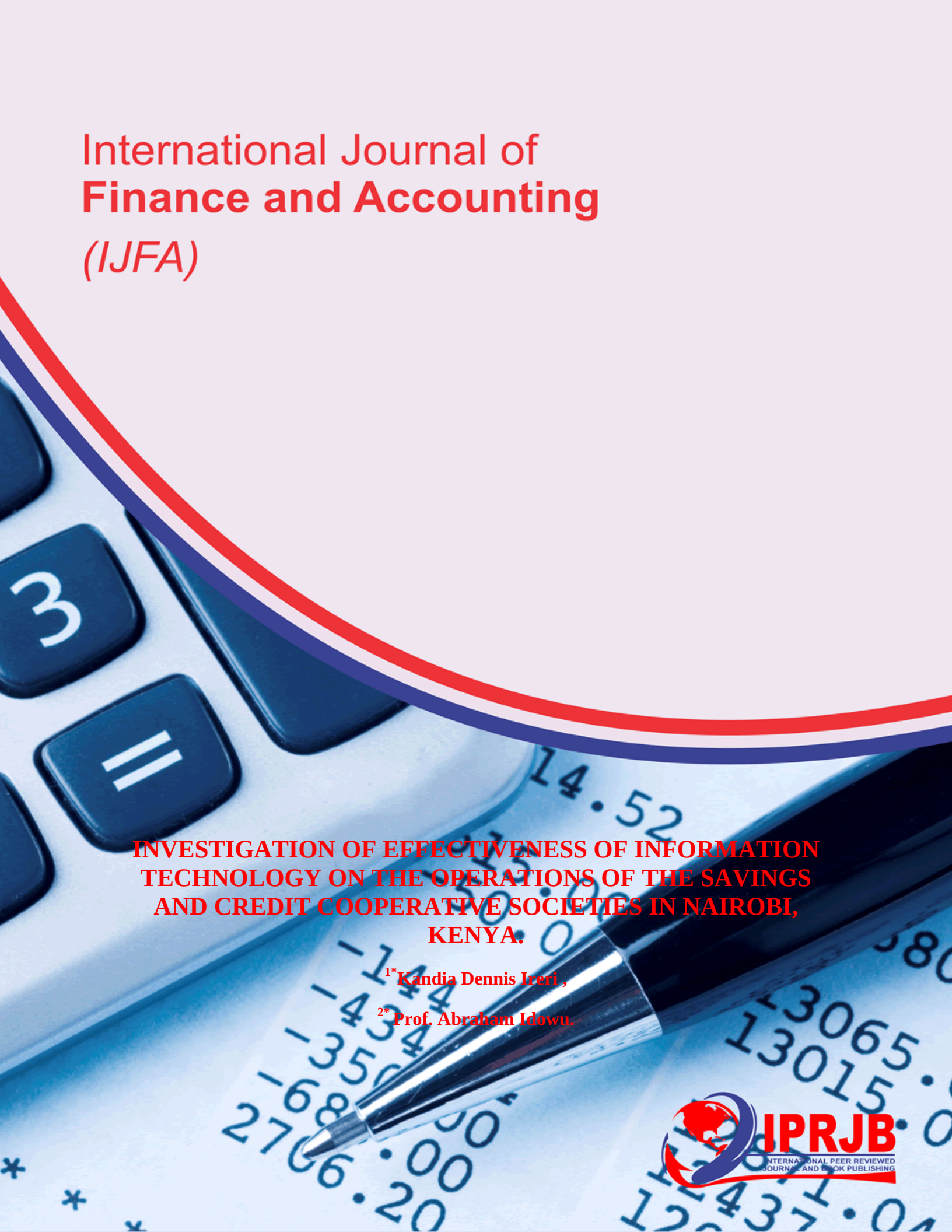

INVESTIGATION OF EFFECTIVENESS OF INFORMATION TECHNOLOGY ON THE OPERATIONS OF THE SAVINGS AND CREDIT COOPERATIVE SOCIETIES IN NAIROBI, KENYA.

[1*] **Kandia Dennis Ireri ,**

[2*] **Prof. Abraham Idowu.**

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[1*]Kandia Dennis Ireri,

[1*]Post Graduate Student, School of Business

University of Eastern Africa - Baraton

***Corresponding Author's Email:** nnodayz@gmail.com

[2*]Prof. Abraham Idowu,

Lecturer, University of Eastern Africa - Baraton

Abstract

Purpose: This study investigated the effectiveness of information technology on the operations of SACCO's within Nairobi.

Methodology: The study used a descriptive research design. The target population consisted of various Sacco members of Sacco's in Nairobi County. This study used a multistage sampling technique. The data collection techniques involved document analysis and questionnaires. A pilot study was conducted on 10% (15 respondents) of the study sample size. The questionnaires were self-administered. Data was gathered, coded and recorded into Statistical Package for Social Science (SPSS) program. Through descriptive statistics, the researcher summarized data in a meaningful way by making calculations to determine percentage for the response to satisfactory factors of the respondents and helped analyze profiles of the SACCO.

Results: Based on the findings of the study concluded that; the SACCO members perceived that the effectiveness of ATM system, effectiveness of asset loan management system, effectiveness of liability/saving management system and the effectiveness of financial management system influenced the operations of savings and credit cooperative societies.

Policy recommendation:SACCOs should commit more resources into the adoption and maintenance of information technology systems since they influence their operations positively.SACCOs should increase the number of ATMs since their effectiveness affect their operations positively SACCOs should maintain their asset loan management systems so as to ensure that members can access loans whenever they are in need

Keywords: *asset loan management system,liability/saving management system,financial management system,credit cooperative societies*

1.0 INTRODUCTION

1.1 background of study

The business environment in which organizations are operating today faces many threats and opportunities which have affected the productivity positively or negatively. As Ansoff (2007) puts it, ‘‘the key challenge for managers in the 1990’s was assuring competitiveness and profitability” for their companies in turbulent environments. The study observes that never in history has the pace of change in the business environment been as rapid as it is now. Recent developments such as the global market place, the opening up of Eastern Europe, the Gulf crisis, the slowdown in the world economy, the new political leadership all over the world, increasing costs of doing business and technological innovations especially in the IT sector, have posed real challenges for managers and made it increasingly difficult for companies to succeed in the turbulent environment (Ansoff, 2007).

There have been significant debates about the impact of new Information Communication Technologies (ICT) on economic performance and competitiveness in general, and on productivity, efficiency, and innovation in particular (Noe et al., 2006). Notably, in seeking an explanation for the acceleration in productivity and economic growth experienced in many industrialized countries in the latter half of the 1990s and early 2000, many economists have looked at the development, application, and utilization of ICT as a critical factor. It has been argued that IT represents a new General Purpose Technology, with the potential of transforming economic processes into a “New Economy,” generating a sustained increase in economic growth through processes of technological development and innovation. Hence, at firm level, the expectations are of greater efficiency, lower costs, and access to larger and new markets, while governments see the application and use of IT as generating higher national productivity, job creation, and competitiveness (Ansoff, 2007).

Castells (2008) reveals that, transactions worth billions of dollars can only take place in seconds in the electronic circuit throughout the globe by pressing a single butting. Although IT has revolutionized the way of living as well as conducting businesses, it continues to pose challenges for marketers and academic alike. According to Loonam and Loughlin (2008), ICT advancements, globalization, competition and changing social trends such as heightened customer proactiveness and increased preferences for convenience have caused intense restructuring of most organizations in the financial sector. Every organization has been trying to keep up with the pace of technological advancement and desire to reap from the benefits that come with it. One of such sector is the savings and credit cooperative societies (SACCO’s).

A savings and credit cooperative is an autonomous association of persons united voluntarily to meet their common economic, cultural needs and aspirations through a jointly owned and democratically controlled enterprise. The key idea behind a co-operative society is to pool the scarce resources, eliminate the middlemen and to achieve a common goal or interest. Cooperatives are vehicles for assisting the people to improve their socio-economic situation. They are institutions that derive their strength and validity from member cooperation and concern for each other (Maina&Murungi, 2004). SACCO’s are business entities and operate on

the basis of demand and supply, they are not concerned about the existence of the poor or non-poor, what matters to them is client's ability to fulfill the requirements, giving out credit/loans and members being able to repay within a given period (Sambu, 2006). SACCO's are owned by members, offering unique services that are proper compared to other micro credit institutions.

Various Sacco's are trying to compete with other financial institutions like the banks to offer services like: current, savings account, fixed deposit accounts, personal car and motor loan, mortgages, transfer of payments, foreign exchange, corporate banking, students savings, credit facility, overdraft, SMS banking, Investment loan and cash advance. However, they still face challenges of inefficiency and ineffectiveness. They try using various systems in a bid to improve on their effectiveness and efficiency and be in line with the advancing technology which do not meet the expected results. This study seeks to investigate the effectiveness of information technology on the operations of Sacco's in Nairobi County.

1.2Statement of the Problem

The cooperative society movement in Kenya has for a long time been credited with success especially in the mobilizations of savings from its members and providing credit at low interest rates. For instance, by the year 2010, these SACCO societies had mobilized savings of over Ksh.200billion. Specifically, Nairobi share capital stood at Kshs. 65 billion while outstanding loans were Kshs. 59 billion (Ndung'u, 2010). However, in the recent past, SACCOs have been characterized with a lot of inefficiencies and have continued to face stiff competition from the banks. According to Ndegwa (2013), ICTs are not sufficiently utilized by SACCOs and that the Ministry of Cooperatives Development and Marketing does not have structures to assist SACCOs in the adoption and utilization of ICT. Hence, SACCO's have continued to miss opportunities since majority have not fully adopted the required IT frameworks in their operations. In addition, the SACCO's have not kept the pace of adopting and effectively using the new emergent technologies. Moreover, despite the application of IT many SACCOs have continued to face a many challenges with regard to management and processes.

Past studies have been conducting focusing on the effects of information technology on financial institutions. For instance; Kamau (2013) sought to establish the effects of technological innovations on financial performance of commercial banks in Kenya, Gitau (2013) sought to determine the effect of Information and Communication technologies (ICTs) on competitive advantage of multinational banks in Kenya while Yegon (2012) sought to determine impact of information technology investments on organizational performance at Kenya Commercial Bank group Ltd. It is evident that so far no study has focused on the effectiveness of information technology. This study sought to fill in this gap and investigated the effect of information technology on the operations of SACCOs in Nairobi, Kenya.

1.3Objectives of the Study

- To find out the perceptions of SACCO members on the effectiveness of ATM system on the operations of savings and credit cooperative societies effectiveness.

- To establish perceptions of SACCO members on the effectiveness of asset loan management system on the operations of savings and credit cooperative societies effectiveness.
- To determine the perceptions of SACCO members on the effectiveness of liability/saving management system on the operations of savings and credit cooperative societies effectiveness.
- To determine perceptions of SACCO members on the effectiveness of financial management system on the operations of savings and credit cooperative societies effectiveness.

2.0 LITERATURE REVIEW

2.1 Empirical Review

Technology strategy was found by many researchers as a way to improve competitiveness. Failure to develop and integrate technology strategy and business strategy is a major contributing factor to the decline of firm's competitiveness. Many literatures also indicate that technology strategy plays an important role in determining firm performance in technology-driven industries such as industrial automation company (Mitchell, 2002).

According to Thompson et al (2010), accurate and timely information about daily operations is essential if managers are to gauge how well the strategy execution process is proceeding; and that information systems need to cover five broad areas of customer data, operation data, employee data, supplier/partner/collaborative ally data, and the financial performance data. Due to its dynamism, ICTs promise fundamental change in all aspects of human life including knowledge dissemination, social networking, economic and business practices, political engagements, education, health, leisure, and entertainment. ICTs are also useful either as tangible goods in their own rights or as value - adding services that improve efficiency and effectiveness. Thus ICTs can provide reliable access to markets (Local, regional and International) through increased use of affordable communications (phone, email). ICT broadly can allow for a reduction in transactions costs, improved access to timely and usable knowledge, improved communications with markets and within supply chain, acquisition of appropriate skills for enhancement of productivity and improved information about new opportunities (Gunga, 2008).

Koellinger (2005) argues that IT continues to have strategic relevance for companies because it enables innovation. A conceptual link between the adoption of IT and innovation is established. This conceptual link allows a market-based, economic explanation for variations in IT payoffs among firms: The successful adoption of new IT leads to innovation. Depending on the behavior of customers and competitors, a successful innovation can enable companies to gain competitive advantages. The economic theory of innovation suggests conditions that are necessary for firms to benefit from innovative activities. The relevance of IT as an important enabler of innovation is demonstrated using a very large sample of enterprises from different industries and countries in the European Union surveyed in late 2003. It is shown that a substantial share of firms use IT to

introduce new processes into their business, or to offer new products or services to their customers. To study the relationship between firm performance and innovation, I estimate an error component model that controls for unobserved market-specific effects and various firm-specific characteristics. The regression results indicate that innovative firms are generally more likely to exhibit increasing turnover and employment. In addition, firms that conduct product or service innovations are also more likely to be profitable. Furthermore, enterprises using IT to innovate perform at least as well as those innovating without IT. Yet, no significant relationship between process innovation and profitability is found, suggesting that firms might have problems to appropriate excess profits from process innovations, independent from whether they are enabled by IT or not. Possible reasons for this include time-lags between process innovations and profit gains, problems to effectively protect process innovations from imitation by competitors, or a lack of complementary resources. The results suggest that the returns to IT critically depend on whether and how IT investments are transferred into innovative activities. In addition, they suggest that IT will maintain its strategic importance as long as the IT industry remains innovative in developing new IT hardware and useful new business applications

2.2 Theoretical review

According to Katz and Khan (1998) goals of this type of communication are expected to achieve: implementation of goals, job instructions, procedures, performance feedback and socialization. However, Tourish (2010) criticizes this flow and argues that messages can be distorted if informal .According to Myers and Myers (1982), messages do not just sit around waiting to be discovered, nor do they float around randomly to be picked up by some lucky accidents. Messages are crafted by a sender, sent through a vehicle then received by a receiver. Communication in schools is sent through various directions using the formal and informal channels while taking vertical or horizontal directions in both channels. Hierarchy is a crucial aspect to consider when examining organizational communication.

In a school hierarchy, messages are transmitted formally through vertical (top-down and down-up), lateral (horizontal) flows and through the informal grapevine. The formal downward has dominated the process of communication in schools (Canary, 2001). It is used by school managers to direct and influence the activities of those who occupy the lower hierarchical levels. School managers convey their messages downward to the staff and students through memos, policies, instructions, directives, speeches, notice boards, newsletters, manuals, and oral media among many others. It is mostly done for information dissemination. Patton and Griffin (1974) they travel a great distance from their sender to the ultimate receiver down through the formal school organization hierar

This study is based on the resource based theory. This theory argues that firms possess resources enable firms to achieve competitive advantage and lead to superior long term performance. Valuable and rare resources can lead to the creation of competitive advantage. That advantage can be sustained over longer time periods to the extent that the firm is able to protect against resource limitation, transfer or substitution (Frawley&Fahy, 2006). Information technology system resources may take on many of the attributes of dynamic capabilities and may be useful

to firms operating in rapidly changing environment. Information technology resources may not directly lead the firm to a position of superior sustained competitive advantage but they may be critical to the firm's long term competitiveness in unstable environments if they help it develop, add, integrate and release other key resources over time (Wade &Hulland, 2004). This theory is relevant to this study since information communication technology is a key resource that affects the performance of a firm. In the context of this study effective use of information technology can result to improved Sacco's operations.

2.3 Conceptual Framework.

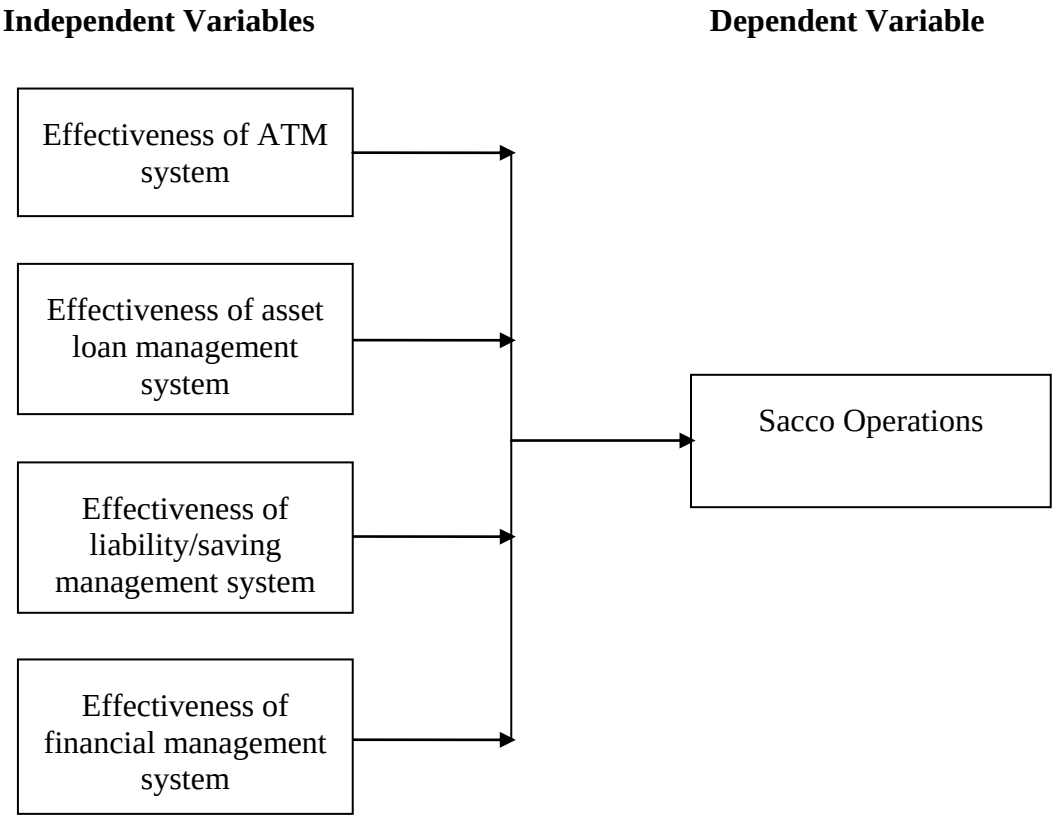

Figure 1: Conceptual Framework.

Source: Author (2015)

3.0 METHODOLOGY

The study used a descriptive research design engaging both the qualitative and quantitative approaches. A sample size of 18 schools with a total of 162 individuals was selected consisting School Managers (SMs), Heads of Departments (HODs) and Presidents of the Students' Councils (POSCO) - categories using stratified and purposive sampling methods. The preferred

data collection tools were questionnaires and an interview guide. Data was analysed using both descriptive and inferential statistics

4.0 RESULTS FINDINGS

Asset Loan Management System and SACCO'sOperations

Table 7 presents results of responses that addressed the second objective of the study. Results indicate that 76.6% of the respondents agreed that their Sacco had loan management systems to track loans repayment and delinquency in their portfolios. Ninety percent (90%) agreed that their Sacco had a system of monitoring monthly loans, 95% agreed that their Sacco had a system of monitoring adequacy of provisions for monthly loan losses and 93.4% agreed that the loan management system had reduced the time taken in processing loansand a further 86.6 % agreed that the loan management system has reduced the cost of loan administration for the Sacco's. Finally, 81.7% of the respondents reported that the loan management system has reduced the default rate. The results show that most of the respondents were in tandem that the asset loan management systems has improved SACCOs operations as support by a mean score of 3.89. The standard deviation was 0.86 which indicates that the answers received were varied as they weredispersed far from the mean. These results allude to the fact that asset loan management systems are essential for enhancing the operations of SACCOs.

The findings are consistent with those in Buhalis and Law (2008) who found out that the increasing use of IT creates or destroys jobs remains a subject of debate. Theory suggests that the net impact depends on the relative strength of two competing effects: On the one hand, the use of IT can lead to innovations, which can result in output growth and a concomitant growth in jobs. On the other hand, process innovation and IT-related productivity gains imply that a given output level can be produced with less labour input. In addition, there can be substitution effects if new IT-related products and services replace other, potentially more labour-intensive, products and service. The collection of overdue loans has become easier as the staff members have a daily updated overview of their dispersed loans. Still Sacco's pointed out that the system has become significantly more efficient as penalties for the overdue loans are now automatically calculated and charged by the computers. Members can also get information on their accounts and loan balance

Table 1: Asset Loan Management System and SACCO's Operations

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	StdDev
Our Sacco has loan management systems to track loans repayment and delinquency in their portfolios	5.00%	11.70%	6.70%	28.30%	48.30%	4.0	1.2
Our Sacco has a system of monitoring the loans monthly	2.50%	5.80%	1.70%	79.20%	10.80%	3.9	0.8
Our Sacco has a system of monitoring adequacy of provisions for loan losses monthly	2.50%	2.50%	0.00%	85.80%	9.20%	4.0	0.6

The loan management system has reduced the time taken in processing loans	2.50%	4.20%	0.00%	89.20%	4.20%	3.9	0.7
The loan management system has reduced the cost of loan administration	2.50%	10.80%	0.00%	70.80%	15.80%	3.9	0.9
The loan management system has reduced the default rate	7.50%	5.80%	5.00%	75.00%	6.70%	3.7	1.0
Average						**3.89**	**0.86**

Liability/Saving Management System and SACCO's Operations

Table 2 presents results of responses that addressed the third objective of the study. Results indicate that 84.2% of the respondents agreed that their SACCOs had saving management information system. Seventy one point six percent (71.6%) agreed that their Sacco saving management information system had improved the administration and the management of Sacco savings, 83.3% agreed that the SACCOs' saving management information system had reduced the loss of members' saving.Seventy one point six percent (71.6%) felt that the Sacco saving management system had improved members satisfaction and 67.5% agreed that the SACCOs' saving management system had improved the production of savings reports. The findings show that most of the respondents were contented that Saving Management System improved SACCO's operations as support by a mean score of 3.64. The standard deviation was 1.05 which indicates that the answers received were varied as they weredispersed far from the mean. These results indicate that the sampled respondents valued savings management systems as a factor for that enhanced the SACCOs overall operations.

These findings are consistent with those of Mitchell (2002) who asserted that technology strategy improves competitiveness. Failure to develop and integrate technology strategy and business strategy is a major contributing factor to the decline of firm's competitiveness. The findings showed that firms with innovative experience are particularly well prepared to make productive use of IT by introducing appropriate complementary innovations. Sacco's with savings management system have an easy access to accurate and up-to-date information on their actual capital and can manage and monitor daily progress of their Sacco since they can get a full picture of portfolio performance and quality. Members could also get a quick information on their savings.

Table 2: Liability/Saving Management System and SACCO's Operations

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	StdDev
The Sacco has saving management information system	4.20%	11.70%	0.00%	74.20%	10.00%	3.7	0.9
The Sacco saving management has improved	10.00%	18.30%	0.00%	65.80%	5.80%	3.4	1.2

the administration and the management of Sacco savings							
The Sacco saving management has reduced the loss of members saving	4.20%	12.50%	0.00%	78.30%	5.00%	3.7	0.9
The Sacco saving management system has improved members satisfaction	2.50%	15.00%	10.80%	48.30%	23.30%	3.8	1.1
The Sacco saving management system has improved the production of savings reports	5.00%	20.00%	7.50%	40.80%	26.70%	3.6	1.2
Average						**3.6**	**1.1**

Financial Management System and SACCO'sOperations

The fourth objective of the study was to determine the perceptions of SACCO members on the effectiveness of financial management system on the operations of savings and credit cooperative societies. Results on Table 9 show that majority 70% agreed with the statement that due to the financial management system in place their Sacco produced accurate and timely financial statements, eighty five point eight percent (85.8%) viewed that the financial management system had improved the production of profit and loss statements. Eighty seven point five percent 87.5% felt that the financial management system had improved the production of cash flow statements, 84.1% felt that the financial management system had improved the production of balance sheet statements,80% agreed that they feltthe financial management system had improved the production of management accounts and another 76.6% had the view that the financial management system had improved the maintenance of an asset register.The findings indicate that most respondentsagreedthat financial management systems enhance SACCO's operations as support by a mean score of 3.86. The standard deviation was 1.05 which indicates that the answers received were varied as they weredispersed far from the mean. These results imply that financial management systems are a core factor that determines the operations of SACCOs.

The findings concur with those in Stoneman and Kwon(2006) who conducted an analysis of the profitability of IT investments in an empirical study that explicitly considered the competitive dynamics in a market showed that the profits of non-adopters of IT are reduced as other firms adopt new IT. Furthermore, the gross profit gains of IT adoption are related to firm and industry characteristics and the number of other users of the technology. Sacco's with this system are more able to manage their cash collections, manage their accounts, payments and could also manage their liquidity.

Table 3: Financial Management System and SACCO's Operations

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std Dev
Due to the financial management system in place our Sacco produce accurate and timely financial statements	7.50%	18.30%	4.20%	53.30%	16.70%	3.5	1.2
The financial management system has improved the production of profit and loss statements	5.00%	9.20%	0.00%	60.80%	25.00%	3.9	1.0
The financial management system has improved the production of cash flow statements	2.50%	8.30%	1.70%	71.70%	15.80%	3.9	0.9
The financial management system has improved the production of balance sheet statements	4.20%	11.70%	0.00%	78.30%	5.80%	3.7	0.9
The financial management system has improved the production of management accounts	4.20%	6.70%	9.20%	28.30%	51.70%	4.2	1.1
The financial management system has improved the maintenance of an asset register	6.70%	9.20%	7.50%	35.80%	40.80%	4.0	1.2
Average						**3.9**	**1.0**

5.0 SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1: SUMMARY OF FINDINGS

The first objective of the study was to find out the perceptions of SACCO members on the effectiveness of ATM system on the operations of savings and credit cooperative societies. Results revealed that effectiveness of ATM system influenced the operations of savings and credit cooperative societies. This was supported by the respondents agreement that; their SACCOs offered ATM services to its members and as a result had improved on its effectiveness, they were satisfied with the ATM services offered by the Sacco, they were in a position to access their savings wherever they were through the use of ATM, ATM system increased efficiency and effectiveness in their SACCO, their members could access their accounts from the ATMs, members could generate their statement from the ATMs and they could access loan disbursements through the ATMs respectively.

The second objective was to establish the perceptions of SACCO members on the effectiveness of asset loan management system on the operations of savings and credit cooperative societies. Results revealed that effectiveness of asset loan management system influenced the operations of savings and credit cooperative societies. This was supported by the respondents agreement that;

their Sacco had loan management systems to track loans repayment and delinquency in their portfolios, their Sacco had a system of monitoring monthly loans, their Sacco had a system of monitoring adequacy of provisions for monthly loan losses, the loan management system had reduced the time taken in processing loans, the loan management system has reduced the cost of loan administration for the Sacco's and the loan management system has reduced the default rate.

The third objective was to determine the perceptions of SACCO members on the effectiveness of liability/saving management system on the operations of savings and credit cooperative society's. Results revealed that effectiveness of liability/saving management system influenced the operations of savings and credit cooperative societies. This was supported by the respondents agreement that; their SACCOs had saving management information system, their Sacco saving management information system had improved the administration and the management of Sacco savings, the SACCOs' saving management information system had reduced the loss of members' saving, the Sacco saving management system had improved members satisfaction and the SACCOs' saving management system had improved the production of savings reports.

The fourth objective of the study was to determine the perceptions of SACCO members on the effectiveness of financial management system on the operations of savings and credit cooperative society's. Results revealed that effectiveness of financial management system influenced the operations of savings and credit cooperative societies. This was supported by the respondents agreement that; due to the financial management system in place their Sacco produced accurate and timely financial statements, the financial management system had improved the production of profit and loss statements, the financial management system had improved the production of cash flow statements, the financial management system had improved the production of balance sheet statements, the financial management system had improved the production of management accounts and the financial management system had improved the maintenance of an asset register.

5.2 Conclusions

Based on the findings of the study, the following conclusions are arrived at;

i). The SACCO members perceived that the effectiveness of ATM system influenced the operations of savings and credit cooperative societies.

ii). The SACCO members perceived that the effectiveness of asset loan management system influenced the operations of savings and credit cooperative societies.

iii). The SACCO members perceived that effectiveness of liability/saving management system influenced the operations of savings and credit cooperative societies.

iv). The SACCO members perceived that effectiveness of financial management system influenced the operations of savings and credit cooperative societies.

Recommendations

Based on the findings the study made the following recommendations;

i). SACCOs should commit more resources into the adoption and maintenance of information technology systems since they influence their operations positively.

ii). SACCOs should increase the number of ATMs since their effectiveness affect their operations positively.

iii). SACCOs should maintain their asset loan management systems so as to ensure that members can access loans whenever they are in need. In addition, they will be in a position to minimize the default rates and ensure that they lend money to the less risky borrowers.

iv). SACCOs should ensure that the liability/savings management systems are effective to increase their membership since they win the confidence of the members through proper management.

v). SACCOs should ensure that the financial management systems are effective to ensure efficiency and transparency in the provision of services to members.

5.3 Recommendations for Further Studies

This study was not exhaustive by any means and therefore it is recommended that another study be conducted among SACCOs country wide since a relatively small portion of SACCOs was sampled and this may have had an influence on the nature of results that were obtained. There is need to expand on the sample size and carry out similar research in other parts of the country as this the study examined SACCOs within Nairobi region.

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