THE EFFECT OF AUTOMATED SERVICE ON FINANCIAL PERFORMANCE OF SAVINGS AND CREDIT COOPERATIVE SOCIETIES LICENCED BY SACCO SOCIETY REGULATORY AUTHORITY IN KENYA

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DECLARATION

I declare that this research project is my original work and has not been presented for an award of a degree in any university.

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This research project has been submitted for examination with my approval as the University Supervisor.

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DEDICATION

I dedicate this research project to my one and only son Ethan Jabali. I owe my hard work to you. You are the reason I work this hard, my angel my sweet child thanks for the patient you had for mama and for understanding me wherever I would come home late. You are forever the best gift I have. I remember the many times I would come and find you a sleep and for all those times your dear mum was busy with academics. Had it not been for the best future I want for you, I would have sat and relaxed. When you grow up, I want you to surpass what I achieved.

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LIST OF ABBREVIATION

ATM's: Automated Teller Machines

BOSA: Back Office Services Activity

CAMEL: Capital Adequacy, Asset Quality, Management and Liquidity

EFT: Electronic Funds Transfer

FSD: Financial Sector Deepening

FOSA: Front Office Services Activity

PEARLS: Protection, Effective financial structure, Asset quality, Rates of
                return and costs, and Liquidity and Signs of growth

POS: Point Of Sale

IT: Information Technology

SACCOS: Savings and Credit Cooperative Societies

SASRA: Sacco Societies Regulatory Authority

SMS: Short Message Service

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ABSTRACT

Saccos in Kenya have developed rapidly in terms of size, structure and variety of product and services. They have transformed gradually from manual system of operations based on traditional savings and loaning activities to a more open effective and competitive system which is able to offer an extensive range of products and services. The growth in products, services and membership has led many Saccos automating their services and therefore improved productivity. The objective of the study was to determine effect of automated service on financial performance of Saccos licensed by SASRA in Kenya. This research took a descriptive- survey design type which is designed to describe the characteristics or behaviors of a particular population and in a systematic and accurate fashion.

The population under study was made up of 130 Saccos. A sample of 45 licensed Saccos based in Nairobi and Kiambu Counties were selected for this study. The sampling method chosen for this study was convenient sampling which is a form of non-probability sampling. Secondary data was used to collect data on the dependent variable, financial performance. This was done by calculating return on assets. Primary data was used to collect data on independent variables where open and closed ended questionnaires were administered to target population. Significance of automated service quality variables as predictors of financial performance was tested using the F-test. Analysis of Variance (ANOVA) was used. The Statistical Package for Social Sciences (SPSS) version 20 was used to analyze the data collected. The coefficient of determination, R squared, measure was used to test the significance of the regression model in explaining the relationship between automated service quality and financial performance.

The study found out that all the Saccos (100%) had undertaken automation of BOSA and FOSA operations in the last 5 years. The study also found out that majority of the Saccos introduced internet banking services, mobile banking and ATM services. These reduced the dependence on the branch network as a core delivery mechanism. From the regression model, the study deduced that taking into consideration all the five factors (expenditure in internet banking, expenditure in automation, expenditure in mobile banking, number of ATM cards issued and size of the Sacco) there is a positive effect on financial performance of Saccos licensed by SASRA. The study concludes that generally automated services have a positive influence on the financial performance of Saccos in Kenya. The study recommends that automation of financial services should be used as a complement to, rather than a substitute for physical branches due to the level of technology literacy in the rural areas.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Saccos in Kenya have developed rapidly in terms of size, structure and variety of product and services. They have transformed gradually from manual system of operations based on traditional savings and loaning activities to a more open effective and competitive system which is able to offer an extensive range of products and services. The growth in products, services and membership has led many Saccos automating their services and therefore improved productivity. The Saccos provide Online Banking, ATM Support, SMS and Mobile Banking system services in most parts of the country. Many have automated their services and improved technologies adopted which is authentic, secured and robust. This automation based services also provides Fund transfer through the mobile phones to members account and vice versa. (Duncan & Elliot, 2004) noted that provision of high quality services makes firms very competitive in that there is proper management and accountability, increase in productivity, higher market share, lower staff turnover and operating costs and improved employee morale, and financial performance.

Saccos should manage the level of service quality they provide to their members to improve profitability and competitiveness. Automated service has become a competitive weapon because it's very easy to duplicate a Saccos product but when it comes to the level of service it's not easy. FSD Kenya (2010) found that in understanding the link between automated service and financial performance relationship, benefits are available to Saccos

in terms of enhancing the level of service quality, gaining competitive advantages, expanding market share, increasing innovation ability and finally improving Sacco performance .It is also a requirement by SASRA that all depositing taking Saccos be fully automated and operational to safeguard the member's investments, efficient and smooth running of the organizations and to improve the members trust on the organizations. Due to this many Sacco's are automated and the effects are more products have been rolled out to counter competition from banks and other financial institutions, services improved and members' satisfaction enhanced.

1.1.1 Automated Service

Automated service provides a good opportunity for organisations to provide new models for service design strategies and new service development (Henderson, McGoldrick and McAdam, 2003). A review of the current conceptualization of automated service reveals that general automated service definitions include specific reference to the internet but they negate the inclusion of other important automated service dimensions such as telephone service and automated service delivery outlets. For example, (Ruyter, Wetzels and Kleijnen, 2001) defined automated service as interactive, content-centered and internet-based customer service, driven by the customer and integrated with related organisational customer support process and technologies with the goal of strengthening the customer-service provider relationship. Moreover, (Surjadjaja, Ghosh and Antony, 2003) identify automated service as web-based service delivered through the internet whereby the customer's interaction or contact with the organisation is limited to the information and communication technology (ICT) itself. A more holistic definition adopted for the purposes of this research, is that which is proposed by (Buckley, 2003) who defines automated

service as the electronic provision of a service to customers. This definition is identified as far more holistic as it allows for the inclusion and examination of other service delivery channels beyond services through the internet.

Therefore the automated service within the Saccos can be defined as the electronic provision of services to customers through electronic networks like the ATM, Telephone banking like M-sacco and the internet. Most Sacco's all over Kenya have partnered with the Cooperative Bank of Kenya to use ATM. Cooperative Bank (2008) noted that Sacco link a robust IT system integrates the banking systems of Saccos with those of the Bank, and enable the members of Saccos get access to banking services from the service outlets of the Bank. According to Cooperative bank, The Sacco link services is an IT-based service that has taken Saccos to a complete new levels in terms of sophistication and quality of services rendered to members.

Automated service has greatly advanced, playing a major role in improving the standards of service delivery in the financial institution sector. Days are long gone when customers would queue in the banking halls waiting to pay their utility bills, school fees or any other financial transactions. They can now do this at their convenience by using their ATM cards or over the internet from the comfort of their homes. Additionally due to the tremendous growth of the mobile phone industry most financial institutions have ventured into the untapped opportunity and have partnered with mobile phone network providers to offer banking services to their clients (Okiro & Ndung'u, 2013).

1.1.2 Financial Performance

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firms overall financial health over a given period of time and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregate. Financial performance measures how well a firm is generating value for the owners. It can be measured through various financial measures such as Profit after Tax, Return on Assets and Return on Equity, EPS and any market value ratio that is generally accepted. Generally the financial performance of many financial institutions has been measured using a combination of financial ratios, analysis, benchmarking, measuring performance against budget or a mix of these methodologies. (Ahmad et al., 2011).

A basic tool of evaluation of financial performance of a business entity is financial analysis. Financial analysis, as a system of standard methods of financial assessment of procedures in a company, is constantly an integral part of the company's financial management. Nevertheless, this system is reprehended in many aspects while the most important critics are directed to the fact that traditional approaches of the financial analysis do not respect a range of factors which are supposed as more or less important according to various authors. From these critics new direction of evaluation of company's performance marked as modern measures that press mainly for reflection of implicit costs especially in the sense of cost of equity (Metcalf, 1976). Preference of cash flow over profit, focus on operating activities, respecting the primary principles of financial management, i.e. time and risk. In

the frame of these modern measures of financial performance of company the most often mentioned are as follows; Discounted (MVA) and Economic value added (EVA).

Dissection of the measures of DCF and CFROI (Pavelkova & Knapkova, 2009; Marinic, 2008) detachedly shows that these measures are based on the dynamic methods of evaluation of investment effectiveness. Then, these measures are also mostly used for evaluation of investment effectiveness in respect of demandingness of their application in evaluation of company's performance. Despite of the fact that business entity as a whole is also a kind of investment, it is an investment that is specific in many aspects, especially in the context of duration of its economic life. Theory of the business entity is based on principle of "going concern" that presupposes infinitive existence of a company. Then, these measures both are based on prediction of cash-flows in a company. In order to be able to evaluate the financial performance of a company by them, it is necessary to make this prediction for the whole existence of business entity while determination of such a prediction is objectively unrealistic.

The measures of ROA and CROGA (Pavelkova & Knapkova, 2009) could be marked as standard ratios with regard to their construction. In the context of these indicators, innovation in performance measurement leans mainly on the focus on operating activities. ROA is a better metric of financial performance than income statement profitability measures like return on sales. It takes into account the assets used to support business activities. It determines whether the company is able to generate an adequate return on these assets rather than simply showing robust return on sales. ROE on the other hand

focuses on return to the shareholders of the company. It can obscure a lot of potential problems as companies can resort to financial strategies to artificially maintain a healthy ROE for a while and hide deteriorating performance of business fundamentals (Hagel, Brown and Division, 2010).

Economic Value Added is also an attribute of financial performance whereby shareholders value is evaluated after the total cost of capital is taken into account. (Higgs, 2004).It is a performance measure developed by Stern Stewart &Co that attempts to measure the true economic profit produced by a company. It is useful for investors who wish to determine how well a company has produced value for its investors, and it can be compared against the company's peers for a quick analysis of how well the company is operating in its industry.

Market Value Added is the difference between the current total market value of a company and the capital contributed by investors (including shareholders and bondholders).It is not a performance metric like EVA, but instead is a wealth metric, measuring the level of value a company has accumulated over time. Past research studies have employed several measures of organizational performance. The dilemma faced by researchers is that no single measure of performance may fully account for all aspects of organizational performance. In a bid to address this problem researchers have resulted to the use of multiple measures of organizational performance. (Subramanian & Nilakanta, 1996)

The financial performance of Saccos was measured by way of having computation of Return on Assets over a period of five years.

1.1.3 Effect of Automated Service on Financial Performance

Automation developments and financial liberalisation (deregulation) are viewed as the main forces influencing the financial sector's development (Edey & Gray 1996, Thompson 1996, Gardener et al*., *1999). These changes motivated financial institutions to be aware of future trends in order to survive and compete effectively. Many financial institutions face a huge challenge in reducing the number of branches they currently operate as down-sizing efforts bring with them complex post-merger problems such as social and political issues, organisational culture concerns, product modifications and automation integration (Gyptra & Dixon, 2002). Recently, automation of services has had a remarkable influence on the growth of service delivery options (Dabholkar & Bagozzi, 2002) and a profound effect on service marketing. In order to remain competitive, institutions are increasing their automated based service options (Fitzsimmons & Fitzsimmons, 1997). More and more financial institutions have adopted automation to deliver their services and this has resulted in: reduced costs, the creation of value added services for customers, the facilitation of their employees' jobs and ultimately, the provision of self-service options for customers (Dabholkar & Bagozzi, 2002).

In today's intensely competitive economy, providing excellent customer service plays a vital role in a company's success and failure (Mouawad & Kleiner, 1996). An increasing number of financial institutions are using automation to deliver their regular service to the consumer. Investigations of quality issues of institutions automated services are necessary

because of their potential influence on: attractiveness, customer retent ion, positive word-of-mouth, and maximizing competitive advantages (Santos, 2003). To embrace this new automation–oriented context, it is necessary for Saccos to realise how quality issues of automated services distinguish their customer services from others. This research assist Sacco administrators to ascertain a better understanding of customer perceptions of automated services now integrated into the Saccos' product offering.

In measuring the organizations performance, automated service is one of the critical measurements. Theoretically and empirically a lot of investigations into the relationship and effects of automated service on financial performance has been done in the traditional banking service context (Muhammad, 2006).The literature indicates that service quality is a key driver of profit in any profit oriented service organization (Okiro & Ndung'u, 2013). Osoro (2011) indicated that automated service puts operational efficiency of Sacco's on the frontline, the reporting requirements which is both internal and external is efficiently managed. Mobile banking (M-Sacco), agency and POS, inter Vs intra linkages has enabled Sacco's to cut down on cost and thereby improved profitability.

The viability of automated service in financial institutions depends upon its profitability and research has linked the success or failure of automated organizations with service quality Santos (2003). Sile (2007) noted the various effects of automated service quality on Saccos performance as a vast range of services to members, increased customer base and market expansion, efficient delivery and management of business and enhanced competitiveness in the financial market. Ombado (2009) noted that having automated

services permits Saccos to cut cost sharply and in return the quality of automated Sacco services contributes to the improvement of profitability. It's with this respect that automated Sacco service context is positively related to Sacco financial performance.

1.1.4 Saccos Licensed by SASRA

A 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. They key idea behind a cooperative society is to pool the scarce resources, eliminate the middlemen and to achieve a common goal or interest (Ministry of Cooperative Development and Marketing, 2007).Cooperatives are good vehicles for assisting the people improve their socioeconomic situation. They are institutions that derive their strength and validity from members' solidarity cooperation and concern for each other.

Procasur Africa (2012) noted that the Sacco sub-sector is part of the larger cooperative movement in Kenya. There are two broad categories of co-operatives: Financial co-operatives (Savings & Credit Cooperative Societies- SACCOs) and Non-financial co-operatives (includes farm produce and other commodities marketing co-operatives, housing, transport and investment cooperatives). In the recent past Savings and Credit Co-operatives (SACCOs) have witnessed faster growth than other co-operatives. The establishment of SACCO Societies Act 2008 places the licensing, supervision and regulation of deposit taking under the armpit of the SACCO Societies Regulatory Authority (SASRA). Through this new legal framework, prudential regulations have been introduced to guide SACCO's growth and development.

Sacco's comprise over 50% of all cooperatives in Kenya and as financial institutions they play a critical role of financial intermediation in Kenya's financial landscape focusing mostly on personal development, small and micro enterprise sector of the economy. The sub sector comprises of large Saccos, some of which have a total asset base of over Kshs. 15 billion to the very small ones that have under Kshs. 10 million in assets and are well spread across the country from the large cities to the rural Kenya (SASRA Report, 2011). There are 130 licenced Sacco's as per SASRA supervision report of 2013.

In the early 1990s Kenya experienced difficult economic times forcing commercial banks to demand higher minimum operating balances for individual accounts to sustain their businesses (Ademba, 2012). This saw many middle and low income persons unable to operate bank accounts. Saccos became popular among employed persons who had been unable to maintain or operate bank accounts and they responded by introducing a Front Office Service Activity (FOSA) which offered quasi banking services at competitive rates opening a new chapter in the Sacco business. He continues to state that the uniqueness of the Sacco movement is its geographical distribution across Kenya. In all the 47 counties there are numerous Sacco's providing financial access to hitherto financially excluded Kenyans. As envisioned in Kenya's development blueprint, Vision 2030, Saccos are already playing their critical role of savings mobilization for investments. Many rural and urban Kenyans now own homes and other business enterprises courtesy of funds through their Saccos.

1.2 Research Problem

In the current era, many business entities are embracing automation in order to cope with the global needs of their customers and generation of accurate and reliable management reports. The service industry in particular has moved towards the use of automated services mainly internet as an additional option for remote services to their customers instead of only traditional face to face service delivery (Curran et al., 2003).This has increased the service quality outreach to many remote parts of the world. Saccos in particular are doing this in order to keep pace with the demands of the world, to counter competition and to improve financial performance.

ATM, telephone banking and internet banking are three forms of automated service delivery channels that are key to improving the financial performance of a Sacco (Cooperative Bank, 2008). In general literature; automated service has been identified as significant predictor of business performance (Duncan & Elliott, 2002). Many Saccos in Kenya have adopted the use of automated channels to deliver services. Ukulima Sacco, Mwalimu Sacco, Stima Sacco are few of the Saccos who have membership spread all over the nation with members accessing services from anywhere they are with use of Sacco Link to withdraw money through the ATM, Use of M-Sacco to access money through their phones and even accessing Statements online. Whereas this has improved services to members, increased revenues and growth in profits they face a unique challenge of connecting the branches while the available infrastructure and income per capita in the region impose severe limitations (FSD Kenya, 2010) .This study therefore explored the perceived effects of automated service on financial performance of Saccos. Buckley (2003)

defined automated service as the electronic provision of a service to customers through electronic channels such as, internet, telephone and ATMs.

Different researches have been done on mobile and internet banking impacts on financial performance in financial institutions in Kenya (Okiro & Ndung'u, 2013). Research linking electronic banking service quality to financial performance in banks in Kenya (Aduda & Kingoo, 2012). Less has been researched on automated service effect on financial performance of Sacco's. Therefore, this study focused on assessing the effect of automated service on financial performance of Saccos. Preference of service quality by customers has a significant impact on a Saccos success and analyzing the markets based on the customers perceptions, designing a service quality system that meets different demands are pertinent objectives for Saccos to gain and retain competitive advantage.

With the rise of automated service in organizations, the issue of empirical interest is the effect it has on financial performance in one of the important and rapidly expanding saving vehicles in the country that is Saccos. The study addressed research question "What is the effect of automated service on financial performance of Saccos licensed by SASRA in Kenya?

1.3 Objective of the Study

To determine effect of automated service on financial performance of Saccos licensed by SASRA in Kenya.

1.4 Value of the Study

The rapid development of automated service advances the need for research beyond the interpersonal dynamic of service encounters in this technology oriented context (Meuter et al., 2000). Parasuraman & Grewal (2000) emphasized the importance of automation in shaping buyer-seller interactions and recommended further investigation into the impact of automation, for example, on the service quality-value loyalty chain. The quality issues of automated services in the banking context are becoming important because of their potential influence on: attractiveness, customer retention, profitability, positive word-of-mouth, and maximum competitive advantages (Moutinho & Smith, 2000; Nguyen & Leblanc, 1998; Santos, 2003).

Despite the theoretical background underpinning the importance of automated service and profitability, empirical research is required to examine the extent to which it enhances or diminishes these variables in this new context. Accordingly, this paper begin with a literature review of current theoretical arguments, followed by empirical literature developed by other authors, to show the relationship between automated services and profitability. Data collection methods and analysis techniques then be explained. The paper conclude with an examination of the major research findings, methodological limitations and implications for marketing planning. The present study aims to establish automated service effect on the financial performance of licensed Saccos by SASRA in Nairobi and Kiambu counties.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter seeks to explore in depth the concept of automated service quality through a review of the various theories and empirical studies. The chapter is also organized through general objective to ensure relevance to the research problem. The literature review is based on authoritative, recent, and original sources such as journals, books, thesis, reliable websites and dissertations.

2.2 Theoretical Review

This presents a review of the literature on the topic of automated services and financial performance as in the previous studies and the gaps to be filled by this research study are also explained.

2.2.1 Diffusion of Innovation Theory

The diffusion and adoption of technological innovations has been explained within several theoretical frameworks. One popular theory is the Diffusion of Innovations (DoI) theory developed by Rogers (1962). An innovation was defined by Denning (2004) as:' a transformation of practice in a community'. It essentially is an idea, practice or object that is perceived to be new by a person or adopting entity. Innovation is transmitted through diffusion and adoption. Diffusion entails communicating or spreading of the news of the innovation to the group for use of the innovation (Rogers, 1995).

Rogers' diffusion of innovation theory postulate that diffusion of innovation occur as potential users become aware of the innovation, judge its relative value and make a decision

based on their judgment, implement or reject the innovation, and seek confirmation of the adoption or rejection decision Rogers (1995). The theory consists of three components: 'the innovation decision process, characteristics of an innovation and adopter characteristics (Bates, Manuel and Oppenheim, 2007). The 'innovation decision process' categorizes the steps an individual takes from awareness of an innovation, through the formulation of an attitude to the innovation, on to the decision as to whether to implement, into five viz: knowledge, persuasion, decision, implementation and confirmation.

The characteristics of an innovation have an impact on the likelihood of acceptance and adoption, and also on the rate at which this process develops. These innovation characteristics can also be classified into five criteria: compatibility, complexity, observability, relative advantage and trialibility. The socio-economic characteristics of adopters also fall under three headings: socio economic (social status, social mobility, level of education etc.), personality values (attitude to change, risk and science, empathy, intelligence, outlook and degree of fatalism, level of aspiration etc.) and communication behaviour (degree of contact with change agents, degree of exposure to mass media communications, degree of opinion leadership, interconnectedness in social networks, cosmopolitan outlook, degree of social participation, tendency to seek information about innovation, and consequently a greater degree of knowledge about innovation) (Rogers, 1995; Fichman 1992; Bates, Manuel and Oppenheim, 2007; Olatokun and Igbinedion, 2009).

This theory can be linked to the automated services quality as Saccos need to adapt to new use of automated services on contrary to the traditional way of operations they had long

adopted. Automation tends to be a process that's supposed to be communicated and a good approach taken to succeed.

2.2.2 Technology Acceptance Model

The Technology Acceptance Model (TAM) is similar to the diffusion of innovation theory but it places more emphasis on psychological predispositions and social influences such as beliefs, attitudes and intentions. Davis (1986) developed the Technology Acceptance Model which deals more specifically with the prediction of the acceptability of an information system. The purpose of this model was to predict the acceptability of a tool and to identify the modifications which must be brought to the system in order to make it acceptable to users. This model suggested that the acceptability of an information system is determined by two main factors: perceived usefulness and perceived ease of use. The Technology Acceptance Model postulates that the use of an information system is determined by the behavioral intention, but on the other hand, that the behavioral intention is determined by the person's attitude towards the use of the system and also by his perception of its utility.

According to Davis (1986) the attitude of an individual is not the only factor that determines his use of a system, but is also based on the impact which it may have on his performance. Therefore, even if an employee does not welcome an information system, the probability that he use it is high if he perceives that the system improve his performance at work. Sacco employees have had no option but to accept automation of process so that work is reduced and efficiency achieved FSD Kenya (2010).On this study, acceptability of the automated services by staff, customers and other users may vary or fail. It's therefore

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important that modification that can be used be made on the automation of the services to aid acceptance.

2.2.3 Marcus's Theoretical Model

Marcus's theoretical model of adoption developed by Marcus (1986) highlights the importance of innovative behaviour and the phenomenon of others modeling themselves on this. Communication channels are a vital component in spreading this modeling behaviour to other potential adopters. The range of influential factors in the take-up of innovations include: the associated 'costs' (personal and institutional), the availability of necessary 'resources' (money, equipment, training, time, prior experience and relevant skills) and the 'value' of the innovation (Bates, Manuel and Oppenheim, 2007). Kwon and Zmud (1987) defined five contextual factors that may impact on any six identified stages of automation namely; user community characteristic, organizational characteristics, technology characteristic, task characteristic and environmental factors.

Robertson and Gatignon (1986) proposed that a variety of competitive effects in the technology consumers industry (competitive intensity, demand uncertainty, professionalism and cosmopolitanism) and within the technology supplier's industry (level of competitiveness, reputation, Research and Development allocation, technology standardization) impact the rate and level of diffusion of high technology innovations. Other models focused on the influence of culture in the diffusion and adoption process. Both personal and organizational processes influence a culture of innovation. These organizational processes include: Management values, rewards, prohibitions, encouragement of new ideas, encouragement of risk-taking, services, support,

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communication channels and staff networks. An institution with these key components in place is better placed to ensure that innovations are facilitated, encouraged, accepted and diffused across its organization. In this wise, the institutional environment shapes the development of the automation initiative, its adoption and implementation. The success or failure of a new automation innovation is thus influenced by culture (Denning, 2004; Bates, Manuel and Oppenheim, 2007).

Saccos normally consider the associated costs, the availability of necessary resources like money, training, time, skills and the value of innovation before adopting the automation of services. It's due to this that this theory is relevant to this study.

2.3 Determinants of Financial Performance of Saccos

Terence (1989) defines performance measurement as a way of ensuring that resources available are used in the most efficient and effective way. The essence is to provide for the organization the maximum return on the capital employed in the business. Financial performance for SACCOs is very important because managers need to know how well the SACCOs are performing. There are two major reasons as to why SACCOs should have financial performance measurement (Johnson & Mark, 1997). The first one is to produce financial statements at the right time. Secondly, financial statements should be analyzed to produce information about the performance of the scheme, which must be used to improve that performance.

Based on WOCCU's standards of measuring performance, the factors which determine the performance of SACCOs include; asset base, Liabilities, Performance of the loan book, corporate governance and the quality of staff and Regulations in the industry.

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2.4 Empirical Literature

Muhammad & Mainudin (2006) assessed the performance in the context of bank of Asia to determine the relationship between automated service quality, customer satisfaction and financial performance. They found out that provision of high quality automated service leads to financial performance and that the use of the internet and telephone and ATM are very essential in boosting growth of customers. They also noted that bank of Asia symbolizes modern banking with innovation services because it provided online banking, ATM support, SMS and Net banking services.

Hernando & Nieto (2007) analyzed the Spanish commercial banks over the period 1994-2002 to measure the effect of adoption of a transactional website on financial performance. Their findings suggest that with a lag of one and a half years the increase in banking profitability can be significantly observed via decreases in overhead expenses with respect to staff, marketing and automation. They also mentioned that internet banking and telephone are seen as complementary delivery channels rather than a substitute to brick and mortar branches. The greater use of Internet in retail banking however brings additional risk components to overall risk profile of the banks. The Basel committee has recognized these related risks and has issued Risk Management Principles for Electronic Banking (July 2003). It aims to promote safety and soundness of e-banking activities while preserving the necessary flexibility in implementation due to speed of change in technology.

Gyamfi, Acheampong & Asamoah (2007) studied banks in Ghana for the period 2003-2007 to establish the relationship between automated service delivery and business growth. The findings were that when banks equip their employees well enough for quality service delivery a drastic shift occurs in the management and success of the banks. They found out that profit and growth are stimulated by quality service delivery that satisfies customers and employees. In their study they found out that a growing number of Banks in Ghana got to know that emphasis had to be put on service deliver, customers' service and employees through automation. They also looked at how managers can build on both automated service delivery and customer satisfaction to assess the corresponding impact on profitability and growth of these Banks.

Sonja (2010) analyzed Saccos in Uganda to determine effect of automation on the growth of Saccos. Her findings suggested that automation of Saccos and therefore automated services lead to efficiency in running the Saccos, customer growth, increased transparency and generation of different accurate financial reports. Sonja noted that many Saccos that had not automated their operations had it rough on gaining customer loyalty and even introduction of new products and services was a challenge being that managing many products without proper automation was posing a great challenge

Aduda & Kingoo (2012) studied Commercial Banks in Kenya to investigate the relationship between e-banking and performance of Kenya banking system. Specifically, the study established whether there is relationship between the dependent variable i.e., performance measured by return on assets and the independent variables: investments in

e-banking, number of ATMS and number of debits cards issued to customers as proxy for e-banking. The study used secondary data. The data was collected from annual report of target banks and Central Bank of Kenya. The study used both descriptive and inferential statistics in analyzing the data. In general the study revealed that e-banking has strong and significance marginal effects on returns on asset in the Kenyan banking industry. Thus, there exists positive relationship between e-banking and bank performance. In general conclusion the electronic banking has made banking transaction to be easier by bringing services closer to its customers hence improving banking industry performance.

Okiro & Ndung'u (2013) analyzed financial institutions in Kenya to establish impact of mobile and internet banking on performance. In particular they found out that commercial banks had the highest rate of usage of internet banking among the financial institutions sampled. SACCOS were slowly adopting internet banking, while micro finance institutions have not yet adopted internet banking. The study also revealed that the most prevalent internet banking services were seeking product rate information and the use of online credit cards. They found that adoption of internet banking has enhanced performance of the banking industry due to increased efficiency, effectiveness and productivity.

2.5 Summary of Literature Review

The review of literature covered the objective and economic rationale of automating service delivery in the Saccos. Linked to this, the existing theories and research work done on the field of automated service quality and especially Financial institutions across the world reveals the stringent need of automated service quality with emphasis on the effects of the automated service quality on Saccos financial performance, utilization of automation

on financial institutions which vary from one business to another. As expected, automation of service quality in Saccos is required to embrace good financial performance, customer satisfaction and managing various products that a Sacco has.

Whereas there are many theoretical literatures on automation especially that touches on the processes and technicalities, there is need to have some theories that elaborates after development of automation and its adoptions what needs to be done to keep up with the pace of changing environment and customers ardent needs. Empirically many studies have been done on automated service qualities and electronic banking effects on financial performance of different sectors; nothing in particular has been done on this rising sector with many members the Sacco sector. The study therefore sought to explore in details the effects the automated service quality has on competition in the challenging environments, on the business growth and performances of the Saccos in Kenya.

CHAPTER THREE

RESEARCH DESIGN

3.1 Introduction

In this chapter, research design used to carry out the research is presented. Barbara (2006) noted that it guides the researcher in collecting, analyzing and interpreting observed facts. It presents the research design, the population, sample size and sampling procedure, data collection and data analysis

3.2 Research Design

Barbara (2006) defined it as the overall strategy that a researcher chooses to integrate the different components of the study in a coherent and logical way, thereby, ensuring research problem effectively addressed; it constitutes the blueprint for the collection, measurement, and analysis of data. This research took a descriptive- survey design type. According to Leary (2010) a descriptive survey is designed to describe the characteristics or behaviors of a particular population and in a systematic and accurate fashion. In this study it was aimed at surveying the Saccos which have automated their service quality and describing the effects of automated service quality on financial performance in these Saccos. Wyk (2005) noted that through it provision of accurate and valid representation of the factors or variables pertaining to the research question is achieved. The survey gave information on how to assess the effects of automated service on Saccos; ATM, internet banking and mobile banking and the benefits to the Saccos on their usage.

3.3 Population

Explorable.com (2009) defines the population as the entire group a researcher is interested in; the group about which the researcher wishes to draw conclusion. This research was on licensed Saccos in Kenya by SASRA. Saccos are institutions which mainly deal with savings and credit facilities for their clients. The population under study was made up of 130 Saccos. The number is obtained from a list of licensed Saccos provided by SASRA as at 31st December 2013, (Appendix I).

3.4 Sample

There was a need to sample the population due to the large targeted group. 45 licensed Saccos based in Nairobi and Kiambu Counties were selected for this study. The sampling method chosen for this study was convenient sampling which is a form of non-probability sampling. Convenient sampling involves a deliberate selection of particular units of population to constitute a sample representing the population Jupp (2006). It was chosen for this study due to the fact that the two counties have the largest Saccos with national outlook, they are cosmopolitan and the minimal cost associated with them.

3.5 Data Collection

Secondary data was used to collect data on the dependent variable, financial performance. This was done by calculating return on assets which is found by dividing net profit after income by total assets. The size of the Saccos was also obtained from the financial statement to help derive the control variable.

Primary data was also be used mostly because it is more focused on the area of study and it gives more reliable data. This was used to collect data on the independent variables. Open and closed ended questionnaires were administered to target population. The data was

collected by use of drop- and- pick- later method. One questionnaire was delivered for managers or senior staffs to fill. The respondents were provided with the questionnaires to fill and later were collected when completely filled. The questionnaire had two parts; there was need on information on demographic data (Name of the Sacco, ownership category, and duration of operations).It also sought to get information regarding the independent variables, automated services. It sought to gather information on the expenditure in internet banking .expenditure in automation, expenditure in mobile banking and the number of ATM cards issued by the various Saccos. This instrument allowed for cost and time savings for the respondents as well as the researcher.

3.5.1 Data Validity and Reliability

Face and content validity of the questionnaire was tested. Face validity was in relation to the misunderstanding or misinterpretation of the questions. This was checked by employing the pre-testing method. Content validity on the other hand refers to the capacity of the instrument to provide adequate coverage of the topic. Adequate preparation of the instruments under the guidance of the supervisors, expert opinion and pre-testing of open ended questions helped establish the content validity.

Reliability is a measure of the extent to which an instrument consistently yield the same result after being administered several times to the same respondents (Orodho, 2005).To establish the reliability of the research instruments, the test re-test method whereby the pilot study respondents were issued with questionnaires for them to fill and the same questionnaires were subjected to a retest to see how the response were.

3.6 Data Analysis

The aim of the data analysis was to obtain substance from the data collected from both primary and secondary sources.

3.6.1 Analytical Model

This is the algebraic expression of the conceptual model.

An analytical multiple linear regression model (adopted from Kimata, 2013) was used to establish the effect of automated service on financial performance of Saccos licensed by SASRA.

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots$$

α = Constant

Y = Financial performance measured by return on assets

X_1 = Expenditure in internet banking

X_2 = Expenditure in automation

X_3 = Expenditure in mobile banking

X_4 = Number of ATM cards issued.

X_5 = Size of Sacco.

e = Error term

Number of branches opened by the Sacco can also be used to measure the financial performance.

The financial performance of the Saccos was measured by way of having computation of Return on assets over a period of five years from 2009 to 2013 and to find the relative rate of growth in comparison with the Sacco's capacity to automate services. The independent variables were measured using the number of ATM cards issued, expenditure in

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automation, expenditure in mobile banking, expenditure in internet banking and size of Sacco. The absolute values of the independent variables were converted into the ratio scale by taking the natural logarithm.

3.6.2 Test of Significance

Significance of automated service quality variables as predictors of financial performance was tested using the F-test. The significance of the overall model in explaining performance through the independent variables was measured through the F-test. Analysis of Variance (ANOVA) was used. The Statistical Package for Social Sciences (SPSS) version 20 was used to analyze the data collected. The coefficient of determination, R squared, measure was used to test the significance of the regression model in explaining the relationship between automated service quality and financial performance. R squared is a measure of goodness of fit that showed the percentage variance in the dependent variable that was explained by the independent variable(s).The higher the R squared the better the model. The analyzed data was then presented using tables.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter discusses the interpretation and presentation of the findings. This chapter presents analysis of the data on the effect of automated service on financial performance of Saccos licensed by SASRA in Kenya. The chapter also provides the major findings and results of the study.

4.2 Response Rate

The study targeted a sample size of 45 respondents from which 37 filled in and returned the questionnaires making a response rate of 82.2%. This response rate was good and representative and conforms to Mugenda and Mugenda (1999) stipulation that a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent.

4.3 Demographic Characteristics

The study sought to establish the background information of the Saccos including ownership category, the duration the Saccos has operated in Kenya and how many branches the Saccos had.

4.3.1 Ownership Category of the Sacco

The study also sought to find out the ownership category of the Saccos. The findings are as presented in Table 4.1.

Table 4. 1: Ownership Category of the Sacco

	Frequency	Percent
Government employees	15	40.5
Teachers	4	10.8
Private sector employees	16	43.2
Farmers	2	5.4
Total	**37**	**100.0**

Source: Research Findings

According to the findings, the majority of the respondents (43.2%) were on the private sector employees' category, 40.5% government employees' category, 10.8% teachers' category and 5.4% farmers' category.

4.3.2 The Duration the Sacco has Operated in Kenya

The study further sought to find out how long the Saccos had being operating in Kenya. The results are as indicated in Table 4.2.

Table 4. 2: Duration the Sacco has operated in Kenya

	Frequency	Percent
11-15 years	4	10.8
16-20 years	9	24.3
over 20 years	24	64.9
Total	**37**	**100.0**

Source: Research Findings

From the findings, majority of the respondents (64.9%) had been in operation in Kenya for over 20 years, 24.3% for 16-20 years and 10.8% for 11-15 years.

4.3.3 Branches the Saccos Have

The study sought to find out how many branches the Saccos had. The results are as shown in Table 4.3.

Table 4. 3: Branches the Saccos Have

	Frequency	Percent
Less than 5	28	75.7
5-10	9	24.3
Total	**37**	**100.0**

Source: Research Findings

The study found out that majority of the respondents (75.7%) had less than 5 branches while 24.3% had 5-10 branches.

4.4 Automated Services

The study sought to find out which area the Saccos had undertaken automation in the last 5 years in BOSA operations and FOSA operations, the category and year that certain automated services were introduced, the quantity of ATMs issued to customers in the period 2009-2013, the expenditure incurred in various automated services categories, the level of expenditure in ICT, the extent to which each of various factors best explain the benefits derived from automated service quality and the extent of agreement with various statements on automated services quality and its effects.

4.4.1 Automation of BOSA Operations

The study sought to find out whether the Saccos had undertaken BOSA automation in the last 5 years. The findings are as indicated in Table 4.4.

Table 4. 4: Automation of BOSA Operations

	Frequency	Percent
Yes	37	100.0
No	0	0.0
Total	**37**	**100.0**

Source: Research Findings

According to the findings all of the respondents (100%) had undertaken automation of BOSA operations in the last 5 years.

4.4.2 Automation of FOSA Operations

The study also sought to find out whether the Saccos had undertaken FOSA automation in the last 5 years. The findings are as indicated in Table 4.5.

Table 4. 5: Automation of FOSA Operations

	Frequency	Percent
Yes	37	100.0
No	0	0.0
Total	**37**	**100.0**

Source: Research Findings

According to the findings all of the respondents (100%) had undertaken automation FOSA operations in the last 5 years.

4.4.3 Year in which Various Automated Services were introduced

The study further sought to find out the year that various automated services were introduced in the Saccos. The results are as indicated in Table 4.6.

Table 4. 6: Year in which various automated services were introduced

	Mean	Std. Deviation
Internet Banking	2.666	1.36626
Mobile banking (M-Sacco)	2.550	0.99868
ATM Services	2.071	1.11981
Expenditure on ICT	1.400	0.91394

Source: Research Findings

From the findings it was indicated that majority of the Saccos introduced internet banking services and mobile banking (M-Sacco) in the year 2011-2012 as shown by a mean score of 2.6667 and 2.550 respectively, ATM services in the year 2010-2011 as shown by a mean score of 2.071 and expenditure on ICT in the year 2009-2010 as shown by a mean score of 1.400.

4.4.4 Quantity of ATMs Cards Issued to the customers in the period 2009-2013

The study sought to find out the quantity of ATMs cards issued by the Saccos to customers in the period 2009-2013. The findings are as shown in Table 4.7.

Table 4. 7: Quantity of ATMs Cards Issued

	2009	2010	2011	2012	2013
Total	8450	69444	80473	96639	50549
Average	228	1877	2175	2612	1366

Source: Research Findings

According to the findings, majority of the ATMs cards (2612) were issued in the year 2012 followed by 2175 in 2011, followed by 1877 in 2010, followed by 1366 in 2013 and 228 in 2009 in each Sacco.

4.4.5 Expenditure Incurred in Automated Services in the Period 2009-2013

The study also sought to find out the expenditure incurred in various automated services in the period 2009-2013. The results are as shown in Table 4.8.

Table 4. 8: Relative Expenditure Incurred in Automated Services

	2009	2010	2011	2012	2013	Average
Mobile banking (M-Sacco)	0.00028	0.00091	0.00326	0.00180	0.00164	0.00158
Internet banking	0.00007	0.00007	0.00010	0.00007	0.00005	0.00007

Source: Research Findings

According to the findings, the highest level of expenditure was in the year 2013 where each firm used, followed by 2012 then followed by 2011.

4.4.6 Extent to Which Various Factors Best Explain Benefits Derived From Automated Services Quality

The study sought to find out the extent to which various factors best explain benefits derived from automated services quality. The findings are as presented in table 4.9

	Mean	Std. Deviation
Improved Customer service	3.851	0.35504
Improved financial performance	3.817	0.40584
Increased revenue	3.685	0.58266
Reduction in operational costs	3.624	0.60391

Source: Research Findings

The findings indicate that, improved customer service, improved financial performance, increased revenue and reduction in operational costs were most beneficial as indicated by a mean score of 3.851, 3.817, 3.685 and 3.624 respectively.

4.4.7 Extent of Agreement with Various Statements on Automated Services Quality and its Effects

The study also sought to find out the extent of agreement on various statements on automated services quality and its effects. The findings are as presented in Table 4.9.

Table 4. 9: extent of agreement with various statements on automated services quality and its effects

	Mean	Std. Deviation
Use of ATM's has increased	4.714	0.46004
The business volume has increased both in customer base as well as savings mobilization	4.094	1.02735
Number of mobile banking transactions has increased	4.081	1.03763
Number of internet banking transactions has increased	3.026	0.75593

Source: Research Findings

According to the findings, majority of the respondents strongly agreed that the use of ATMs has increased as shown by a mean score of 4.714, the respondents also agreed that the business volume has increased both in customer base as well as savings mobilization and number of mobile banking transactions has increased as indicated by a mean score of 4.094 and 4.081 respectively, the respondents were neutral on number of internet banking transactions has increased as shown by a mean score of 3.026.

4.5 Regression Analysis

In this study, a multiple regression analysis was conducted to test the effect among predictor variables. The research used statistical package for social sciences (SPSS V 21.0) to code, enter and compute the measurements of the multiple regressions.

Table 4. 10: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.873	0.762	0.724	0.287

Source: Research Findings

R-Squared is a commonly used statistic to evaluate model fit. R-square is 1 minus the ratio of residual variability. The adjusted R^2, also called the coefficient of multiple determinations, is the percent of the variance in the dependent explained uniquely or jointly by the independent variables. 72.4% of the changes in financial performance of Saccos licensed by SASRA in Kenya could be attributed to the combined effect of the predictor variables.

Table 4.11: **Summary of One-Way ANOVA results**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	9.223	5	1.845	19.883	7.52E-09
	Residual	2.876	31	0.093		
	Total	12.099	36			

Source: Research Findings

The probability value of 7.52E-09 indicates that the regression relationship was highly significant in predicting how expenditure in internet banking, expenditure in automation, expenditure in mobile banking, number of ATM cards issued and size of Sacco affect the financial performance of Saccos licensed by SASRA. The F calculated at 5% level of

significance was 19.883 since F calculated is greater than the F critical (value = 2.52), this shows that the overall model was significant.

Table 4.12: Regression coefficients of the relationship between financial performance of Saccos licensed by SASRA and the five predictive variables

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.053	0.217		2.889	5.31E-03
	Expenditure in internet banking	0. 586	0.149	0.613	5.309	1.58E-06
	Expenditure in automation	0.701	0.181	0.149	3.210	2.10E-03
	Expenditure in mobile banking	0.599	0.196	0.234	4.255	7.19E-05
	Number of ATM cards issued	0.763	0.091	0.138	3.989	1.78E-04
	Size of Sacco	0. 682	0.078	0.157	3.026	1.64E-04

Source: Research Findings

As per the SPSS generated table above, the equation ($Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_{5+} e$) becomes:

$Y = 1.053 + 0.586 X_1 + 0.701 X_2 + 0.599 X_3 + 0.763 X_4 + 0.682 X_5$

The regression equation above has established that taking all factors into account (expenditure in internet banking, expenditure in automation, expenditure in mobile banking, number of ATM cards issued and size of Sacco) constant at zero the financial performance of Saccos licensed by SASRA would be 1.053. The findings presented also show that taking all other independent variables at zero, a unit increase in expenditure in internet banking would lead to a 0.586 increase in the scores of the financial performance of Saccos licensed by SASRA and a unit increase in the scores of expenditure in automation would lead to a 0.701 increase in the scores of financial performance of Saccos licensed by SASRA, a unit increases in the scores of expenditure in mobile banking would lead to a 0.599 increase in the scores of financial performance of Saccos licensed by SASRA. Further the study found out that a unit increase in the scores of number of ATM cards issued would lead to a 0.763 increase in the scores of financial performance of Saccos licensed by SASRA. The study also found that a unit increase in the scores of size of Sacco would lead to a 0.682 increase in the scores of financial performance of Saccos licensed by SASRA.

Overall, number of ATM cards issued had the greatest effect on financial performance of Saccos licensed by SASRA, followed by expenditure on automation, followed by size of Sacco, then expenditure in mobile banking while expenditure in internet banking had the least effect to the financial performance of Saccos licensed by SASRA. All the variables were significant ($p < 0.05$) and was adequate in drawing conclusions.

4.6 Interpretation of the Findings

The study found out that all the Saccos (100%) had undertaken automation of BOSA and FOSA operations in the last 5 years. This is in line with Ademba (2012) who posits that in the early 1990s Kenya experienced difficult economic times forcing commercial banks to demand higher minimum operating balances for individual accounts to sustain their businesses which saw many middle and low income persons unable to operate bank accounts. Saccos became popular among employed persons who had been unable to maintain or operate bank accounts and they responded by introducing a Front Office Service Activity (FOSA) which offered quasi banking services at competitive rates opening a new chapter in the Sacco business.

From the regression model, the study deduced that there were factors affecting the financial performance of Saccos licensed by SASRA which are expenditure in internet banking, expenditure in automation, expenditure in mobile banking, number of ATM cards issued and size of Sacco. They all affected the financial performance positively. The correlation coefficient (R) which is 0.873 is close to 1, it therefore indicates that the five variables are positively linearly related. From the one-Way ANOVA analysis results, the probability value 7.52E-09 indicates that the regression relationship was highly significant in predicting how internet banking, expenditure in automation, expenditure in mobile banking, number of ATM cards issued and size of the Sacco affect the financial performance of Saccos. The F calculated at 5% level being 19.883 and is greater than F critical (value=2.52) shows the significance of the overall model.

The five predictive variables all taken into account constant at zero the financial performance of Saccos licensed by SASRA would be 1.053.The findings presented also show that taking all other independent variables at zero, a unit increase in expenditure in internet banking, expenditure in automation, expenditure in mobile banking, number of ATM cards issued and size of the Sacco lead to a 0.586, 0.701, 0.599, 0.763, and 0.682 respectively increase in the scores of financial performance of Saccos licenced by SASRA. This is in line with Muhammad and Mainudin (2006) who assessed the performance in the context of bank of Asia to determine the relationship between automated service quality, customer satisfaction and financial performance. They found out that provision of high quality automated service leads to financial performance and that the use of the internet and telephone and ATM are very essential in boosting growth of customers. This also concurs with Sonja (2010) who analyzed Saccos in Uganda to determine effect of automation on the growth of Saccos. Her findings suggested that automation of Saccos and therefore automated services lead to efficiency in running the Saccos, customer growth, increased transparency and generation of different accurate financial reports hence better financial performance.

Overall, the study found out that the number of ATM cards issued had the greatest effect on financial performance of Saccos licensed by SASRA, followed by expenditure on automation, followed by size of Sacco, then expenditure in mobile banking while expenditure in internet banking had the least effect to the financial performance of Saccos licensed by SASRA. This is in agreement with Okiro & Ndung'u (2013) who state that clients enjoy the convenience of using their ATM cards or over the internet from the comfort of their homes which in turn leads to a better financial performance of financial

institutions due to increased client base demand for services. Additionally due to the tremendous growth of the mobile phone industry most financial institutions have ventured into the untapped opportunity and have partnered with mobile phone network providers to offer banking services to their clients which have had a positive impact to financial performance of the financial institutions.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The study found out that all the Saccos (100%) had undertaken automation of BOSA and FOSA operations in the last 5 years. The study also found out that majority of the Saccos introduced internet banking services and mobile banking (M-Sacco) in the year 2011-2012 as shown by a mean score of 2.6667 and 2.550 respectively, ATM services in the year 2010-2011 as shown by a mean score of 2.071 and expenditure on ICT in the year 2009-2010 as shown by a mean score of 1.400. The study further found out that majority of the ATMs cards (2612) were issued in the year 2012. The highest level of expenditure was in the year 2013 where firms used an average of 92271. The study also found out that majority of the respondents strongly agreed that the use of ATMs has increased as shown by a mean score of 4.714.

The study also found out that there were factors affecting the financial performance of Saccos licensed by SASRA which are expenditure in internet banking, expenditure in automation, expenditure in mobile banking, number of ATM cards issued and size of Sacco. They all affected the financial performance positively. The regression equation established that taking all factors into account (expenditure in internet banking, expenditure in automation, expenditure in mobile banking, number of ATM cards issued and size of Sacco) constant at zero the financial performance of Saccos licensed by SASRA would be 1.053. The study also found out that taking all other independent variables at zero, a unit increase in expenditure in internet banking would lead to a 0.586 increase in the scores of

the financial performance of Saccos licensed by SASRA and a unit increase in the scores of expenditure in automation would lead to a 0.701 increase in the scores of financial performance of Saccos licensed by SASRA, a unit increases in the scores of expenditure in mobile banking would lead to a 0.599 increase in the scores of financial performance of Saccos licensed by SASRA. Further the study found out that a unit increase in the scores of number of ATM cards issued would lead to a 0.763 increase in the scores of financial performance of Saccos licensed by SASRA. The study also found that a unit increase in the scores of size of Sacco would lead to a 0.682 increase in the scores of financial performance of Saccos licensed by SASRA.

The study further found out that the number of ATM cards issued had the greatest effect on financial performance of Saccos licensed by SASRA, followed by expenditure on automation, followed by size of Sacco, then expenditure in mobile banking while expenditure in internet banking had the least effect to the financial performance of Saccos licensed by SASRA.

5.2 Conclusion

This study examined the effect of automated service on financial performance of Saccos licensed by SASRA in Kenya. The study concludes that generally automated services have a positive influence on the financial performance of Saccos in Kenya. The study found out that all the Saccos had undertaken automation of BOSA and FOSA operations in the last 5 years. The study also found out that majority of the Saccos introduced internet banking services and mobile banking (M-Sacco), ATM services. The study further found out that majority of the ATMs cards (2612) were issued in the year 2012. A wide range of

alternative delivery mechanism became available such as internet and ATMs. These reduced the dependence on the branch network as a core delivery mechanism. The new automated services are becoming an important factor in the development of financial services industry, and especially Saccos hence impacting financial performance.

The application of automated services to Saccos services is a subject of fundamental importance and concerns to all Saccos and indeed a prerequisite for local and global competitiveness in the financial sector. The advancement in technology plays an important role in improving service delivery standards in the financial sector. The profitability gains associated with the adoption of automated services are mainly explained by a significant increase in financial performance of Saccos. Sacos would therefore profit from automating their services.

The study finally concludes that the number of ATM cards issued had the greatest effect on financial performance of Saccos licensed by SASRA. This shows that the clients prefer using ATMs than the other services. This can be attributed to the fact that ATMs offer a client the freedom to personalize financial services and can access the same at any time of the day or week.

5.3 Recommendations for Policy

The study recommends that automation of financial services should be used as a complement to, rather than a substitute for, physical branches. This is because most of the people in the rural areas are not able to access the automated services owing to their level of technology literacy.

The study also recommends that there is need to understand the changes that automation of services brings on the Saccos in order to examine in detail how the recent and foreseeable advances in technology is affecting the various aspects of the Saccos and can affect its future evolution.

Since adoption of ICT improves the Sacco's image and leads to a wider, faster and more efficient market, it is imperative for bank management to intensify investment in ICT products to facilitate speed, convenience, and accurate services, or otherwise lose out to their competitors.

To facilitate and improve Sacco service automation in Kenya and other developing countries, there is need to address the internal factors through awareness creation, training, improving organization, enhance and assure security, reliability, confidence and improve risk taking propensity by potential adopters. Training and Manpower development is a major problem mitigating against the growth of automation of service in Saccos in the country. Government must make right IT policy by ensuring that Computer, Communication equipments and other IT infrastructures to a large extent have manufactures in the country so that our people can acquire first hand necessary skills.

5.4 Limitations of the Study

There were challenges which were encountered during the study. Some officers from Saccos that participated in the study were initially reluctant to release information related to automated services arguments that it was confidential. That reluctance delayed the completion of data collection.

Further, the data was tedious to collect and compute as it was in very raw form. Due to lack of standardized financial statements from various Saccos which made the data computation even harder.

5.5 Suggestions for Further Research

Since the study focused on the effect of automated service on financial performance of savings and credit cooperative societies licensed by Sacco Society Regulatory Authority in Kenya, further studies should be done on all commercial banks to assess how automated service affect financial performance.

Further studies should also be done on the challenges that affect the automation of services in banking sector among commercial banks in Kenya since it is not fully employed despite previous studies showing it is beneficial in customer acquisition.

A similar study should also be done in other counties to see whether it will yield the same findings as this study focused on Kiambu and Nairobi Counties.

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APPENDIX I

1. AFYA SACCO SOCIETY LTD
2. AIRPORTS SACCO SOCIETY LT
3. ASILI SACCO SOCIETY LTD
4. BANDARI SACCO SOCIETY LTD
5. BARAKA SACCO SOCIETY LTD
6. BARINGO FARMERS SACCO LTD
7. BIASHARA SACCO SOCIETY LTD
8. BINGWA SACCO SOCIETY LTD
9. BORABU SACCO SOCIETY LTD
10. BORESHA SACCO SOCIETY LTD
11. BUNGOMA TEACHERS SACCO LTD
12. BURETI SACCO SOCIETY LTD
13. BUSIA TESO TEACHERS SACCO LTD
14. CENTENARY SACCO SOCIETY LTD
15. CHAI SACCO SOCIETY LTD
16. CHEMELIL SACCO SOCIETY LTD
17. CHEPSOL SACCO SOCIETY LT
18. CHUNA SACCO SOCIETY LTD
19. COMOCO SACCO SOCIETY LTD
20. COMOPOLITAN FARMERS SACCO
21. COUNTY SACCO SOCIETY LTD
22. DAIMA SACCO SOCIETY LTD
23. DHABITI SACCO SOCIETY LTD
24. DIMKES SACCO SOCIETY LTD
25. EGERTON SACCO SOCIETY LTD
26. EMBU TEACHERS SACCO LTD
27. ENEA SACCO SOCIETY LTD
28. FARIJISACCO SOCIETY LTD
29. FORTUNE SACCO SOCIETY LTD
30. FUNDILIMA SACCO SOCIETY LTD
31. GITHURAI DAIRY SACCO LTD
32. GUSII MWALIMU SACCO LTD
33. HARAMBEE SACCO SOCIETY LTD
34. HAZINA SACCO SOCIETY LTD
35. IMENTI SACCO SOCIETY LTD
36. IRIANYA TEA SACCO SOCIETY LTD
37. JAMII SACCO SOCIETY LTD
38. JIJENGE SACCO SOCIETY LTD
39. KAKAMEGA TEACHERS SACCO LTD
40. KEIYO TEACHERS SACCO LTD
41. KENPIPE SACCO SOCIETY LTD
42. KENVESRITYSACCO SOCIETY LTD
43. KENYA BANKERS SACCO LTD
44. KENYA CANNERS SACCO LTD
45. KENYA POLICE STAFF SACCO LTD
46. KIAMBAA DAIRY RURAL SACCO LTD
47. KILIFI SACCO SOCIETY LTD
48. KINGDOM SACCO SOCIETY LTD
49. KIPSIGIS TEACHERSACCO LTD
50. KITE SACCO SOCIETY LTD
54. K-UNITY SACCO SOCIETY LTD
55. KURIA TEACHERS SACCO LTD
56. LENGO SACCO SOCIETY LTD
57. MAGADI SACCO SOCIETY LTD
58. MAGEREZA SACCO SOCIETY LTD
59. MAISHA BORA SACCO SOCIETY LTD
60. MARAKWET TEACHERS SACCO LTD
61. MARSABIT TEACHERS SACCO LTD
62. MENTOR SACCO SOCIETY LTD
63. MERU SOUTH FARMERS SACCO LTD
64. METROPOLITAN TEACHERS SACCO LTD
65. MMH SACCO SOCIETY LTD
66. MOMBASA PORT SACCO SOCIETY LTD
67. MOMBASA TEACHERS SACCO LTD
68. MUDETELTD SACCO SOCIETY LTD
69. MUHIGIA SACCO SOCIETY LTD
70. MUMIAS OUTGROWERS SACCO
71. MWALIMU NATIONAL SACCO LTD
72. MWITO SACCO SOCIETY LTD
73. NACICO SACCO SOCIETY LTD
74. NAFAKA SACCO SOCIETY LTD
75. NAKU SACCO SOCIETY LTD
76. NANDI HEKIMA SACCO SOCIETY LTD
77. NAROK TEACHERS SACCO SOCIETY LTD
78. NASSEFU SACCO SOCIETY LTD
79. NATION SACCO SOCIETY LTD
80. NDEGE CHAI SACCO SOCIETY LTD
81. NDOHA SACCO SOCIETY LTD
82. NTIMINYAKIRU SACCO SOCIETY LTD
83. NYAMBENE ARIMI SACCO SOCIETY LTD
84. NYAMIRA TEA FARMERS SACCO LTD
85. NYERI TEACHERS SACCO SOCIETY LTD
86. ORTHODOX DEVELOPMENT SACCO LTD
87. SAFARICOM SACCO SOCIETY LTD
88. SAMBURU TRADERS SACCO SOCIETY LTD
89. SHERIA SACCO SOCIETY LTD
90. SIAYA TEACHERS SACCO SOCIETY LTD
91. SIMBA CHAI SACCO SOCIETY LTD
92. SIRAJI SACCO SOCIETY LTD
93. SOLUTION SACCO SOCIETY LTD
94. SOT TEA GROWERS SACCO SOCIETY LTD
95. SOTICO SACCO SOCIETY LTD
96. STIMA SACCO SOCIETY LTD
97. SUKARI SACCO SOCIETY LTD
98. TAI SACCO SOCIETY LTD
99. TAITA TAVETA TEACHERS SACCO LTD
100. TEMBO SACCO SOCIETY LTD
101. TENHOS SACCO SOCIETY LTD
102. THAMANI SACCO SOCIETY LTD
103. THARAKA NITHITEACHERS SACCO LTD

51. KITUI TEACHERS SACCO LTD
52. KIMFRI SACCO SOCIETY LTD
53. KONOIN SACCO SOCIETY LTD

104. THIKA DISTRICT TEACHERS SACCO LTD
105. TIMES U SACCO SOCIETY LTD
106. TOWER SACCO SOCIETY LTD

107. TRANS NZOIA TEACHERS SACCO SOCIETY LTD
108. UKULIMA SACCO SOCIETY LTD
109. UNAITAS SACCO SOCIETY LTD
110. UNITED NATIONS SACCO SOCIETY LTD
111. UNIVERSAL TRADERS SACCO SOCIETY LTD
112. WAKENYA PAMOJA SACCO SOCIETY LTD
113. WAKULIMA COMMERCIAL SACCO SOCIETY LTD
114. WANAANGA SACCO SOCIETY LTD
115. WANANCHI SACCO SOCIETY LTD
116. WANANDEGE SCCO SOCIETY LTD
117. WARENG SACCO SOCIETY LTD
118. WASHA SACCO SOCIETY LTD
119. WAUMINI SACCO SOCIETY LTD
120. YETU SACCO SOCIETY LTD
121. NRS SACCO SOCIETY LTD
122. UKRISTO NA UFANISI WA ANGLICANA SACCO SOCIETY LTD
123. KIPSIGIS EDIS SACCO SOCIETY LTD
124. CAPITAL SACCO SOCIETY LTD
125. ISIOLO TEACHERS SACCO SOCIETY LTD
126. LAIKIPIA TEACHERS SACCO SOCIETY LTD
127. KENYA MIDLAND SACCO SOCIETY LTD
128. CHEPSOL SACCO SOCIETY LTD
129. KIPSIGIS EDIS SACCO SOCITY LTD
130. TAIFA SACCO SOCITY LTD

SOURCE: SASRA WEBSITE-(www.sasra.go.ke)

APPENDIX II: INTRODUCTORY LETTER

Indira Gandhi Oyugi

University of Nairobi

P.O Box 30197-00100

Nairobi.

To whom it may concern

Dear Sir/Madam

RE: RESEARCH PROJECT

I am an MBA student at the University of Nairobi undertaking a research project as part of the requirements of the degree of Masters in Business Administration. The topic of my Research is "Effect of Automated Service on financial performance of Saccos in Kenya."Your institution has been selected to form part of the study. I kindly request your assistance by availing time to respond to the questionnaire. Any information provided will be treated with utmost confidentiality and used solely for academic purposes. A copy of the final report will be made available to you at your request. Your assistance will be highly appreciated. Thanking you in advance.

Yours faithfully

Indira Gandhi Oyugi

MBA student

D61/75332012

E-mail:oyugiindira@gmail.com

Tel: 0714556227

Supervisor:

Mr Herick Ondigo

Lecturer, Department of Finance and Accounting, University of Nairobi

APPENDIX III: QUESTIONNAIRE
PART A: DEMOGRAPHIC DATA

1. Personal details of Respondent

Name (**Optional**)..

Position in the organization................................

Company Information

Name of the Sacco...

2. Please tick the ownership category that best describes your Sacco

Government employees   [   ]

Teachers   [   ]

Private Sector employees   [   ]

Farmers   [   ]

Others (please specify)...

3. For how long has your Sacco operated in Kenya?

Less than 5 years   [   ]

6-10 years   [   ]

11-15 years   [   ]

16-20 years   [   ]

Over 20 years   [   ]

4. How many branches does your Sacco have?

Less than 5   [   ]

5-10   [   ]

More than 10   [   ]

PART B: AUTOMATED SERVICES

5. In which area has your Sacco undertaken automation in the last 5 years?

BOSA Operations   [   ]

FOSA Operations   [   ]

6. The following table shows different automated services categories. Tick the category and the year in which you introduced it.

Category	Year of introduction			
	2009-2010	2010-2011	2011-2012	2012-2013
ATM services	[ ]	[ ]	[ ]	[ ]
Mobile banking (M-Sacco)	[ ]	[ ]	[ ]	[ ]
Expenditure on ICT	[ ]	[ ]	[ ]	[ ]
Internet Banking	[ ]	[ ]	[ ]	[ ]

7. Please give in terms of quantity the ATMs cards issued to customers in the following period

Year	Quantity
2009	[ ]
2010	[ ]
2011	[ ]
2012	[ ]
2013	[ ]

8. Please indicate the expenditure incurred in the following automated services categories.

Category	Year				
	2009	2010	2011	2012	2013
Mobile banking (M-Sacco)	[ ]	[ ]	[ ]	[ ]	[ ]
Internet Banking	[ ]	[ ]	[ ]	[ ]	[ ]

9. Please indicate the level of expenditure on ICT in your Sacco.

Category	Year				
	2009	2010	2011	2012	2013
Less than Ksh.500, 000	[ ]	[ ]	[ ]	[ ]	[ ]
500,000-1,000,000	[ ]	[ ]	[ ]	[ ]	[ ]

1,000,000-5,000,000	[ ]	[ ]	[ ]	[ ]	[ ]
Above 5,000,000	[ ]	[ ]	[ ]	[ ]	[ ]

10.Please indicate the extent to which each of the following factors best explain the benefits derived from automated services quality on a scale of 1-4,where 1-least beneficial,2-Slightly beneficial,3-Moderately beneficial,4-Most beneficial.

Benefit	Ranking			
	1	2	3	4
Improved customer service	[ ]	[ ]	[ ]	[ ]
Reduction in operational costs	[ ]	[ ]	[ ]	[ ]
Improved financial performance	[ ]	[ ]	[ ]	[ ]
Increased revenue	[ ]	[ ]	[ ]	[ ]

11. To what extent do you agree with the following statements on various automated services quality and its effects on a scale of 1-5,(where 1- Strongly agree, 2- Agree, 3- Neutral,4 Disagree,5- Strongly disagree)

Statement	Ranking				
	1	2	3	4	5

Use of ATM's in has increased

Number of mobile banking transactions has increased

The business volume has improved both in customer base as well as savings mobilization

Number of internet banking transactions has increased.

END OF THE QUESTIONNAIRE

THANK YOU