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TECHNOLOGY ADOPTION STRATEGIES AND PERFORMANCE OF DEPOSIT TAKING SACCOS IN NAIROBI CITY COUNTY, KENYA

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ABSTRACT

The general objectives of the study was to evaluate the effect of technology adoption strategies and performance of deposit taking Saccos in Nairobi City County. The study was guided by the following specific objectives: to establish the effect of financial information system on performance of deposit taking Saccos in Nairobi City County; to determine the effect of communication technologies and performance of deposit taking Saccos in Nairobi City County; The study targeted 42 deposits taking Saccos (DTSs) in Nairobi City County licensed by SASRA at end of 2023.The study employed self-administered structured questionnaires as the tool for data collection. The study carried out a pilot test to assess the validity and reliability of the questionnaires in gathering the data required for purposes of the study. Quantitative data was analyzed using descriptive and inferential statistics was computed by use of Statistical Package for Social Sciences (SPSS) version 20.0. A total of 126 questionnaires were sent to the targeted 126 senior management, middle level management and low-level management from 42 deposits taking Saccos) in Nairobi City County licensed by SASRA; from which 103 questionnaires were returned completely filled, depicting a response rate of 81.7% which is good for generalizability of the research findings to a wider population. Both descriptive and inferential statistics showed that the study's conceptualized independent variables (financial information system, communication technologies) have a significant effect on performance of DT-Saccos in Nairobi City County (dependent variable). The study concluded that financial information system can greatly enhance the operational efficiency, customer service, and strategic capabilities of deposit-taking Saccos, driving superior performance. Secondly, effective communication technologies enhance the operational efficiency, member engagement, and overall performance of deposit-taking Saccos by improving service delivery, facilitating real-time interactions, and providing valuable insights for decision-making. The study recommends that first, for deposit taking Saccos to realize superior performance, they should adopt an effective financial information system that can greatly enhance operational efficiency and customer service delivery. Secondly, the information communication technology department of deposit taking Saccos should roll out an upgraded and secure communication system that offers seamless addresses customer needs, engagements and complaints resolutions.

Key Words: Technology Adoption Strategies, Performance of Deposit Taking Saccos, Financial Information System, Communication Technologies

Background of the study

Deposits taking Saccos are very important in any economy; these institutions are established to provide services such as deposit taking and loan disbursements. They play major roles in developing the economies as they help in distribution of financial resources from individuals and corporates that have excess funds to individuals and corporates that are in deficit of such funds. (Derreumaux, 2013). It is estimated that there are 800 million people globally, who are members of the co-operatives and 100 million are employed by co-operatives. In nearly all developed countries, they have been the main contributors to the economic growth and poverty alleviation. Deposits taking Saccos are quasi financial institutions that mobilize savings, provide loans as well as other products to their members. They play an important role in Kenya's financial sector in provision of affordable financial services to their members both urban and rural households (Dillon & Morris, 2016).

Technology is a long process depending critically on recognition of new, external information, assimilating it, and applying it to commercial ends (Davis, 2019). Over the past decades the structure of the deposit taking Saccos has undergone dramatic changes, despite the functions performed by the Saccos remaining relatively constant. Technology adoption strategies in deposit taking Saccos have strategic variables to surpass any form of competition thus becoming an effective means by which Saccos can improve their performance while simultaneously being able to maintain their effectiveness in the market (Davis, 2023).

History shows that technology adoption strategies has been a critical and persistent part of the economic landscape over the past few centuries. According to Esman Nyamongo & Ndirangu, (2013),technology adoption strategies have been for a particular period remained the main key to economic growth whether in any developing or developed country. For instance, there are a number of times of accelerated technological innovation in United States financial history, regularly following or all through periods of political disturbance and great social like the immense depression and Civil War. It seems clear in the year1970s and 1980s have been years of moderately rapid technological innovation due to higher inflation and its effects on rapid technological progress and interest rates that has drastically reduced the real costs of carrying out financial transactions (Fama, 2018).

Statement of the Problem

The banking sector environment is ever changing due to the accelerated changes in the technological innovation-taking place in the world and therefore affecting the financial sector and this has created research interest in technological innovation. Sasra has continued to approve new banking innovation products for the financial services industry that has been impacted by the ever-changing consumer needs, innovative financial products, technological advancement and the use of multiple delivery channels. Deposit taking Saccos are able to continue being competitive in the unique scenarios and are able to endure with the environment by introducing new products, expand the existing ones, and add new distribution channels (Nasra,2023)

High performance of deposit taking Saccos in Kenya is crucial for increase banking sector penetration nationwide toward economic growth and attaining sustainable growth. However, despite commercial banks recording high performance, most of deposit taking Saccos in the country have indicated decline in their performance from 2021-2023 (Sasra,2023).The performance in terms of return on assets of deposit- taking SACCOs has been declining. In 2021, the ROA for deposit-taking SACCOs was 10.93%, declining to 10.04% in 2022 and further decline to 9.46% in 2023 (SASRA report, 2023). The decline is an issue of concern considering the significant importance of deposit-taking SACCOs to socioeconomic development in the country.

From reviewed relevant literature, it has come out strongly from several writers like; Muyoka (2014), Nader (2011), Chang and Dutta (2012) and Tufano (2003) that technology adoption strategies have positive impact on performance. They have agreed on the transformative impact

of performance and operational efficiency. However other scholars like; McAndrews (2002), Nader (2011 and Prager (2001) and Nadia, Anthony and Scholnick (2003) established that technology adoption strategies have negative effects on performance indicators. The varied results from the different researchers and alternative views from different countries are predominantly as an outcome of lack of deep and thorough research on the subject matter.

This study intends to take a departure from past studies and incorporate several technology adoption strategies and their effect on performance indicators. There is also concentration of technology adoption strategies studied on profitability and mostly in developed and emerging economies leaving a paucity of performance literature for Africa and Kenya specifically. It is against this background that the study intends to evaluate the relationship between technology adoption strategies and performance of deposit taking Saccos in Nairobi City County.

General Objectives

The general objective of the study was to evaluate the effect of technology adoption strategies on the performance of deposit taking Saccos in Nairobi City County.

Specific Objectives

i. To establish the effect of financial information system on performance of deposit taking Saccos in Nairobi City County.

ii. To determine the effect of communication technologies on performance of deposit taking Saccos in Nairobi City County.

LITERATURE REVIEW

Theoretical Review

Technology Acceptance Model

Davis (1986) proposed the Technology Acceptance Model (TAM). This model describes why people acknowledge or dismiss technology advancement. Davis (1986) identified two distinctive beliefs relating to information systems and generally accepted computer applications: the innovation's perceived usefulness and simplicity of use. The theory noted there was a link between the adoption of innovation and perceived convenience, the usability of progress, the individual inclination towards innovation and the user's behavioral intentions.

Davis (1989) further developed this theory as the most widely used theory to explain technology acceptance by consumers. TAM is inclined to the field of social psychology. TAM is a stable, solid and cost-effective theory for predicting the adoption of information technology by consumers. TAM is used to study user acceptance of various information systems. TAM constructs are suited for understanding the acceptability of financial information system because it encompasses the utilization of information systems that run on computer applications.

Fu, Farn and Chao (2013) study in Taiwan on the taxpayer's decision to adopt e-tax applied technology acceptance theory and perceived usefulness (PU) was the most vital determinant of technology adoption. Financial information systems, according to Adebayo, Idowu, Yusuf, and Bolarinwa (2013), are a vital tool for decision making in today's quickly changing environment since firms must keep up with evolving technologies. TAM explores behavioral intents of using technology by drawing up relations between behavioral intention, adoption, and system usage. The theory has been applied in many empirical studies and proves high quality and statistically reliable. The TAM theory's main limitation is given by Van and Cavaye (1999), who indicated that the effect and personal control factors on behavior are not considered by TAM. TAM does not take into account other factors such as economic factors, pressures from manufacturers, consumers, and rivals.

In this study, TAM explained why organizations adopt financial information systems. TAM suggests that the growth (performance) forces deposit taking Saccos to embrace more effective

and innovative technological solutions to achieve their business goals of realizing maximum profits. Deposit taking Saccos would intend to accept and implement technology in their daily activities if the owners/managers perceive it is easy to use the financial information systems. Then it would be of great benefit to the business.

Task-Technology Fit Theory (TTF)

Goodhue and Thomson (1995) proposed the theory of Task-Technology Fit Theory.TTF theory assumed that information technology is more likely to have a positive effect on individual performance and be used if the capabilities of information technology match the task that the user must perform (Goodhue & Thompson, 1995).To explain the linkage between information technology utilization and individual performance, they developed a conceptual model of technology-to-performance chain.This conceptual framework was based on two separate research streams: first, the utilization of information technology with its antecedent of attitude and behavior, and second, the "fit focus" evident in research investigating the performance of individual information technology user.

Venkatraman (1989) discussed the concept of "fit" assessment in strategy research comprehensively with six alternative perspectives and approach of fit. Fit as moderation perspective; effect of fit as a moderating variable of an independent variable (predictor variable) on dependent variable (criterion variable). Fit as mediation perspective; an existence of intervening (indirect) effects between an antecedent variable and its consequent (criterion) variable. Fit as matching perspective; fit is a theoretically defined match between two related variables. Fit as gestalts; gestalts could be defined as the degree of internal coherence among a set of theoretical attributes (fit as on the identification of different group). Fit as profile deviation: the degree of adherence to a specified profile. Fit as co-variation; a pattern of co-variation or internal consistency among a set of theoretically related variables.

Goodhue and Thompson (1995) indicate that the fit between task characteristics and features of information systems provide a conceptual basis for testing the quality of individual decision-making. System information helps users by providing information that can be used individually to carry out their duties. Therefore, the strong relationship between information technology and individual performance (Teo & Men, 2008) or utilization (Strong et al. 2006) is the fit between information technology that provides information to users and information needed to the task that must be done.

The TTF theory proposes that a better fit between technology and task will lead to better Performance.Goodhue and Thomson (1995) in their study observe that there is supportive evidence of TTF as a function of system characteristics and task characteristic, and strong evidence of performance in which TTF and utilization must be included. In the study, as proposed by the TTF and as explained above, adoption of product innovation by deposit taking Saccos can lead to improved performance. The fit between the task and technology as used in the study are the relevant ICT resources adopted in order to enhance performance.

Conceptual Framework

A conceptual framework is an illustrative framework that shows the relationship between the study variables.

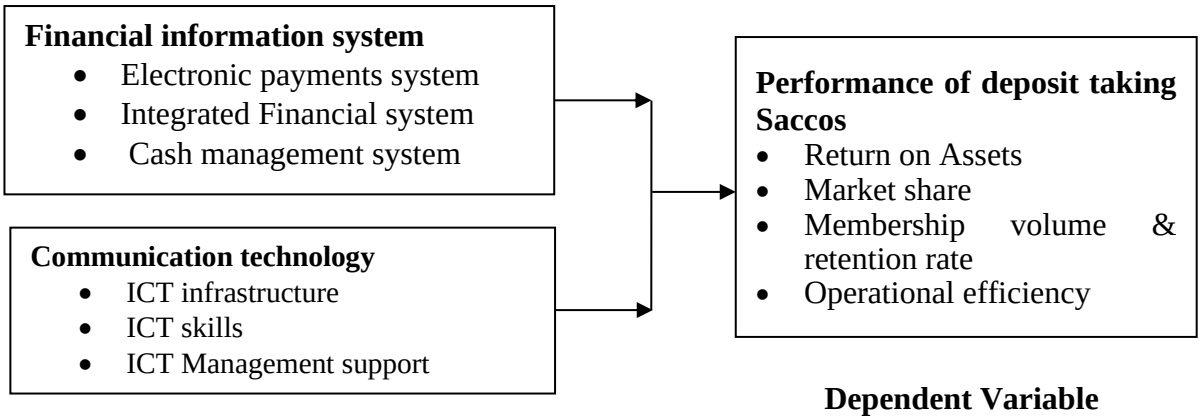

Figure 2.1 Conceptual framework

Financial information system technologies

Financial information system technologies are software programs that assist managers/owners plan and regulate processes by providing accurate and relevant data for decision-making (Francesco et al,2012).It goes hand in hand with creative and contemporary financial practices for which many enterprise owners, especially in third world nations, are unprepared or find difficult to implement; however, organizations are developing ever more complicated financial information systems to achieve strategic objectives and improved results. When it comes to computerized accounting, small and medium enterprises (SMEs), particularly in developing countries, confront a number of issues, including lack of capital and technical outmodedness, insufficient cash, management knowledge, and management's inexperience (Francesca & Claeys,2010).

Financial information system technologies, according to Frame & Lawrence (2011),are essential tools for efficient management, policymaking, and monitoring of organizational activities. Odero (2014) discovered that the type of financial systems used, financial information, and the degree of regulations in place all affected Saccos' financial output as calculated by changes in return on investment. The challenge of low financial system acceptability among Kenyan Saccos, according to Nyathi, Nyoni, and Bonga (2018), could be attributed to the initial purpose of IT adoption, which was to replace the manual financial approach, which has now inhibited further use and investigation of the system's benefits.

Communication technologies

Communication technologies are technologies that handle activities such as gathering, processing, storing, retrieving, transmitting and presenting information (Yu, 2010). Herselman and Hay (2003), describe communication technologies as technologies that support the communication and co-operation of "human beings and their organizations" and the "creation and exchange of knowledge. They provide new ways of storing, processing information in an organization as well as exchanging information with their stake holders as well (Kollberg & Dreyer,2006). Growth in communication technologies enables organizations to become more competitive. Using communication technologies in organizations enables transparency and facilitates information sharing (Shanker, 2008). Fullantelli and Allegra (2003) state that communication technologies give organizations a wide range of possibilities for enhancing their competitiveness and provide a mechanism for them to acquire new markets.

Communication technologies have made Saccos to have effective communication with their customers, improve customization, market awareness, marketing costs reduction, escalation in

loyalty of customers, increased sales capacity, profitability and performance. These however create customer-based, competitive advantage and boast growth of enterprises.

Empirical review of related literature

Financial information systems and performance of saccos

Gloy and Akridge (2020) studied the use of technology in Wisconsin and Kansas to determine which factors influenced financial information system technologies usage by farmers and asserted that there has been a push towards the adoption of financial information system technologies thus more performance of dairy societies. The increasing growth in international trade, cross border financial transactions and investments which unavoidably involve the preparation and presentation of accounting reports that is useful across various national borders, has brought about the adoption of Financial information system technologies by both the developed and developing countries (Armstrong et al., 2017).

Adekunle and Adejare (2014) studied how adopting financial information system technologies affected performance of enterprises accounts. The study used interview guides and questionnaires. It was found that there was a strong positive relationship between financial information system technologies and performance. The study also found that effective financial information system technologies are critical to sound decision-making, which directly impact small business performance.

Boateng (2015) undertook a study on computerization of record-keeping in rural banks. A case study approach was adopted and used a sample size of 60 respondents. Findings revealed that computerization of accounting systems positively impacted record-keeping. Anokyewaa (2015) examined how computerized record-keeping affect SMEs' performance in Ghana. The research used a case study approach. Most entrepreneurs in the study utilized manual accounting. Those that used computerized accounting systems recorded superior performances. There was a significant effect of computerized accounting on SMEs' operations but the study did not explain the mechanism behind the improved performance.

Aladejebi and Oladimeji (2019) investigated the impact of financial information system technologies on the performance of Nigerian small and medium-sized enterprises. A total of 200 owners were included in the study. Questionnaires were used to collect data. According to the study, financial information system technologies assist managers to better understand the company's performance, which improves its success. The researchers further revealed that, since majority of entrepreneurs did not have general accounting skills and dislike the expense of preparing financial statements, they hold their records manually.

Ploybut (2014) investigated the nexus between financial information system technologies and business performance in Thailand. This research used secondary data sources. The SME financial information was generated from the computer systems used by managers for statutory reporting. The findings revealed widespread use of financial information system technologies, especially accounting software packages. The study also found that Thai SMEs prepare and publish their financial reports to comply with legal requirements. However, there was little awareness of financial information system technologies among SMEs.

Odhiambo (2018) investigated the impact of financial information system technologies on the financial performance of non-governmental organizations (NGOs) in Narok County, Kenya. The study relied on primary data collection from a census sample. The study concluded that the financial information system technologies substantially impacted the financial performance of NGOs in Narok County.

Ghimire and Abo (2013) examined effect of financial information system technologies on SMEs' performance in the Ivory Coast. The study deployed a descriptive survey design. According to the report, financial information system technologies affected the success of SMEs. Lack of budgeting skills and knowledge irregularity were also identified as key factors influencing SMEs' success in the report.

Hamza (2015) examined the impact of financial information system technologies on the performance of SMEs in Ghana. Questionnaires were used to collect data. The study targeted 1000 respondents, but only 300 were sampled. The study discovered that SMEs' financial performance is influenced by financial information system technologies. To improve their financial performance and prosper in an unstable market setting, SME managers must embrace effective financial information system technologies.

Communication technologies and performance of SACCOs

Al-Hawary and Aldafiri (2017) researched the effects of the adoption of communication technology elements on employee performance in the Interior Ministry of Kuwait State. The communication technology elements included hardware, software, databases, networks, and the human element. The study population consisted of managers in the Interior Ministry of Kuwait State. The researcher used questionnaires to collect data for the study. The researcher further used statistical tests to analyze questionnaire items, answer the study questions, and test hypotheses. The researcher found that there was a statistically significant effect, which proved that the adoption of communication technologies affected employees' performance in the Kuwaiti Interior Ministry.

Toader, Firtescu, and Anton (2018) carried out a study to examine the impact of information and communication technology infrastructure on economic growth by conducting an empirical assessment of the EU countries. Using panel-data estimation techniques, the researchers investigated how various indicators of ICT infrastructure affect economic growth. Results indicated that using ICT infrastructure has a strongly positive effect on economic growth in the EU member states, but the magnitude of the effect differed depending on the type of technology examined.

Jabbouria, Zahari, and Khalid (2015) investigated the impact of information technology (IT) infrastructure on innovation performance as a critical issue in Iraqi private universities. The proposed design approach asked participants to respond to a self-reported questionnaire, with five information technologies as the independent variable and subjective measures of innovation performance as the dependent variable. A factor analysis was performed to identify the banks 'IT infrastructure with innovation performance to test. The study population consisted of six private universities in Iraq. From these, 75 academics from the faculty were chosen. The analysis results indicated a positive and statistically significant association between IT infrastructure and innovation performance.

A study conducted by Kimani (2015) examined the impact of communication technologies on organizational performance in the case of Population Services Kenya. A descriptive survey was used. Primary data was collected using semi-structured questionnaires. The population for this study comprised the entire PS Kenya staff, which was 438. The questionnaire was administered electronically for data collection. The study findings revealed that most of the respondents had various IT company devices at their disposal to enable them to perform their duties. The study findings also revealed that there was a positive relationship between the level of communication technology use and organizational performance at Population Services Kenya. The study results indicated that communication technology use explains 82.4% of organizational performance at PS Kenya. The study recommends that organizations should embrace communication technology tools and services to have a competitive edge and improve service delivery to their customers.

Karungani and Ochiri (2017) conducted a study on the effect of ICT infrastructure support on organizational performance using a case of Nairobi City County, Kenya. The research was based on the positivist research philosophy. A quantitative research design and a survey strategy were used. The research employed purposive sampling to select 87 employees in Nairobi City County Government to participate in the research. Data was collected using simple structure questionnaires and analyzed using descriptive and regression analysis. The findings showed that a robust technology infrastructure in procurement improves

communication, enhances efficiency, enhances monitoring and control, makes work easier as well as improves service delivery. Technology infrastructure also plays an important role in improving the level of coordination between members of the supply chain network. It facilitates information flow between members of the supply chain and ensures timely delivery of goods and services between supply chain partners. By improving coordination among supply chain partners, Technology infrastructure eliminates high transaction costs associated with the flow of goods supply from one chain partner to another.

An empirical study conducted by Dalain (2018) analyzed the impact of training and information and communication technology on employee's performance in pharmaceutical manufacturing companies in Amman. Two independent variables were defined namely: a) Training and b) information and communication technology. The dependent variable was defined as employees' performance. The study population consisted of (15) pharmaceutical manufacturing companies operating in Amman. The study used stratified random sample. To collect the primary data, a questionnaire survey was distributed to 120 managers. The results showed that training was the most significant factor. It positively and directly regresses on employees' performance, followed by information and communication technology, which also positively and directly regresses on employee's performance.

RESEARCH METHODOLOGY

This study used descriptive research design. The study targeted all the 42 deposits taking Saccos (DTSs) in Nairobi City County licensed by SASRA at end of 2023. Nairobi City County was chosen as it is the financial headquarter of most of the deposit taking Saccos in the country and most of them are also based in Nairobi City County. The researcher focused on Saccos which are licensed in terms of equipment, capital base, county coverage and skilled human resources. The researcher targeted one person from all three level of management from each sacco that is senior management, middle level management and low-level management giving a total of 126 respondents. A census is a survey conducted on the full set of observation objects belonging to a given population or universe. The current study comprised of 42 the deposits taking Saccos in Nairobi City County which is relatively small size population and hence there was no need of sampling. Therefore, a census method was adopted for this study. The study employed self-administered structured questionnaires as the tool for data collection. According to Mugenda and Mugenda (2009), a questionnaire is a research instrument consisting of a list of questions and other prompts for gathering information from respondents.

The analytical model was based on multiple linear regressions. Multiple regression is an extension of simple linear regression. The significance of the relationship between each of the independent variables and performance of was established using the f-test. The significance level being 0.05 meaning 95% confidence level. In this study coefficient of correlation (r) and coefficient of determination (r^2) was used to determine the nature and magnitude of the relationship. Correlation coefficient was used to measure the degree of relationship between each independent variable and the dependent variable.

RESEARCH FINDINGS AND DISCUSSION

A total of 126 questionnaires were sent to the targeted 126 senior management, middle level management and low level management from 42 deposits taking Saccos) in Nairobi City County licensed by SASRA; from which 103 questionnaires were returned completely filled, depicting a response rate of 81.7% which is good for generalizability of the research findings to a wider population. The good response rate was achieved by the researcher patiently waiting for the respondents to fill all sections of the questionnaire and also giving ample time to some busy respondents to fill the questionnaire and coming back to pick a completely filled questionnaire.

Descriptive statistics

These are descriptive statistics based on the study's independent variables (financial information system technologies, communication technologies, human resource information system, product innovation) in as far as they are perceived by respondents to influence performance of DT Saccos in Nairobi County (dependent variable). They are summarized responses measured by Likert scale of measurement showing measures of central tendency and dispersion.

To begin with; table 4.1; this dataset assumes normal distribution, since most of the values are within one standard deviation on either side of the mean- thus showing normal small spread without outliers. That is, the dataset shows small spread, because all values are close to the mean, yielding smaller variance and standard deviation.

More so, as shown in table 4.1, the values for skewness (degree and direction of asymmetry) and kurtosis (peakedness), are well within ±1.96 limits, suggesting that the departure from normality is not extreme. The values of skewness show both positive and negative implying that some data are slightly right-skewed while some slightly left-skewed. Kurtosis values fall within +1 and -1 showing that few observations highly deviate from the mode.

Table 4.1 Descriptive Statistics

		Financial information system	Communication technologies	Performance of DT-Saccos
N	Valid	103	103	103
	Missing	0	0	0
Mean		3.5110	3.5317	3.5419
Mode		4.00	4.00	4.00
Std. Deviation		.99364	.91119	1.03849
Skewness		-.599	-.713	-.720
Std. Error of Skewness		.240	.240	.240
Kurtosis		-.395	-.048	-.345
Std. Error of Kurtosis		.476	.476	.476

In terms of interpreting descriptive statistics, based on mean and mode, first, the mean of financial information system is 3.5110 (round to 4 is agree on the likert scale) with a std deviation of 0.99364 and a mode of 4.00 (agree) implying that most respondents generally agreed that financial information system has an effect on the performance of DT-Saccos in Nairobi County. These results are supported by some previous studies such as Gloy and Akridge (2020) who studied the use of technology in Wisconsin and Kansas to determine which factors influenced financial information system technologies usage by farmers and found that there was a push towards the adoption of financial information system technologies since it enhanced performance of the studied dairy societies.

Secondly the mean of communication technologies is 3.5317 (round to 4 is agree on the likert scale) with a std deviation of 0.91119 and a mode of 4.00 (agree) implying that most respondents generally agreed that communication technologies have an effect on the performance of DT-Saccos in Nairobi County. These results are supported by Kimani (2015) who examined the impact of communication technologies on organizational performance of Population Services Kenya; and found that communication technology use explains 82.4% of organizational performance at Population Services Kenya. The study recommended that organizations should embrace communication technology tools and services to have a competitive edge and improve service delivery to their customers.

Finally using secondary data, first distribution and proportion of assets of DT-Saccos based on three tier categories for the years 2020-2022 showed that total assets for DT-Saccos with total assets above kshs.5billion had an increase in proportion to total assets from 72.03% (2020) to

75.61% (2021) to 77.56%(2022) confirming having substantial financial power for technology adoption saved on operational costs/expenses., thus boosted return on assets.

However those DT-Saccos with total assets between Kshs. 1 Billion and Kshs. 5 Billion experienced decline in proportion to total assets percentage; 22.76% (2020), 19.56%(2021), 18.27%; and those with total assets below Kshs. 1 Billion also showed decline in Proportion to total assets, that is, 5.21% (2020), 4.82% (2021), 4.18% (2022), implying those these DT-Saccos had no substantial financial power to roll out upgraded and state of the art technologies or was experiencing decline in rate of return on assets due to heavy expenses/costs incurred in implementing technological adoption strategy.

Table 4.2 Distribution of total assets of DT-Saccos within 3 Tier Categories

Category of DT-Saccos by total assets size	***Total assets (ksh. billions)***			***Proportion to Total assets***		
	2020	2021	2022	2020	2021	2022
Total Assets above Kshs. 5 Billion	452.13	522.57	592.14	72.03%	75.61%	77.56%
Total Assets between Kshs. 1 Billion and Kshs. 5 Billion	142.86	135.21	139.49	22.76%	19.56%	18.27%
Total Assets below Kshs. 1 Billion	32.70	33.32	31.88	5.21%	4.82%	4.18%

Source; SASRA supervision annual report, 2023

Lastly in terms of membership and market share as shown in table 4.4, government based DT-Saccos (state corporations, teachers, general services) showed significant increase in membership and market share while Community Based SACCOs, County Government and Private based Saccos showed a decline in membership and market share for the years 2021-2022.

Table 4.3 Distribution of membership and market share

	Total number of members in millions		***% to Total Membership (Market share of Total Membership)***	
Industry/sector of DT Sacco	**2021**	**2022**	**2021**	**2022**
Community Based-SACCOs	0.56	0.60	14.21%	14.00%
County Government	0.09	0.09	1.58%	1.45%
State Corporation	0.19	0.21	3.46%	3.63%
Teachers	1.25	1.44	20.87%	22.48%
General services(Gov't)	0.41	0.45	7.20%	7.44%
Private Based-SACCOs	0.43	0.39	9.11%	8.05%

Source; SASRA supervision annual report, 2023

Correlation analysis

Correlation analysis was computed using Pearson's product moment correlation coefficient to determine linear relationship between the study's conceptualized independent variables (financial information system, communication technologies, human resource information

system, product innovation) and the outcome variable (performance of DT-Saccos in Nairobi county).The results showed that all predictor variables (financial information system 0.833, communication technologies; 0.866, had positive significant correlation with the dependent variable (performance of DT-Saccos).

Table 4.4 Correlations

		Financial information system	Communication technologies	Performance of DT-Saccos
Financial information system	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	103		
Communication technologies	Pearson Correlation	.599**	1	
	Sig. (2-tailed)	.000		
	N	103	103	
Performance of DT-Saccos	Pearson Correlation	.833**	.866**	1
	Sig. (2-tailed)	.000	.000	
	N	103	103	103

Communication technologies had the highest correlation coefficient (0.866); implying that adoption of feasible communication technologies enhance the performance of deposit-taking SACCOs by improving efficiency, transparency, and accessibility of financial services through mobile banking, digital loan management, and real-time communication.

Financial information system was the second with correlation coefficient (0.833), implying that a functional financial information system streamlines processes, improves accuracy, and enhances overall efficiency, leading to better performance and member satisfaction for SACCOs.

Multiple regression analysis

From the values of unstandardized regression (β) coefficients with standard errors in parenthesis (table 4.5), all the independent variables; financial information system; β = 0. 554 (0.102) at $p<0.05$; communication technologies; β = 0.467 (0.098) at $p<0.05$; all significantly predicted performance of studied DT-Saccos in Nairobi County (dependent variable).

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.364	.066		5.511	.000
	Financial infor system	.554	.102	.481	5.439	.000
	Communication technologies	.467	.098	.410	4.757	.000

a. Dependent Variable: Performance of D-TSacccos

Therefore, the study's ultimate multiple linear regression equation for overall significant multiple linear influence of the study's independent variables (financial information system, communication technologies) on performance of DT-Saccos in Nairobi County (dependent variable) is;

$y = 0.364 + 0.554X_1 + 0.467X_2$

Where;

y= performance of DT-Saccos in Nairobi County

X_1= Financial information system

X_2= Communication technologies

Conclusions

First, the study concludes that financial information system can greatly enhance the operational efficiency, customer service, and strategic capabilities of deposit-taking Saccos, driving superior performance.

Secondly, effective communication technologies enhance the operational efficiency, member engagement, and overall performance of deposit-taking Saccos by improving service delivery, facilitating real-time interactions, and providing valuable insights for decision-making.

Recommendations

First, for deposit taking Saccos to realize superior performance, they should adopt an effective financial information system that can greatly enhance operational efficiency and customer service delivery.

Secondly, the information communication technology department of deposit taking Saccos should roll out an upgraded and secure communication system that offers seamless addresses customer needs, engagements and complaints resolutions.

Areas for further studies

First, a similar study can replicate covering all Saccos in Kenya to generalize findings to a wider population.

Secondly, a longitudinal study design can be adopted using time series data for a period of five years so as to establish the sustainability of technological strategies in financial institutions

Thirdly, a similar study targeting all Saccos in Kenya can be done to evaluate customer satisfaction of financial information.

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