

## Effects of Information Communication Technology Adoption on Financial Performance of Deposit Taking Saccos in Eldoret Town



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**ABSTRACT:** Kenya Vision 2030 recognises the critical role of information and communication technology (ICT) as an amplifier for innovation, growth, and competitiveness in all organisations, which ultimately contributes to better economic productivity. The general well-being of the populace has been stabilised by economic stability. The emergence of digital inclusive finance has improved people's quality of life while reducing financial barriers, enhancing the credit system, and allocating resources as effectively as is feasible. The main objective of this study was to assess the effects of Information Communication Technology (ICT) adoption on the financial performance of the savings and credit cooperative societies (SACCOS) in Eldoret town. The study was guided by the following objectives to determine the effect of mobile banking on the financial performance of the SACCOS in Eldoret town and to determine the effect of internet banking on the financial performance of the SACCOS in Eldoret town. The study utilised the Diffusion Innovation Theory. The study adopted a descriptive research design to obtain pertinent and precise information on the current status of the phenomena. Eleven authorised SACCOS in Eldoret that accept deposits were the focus of the research. Questionnaires were used in the study to gather data from primary sources. The gathered data was coded, edited, and then SPSS version 29 was used for analysis and presentation. The study findings found that mobile banking played a crucial role in saving time for both clients and Sacco employees (mean = 3.46, std deviation = 1.268), also the study established that internet banking significantly increased transaction volume per day compared to traditional methods (mean = 3.84, std deviation = 1.153). The study concluded that accessibility and user-friendly interface of mobile banking enhanced usability and appealed to a wide range of users. The study recommended that the SACCOS should focus on expanding and promoting mobile banking services, given their demonstrated effectiveness in optimizing time management and enhancing customer satisfaction and the SACCOS should leverage internet banking to increase daily transaction volumes and improve financial efficiency.

### BACKGROUND TO THE STUDY

A cooperative is a self-governing group of people that work together to run a jointly owned business in order to satisfy their shared cultural, economic, and aspirational needs (Empower, 2016). Currently, the cooperative movement is founded on the ideas of free and open memberships, democratic governance, membership, economic participation, independence, and individuality (International Cooperative Alliance, 2017).

Information Communication Technology (ICT) is what drives our economy today, financial innovation came as a result of advancement in ICT. Success of every financial institution depends largely on the level of adoption of ICT in the organization. Over one billion individuals are members of cooperatives worldwide. More than 250 million people throughout the world work for cooperatives or are members of cooperatives to make a living (International Cooperatives Alliance, 2017).

Lorenzo Bolognini's (2012) history of mobile banking includes the inception of mobile banking apps, WAP, SMS, and mobile internet banking that use the internet to send money to a customer's mobile number so it may be withdrawn via m-pesa.

Individual financial institutions have taken various strategies to increase competition in the market from other financial institutions and to increase their profitability. Satell (2017) argued that a firm's competitive advantage can result from a financial innovation that is appropriately incorporated. When tackling business problems, organizations can employ a variety of approaches, including fundamental research, breakthrough innovation, sustaining innovation, and disruptive innovation (Onyango, 2021). The strategy used for innovation is determined based on the organizational ability in context of the resources, knowledge, and abilities desirable to implement a particular invention. The Africa Confederation of Co-operative Society Savings and Credit Association (ACCOSSA) was created as a Pan African structure in Nairobi, Kenya, in 1965. It was founded to advance the goals of the SACCO Society, give

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members of the Society a discussion system, provide insurance for life savings along with loan protection, and instruct identify participants on a variety of credit union subjects. (Thinyale, 2019). Notably, the Kenyan government acknowledged co-operatives as appropriate frameworks that would allow individuals can accomplish their goals and take part in the country's economic development after independence. The government responded by taking action, which led to the SACCO Society movement's rapid development and national expansion. These SACCOs stipulated various kinds of financial services, but loans secured by members' share capital consisted their most important the suggestion. (Gardeklint, 2009).

As English-speaking nations such as Ghana, Uganda, Nigeria, Tanzania, and Kenya were just some of the first African nations to become members of SACCO. The majority non-English speaking African countries joined the SACCO community in the 1970s following starting to recognise SACCOs in the 1960s. (Muturi, 2018). SACCOs have recently undergone substantial financial invention in their efforts to offer financial services to the underprivileged and working class in their efforts to promote financial inclusion and financial deepening. This has received a lot of support in nations including Colombia, India, Brazil, and the United States (Duguma & Han, 2018). Africa, which is committed to achieving the sustainable development objectives, is more in need than any other region of the world of the financial innovations found in Savings and Credit Co-operative organizations. Ethiopian SACCOs have been able to mobilize additional deposits because to the development of innovative savings products, which helps them maintain their financial viability. In African nations like Uganda, Kenya, Malawi, and South Africa, automation and digitization have eliminated paper records of transactions and made them simpler and more open. By expanding its membership across national boundaries, it lowers operating costs (Duguma & Han, 2018).

In 1965 the number of SACCOs in Africa has increased to the point where the continent's SACCOs established the Africa Confederation of Cooperative Society Savings and Credit Association (ACCOSSCA), with the main goals of ACCOSSCA's formation to further the SACCO ideals, provide SACCO insurance, and inform members of SACCO-related matters, at 2010 the research show that SACCOs in Africa are still struggling as the economy of the land, (Jepkorir 2022)

Kenya's first cooperative was known as the Lumbwa Co-operative Society. It was established in 1908 by European farmers in order to take advantage of economies of scale, through the purchase seeds, chemicals, fertiliser, and other agricultural inputs before selling their products, Kenya Union of Saving and Credit Co-operatives were established in order to replace Lumbwa Co-operative Society in the supply of agricultural inputs (mutinda 2022).

In particular, the overall goal from 1964 to 1993 was to speed up the nation's economic development, especially in the rural areas, by using SACCOs. To guarantee that SACCOs were properly directed to achieve the government's development agenda, the government guided their activities while still providing grants and subsidies. Indeed, SACCO societies play a vital role in almost all sectors of the economy (Khumalo, 2008). In fact, the governing body regards the Kenyan cooperative movement as one of its financial pillars. According to (Gachora 2017), the sector of cooperatives contributes over 30% of the nation's savings. For the majority of Kenyans, cooperatives are a major factor in their economic development and an enhancement of their standard of living both in rural and urban areas. Based on Ndung'u's (2010) study, SACCO societies had accumulated over Ksh 200 billion in savings.

### **PROBLEM STATEMENT**

Despite adoption of ICT in SACCOs, little knowledge exist on how technology has affected financial performance. Past studies such as Gichuki (2021) carried out a study on the Influence of ICT implementation and the use on Sacco innovativeness, innovations and performance the research focuses on SACCOs in Nairobi County the research deals majorly on growth membership while Koech et al. (2021) researched on Effects of ICT adoption on financial performance of a Sacco the research was done and researcher major computerization in their study, other research was carried out in commercial bank and not SACCOS and it is for this reason that the researcher carried out a research on effects of ICT adoption on financial performance of deposit taking SACCOs in Eldoret registered under SASRA.

### **Research Objectives**

This study was guided by the following three specific objectives;

- i. To determine the effect of Mobile banking on the financial performance of SACCOs in Eldoret town in Kenya.
- ii. To determine the effect Internet banking in the financial performance of the SACCOs in Eldoret town in Kenya.

### **Research Questions**

- i. To what extent has mobile banking influenced financial performance of the SACCOS in Eldoret town in Kenya?
- ii. What has been the effect of internet banking on the financial performance of the SACCOS in Eldoret town in Kenya?

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## LITERATURE REVIEW

### Mobile Banking Internet Banking and the Financial Performance of SACCOs

According to an earlier research, commercial banks' financial performance has been helped by mobile banking. (Ondigo 2018). Most Customers do not like the idea of working to bank for transactions, everybody likes to do things at their own comfortable place, with advancement in technology customers are now able to obtain such services such as, checking balance, deposit money to account, withdrawals of money, borrowing of loan, and payment of loan among other services Mobile banking have the following advantages easy access commonly requested information accessible anywhere, at any time, and in any format at the customer's convenience all without the need to buy pricey or extra equipment. Issuing of instrument directly to the bank. Assurance of reliability, confidentiality and security of information, Reduction in mailing and delivery charges as these costs are passed on to the customer. (Kanini 2019) based on his research on deposit taking Saccos' financial performance and financial innovation strategy, he came to the conclusion that mobile banking has benefited customer service delivery while decreasing expenses and improving effectiveness, which has helped retain customers through customer loyalty.

Olweny (2020) The world demands additional resources for the creation of ICT infrastructure, along with laws that encourage innovation and improve being adopted., there is much to be done in deployment of technology for early adoption was not user friendly and had limited extend, According to Karachi (2022), there is no denying that Sacco's was stranded in the deep end of the digital sea in the post-Covid-19 era and will require the use of online lending for both short-term (mobile loans) and over time (development loans). As at 2013, Anazodo (2013) in his study found out that although there have been competitive pressure and perceived benefits of ICT solution, most institutions are yet to exploit its full potentials in their operations, the challenge having been corrupt practices, irregular supply of energy and internet connectivity and expert skills. Mathur (2009) concluded that ICT is of great importance in such a way that adoption of it give a company its competitiveness.

Alalwan et al. (2016) investigated the factors affecting the acceptance of mobile banking. 343 individuals filled out a form for a field survey that was employed to collect data. The study's findings demonstrated that performance expectations, effort expectations, pricing expectations, and trust all had a significant and beneficial influence on behavioral intention. The study found that previous experiences and perceptions of utility, simplicity of use, dangers, and risks strongly influenced respondents' intentions to utilize mobile banking. The study centered on adoption of mobile banking but not how it impacts on financial performance. The research was in Jordan and not Kenya.

Mabwai (2016) aimed to ascertain how mobile banking affected the financial performance of Kenyan commercial banks. Only secondary data was derived from the financial accounts of commercial banks, were used in the study. Descriptive and regression analysis were employed to evaluate the data. The study suggested that commercial banks in Kenya have performed better since adopting mobile banking. This study was biased to commercial banks only and not SACCOs.

Harelimana (2017) looked into how the use of ICT has affected the financial performance of microfinance firms in Rwanda. A case of Network for International Microfinance. The study used both 132 financial institutions, picked at random, and employed descriptive research methodology. The study methods for analysing both quantitative and qualitative data on a sample of was carried from the year 2011 to 2015 It came to the conclusion that although financial innovations had a favourable influence on profitability, the intensity of the effect was determined to be minimal since microfinance organizations had made few investments in financial innovations (Harelimana, 2017). The research centred on financial performance of microlending organizations and not of DTS in Kenya. In their 2016 study on mobile banking in rural Karnataka, Kishore & Sequeira discovered that behavioural intentions to use mobile banking services were strongly influenced by performance expectations, effort efficiency, social influence, and attitude. The research didn't investigate the impact ICT on financial performance DT SACCOs but micro finance . The study was conducted in rural Karnataka and not Kenya

### Internet Banking Internet Banking and the Financial Performance of SACCOs

Internet banking is the practice of using a public or private network, like the internet, to access accounts, execute transactions, and obtain the most updated information on financial products and services .Internet banking , IB, also known as e-banking, is a system which enables bank customers to access their account details and general information about the products and services provided by the bank at any time by using the bank's website (Penida & Sunsern 2012).

According to Wachira *et al* (2014) research done on an evaluation of the perceived effect of ICT's in Kenya, data was collected by use of questionnaires and finding shows that with the use of ICT there is an increase in deposit, dividends rate also increase and therefore market share. Infrastructure in the SACCO show to have help to cultivate new market, makes communication easy, findings further indicates that there exists an effect in ICT policy and performance.

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Ileri (2017) conducted research on Effectiveness of ICT on the operation of SACCO, the researcher based his research in Nairobi Town, descriptive research design was used in the study. The findings shows that due to financial management system, the SACCO had produced accurate and timely financial statements, it also indicated that, it had improved production of balance sheet statement and cash flow statement as well as maintenance of asset, findings shows that management system improve SACCO performance. Generally, the findings indicates that technology strategy improves competitiveness, that is firms with innovative experience are prepared to make productive use of ICT.

Gichuki (2021) concluded in his research that membership is SACCO and that without membership there is no SACCO, the study use various implications such as growth membership, total assets, net income, and revenue of SACCO ,according to researcher ,membership growth rate was used as primary measure of performance, in order to asses correlation analysis was employed to examine the relationship and the findings indicates a positive correlation between SACCO membership ,total assets, therefore contribute significantly to SACCO performance, generally the results indicates a strong positive correlation between SACCO membership, total assets, net revenue and net income.

Okiro (2013) investigated the impact of internet and mobile banking on the operations of Kenyan financial institutions. The study utilised both descriptive and qualitative research designs, dependent on its objectives and the type of data it in question. The objective was to provide readers a thorough grasp of mobile and internet banking, how it was used in financial institutions, and the effect it had on their productivity. Data collection employed primary sources. The intended respondents were given both open-ended and closed-ended questionnaires. Utilizing both quantitative and qualitative methods, the collected data was examined. Qualitative data was analyzed utilizing statistical data analysis. A positive correlation was established. The study concentrated on all financial institutions, whereas the current study narrowed down to DT SACCOs in Kenya in Eldoret registered under SASRA .

Mulwa (2017) evaluated how online banking affected Kenyan commercial banks' financial performance. It used descriptive design. A total of forty commercial banks had been the study's target audience.. The study used a data collecting form and the Pearson correlation coefficient to determine how online banking affects bank performance. The impact of internet banking on financial performance was examined using the other inferential test and multiple regression analysis. The study showed that the rise in online client deposits made possible by internet banking caused ROA in commercial banks to trend upward. The research concluded that a substantial, favorable connection between internet banking and financial performance of commercial banks existed.This study focused on commercial banks while the focus of the current study was the deposit taking SACCOs in Kenya.

Ileri et al. (2017) report that after researching the impact of IT on the operations of Saccos in Nairobi, they came to the conclusion that Sacco members would access their savings, accounts, and loan disbursement all through ATMs. The performance of SACCOs was further impacted by the ATM system, which increased efficiency and effectiveness within the SACCO. Kamau (2018) conducted research on the financial performance of deposit-taking SACCOs in Nairobi City County as well as their innovative technology offerings. The study utilized a descriptive survey research approach and included 410 management staff members of SACCOs in Nairobi City County that accept registered deposits. Questionnaires are utilized in the study to obtain data. The findings exhibited a strong correlation between financial performance and innovative technical capabilities. The study it was focused only on Nairobi County and suggested futher research to be done,therefore these study trys to fill this gap.

Luka (2012) noted that ICT investment depends on how technology is used in business processes that is, company's ability to innovate its work processes and routines within support of ICT.Olajide (2015) concluded that ICT is a major tool in maintaining a competitive position in the market as well as increasing organization productivity. A good ICT policy is important for efficient managerial and operations in both public and private sectors. ICT policy is all-time guiding principles that influence decisions and actions required for the smooth running of the organization Asma (2020) said that entrepreneurs with business understanding have acknowledged the power of information technology (IT) tools for reaching business targets. It promotes the attainment of corporate objectives and simplifies workflow. ICT today is a major determining factor for success in all the organization is a tool for reaching business targets, It makes it possible the business to improve its internal procedures

(Siddik, 2016). Rauf et al. (2014) conducted a study whether online banking has an impact on liquidity and asset quality in order to ascertain whether e banking affect financial position of a bank.They came to the conclusion that a growth in e-banking led to a greater than commensurate rise in liquidity and asset quality across Pakistan's whole banking system.

Mateka & Omagwa (2017) discovered through his research that online banking boosts revenue and is a key component of cost management in banks, he continue to say ,the bank's primary sources of income is internet banking, which has created further possibilities for revenue growth. that comes as a result of wide distribution of loan to customers without many restrictions hence increasing interest ,internet is also able to update customer on the pay ,when to pay and if they have defaulted in payment by use of electronic remitters and advice.

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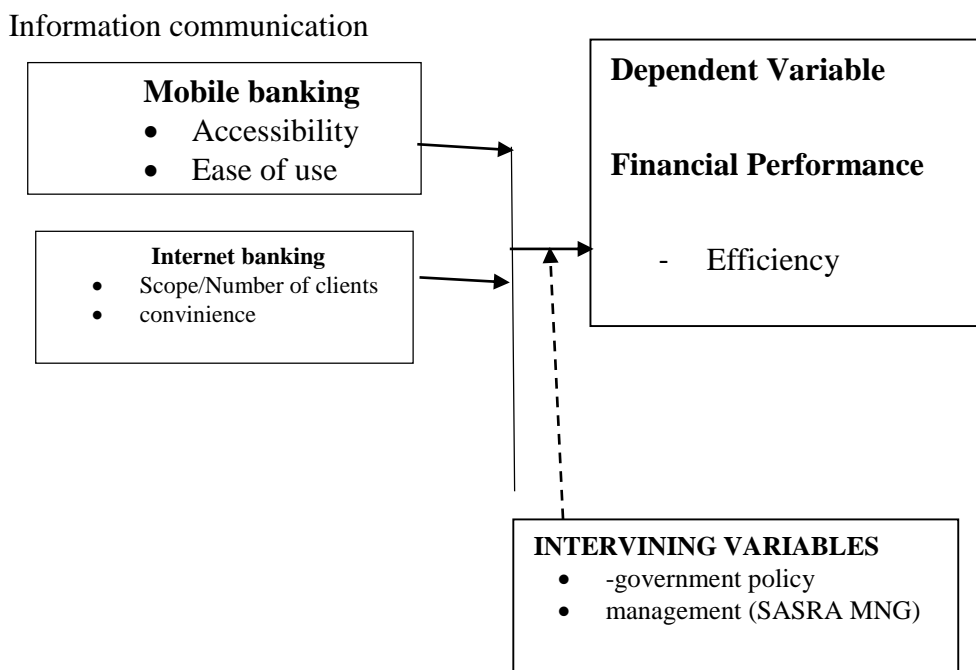
## THEORETICAL REVIEW

### Theory on Diffusion and Innovation

The French sociologist Gabriel Tarde discussed theory for the first time historically in 1903 (Toews, 2003). The term diffusion of innovation describes the method by which individuals embrace a new idea, item, or behaviour. (Rogers 2011) concluded that the Diffusion of Innovation theory is regarded as a helpful change model for guiding the innovation when technological innovation is presented and modified to meet the needs of adopters at all levels. He also points out the importance that peer networking and communication are to the adoption method. Kelly (2021) describes the theory of diffusion of innovations which explains how novel advancements in science, technology, and other domains permeate societies and cultures before becoming widely used. The theory of diffusion of innovations attempts to clarify the process and rationale behind the adoption of novel concepts and techniques, which could involve extended durations. Innovation has developed over a long period of time, giving rise to ICT, ICT can be said as the infrastructure and components that make up modern computing, i.e., all gadgets, networking elements, programmes, and systems that when put together enable individuals and organisations to function effectively and efficiently. This theory explain how ATM has been adopted in banking sector in general, therefore the theory is significant in the study as it describe a useful change model that can be used to direct technological innovation, ensuring that it is presented and modified to satisfy the needs of all potential adopters in this case Saccos financial performance.

## CONCEPTUAL FRAMEWORK

### INDEPENDENT VARIABLES



## RESEARCH METHODOLOGY

### Research Methodology and Research Design

The study adopted a quantitative research approach. By employing this approach, the study aimed to collect numerical data from a representative sample of SACCOS in Eldoret Town, utilizing questionnaires to gather information on ICT adoption and financial performance indicators. Research design is the strategy that directs a research study to solve a research problem addressing such variables as mobile banking, ATM and internet banking, the research was conducted through descriptive research design that involved qualitative research, (Mugenda and Mugenda 2003) concluded that descriptive research design describe the aspects the way they are without influencing it in any way ,which was designed carefully to make sure the situation is fully described on the situation ,making sure that they minimize biasness as much as possible in data collection and reduce errors in interpreting the data collection.

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## Target Population

The study targeted 66 employees from the licensed deposit taking SACCOs in Eldoret, according to Sacco Society Regulatory Authority (SASRA).

## Data Analysis and Presentation

To analyze the data, the study employed quantitative descriptive statistics, including measures such as mean, standard deviation, and percentages. Before summarizing the data, thorough checks for completeness and accuracy were conducted on the questionnaires, following the guidelines outlined by Mugenda and Mugenda (2013). Sequential coding was applied to ensure consistency and uniformity in the presentation of the data for analysis. The researcher utilized the Statistical Package for the Social Sciences (SPSS) version 29 to analyze the collected data. Additionally, the findings were presented using a variety of visual aids, such as graphs, tables, and pie charts, to enhance clarity and facilitate better understanding of the results.

## RESEARCH FINDINGS AND DISCUSSION

### Descriptive Statistics

#### Mobile Banking and the Financial Performance of a SACCO

	N	Min.	Max.	Mean	Std. Dev.
Use of Mobile banking in making deposit and withdrawals has saved time for both clients and Sacco employees of the Sacco	63	1	5	3.46	1.268
Mobile banking is easily accessible	63	1	5	3.73	1.194
Mostly Mobile banking services are preferable by clients due to its features such as ability to pay bills at their comfort	63	1	5	3.79	1.220
Mobile banking has mobilized savings among Sacco members as clients can deposit money to their savings account	63	1	5	3.75	1.164
With the use of Mobile banking, information is easily accessed, such as checking of account balance	63	1	5	3.83	1.185
Mobile banking can serve as a platform for introducing innovative financial products and services, such as micro-loans, insurance, and investment options	63	1	5	3.84	1.081
Mobile banking generates a wealth of data that can be analyzed to gain insights into member behavior, preferences, and financial needs.	63	1	5	3.79	1.233
Valid N (listwise)	63				

Source: Researcher (2024)

The analysis indicated that the use of mobile banking for deposits and withdrawals saved time for both clients and Sacco employees (mean = 3.46, std deviation = 1.268). Mobile banking was found to be easily accessible (mean = 3.73, std deviation = 1.194). Clients preferred mobile banking due to features like bill payment convenience (mean = 3.79, std deviation = 1.220). Mobile banking also mobilized savings among Sacco members (mean = 3.75, std deviation = 1.164). The use of mobile banking facilitated easy access to information, such as checking account balances (mean = 3.83, std deviation = 1.185). Additionally, mobile banking served as a platform for innovative financial products and services (mean = 3.84, std deviation = 1.081), and generated data that provided insights into member behavior and preferences (mean = 3.79, std deviation = 1.233). These findings gave an implication that the adoption of information communication technology, specifically the use of mobile banking, had significant positive implications for the financial performance of deposit-taking SACCOs in Eldoret Town. Further, the use of mobile banking for deposits and withdrawals saved time for both clients and Sacco employees, indicating increased efficiency. Mobile banking was found to be easily accessible, which made it a preferred method for clients, especially due to features like bill payment convenience. The use of mobile banking also mobilized savings among Sacco members, suggesting that it facilitated better financial management.



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### Internet Banking and the Financial Performance of SACCOs

	N	Min.	Max.	Mean	Std. Dev.
Internet banking has increased transaction volume per day as compared to traditional methods	63	1	5	3.84	1.153
With the use of internet banking clients can easily access variety of products	63	1	5	3.84	1.081
Internet banking in bill payment has improved the image of the Sacco, it is easy to use	63	1	5	3.79	1.233
Internet banking service is convenient as it can be done outside the Sacco premises	63	1	5	3.84	1.153
Fund transfer system have improved cost efficiency among customers	63	1	5	3.57	1.279
ICT makes remote work possible, providing employees with the flexibility to work from anywhere	63	1	5	3.75	1.270
Automated compliance management systems help ensure that organizations adhere to regulatory requirements, reducing the risk of legal issues.	63	1	5	3.70	1.240
E-learning platforms reduce training costs and provide employees with the flexibility to learn at their own pace.	63	1	5	3.60	1.326
Valid N (listwise)	63				

**Source:** Researcher (2024)

The analysis revealed that internet banking increased transaction volume per day compared to traditional methods (mean = 3.84, std deviation = 1.153). Clients could easily access a variety of products with internet banking (mean = 3.84, std deviation = 1.081). Internet banking for bill payment improved the Sacco's image and was user-friendly (mean = 3.79, std deviation = 1.233). Additionally, internet banking's convenience outside Sacco premises was noted (mean = 3.84, std deviation = 1.153). The fund transfer system showed improved cost efficiency among customers (mean = 3.57, std deviation = 1.279). ICT enabled remote work, providing flexibility for employees (mean = 3.75, std deviation = 1.270). These findings implied that the adoption of information communication technology, specifically the use of internet banking, had significant positive implications for the financial performance of deposit-taking SACCOs in Eldoret Town. The analysis revealed that internet banking increased transaction volume per day compared to traditional methods, indicating greater efficiency and productivity. Clients could easily access a variety of products with internet banking, providing them with a more comprehensive and convenient financial services experience. Furthermore, internet banking for bill payment improved the Sacco's image and was user-friendly, enhancing customer satisfaction.

#### Conclusions

The study concluded that clients demonstrated a clear preference for mobile banking, particularly due to its convenient bill payment features, which proved to be practical in various financial tasks. Furthermore, mobile banking facilitated the mobilization of savings among Sacco members, contributing significantly to the promotion of financial inclusion within the community. Moreover, it provided easy access to essential financial information, empowering users to make well-informed decisions. Furthermore, the study concluded that the versatility of internet banking in providing access to a diverse array of products and services catered to the diverse needs of different customer segments. Moreover, internet banking played a significant role in enhancing the Sacco's image through its convenient bill payment options and user-friendly interfaces, thereby further enhancing customer satisfaction and organizational reputation. Importantly, the convenience of internet banking outside Sacco premises emphasized its adaptability to various environments, highlighting its crucial role in modern banking practices.

#### RECOMMENDATIONS OF THE RESEARCH STUDY

- i. The SACCOs should prioritize the adoption of technological advancement components and innovation as they remain crucial to sustain competitiveness and ensure sustained organizational growth.
- ii. The SACCOs should focus on expanding and promoting mobile banking services, given their demonstrated effectiveness in optimizing time management and enhancing customer satisfaction.
- iii. The SACCOs should leverage internet banking to increase daily transaction volumes and improve financial efficiency.

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