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MOBILE BANKING ADOPTION AND PERFORMANCE OF SAVINGS AND CREDIT COOPERATIVE SOCIETIES IN KIAMBU COUNTY, KENYA

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Abstract

Performance of Deposit Taking Savings and Credit Cooperatives (SACCOs) in Kiambu County is deteriorating where 44% of the SACCOs are not meeting the regulator's requirements. Additionally, the SACCOs recorded reduced return on assets of 8% against expected 10%. SACCOs also recorded low deposit of 5.4% against the recommended 8% (2014) and further dropped in 2015 where deposit was 5% while return on assets was 7.5%. Mobile banking has revolutionized how financial institutions conduct business so as to make a niche in a highly competitive environment. The aim of this research was to investigate the influence of mobile banking adoption on performance of SACCOs in Kiambu County, Kenya. The theory of transaction cost, diffusion of innovation and agency were employed in the research. The study utilized descriptive research design that targeted all 14 Deposit Taking Cooperatives in Kiambu County. Purposive sampling technique was used for the identification of three management employees from all the 14 SACCOs in Kiambu County based on their expertise in mobile banking innovations while for the members, convenience sampling aided in the selection of those who visited the banking hall. Semi structured questionnaire was applied in data collection. Six random SACCOs in Nairobi City County were selected for pre-testing to assess the instrument's validity and reliability. Descriptive statistics were used to summarize data while multiple regression assisted in analyzing relationship between the variables. The findings showed that mobile banking had a positive and significant relationship ($r=0.722$, $p<0.05$) while regression demonstrated a significant effect ($\beta=0.72621$, $p<0.05$) indicating that an increase in mobile banking will raise performance of Deposit Taking SACCOs in Kiambu County by 0.72621 significantly. The study concluded that mobile banking has positive and significant effect on performance of Kiambu County SACCOs. It hence recommended enhancement of mobile banking services and introduction of new innovative transaction services to meet the growing needs thus enhance performance.

***Keywords**: Deposit Taking SACCOs, financial innovation, financial services, mobile banking, performance*

Introduction

Performance is the general well-being of a Deposit Taking Credit and Cooperative Society through the utilization of critical resources to achieve objectives in a given time frame (Thuita, 2021). Mobile banking innovation has been considered a significant solution to an organization's performance as it reduces high costs of operations and risks, and enabling environment for long-term performance. Additionally, mobile banking innovation plays a crucial role in the improvement of service delivery and access to financial services (Maina et al., 2020), enhancing liquidity, operations and asset quality (Moki et al., 2019).

Globally, SACCOs are making significant contribution as they fill the gap underserved by the banks in the provision of financial services to the unbanked of the society through affordable credit facility. With almost 760 million members of the sector, the USA is one of the largest with $93 billion gross business from 4 million members. In France and the Netherlands' Robobank, the sector has continued to register impressive performance while in South

America, SACCOs are highly developed in countries such as Brazil, Argentina, Chile and Uruguay (Mmari & Thinyane, 2019). The contribution of the cooperative sector in Greece is evidenced in economic growth and financial empowerment of its membership. However, the sector is presented with dynamic challenges and hostile environment; growing population, emerging technology and societal expectations. Even though the sector has recorded significant achievement, the harsh economic conditions and volatile environment has had significant effect on internal structure leading to performance failures (Kaloglannides, 2020). In most developed and developing countries, the sector is proving essential in the socio-economic development evidenced in Japan where it is considered the backbone of the small enterprises and dominates the agricultural sector. In Malaysia, the cooperative sector commands strong membership serving the majority population that are highly exposed to poverty. However, the performance of Malaysian SACCOs is hampered by fierce competition which has reduced income stream, low management commitment, integrity issues, inadequate member support and expertise within the Sacco board of directors (Omar et al., 2022).

A similar experience is witnessed within the African continent where performance of Malawian SACCOs is hampered due to inability to meet member needs leading to massive withdrawal of deposits. Additionally, the sector is also experiencing poor asset quality, governance and reduced profitability (Mmari & Thinyane, 2019). Even though there is increasing number of SACCOs in Eastern Ethiopia at 395, only 46 of them are subjected to auditing as majority of the SACCOs are dormant while some are managed informally without proper accounting system thereby giving room for mismanagement which have potential effect to performance (Henock, 2019). The same experience is evidenced in Tanzania where the cooperative movement has recorded poor performance attributed to inadequate training with majority of the SACCOs in Ukerewe being managed by people with informal education with very few attending primary education. Additionally, the emerging technology adopted by the cooperative sector in Tanzania is proving challenging for the uneducated personnel to adopt ICT in the modern business environment hence unstable performance. This has led to dormancy evidenced in 13 registered SACCOs in Ukerewe District where only 3 are still in operation. In Sengerema, only 13 SACCOs were still in operations from 19 registered hence impacting on the cooperative prosperity (Lawrence, 2023).

The Kenyan Deposit Taking SACCOs are considered vehicles of investment and savings due to their attractiveness to customer through service provision, reduced collateral requirement, accessibility and their extent in meeting the needs of the informal sector. However, with 7000 SACCOs registered, only 32.5% are operating effectively while 21.4% have collapsed as a result of inadequate technology adoption and inability to meet customer needs. In Narok County, there were SACCOs which recorded poor performance with 20 SACCOs registered but only 17 were active due to lack of capital while others collapsed as a result of loss of membership (Salaton et al., 2020). The trend in poor performance is evident in the Western Kenya SACCOs through non-performing loans which rose from 5.12% (2015), 5.23% (2016) and 6.14% (2017). Despite their increasing number, these SACCOs are facing liquidity issues, credit risk and operational inefficiencies that has negatively impacted on their performance. .

Performance of Kiambu County SACCOs has been low evidenced in reduced return on assets from 8% to 5%. Additionally, SACCOs such as; UNES, Ekeza, Orient and Jitegemee have been placed under SASRA management as they were not giving members dividend (Matu & Muturi, 2019). The Kiambu County Sacco sector is not fully able to meet member needs evidenced in non-paid dividends and loans, low multiplying factor and lack of appropriate

technology to enhance their operations for improved efficiency (Miano & Gitonga, 2020). Even though there have been studies on mobile banking adoption and performance, there is scanty research that specifically targeted Kiambu County SACCOs' mobile banking adoption hence this study investigated the effect of mobile banking adoption on performance of Savings and Credit Cooperatives in Kiambu County.

Objective

To determine the influence of mobile banking adoption on financial performance of Savings and Credit Societies in Kiambu County.

Theoretical Review

Transaction cost innovation theory

According to Coase (1937), transaction cost theory defines the boundaries of firms and explains why they exist. The theory argues that customers may incur costs when making purchases during the transaction; hence, economic factors are examined through the theory as cost defines and evaluates relationships in transaction partnerships (Lit et al., 2019). Williamson (1975) notes that transaction costs arise due to market failures caused by interactions between different factors and human nature within the environment, making transactions cumbersome. The theory has been applied in financial innovation to determine possibility of reducing the apparent costs of transactions and operations. The theory was used as a guideline to analyze performance.

Diffusion of innovation theory

The theory of diffusion of innovation (DOI) was proposed by Rogers (2003) as a process that involves communication of innovation in different platforms in a given period amongst members of a given social system. According to the theory, diffusion may incorporate four elements; innovation-which is an idea or an object that is perceived as new and adding value to the organization. Diffusion, however, is communication in specific channels to create awareness hence increase the adoption. Rogers (2003) added that these channels may consist of mass media where many individuals or a society may obtain information regarding the innovation. The author added that interpersonal communication may also be used to incorporate face to face for more understanding of the innovation. Equally, the time element has been considered important as it communicates the duration it will take for complete diffusion of a particular innovation which varies from an individual, an organization or a society.

The theory of technology acceptance model (TAM2) proposed by Davis et al. (1989) added that compatibility and complexity enhanced DOI hence referred as perceived-ease of use and usefulness. Ventkatesh and Davis (2000) noted that TAM2 tried to overcome the weaknesses of DOI through risk introduction (Abramora & Bohme, 2016), trust and benefits as customers may avoid using an innovation due to risks and fear of losing finances (Okoli & Twari, 2021). The theory was used in the study to analyse how mobile banking innovation has been adopted by Kiambu County SACCOs, looking at the adoption of different products and services, the relative advantage derived from financial innovation, the complexity and compatibility with existing values of the customers hence improved adoption that leads to performance. The theory was therefore critical in analysing mobile banking which was the study's independent variable.

Agency theory

Jensen and Meckling (1976) were the proponent of agency theory proposing a relationship between the principal and the agent. According to the theory,the principal gives directions to the agent to perform certain activities and decision making on behalf of the principal. However, in the course of relationship, a conflict may arise due to separation of power of ownership and firm control which makes the management to have control over information, hence not fully accessed by the principal leading to agency conflicts (Tekin & Polt, 2020).

Santoso et al. (2022) view two types of conflicts in an agency-principal relationship; the first conflict is based on interest as the principal may find it hard to access information. The second conflict is risk sharing which happens when both the agent and the principal have varying risks attitude. Eisenhardt (1989) note that people tend to act in their own interest and benefits hence resulting to conflict (Santoso et al., 2022). The study used the theory to analyse agency relationship existing between SACCO owners and the management where the owners direct the management to innovate for purposes of reducing costs to improve business performance.

Mobile banking and business performance in Kenya

The connection of mobile banking to member accounts and provision of short messages have lead to improved financial performance within the Sacco sector. Muthiani et al. (2024) used descriptive research with a questionnaire to collect primary data from 384 respondents who were derived from 16821 members engaged in mobile banking. Descriptive statistics aided in data summarization through frequency tables, mean and standard deviation. Regression was used to predict mobile banking on financial performance using SPSS Version 20. The findings indicated that mobile banking did not have significant effect on financial performance hence was not considered crucial in enhancing performance. This study measured mobile banking using transaction volume, retention rate, user registration, accessibility and usability.

Innovation is crucial to the success of business through the integration of new ideas, knowledge and business design (Qamruzzaman & Wein, 2019). An investigation by Rono and Munene (2023) analysed how mobile banking affected the performance of Nakuru County SACCOs using descriptive research design with a target population 60 Deposit Taking SACCOs. Due to the small number of the SACCOs, all were included where questionnaire was distributed translating to 54 dully filled and returned. Mobile banking was operationalized using; convenience, security, access and efficiency. Descriptive statistics and linear regression enabled the analysis of primary data. The results showed that mobile banking enhanced financial performance with an R Square of 0.613 indicating that 61.3% of financial performance was as a result of mobile banking. This study however, did not indicate the unit of analysis that provided responses.

An investigation was conducted by Millan et al. (2023) to determine how financial innovation affected loan performance using a descriptive research design. Descriptive analysis was used to explain data patterns, while inferential statistics enabled the generalization of the findings. Loan transaction volume, disbursement and transaction cost were considered. The population consisted of 190 board members and employees of 6 DT SACCOs based in Mombasa County. With 90% response rate, it was found that mobile banking led to very high loan repayment deposits, withdrawals and high loan disbursement through mobile banking leading to the conclusion that mobile banking was widely used in loan-related transactions. The study was based in Mombasa County and used only 6 DT SACCOs. This study enhanced the number of SACCOs to 14 in a different geographical location of Kiambu County.

Mobile banking has created competitive advantage to the Sacco sector thereby improving financial performance. Using a correlation research with 108 Sacco managers derived from five Deposit Taking SACCOs in Kericho County, the study collected data through questionnaire administration. Content validity enhanced the instrument's validity where field experts were involved to improve the tool. Test retest aided in the improvement of the instrument's reliability. Descriptive and multiple linear regression analysed primary data. The results indicated that mobile banking presented strong and positive connection with financial performance ($R=0.729$, $\beta=0.775$) (Chepkorir et al., 2022).

Using a descriptive research design, Maina and Mungai (2019) investigated how mobile banking affected performance of tier-one banks in Kenya. The study targeted 8 tier one commercial banks using secondary data generated from websites of the banks where the ROE of the past five years was obtained. Mobile banking was measured using mobile banking loans, payments, bills, and funds transfers. The results indicated that mobile banking withdrawal positively and significantly affected performance. It also showed an increase in mobile banking withdrawal yearly, hence the adoption of the innovation due to flexibility and convenience. This study was based on tier-one banks in Kenya. The current research targeted cooperative societies based in Kiambu County.

Mobile banking technology has allowed financial institutions to showcase their financial products conveniently to their customers through digital devices (Mugo et al., 2019). The positivist philosophy guided the authors to formulate a hypothesis in the study working with a target population of 110 DTS licensed as of 31st December 2011, where 86 were selected. Independent variables were mobile money transfers, bill payments, deposits, enquiry services and mobile statements. Simple random sampling was used to identify SACCOs, while purposive sampling aided in selecting two technology managers and finance managers. The findings showed that mobile money transfer service was insignificant. However, mobile deposit service, bill payment and statements were significant, while mobile enquiries were insignificant. This study used only Sacco employees while the current study included both employees and members that enhanced the richness of the findings.

Conceptual framework

In this study, the conceptual framework was used to demonstrate the relationship between the variables as indicated in Figure 1.

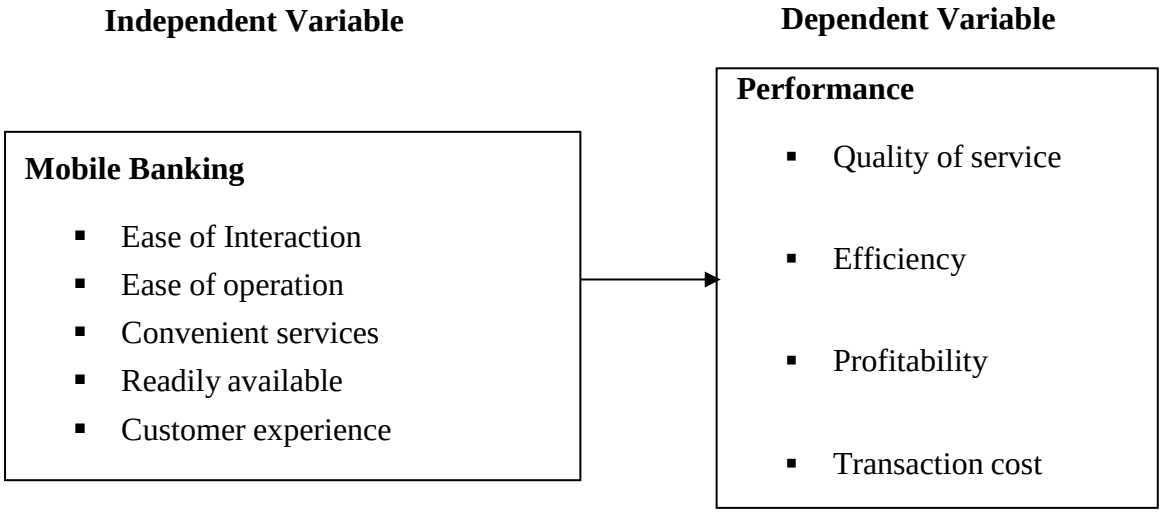

Figure 1. Conceptual Framework

From Figure 1, the dependent variable was performance, while the independent variable was mobile banking which was measured into: ease of interaction, convenient services, ease of operation, readily available and customer experience. Performance was measured through quality of service, efficiency, profitability, and transaction cost. An arrow was added to demonstrate the direction of relationship between mobile banking innovation and performance.

Research Methodology

As per Van et al. (2021), the study employed descriptive research design to illustrate the characteristics of mobile banking adoption and to predict performance of Deposit Taking SACCOs in Kiambu County. The design was chosen since it was less time-consuming and allowed the inclusion of both subjective as well as quantitative methods. Descriptive research design was most suitable as the researcher intended to describe events and to make generalization of the findings across other population (Omair, 2015).

The target population consisted of all 14 SACCOs operating in Kiambu County, Kenya, as of December 31, 2022. All SACCOs with headquarters in the County were selected as indicated in the SASRA (2023) report. The unit of analysis comprised of all Sacco managers and members where purposive sampling aided in the identification of three management staff according to their expertise while convenience sampling enabled the recruitment of three members who visited the banking hall in all the 14 SACCOs. The population was chosen as SACCOs in Kiambu County have experienced challenges related to performance leading to delayed loan processing, long waiting time in FOSA services, poor governance and low product uptake (Gacheru and Muturi, 2018). The inclusion of staff in the population was considered suitable as they participate in innovative activities while the members are the main adopters of the SACCOs products and services hence were found to be critical in providing responses according to the research interests.

Primary data was gathered by questionnaire in this study (Aithal & Aithal, 2020). The questionnaire involved semi-structured questions which were administered through drop and pick. Data from secondary sources such as financial statements, published journals, annual reports, library holdings, university libraries and other research projects were collected. Due to

its simplicity of development and easy to follow rules and principals, the questionnaire was used by the researcher as a tool (Aithal & Aithal, 2020). Pilot test was done to verify reliability and validity of the instrument using 10% of the sample generated from Nairobi City County (Connely, 2008). The assessment of trustworthiness is crucial for ensuring immovable quality in subjective research (Kaivo-oja, 2017). Cronbach alpha coefficient was used to determine reliability with values ranging between 0.00-1.0, with those closer to 1 considered perfect reliability with an acceptable threshold of 0.7 (Adeniran, 2019). From the findings, the aggregate reliability of the instrument was 0.76, which was considered acceptable. The study measured validity by subjecting the instruments to experts who provided feedback for improvement of the research instrument.

Inferential and descriptive statistics were used in data analysis. In order to assess dimensions with the highest concentrations, descriptive statistics were used, such as frequency distribution tables and percentages, mean scores and standard deviations. Additionally, a multiple regression analysis model was employed to predict the relationship between the variables. Data was analysed using version 23 of the Statistical Package for Social Sciences (SPSS).

Results and Discussion

Response rate

In all 14 DT SACCOs in Kiambu County, the researcher distributed 84 questionnaires to 42 management staff and 42 Sacco members. Table 1 presents the results.

Table 1: Response Rate

Response	Frequency	Percentage
Management staff	38	49%
Sacco Members	40	51%
Total response	**78**	**93**
Not responded	6	7
Total	**84**	**100**

Source: Research (2024)

According to the data presented in Table 1, it was found that 49% of employees and 51% of members responded to the study. The overall response rate reached 93% after 78 respondents duly completed and returned the questionnaire. Mugenda and Mugenda (2003) suggest that responses above 70% are considered excellent, while responses between 50%-60% are sufficient hence acceptable for analysis (Mugenda & Mugenda, 2012). A response rate of 93% was achieved inthe study which was considered excellent. Mathu and Kyongo (2017) study on strategic innovation and competitive advantage found an 80% response rate, which the current study has exceeded by recording a 93% response rate. Lavidas et al. (2022) recognize the importance of response rate in research necessary for making inferences about the population. Having received 93% responses, the instrument was considered valid and reliable for making inferences.

Mobile banking and performance

Mobile banking is a financial innovation that allows customers to access financial services through mobile devices (Njoroge & Nasieku, 2023). The study collected responses from

questionnaire instrument developed through a five-point rating scale: 1=Very Low, 2=Low, 3=Moderate, 4=High, 5=Very High. Respondents were required to choose one from the options provided in each statement. Table 2 shows the findings.

Table 2: Mobile Banking and Performance

Statement	VL	H	M	H	VH	Mean	SD
Members can bank with the SACCO more due to mobile banking's ease of interaction.	7.2	5.8	33.3	27.5	26.1	3.59	1.15
There is enhanced transaction due to the ease of operation of mobile banking.	0	5.8	15.9	43.5	34.8	4.07	0.86
Mobile banking is more convenient for members.	7.2	11.6	21.7	29.0	30.4	3.64	1.23
The mobile banking is readily available to the members.	4.3	7.2	15.9	33.3	39.1	3.96	1.11
Mobile banking enhances the member experience.	15.9	13.0	26.1	27.5	17.4	3.17	1.31
Total	**6.92**	**8.68**	**22.58**	**32.16**	**29.56**	**3.67**	**1.13**

Source: Research (2024)

From Table 2, it was found that 7.2% of respondents registered a very low extent that members can bank with the SACCO more due to mobile banking ease of interaction, 5.8% indicated a low extent, 33.3% moderate extent, 27.5% of respondents showed high extent. In comparison, 26.1% of respondents noted a very high extent to the statement. The mean score for this statement was 3.59, with a standard deviation of 1.15. Maina and Mungai (2019) reported how mobile banking resulted in a high number of withdrawals as a result of convenience and flexibility, which agrees with the current study results that the ease of interaction has enhanced banking with cooperative societies in Kiambu County. The 33.3% of respondents indicating a moderate extent suggests that SACCOs in Kiambu have not fully embraced mobile banking hence agree with Chepkorir et al. (2022), who reported that 45% of respondents disagreed with the preference of SACCOs for mobile banking due to its features. Additionally, 40% of respondents disagreed with the notion that SACCOs frequently utilize mobile banking in Kericho County.

The results demonstrated that no respondent recorded very low extent to the statement "there is enhanced transaction due to ease of operation of the mobile banking", 5.8% of respondents were of low extent, and 15.9% indicated moderate extent, 43.5% of respondents showed high extent. In comparison, 34.8% of respondents indicated a very high extent to the statement (Mean=4.07, SD=0.86) which showed mobile banking's ease of operations enhances transactions from the members, which is in line with the findings of Mikae and Mogwambo (2022), who reported that mobile banking enhanced their transactions, where they were able to regularly deposit and withdraw without travelling to physical offices. This showed that mobile banking was easy to operate with enhanced regular transactions, enabling the members to

transact more using their mobile devices, hence agreeing with the current findings.

The study found that mobile banking was more convenient to the members where 7.2% of respondents noted a very low extent to the statement, 11.6% of respondents indicated a low extent, and 21.7% were of a moderate extent, 29.0% indicated a high extent. In comparison, 30.4% of respondents registered a very high extent to the statement. Scores ranged from 3.64 to 1.23, with a mean of 3.64. The study's results concur with the findings of Omondi (2015), who reported that mobile banking had more reliability and convenience, which enhanced customer satisfaction.

The findings indicated that mobile banking was readily available to the members where 4.3% of respondents indicated a very low extent, 7.2% of respondents noted a low extent, and 15.9% ofrespondents considered the statement to be a moderate extent, 33.3% of respondents indicated a high extent while 39.1% were of very high extent. The mean score for the statement was 3.96, with a standard deviation of 1.11. This finding is consistent with the results of Njoroge and Nasieku (2023), who highlighted how mobile banking has expanded customer reach to previously unbanked populations, consequently enhancing performance. Furthermore, Alqiwan et al. (2017) emphasized the importance of customer motivation in successfully implementing mobile money. Therefore, SACCO management should consider meeting customer needs to enhance adoption and reach, thereby improving performance.

It was established that mobile banking enhances member experience where 15.9% of the respondents indicated a very low extent, 13.0% noted a low extent, 26.1% reported a moderate extent, and 27.5% noted a high extent. In comparison, 17.4% of respondents showed a very high extent to the statement. There was a standard deviation of 1.31 with a mean score of 3.17. Qualitative findings from Respondent 16 showed that:

> *"There is members' satisfaction that makes them do more business with the SACCO…. there is commission due to transaction…. reduced administrative costs to the SACCO…. Members can make payments and monitor their accounts often…. Increased number of transactions, repayments ….. and enhanced service delivery through mobilebanking" (Respondent 16, Management Staff)*

While observing a member, Respondent 15 indicated:

> *"Has brought about access to one's account reducing on time to visit the office…. services in your hands wherever you are and whenever you need…ease of use and accessibility increasing convenience in monetary based transactions …has enabled meto track my transactions hence more transparency (Respondent 15, Member).*

The findings show that mobile banking improves customer experience and enhancing customer satisfaction. Mobile banking also reduces administrative costs incurred by the SACCOs, ultimately enhancing their performance as members can conveniently access services anywhere and view their statements, increasing SACCO's transparency. Rono and Munene (2023) reported that 33% of respondents agreed that mobile banking enhanced 24/7 access to financial services to the members of Nakuru County SACCOs, hence agreeing with the current study findings that there is enhanced member experience as a result of mobile banking for members of SACCOs based in Kiambu County.

This demonstrates that as SACCOs increase their financial innovation in mobile banking, it

willbe able to provide more customer experience thereby retaining its customers and enhancing performance. The aggregate mean score for mobile banking was 3.67, with a standard deviation of 1.13 indicating that respondents rated to a high extent that mobile banking affects business performance for Savings and Credit cooperatives in Kiambu County. Chepkorir et al. (2022) established that mobile banking influenced performance of Kericho County SACCOs, where the mean score was 4.23 with a standard deviation of 0.66. The study findings show that mobile banking has a moderate influence on the performance of SACCOs in Kiambu County. Al-Jabri and Sohail (2012) on diffusion of innovation reported how mobile banking was highly adopted due to its perceived relative advantage. The current study revealed that there is increased convenience and access to SACCO products which add more value to the customersthus resulting to high adoption.

Correlation analysis

The study used Karl Pearson correlation coefficient to analyze the degree and direction of the relationship between financial innovation and performance. Karl Pearson was adopted in the study based on its wide application in academic research (Kafle, 2019). Table 3 presents the findings.

Table 3: Relationship between Mobile Banking and Performance

Variables		Mobile Banking	Performance
Mobile Banking	Pearson Correlation	1	.722**
	Sig. (2-tailed)		0.000
	N	69	69
Performance	Pearson Correlation	.722**	1
	Sig. (2-tailed)	0.000	
	N	69	69

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

Source: Research (2024)

From the findings in Table 3, Mobile banking showed a strong, positive and significant relationship with performance where correlation value was 0.722 and p value<0.05. Rono and Munene (2023)found that mobile banking correlation coefficient was 0.817, which showed a solid and positive relationship with performance, while Mogwambo and Mikae (2022) reported a 0.533 correlation coefficient between mobile banking and the performance of Kisii County SACCOs.

Kalemis (2022) notes that correlation measures the strength of the relationship between two variables, where values range between -1.0 and 1.0, with positive values signifying the positive direction of the relationship and vice versa. Senthilnathan (2019) added that for interpretation of the correlation coefficient, values within the range of 02-03 may be considered weak correlations; 0.4-0.5 are moderate correlations; coefficient values between 0.6-0.7 are strong correlations, and above 0.7 are robust correlations. From the findings, mobile banking achieved a strong and positive correlation (0.722, p<0.5) to performance of SACCOs in Kiambu County.

Model summary

The study analyzed how mobile banking directly affected SACCOs' performance in Kiambu County. A model summary was generated using R, R Square, Adjusted R Square, and the Standard Error of the Estimate, with findings in Table 4.

Table 4. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.722a	0.522	0.514	0.56381

a. Predictor: (Constant), Mobile banking

Source: Research (2024)

From Table 4, the R-value of 0.722 represents the correlation coefficient, indicating the model's quality in predicting performance. The R Square value of 0.522, also known as the coefficient of determination, illustrates the proportion of change in the dependent variable (performance) that can be explained by predictor variable. In this instance, mobile banking accounts for up to 52.2% of the variation in performance, while the remaining 47.8% is attributed to factors outside the scope of the study. The Adjusted R Square value of 0.514 reflects the change in the dependent variable after adjustments are made in the model, providing a more accurate depiction of the proportion (Dhakal, 2018).

Analysis of variance

The study used F statistics to analyse whether the model was a good fit for the data to be used in the analysis. The findings were indicated in Table 5.

Table 5. Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.225	1	23.225	73.060	.000b
	Residual	21.298	67	0.318		
	Total	**44.523**	**68**			

a. Dependent Variable: Performance

b. Predictor: (Constant), Mobile banking

From Table 5, F (1, 67) =73.060, p value<0.000, which indicated that the model was a good fit, evidenced by the p-value <0.05.

Regression coefficient

The study used multiple regression to analyze the contribution of mobile banking to performance, as indicated in Table 6.

Table 6. Regression Coefficient

Model 1	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
	B	Std. Error	Beta		
(Constant)	1.01236	0.32052		3.15854	0.00238
Mobile Banking	0.72621	0.08496	0.72224	8.54754	2.5E-12

a. Dependent Variable: Performance

Source: Research (2024)

From the results presented in Table 6, holding all other variables constant, performance is expected to increase by (β=1.01236, $p<0.05$). Similarly, an increase in mobile banking leads to a rise in performance (β=0.72621, $p<0.05$) thereby confirming Chepkorir et al. (2022) findings that mobile banking had a significant and positive effect on performance of SACCOs in Kericho County. Jensen and Meckling (1976) theory note that management have been given directives to act in the interest of the principal through their decisions and activities. The findings indicate that management decision making of mobile banking strategies have enhanced business performance which may benefit the principal through increased returns.

Conclusions

The objective of the study was to explore the effect of mobile banking on the performance of SACCOs in Kiambu County. The results revealed that the introduction of mobile banking innovation enabled members to conduct more banking activities with the SACCO, consequently leading to increased transactions due to the ease of use associated with mobile banking. Furthermore, the findings indicated that mobile banking offered convenience to members by allowing accessibility anywhere and anytime, contributing to an overall improved user experience. Pearson correlation analysis showed a positive and strong relationship between mobile banking and performance while regression revealed that mobile banking significantly affects performance

The study concludes that mobile banking facilitates increased transactions with members due to its user-friendly nature, making transactions easier to perform. Additionally, it is concluded that mobile banking offers greater convenience to members, as it can be utilized anywhere and at any time. Moreover, it is concluded that mobile banking is readily accessible to members, thereby enhancing their overall experience in accessing SACCO services. It also concludes that an increase in mobile banking usage correlates positively and significantly with the performance of SACCOs in Kiambu County.

Recommendations

In relation to mobile banking, the study offers recommendations for SACCOs to consider enhancing mobile banking services to cater to diverse member needs. This includes maintaining and updating mobile banking USSD and applications to incorporate new features that align with the evolving requirements of modern members. Additionally, implementing regular updates will not only ensure the compatibility of mobile applications with new technologies but also enhance their performance, thereby improving overall member experience. These measures are expected to contribute to the growth and sustainability of SACCOs by meeting the changing demands of their members and enhancing their satisfaction with mobile banking services.

Future research endeavors could explore non-withdrawable deposit-taking SACCOs in the same region or even delve into other industries beyond SACCOs. While this study examined mobile banking on performance of Savings and Credit Cooperatives targeting both employees and members, future studies might opt for a more focused approach by analyzing either employees or members exclusively to facilitate more in-depth analysis. Additionally, considering the geographical context, future studies could explore different locations such as Murang'a, Nyeri, or Nairobi to assess potentialvariations in findings across diverse regions.

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