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INFLUENCE OF MOBILE BANKING ON THE PROFITABILITY OF DEPOSIT-TAKING SACCOS IN KENYA

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Abstract: **The Deposit Taking Savings and Credit Cooperative Societies in the Country are gradually adapting to rapid changes by embracing new ways such as establishing loan products, enhanced communication, knowledge and technology. Savings and credit deposits Cooperative societies have adopted transactional self-service via mobile and telephone banking. Through the introduction of Front Office Services, Savings and credit deposits Cooperative societies also use of computerized technology, like the networks of Automated Teller Machines, to serve its customers this has led to increased customer satisfaction, transaction costs have decreased, and the efficiency and profitability of banks have both improved from the widespread embracing of electronic banking. Therefore, this study sought to assess the influence of mobile banking on the profitability of deposit-taking SACCOs in Kenya. The study used a descriptive survey research design. With a focus on forty companies that are licensed by the Savings and Credit Co-Operative Societies Regulatory Authority and function in Kenya. A census took place on all forty teacher-based companies with a scope of five years from 2018 to 2022. Secondary data was used that was obtained through a specialized data gathering instrument. In addition, the study relied on publicly available information sources, such as published financial statements and annual reports for the enumerated Savings and credit deposits Cooperative societies. To evaluate data, descriptive statistics (percentages, measures of central tendency and frequencies) as well as multiple regression analysis was used. The research revealed a significant positive impact of mobile banking on the profitability of deposit-taking Savings and Credit Co-Operative Societies in Kenya. The research finds that the companies analyzed which implement mobile banking access a wider customer segment, enabling them to draw in additional deposits and enhance their ability to lend. The research suggests that companies should create a mobile banking app that is user-friendly and straightforward to navigate, allowing individuals of all ages to utilize it efficiently.**

Keywords: **Mobile Banking, Profitability.**

1. INTRODUCTION

Deposit-Taking Savings and Credit Co-operative Societies (DT-SACCOs) within the Kenyan economic landscape are undergoing significant advancements and allocating substantial proportions of their constrained financial resources towards Information Communication Technology (ICT). This investment has facilitated enhancements in service delivery, enabling SACCOs to offer a diverse array of products and services, thus improving their operational effectiveness (Koduk, 2015). The occurrence of electronic banking also known as e-banking utilized in the SACCO sector due to impact from the ICT revolution (Koduk, 2015). Many SACCOs are progressively changing from conventional banking methods to use of electronic banking solutions, including mobile and online banking, as well as ATM connectivity. SACCOs' embrace of e-banking signifies a strategic effort to address the growing competition for banking and non-banking fiscal organizations with the objective of augmenting service value and reducing operational costs to maximize shareholder benefits (Mouawad & Kleiner, 1996).

In the case study concerning Lainisha SACCO, a deposit-taking SACCO, the institution has implemented mobile banking capabilities which, following its introduction, resulted in substantial improvements in revenue, heightened customer satisfaction by 75%, an 85% increase in revenue, a 60% reduction in operational costs, and a 75% growth in membership. Such enhancements in revenue, membership, and operational efficiency have consequently enabled the entity to bolster its profitability (Koduk, 2015). Electronic Banking, pertains to the provision of banking services through digital platforms, predominantly via the Internet. This terminology also encompasses financial transactions conducted through automated teller machines, electronic funds transfers, and banking via telephone or mobile devices. Customers are afforded the capability to execute a variety of banking transactions via e-banking, including monitoring account balances, ordering new cheques, issuing stop payment requests, executing balance transfers, opening new accounts, among other functionalities (Ndunga, Njati & Rukangu, 2016).

With the development of online banking, most financial institutions customers are now empowered to be checking account balances and executing financial operations without the necessity of physically attending a banking institution. In contemporary society, individuals no longer require the burden of carrying substantial amounts of cash, as they can fulfill the majority of their transactions electronically (Ndunga, Njati & Rukangu, 2016). The utmost potential of electronic banking resides in its capacity to disseminate timely and pertinent information to a broader audience at a reduced cost (Ndunga, Njati & Rukangu, 2016). Common forms of e-banking are: Point-of-Sale (POS) purchase involving utilizing Credit and Debit Cards, Electronic Funds Transfers, Self-Service (PC) Banking, Telephone Banking, Interactive Television (TV), Automated Teller Machines (ATMs), and Branchless Banking. The Commercial Bank of Africa in conjunction with Safaricom Limited provide the e-banking service known as MShwari. Through this platform, funds can be transferred into a savings account via the M-PESA Menu on a mobile device, allowing savers to accrue interest on their savings starting from as little as Ksh.1. It facilitates individuals with an M-PESA account to apply for and obtain a microcredit product (loan) of at least Ksh.100, at any time, day or night (CBK, 2012).

Equity Bank of Kenya furthermore offers a form of electronic banking referred to as Eazzy 247. This particular service exemplifies mobile banking, enabling clients to conduct transactions via mobile devices in order to access their accounts (Ndunga, Njati & Rukangu, 2016). All principal mobile service providers in Kenya, including Safaricom, Orange, and Airtel, facilitate effortless, 24/7 access. A designated bank account known as M-KESHO is provided by Equity Bank of Kenya Limited. This account serves the purpose of facilitating the transfer of funds to and from the MPESA system (Deposit & Withdrawal). In addition, Standard Chartered Bank of Kenya extends a user-friendly online banking and cash management service entitled Straight to Bank (S2B).

The development of Savings and Credit Cooperatives (SACCOs) as a potent mechanism to address both social and economic needs has posed a significant challenge in Africa, as highlighted by the African Confederations of Cooperatives Savings and Credit Association (Dangolani, 2011). The primary function of a SACCO is to serve as a vehicle for investment, a collaborator in wealth creation, and a supplier of a variety of financial products and services. Technological advancements, fluctuations in interest rates, diminished savings rates and loan utilization, reduced demand for social goods and services, and inequitable competition from alternative financial entities represent merely a fraction of the challenges that SACCOs must navigate on a daily basis.

In an effort to enhance customer service, Deposit Taking SACCOs in Kenya have transitioned to a wholly paperless and digital framework, providing offerings such as mobile banking, ATM accessibility, and electronic banking (Dangolani, 2011). Members are able to process and obtain loans through MasterCard, internet banking, mobile devices, and Visa cards. Additionally, members utilize these modalities to establish bank accounts, execute payments, verify account balances, transfer funds, subscribe to initial public offerings, and engage in a myriad of other banking-related activities (Ndunga, Njati & Rukangu, 2016).

As stated by Kombe and Wafula (2015), Deposit Taking SACCOs represent the leading category of cooperatives that focus on gathering member savings and providing credit facilities. The organizations have operated without the advantages of technological advancements that have enhanced the efficiency and profitability of numerous other businesses. Omondi (2015) contends that SACCOs in East Africa ought to utilize technology to enhance the social and economic influence of their organizations. M-Banking, or mobile banking, involves managing financial transactions (like checking account balances, processing payments, and submitting credit applications) through a smartphone. Mobile phones usage has increased over the past few years, becoming banking the most popular form of electronic banking. This enables customers

to access their funds online via text messages or through menu-based systems such as M-Pesa and Airtel money. As a practical approach, significant advantages arise from broad acceptance and the presence of an established distribution network involving millions of mobile phones (Muriuki, 2009).

Profitability serves as the measure for assessing the success or failure of a business operation. Another definition of profitability could mean the capability of a corporation's assets to generate a return on investment compared to the expenses of those resources (Coetzee, Kamau, & Njema, 2003). While a business might generate financial revenue, this does not automatically equate to being profitable. To enhance service for their clients, SACCOs have embraced the implementation of digital technologies like ATM networks. Banks and their financial outcomes have greatly profited from ATMs due to the convenience and low fees for transactions they offer their clients (Muthui, 2019).

There are roughly forty teacher DT-SACCOs functioning in Kenya. This idea has been prevalent in the field of deposit-taking; SACCOs have offered savings and different kinds of loans for development, educational expenses, and emergencies. In Kenya, DT-SACCOs face competition from various sources for example the banks, microfinance institutions, pyramid scams, investment companies and shylocks, (Muthui, 2019). The country had an estimated population of 47.6 million, with an impressive 24.6 million of them participating in SACCO enterprises in various capacities. In spite of the government's strong attempts to support cooperative movements via legislation, 3,457 SACCOs (51%) were inactive by the end of 2013 (Kiaritha et al., 2014). The research was important due to the high failure rate of SACCOs, which has obstructed attempts to enhance mobile banking and profitability as noted in Vision 2030 and the Millennium Development Goals.

STATEMENT OF THE PROBLEM

Deposit-taking SACCOs in the Country are increasingly aligning to the rapidly-changing environment by implementing strategies like developing new loan offerings, putting strategic plans into action, conducting continuous research, ensuring staff receive regular education and training, assessing employee performance, and improving information, communication, and technology (Muthui, 2019). The adoption of mobile and telephone banking for self-service transactions has become prevalent among SACCOs. The automated teller service has advanced as well, focusing on digital interactions rather than physical ones. Furthermore, SACCOs have embraced FOSA and are increasingly operating similar to banks (Atsiaya, 2016). SACCOs utilize computerized technology, including ATM networks, to assist their customers. The widespread use of ATMs has increased customer satisfaction, reduced transaction costs, and improved the efficiency and profitability of banks (Muthui, 2019).

Ndunga, Njati, and Rukangu (2016) state that competition from non-banking entities has risen since the advent of internet money transfers and the approval of microfinance institutions as deposit-accepting organizations. Consequently, banks have started adopting innovative strategies to take advantage of both current and developing market trends. SACCOs need to adopt technology to be competitive in the industry of today, which is ruled by big, established commercial banks. In doing so, businesses can ensure their ongoing success and attract a customer base that has a strong demand for their products. Although Deposit Taking Saving and Credit Cooperative Organizations (DT-SACCOs) have swiftly implemented e-banking to deploy their products, services and account for a substantial portion of the economy's deposits in the financial sector, this shift has presented them with a number of difficulties, including risk and uncertainty (Koduk, 2015). To ensure their ongoing survival, SACCOs in the Subsector must adopt innovative technological management and operational methods, including electronic banking.

2. LITERATURE REVIEW

Theoretical Literature Review

Diffusion of Innovation Theory

Put forward by Christensen following a number of studies from 1997 to 2006 (Christensen, 2006), the theory illustrates how a product or service initially establishes itself through fundamental methods at the lowest tiers of a market. The product consistently and persistently elevates a market to ultimately displace the existing competitors. It fundamentally revolves around four main components, starting with the idea that existing market participants advance by adhering to a course that fosters innovation (King & Baartartogtokh, 2015). Nevertheless, companies or technologies focused on innovation follow a clearly different path for launching new and enhanced products or through sustaining innovation. Second, incumbents exceed customer expectations; third, they can respond to disruptive threats; and fourth, they ultimately fail after experiencing disruption.

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This theory primarily describes how a service or product establishes itself initially through simple methods at the lowest tiers of a market. The product subsequently scales a market upward in a continuous and relentless way to ultimately displace the existing competitors. This would clarify the reduced profitability in SACCOs after mobile banking was introduced, along with the later increase in profitability after some time.

Empirical Literature Review

Mugane (2020) investigated the association between mobile banking and Kenyan commercial banks' financial performance using a descriptive methodology and quantitative methodologies. The study included 80 individuals, comprising two senior managers from each of the 40 banks. Original data was gathered via surveys, producing both numerical and descriptive information. Qualitative data underwent content analysis, whereas quantitative data were presented inform of descriptive statistics like means, standard deviations, displayed in graphs as well as tables. The results were a statistically significant positive link in relation use of short message service and how commercial banks performed financially, concentrating specifically on this sector and highlighting a contextual gap.

Orina (2020) looked on how commercial banks' operational efficiency in the country are affected by mobile banking, employing a descriptive design centered on 41 banks. A census study was performed utilizing secondary data from the Central Bank of Kenya, spanning the years 2010 to 2018. Essential information comprised bank deposits, loans granted, and recorded accounts. The results were presented using descriptive statistics as well as the inferential statistics, which was carried out using STATA, alongside multiple regression equations to evaluate relationships between variables. The Hausman Test established the application of a Fixed effect model for panel data, and tests for heteroscedasticity, autocorrelation, multicollinearity, and normality were performed. The results showed that mobile banking loans greatly improve operational efficiency, while also highlighting conceptual and contextual gaps in comprehending this efficiency in Kenya.

Iravonga and Miroga (2018) investigated how mobile banking affected small and medium-sized businesses' (SMEs') financial results in Kenya's Kakamega County, by employing an exploratory study approach. The study focused on SMEs that provide financial services, using a sample of 373 chosen via random sampling. Information was gathered from entrepreneurs using semi-structured questionnaires, with support from trained researchers. A preliminary study was performed with 25 questionnaires, and data was handled using Excel and examined with SPSS. The results indicated that SMEs utilized mobile banking for multiple purposes, yet a negative relationship was found between financial performance and mobile banking charges. Research observed a methodological deficiency because of its explanatory framework.

3. RESEARCH METHODOLOGY

The study used a descriptive survey research design. With a focus on forty companies that are licensed by the Savings and Credit Co-Operative Societies Regulatory Authority and function in Kenya. A census took place on all forty teacher-based companies with a scope of five years from 2018 to 2022. Secondary data was used that was obtained through a specialized data gathering instrument. In addition, the study relied on publicly available information sources, such as published financial statements and annual reports for the enumerated Savings and credit deposits Cooperative societies. To evaluate data, descriptive statistics (percentages, measures of central tendency and frequencies) as well as multiple regression analysis was used.

4. FINDINGS

The study was to ascertain effect of mobile banking on the financial success of Kenyan deposit-taking SACCOs. Mobile banking was assessed based on checking balances, cash withdrawals, bill payments, loan repayments, and maintenance and operational expenses. The descriptive statistics results on mobile banking are presented in Table 1.

Table 4.1: Mobile Banking and Profitability

Indicators	Minimum	Maximum	Mean	Standard deviation
Checking balance and cash withdrawal	2.2854	10.2654	4.061	0.7512
Bill payment and loan payback	3.5781	9.1547	3.946	1.0558
Maintenance and operation cost	5.0124	11.6475	4.123	0.8761

Source: Survey Data (2025)

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The results reveal a minimum effect of 2.2854 and a maximum of 10.2654, suggesting that certain SACCOs greatly gain from mobile banking. The average value of 4.061 indicates a generally favorable effect on profitability, whereas a standard deviation of 0.7512 implies that most SACCOs undergo comparable effects. In general, the findings highlight how mobile banking influences SACCO profitability in Kenya, showing consistent patterns among various institutions. The results align with Omondi (2015) research findings that indicate mobile banking, specifically through balance inquiries and cash withdrawals, significantly contributes to the more incomes of SACCOs in Kenya.

The study's lowest score was 3.5781, and its greatest value was 9.1547, highlighting a spectrum of performance metrics among the SACCOs regarding the influence of these factors on their profitability. The average value of 3.946 indicates that, generally, the impact of bill payment and loan repayment on profitability is somewhat moderate, leaning toward the lower side of the observed spectrum. This mean value, combined with a 1.0558 standard deviation, shows that there is differences in various SACCOs experience the impacts of these financial activities. This magnitude of standard deviation suggests that while the majority of SACCOs are grouped near the mean, there are significant variations in performance, with certain institutions excelling or underperforming relative to the average. The consistency of these findings with the research by Too et al. (2016) highlights the significance of these financial activities in enhancing profitability and suggests that SACCOs could gain from establishing strong systems for efficiently managing both bill payments and loan collections.

The research additionally uncovered a minimum cost of 5.0124 and a maximum cost of 11.6475, pointing to a spectrum of operational expenses encountered by these organizations. The average cost was determined to be 4.123, indicating that typically, SACCOs experience a reasonable degree of expenses linked to their maintenance and operational functions. Additionally, the standard deviation of 0.8761 suggests a fairly low variability in these expenses across the various SACCOs, indicating that the majority of organizations incur costs that are near the average value. These results correspond with the study by Ayugu and Mutswenje (2023), which revealed that the cost structures related to mobile banking services significantly positively impact the profitability of financial institutions.

Inferential Statistics Results

Table 2: Correlation Analysis

		Mobile banking	Profitability
Mobile banking	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	40	
Profitability	Pearson Correlation	.791**	1
	Sig. (2-tailed)	.002	
	N	40	40

The study found that, at a significance level of 0.002, the Pearson r correlation for mobile banking with respect to the profitability of DT-SACCOs in Kenya was 0.7911. This shows that the profitability of these financial institutions and the usage of mobile banking are significantly positively correlated. The observation is similar to Mugane's (2020) who studied Kenyan commercial banks' and how mobile banking affect their financial performance. According to the study's findings, there was a favorable link between short messaging service and commercial banks' financial success.

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.867	0.752	0.721	0.2150

The R value of 0.867 indicates a strong positive correlation between mobile banking with the profitability of SACCOs. This indicates that a greater utilization of these technologies is linked to increased profitability. According to the R square value of 0.752, roughly 75.2% in profitability is as a result of these independent variable (mobile banking), highlighting its importance in improving financial performance. The modified R square value of 0.721 (72.1%) indicates that the model stays robust even when considering the number of predictors. Thus, other unexamined variables contribute to the remaining 27.9% of profitability. Moreover, a standard error of 0.2150 reflects dependable predictions, since smaller figures imply predicted profitability is in close agreement with actual values.

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Table 4: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	121.645	1	121.645	236.107	0.004
	Residual	19.578	38	0.515		
	Total	141.223	39			

The values of Analysis of Variance (ANOVA) table show that the mean square value is 121.645, the F value is 236.107 and the level of significance value is 0.004. This suggested the model was significant.

Table 5: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.587	0.312		1.881	0.002
	Mobile banking	0.715	0.267	0.0613	2.678	0.003

The findings suggest that if mobile banking remains unchanged, the profitability of DT-SACCOs in Kenya would be 0.587. The derived regression coefficients suggest that enhancing mobile banking would boost the profitability of DT-SACCOs in Kenya by 0.715. Consequently, the resulting regression formula is stated as follows.

Profitability = 0.587 + 0.715(mobile banking) + ε

The goal of the study was to determine the hypothesis that mobile banking in Kenya has no discernible effect on the profitability of SACCOs that accept deposits. The mobile banking variable displayed a beta value of 0.0613 with a p-value of 0.003, according to the regression analysis results. These observations are consistent with other studies showing that mobile banking enhances the financial performance of cooperatives and microfinance institutions. The beta coefficient of 0.0613 signifies a positive correlation between mobile banking adoption and profitability, implying that each unit rise in mobile banking usage correlates with an increase in profitability of about 6.13%. This outcome is statistically meaningful, as demonstrated by the p-value of 0.003, which is significantly lower than the standard threshold of 0.05. This degree of significance indicates that the probability of witnessing such a correlation randomly is quite minimal, thus offering robust evidence opposing the null hypothesis. These findings are consistent with a 2019 study by Kathuo, Rotich, and Anyango that focused on how mobile banking improves client interaction, reduces transaction costs, and transforms financial inclusion.

5. CONCLUSIONS

The research revealed that statistically mobile banking significantly had the highest effect on the profitability of DT-SACCOs in Kenya. Consequently, the research finds that SACCOs implementing mobile banking can access a wider clientele, enabling them to draw in additional deposits and enhance their lending ability. The ease of performing transactions through mobile phones motivates members to save additional funds and make use of credit services, which directly boosts the profitability of these organizations. SACCOs can channel the savings gained from lowered operational costs into improving their services, boosting member benefits, and ultimately enhancing profitability. Mobile banking enables a greater number of transactions because of its user-friendliness and availability. Members have the ability to deposit, withdraw, and transfer funds whenever they wish, resulting in higher transaction frequency.

6. RECOMMENDATIONS

The research suggests that the SACCOs need to enhance their digital infrastructure to facilitate mobile banking, EFT, ATMs, and online banking, making sure they are safe and easy to use. Create initiatives to inform members about the advantages of digital banking, boosting usage and diminishing reluctance. Implement robust security protocols, such as two-factor authentication and periodic audits, to safeguard customer information and foster trust. Establish explicit guidelines for reporting and tackling fraud to guarantee member safety. Offer a range of financial products utilizing digital platforms, including microloans, savings accounts with attractive interest rates, and investment options designed to meet the requirements of members. Create a specialized customer service team that is accessible 24/7 to help members with any problems concerning digital banking services.

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