

INFLUENCE OF MOBILE BANKING ON THE FINANCIAL PERFORMANCE OF SACCO'S IN KENYA, KISII COUNTY

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Abstract: Financial innovations service management has come up a cost-effective innovative measure meant to attract and retain a huge customer base in deposit taking SACCOs. The savings and credit cooperative societies (SACCO) are faced with challenges of survival due to decline of members despite their geographical spread compared to other financial providers in Kenya. This trend in loss of customers is attributed to the competition from banks, which have embraced financial innovations thus being able to offer better services like easy access transaction accounts and consumer loans through mobile and internet platforms.

Objectives: The general objectives was to examine the influence of financial innovations on the financial performance of Sacco's in Kenya with a specific objective to determine the influence of Mobile banking on the financial performance of Sacco's.

Design: The study adopted descriptive research design. The target population comprised 10 SACCO's operating in Kisii town with 300 respondents. The sample size constituted 90 respondents' employees who were involved in the management of the SACCO.

Findings: The results revealed that value transacted using mobile banking positively and significantly affected the performance of SACCOs financially. The study concluded that value transacted using mobile banking significantly impacted the financial performance of SACCOs. The results further revealed that Value transacted using agency banking positively and significantly affected the performance of SACCOs financially.

Keywords: financial innovations, financial providers, savings and credit cooperative societies

Background Information

The concept of electronic banking was first conceived in the mid-70s. However, with the high cost of internet resulted to lack of internet users, consequently the growth of electronic banking was stunted. During the internet boom of the mid to late 90s, people started to ease up about making transactions over the internet. Electronic banking grew alongside the internet. Despite that growth that was inevitable, customers were still reluctant and hesitant to carry out monetary transactions over the internet. It took widespread adoption of e-commerce which was based on innovative companies such as AOL, Amazon and eBay to make the idea of online purchasing common. Up until 2000, over 80% of American banks offered online banking services and growth was slow. For example, at Bank of America, it took 10 years to attain 2 million customers of e-banking.

The world has also become increasingly addicted to financial innovations doing business in the cyber space, across the internet and World Wide Web. Internet commerce in its own respect has expanded in various innovative forms of money, and based on digital data issued by private market actors, has in one way or another

substituted for state sanctioned bank notes and checking accounts as customary means of payments (Cohen 2001). Technology has greatly advanced playing a major role in improving the standards of service delivery in the financial institution sector. Days are long gone when customers would queue in the banking halls waiting to pay their utility bills, school fees or any other financial transactions.

Chan and Jia ,2011) study in China on the effects of mobile banking on financial deepening of banks thus a sampled survey of 50 commercial banks; a regression model used for data analysis and the results of the analysis revealed a significant positive relationship between mobile banking and customer deposits while Njiru (2014) study access to banks with reference CBK report says 76.7% customers in the country have access to a financial institution within five-kilometer radius, compared to Uganda and Tanzania which recorded 42.7% and 31 % respectively. There has been rapid increase in access points to technological innovations, financial system and regulatory reforms, and increased competition in the market.

In South Africa, the DRC, Zambia and Kenya for instance, mobile phone banking is taking services to remote areas where conventional banks have been physically absent. Subscribers can now open accounts, check their balances, pay their bills, transfer money, and cater for their daily basic needs. In the past 30 years, three (3) products that are seen to have had the most impact on the world are in the ICT sector: the internet, PCs and mobile phones. Of these, the mobile phone has the highest penetration in developing countries (Ondeige, 2010). The use of ATMs, POS terminals, Internet and mobile phone platforms have accelerated and moved closer to branchless banking.

In Kenya, the Sacco sub sector can be described as two-tiered given the range of financial services to members and regulatory regime. The traditional Savings and Credit Cooperative Societies (SACCOs), described in law as Non-Deposit Taking SACCOs (NDTS) provide a limited range of savings and credit products, are registered and supervised under the Cooperative Services Act, CAP 490. The Deposit Taking SACCOs (DTS) besides the basic savings and credit products, also provide basic 'banking' services (demand deposits, payments services and channels such as quasi banking services commonly known as ATMs), FOSA and are licensed and supervised under the Sacco Societies Act of, 2008.

DTSs are licensed, regulated and supervised by SASRA, while NDTSs are supervised by the commissioner of co-operatives. By December 2017 there were over 198 SACCOs registered with SASRA to operate as Deposit Taking SACCOs in Kenya (SASRA, 2017). By December 2018, Kenya had 166 licensed DTS. Over the years, SACCOs have gradually automated their services moving from the traditional savings and loaning issues to an additional competitive and effective approach such as mobile banking that has positively affected their financial performance (Kiugi, 2018).

SACCOs in Kenya have developed rapidly in terms of size, structure and variety of product and services. They have transformed gradually from manual system of operations to a more open, effective and competitive system which is able to offer an extensive range of products and services. The growth in products, services and membership has led many SACCOs to automate their services and therefore improved productivity (Oyugi, 2014). Most SACCOs provide Online Banking, Automated Teller Machine (ATM) Support, Short Message Service (SMS) and Mobile Banking system services.

In Kenya Savings and Credit Co-operative Societies (Sacco's) have realized a tremendous growth in the subsector and are investing huge amount of their scarce financial resources in electronic technology (IT) to enhance services delivery and offer a wide variety of products and services range, increased membership mobilization and size, ensure better structure and effective financial performance (Koduk, 2015). Electronic banking (e-banking) as used in the Sacco's industry is as a result of Information Communication Technology

(ICT) revolution commonly referred to as electronic commerce. The growth of electronic banking services is anticipated to minimize congestions in the banking halls and lessen long queues in banks. Financial services that are based ICT on have made a substantial contribution in decreasing the operational costs of providing financial services.

The success of SACCOS incredibly lies on the deposits assembly to prepare more deposits; monetary establishments offer a scope of funds items that are custom-made to their specific customer base. They offer the greatest assortment of specific reserve funds items, so their clients have a decision between promptly available, fluid items, or semi-fluid records or time deposits with as needs be higher loan fees; thus, Sacco's began rolling out electronic customer service management services to attract and retain a huge customer base (Sylvia, 2013).

Over the years, banking activities have undergone radical changes precipitated by advances in information technology. The increased innovations in the digital cellular networks have led to powerful and widely distributed cellular networks that enable users to sufficiently transmit videos and huge documents and reduced cost of mobile phones. This has largely contributed towards financial inclusiveness, provided a better substitute to other conventional digital bank channels like Automated Teller Machines and built branches, lowered the cost of delivering bank services through reduced paperwork and increased the convenience to customers by connecting the institutions to their customers through telecommunication networks (Mwania, 2017).

SACCOs are crucial in an effort to ensuring financial inclusion and deepening and subsequently, the achievement of Kenya's strategic national development plan. As part of Kenya's macro-economic goals, savings rates were anticipated to rise to 30% of GDP through improved financial deepening, creating credit referencing and streamlining SACCOs with a view to raising institutional capital. The Sacco sector, though not recognized as an autonomous sector, will assist the mobilization of investment funds through effective innovative customer relationship management mechanisms. Customers can access account information at any time, day or night, and this can be done from anywhere. Internet banking has improved banking efficiency in rendering services to customers. SACCOs cannot ignore information systems since they play an important role in their operations because customers are conscious of technological advancements and demand higher quality services.

Mobile banking and financial performance for SACCOs

Mobile banking customers are driven by the convenience that is brought about by the technology in terms of deposits, withdrawals and making payments. M-pesa offers a high level of reliability and convenience since agents are located even in small market centers and customers can undertake transactions from the comfort of their homes (Johnson, at el.2012). Omondi (2015) found that Commercial Banks underperformed after the adoption of mobile banking, implying that adoption of mobile phone banking negatively affected performance of the sampled commercial banks.

Aboelmaged and Gebba (2013) sought to considered components that influenced mobile banking adoption in the United Arab Emirates (UAE). Survey data, collected through self-administered questionnaire, from 119 respondents was analyzed where they found that attitude and expected usefulness substantially influenced adoption of banking using mobiles. Conversely, influence of control in behavior and its importance on adoption of banking by mobiles phones were unimportant

Okiro and Ndungu (2013) pertaining to The Effect of Internet and Banking Mobile on Performance of Financial Organizations in Kenya. The study, as suggests the title, sought to determine the effect of internet

banking and mobile on the performance of financial organizations in Kenya by focusing on financial institutions in Nairobi. The study investigated 30 financial institutions by assessing the role played by internet and mobile banking in the performance of the institutions. The study employed qualitative and descriptive methods research designs with the aim of having a clear understanding of internet and mobile banking. The study collected qualitative data from the managers, subordinate staff and also from customers of the 30 institutions. These 30 institutions were arrived at by the use of stratified sampling. The sampling process led to the 17 commercial banks, 11 SACCOs and 2 microfinance institutions were sampled. Open and closed ended questionnaires were applied in the process of data collection. The analysis of collected data was conducted through the use of both qualitative measures and quantitative measures

Vincent Kiprop Too (2016) concluded that mobile banking would make it easier to send money to receiver instantly. it also concluded mobile banking ensures easy track of lenders and easy monitoring, it concluded mobile banking helps to ensure quick transfer of funds as it saves on time, that mobile banking ensures easy payment of bills and avoids cash payments and concluded mobile banking payment of bills affects productivity of banks within the area

Mutua (2011) concluded that there is a weak but positive relationship between mobile banking and financial performance of commercial banks in Kenya. This could be attributed to the trends which showed that financial performance of commercial banks was affected majorly by macro-economic variables like post-election violence, inflation and foreign exchange rates fluctuations among other macro-economic variables. Okiro & Ndung'u (2013) noticed that mobile banking faces various challenges among them being, system delays by the mobile money transfer service providers, slow processing of transactions, high transactions costs, limit on the amount of money that can be withdrawn in a day and fraud.

Furthermore, Maiyo (2013) led an investigation on the impact of electronic banking on the performance of business banks in Kenya; the survey found that embracing e-banking had improved effectiveness, productivity and efficiency of commercial banks in the country. It was revealed that mobile banking has a significant effect on returns on asset whereas fees and commission from Online Banking as well as the amount of money that commercial banks invest in electronic banking to install, train staff and maintain the platforms has no or minimal effect on return on assets.

Daud, Kassim, Said, and Noor (2011) in a study, looked at the variables affecting phone banking adoption for the Malaysia market by means of advanced Technology Acceptance Model (TAM). Survey data gathered from about 300 users of banking services on their opinions on mobile banking was empirically evaluated. They found that perceived helpfulness and perceived credibility or users' perception on the safety transactions details and private data from unauthorized access affected adoption of mobile banking.

Statement of the Problem

Onduko (2013) indicated that SACCOs and other MFIs in the financial sector in Kenya risk closure and redundancy if they are not able to embrace innovative technology to counter the ever-rising competition from the commercial banks. SACCO's always slowly straggling to keep pace with this ever changing technology with some of the SACCOs underperforming while others operate on losses. Long lines due to increased membership, transaction error, and insecurity and network failures are the common challenges in the financial markets. Savings and credit cooperative societies' growth in Kenya is decimal. Many of them still do not have Front Office Services Activity. How to strategize for financial innovation basing on the available resources to attain growth has become a great challenge (Sacco Societies Regulatory Authority, 2015).

Objectives of the Study

The general objectives was to examine the influence of financial innovations on the financial performance of Sacco's in Kenya with a specific objective to determine the influence of Mobile banking on the financial performance of Sacco's in Kisii county.

Research Methodology

The study adopted descriptive research design as it was useful in capturing unbiased representation of perceptions and experiences of respondents. It involved repeated observations of the same variable over a period of time and it had the potential to bring out the contribution of individual item over the outcome of a given event. Additionally, the approach compares variables in different years and circumstances and provides reasons for occurrence. The study investigated all the SACCO's currently operating in Kisii County and the respondents were drawn from those SACCO's. Currently there are 10 SACCO's operating in Kisii town. The target population constituted 300 respondents from the SACCO's operating in Kisii town. The research data was analyzed quantitatively. Information was sorted, coded and input into the statistical package for social sciences (SPSS) version 21 for production, descriptive statistics and inferential statistics.

Results and Discussions

This section presents results and analysis of mobile banking and performance of deposit taking saccos. The results are organized as follows; Descriptive findings are presented first, followed by correlational analysis, and finally the regression analysis and model development.

Descriptive Analysis for Mobile Banking and Performance

Frequency statistics are the main descriptive statistics used with discrete variables. These include absolute frequencies for each category of the discrete variable, relative frequencies (proportions or percentages of the total number of observations), and cumulative frequencies for successive categories of ordinal variables. In the current study, relative frequencies were used.

The respondents were asked to indicate their level of agreement on statements regarding the use of mobile banking and its influence on performance of Saccos in a likert scale. Table 1 shows the results from the respondents of the study. Majority of the respondents agreed that they Regularly use Mobile banking services in making deposits and withdraws as it saves time, with 36.2% of the respondents agreeing and 31.9% of the respondents strongly agreeing. 61.7% strongly agreed and 25.5% agreed that mobile devices had reduced time for making deposits. 52% of the respondents agreed that information related to Sacco products could be relayed to customers through SMS. 40.4% disagreed that credit ratings could be conducted through mobile devices. 31.9% of the respondents stated that members received their loan status through Short Message Services (SMS) alerts. 74% of the respondents agreed that the Sacco was able to perform multiple approvals for different financial products. 84.8% of the respondents agreed that the Sacco had managed to combine branch reports into a single financial document for easier reporting. All the results for descriptive statistics are illustrated in Table 1 next page.

Variable	SD D	D	Ν	Α	SA	Mean	StDev
	(%)	(%)	(%)	(%)	(%)		
Regularly use Mobile banking services in making deposits and withdraws as it saves time		14.9	14.9	36.2	31.9	2.1	0.756
Mobile banking has greatly reduced unnecessary expenses like travelling to the bank physical and make deposits and other transactions		0.0	4.3	25.5	61.7	1.7	0.569
Mobile banking services can easily access the information on the account like checking their balances from any where		30.4	17.4	32.6	19.6	2.4	0.356
Mobile banking is commonly used due to its simplicity in the registration processes	4.3	40.4	27.7	21.3	6.4	3.9	0.846
Mostly Mobile banking services is preferable by many Sacco's clients due to its features	10.6	44.7	10.6	31.9	2.1	3.7	0.936

SD-Strongly Disagree, D-Disagree, N-Neutral, A-Agree, SA-Strongly Agree, N=81, StDev-Standard Deviation

Correlation Analysis for Mobile Banking and Performance

Correlation may be described as the degree of association between two variables, and it ranges between -1 and 1 (Asuero, Sayago, & González, 2006). A correlation of either +1 or -1 implies a perfect relationship, whereas, zero signifies the absence of any association. The sign depends on whether the variables are positively or negatively related. Two different types of correlation coefficients are in use. One is called the Pearson product moment correlation coefficient, and the other is called the Spearman rank correlation coefficient, which is based on the rank relationship between variables. The Pearson product-moment correlation coefficient is more widely used in measuring the association between two variables. In this study, Pearson product moment correlation was employed in testing the relationship between each of the independent variables and the dependent variable under instigation.

The correlation between mobile banking and financial performance (ROA) of K-Unity Sacco was examined. The results of the correlation analysis presented in Table 2. The study revealed that the relationship between mobile banking and financial performance was positive and statistically significant (r=0.233, p<0.05). This implies that introduction of mobile banking for instance launching questions through mobile devices, linking of member's bank account with personal mobile money wallet; notification of loan standings through sms enhanced the financial performance of a SACCO. These findings are in agreement with a study with Bahati (2018) who concluded that indeed mobile banking had a positive impact on financial performance among Deposit Taking Saccos.

Co				
		ROA	ROE	Mobile Banking
Mobile Banking	Pearson Correlation	0.533	0.608	1
	Sig. (2-tailed)	0.011	0.005	
	Sum of Squares and Cross-products	298.524	27.651	15.379
	Covariance	0.055	0.036	0.334
	Ν	81	81	81

*. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed), a. List wise N=81

Regression Analysis for Mobile Banking and Performance

Regression is a method for studying the relationship between two or more quantitative variables. The structural model underlying a linear regression analysis is that the explanatory and outcome variables are linearly related.

Linear regression analysis was conducted to ascertain the effect of mobile banking on financial performance of the SACCOs. The results in Table 3 shows that the value of R^2 was 0.284 indicating that variation of 28.4% in financial performance of Saccos can be attributed to application of mobile banking in Saccos.

Table 3: Model Summary for Mobile Banking and Performance

Model Summaryb							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson		
1	0.533 ^a	0.284	0.271	0.97205	2.789		

a. Predictors: (Constant), Mobile Banking

b. Dependent Variable: ROA

ANOVA examines the relationship between variables when there is a nominal level independent variable has 3 or more categories and a normally distributed interval/ ratio level dependent variable. It produces an F-ratio, which determines the statistical significance of the result. The findings on the analysis of variance (ANOVA) presented in Table 4 shows that F-statistic value of 20.180 and P-value of 0.001<0.05. These findings imply that the regression model was significant in predicting the relationship between mobile banking and performance of Deposit Taking Saccos.

AN	OVA ^a				
Model		Sum of	Df	Mean Square F	Sig.
		Squares			
Regression		36.405		1 36.405 20.180	0.001 ^b
1	Residual	142.520		79 1.804	
Tota	ıl	178.925		80	

 Table 4: ANOVA for Mobile Banking and Performance

a. Dependent Variable: ROA

b. Predictors: (Constant), Mobile Banking

According to the regression coefficient model as extracted from Table 5, it was found that taking all the independent variables value at zero, the financial performance of the SACCO will be 10.729. The regression coefficient for mobile banking (0.705) was statistically significant (t= 4.764, p=0.001 < 0.05), which indicates that a unit increase in mobile banking will result to an increase of 0.705 units in financial performance:

The regression model of the study was $Y = \beta 0 + \beta 1X1 + \epsilon$ Substituting the coefficient in the model,

Y= 10.729 +0.705 Mobile Banking + e

Coefficients ^a						
Model Unstar		dized Coefficients	Standardized Coefficients	t	Sig.	
	В	Std. Error	Beta			
(Constant)	10.729	0.880		12.1	92 0.000	
1 Mobile Bankin	ng 0.705	0.148	0.233	4.76	64 0.001	

a. Dependent Variable: ROA

Summary of Findings

Due to complex and dynamic environment SACCOs operate from, there is an evident force that contributes to failure of some of them and deteriorating growth for those that survive. This is due to numerous challenges that are unique and specific to the sector in general.

The research's objective was to find out the influence of financial innovations on the financial performance of Sacco's in Kisii County, Kenya. A descriptive research design of study was used. In this study. The study investigated all the SACCO's currently operating in Kisii County. The respondents were drawn from those SACCO's operating in Kisii County. As per to Mugenda and Mugenda (2012) any sample size that is between 10% and 30% is a good demonstration of the target population and as a result 30% was used for analysis. From the target population of 300 employees, the researcher selected 90 employees who have been involved in the management of the SACCO.

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