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Mobile Money and Sustainability of Registered Commercial Banks in Kenya

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ABSTRACT: *The rapid growth of Fintech products has resulted in the development of mobile money services (MMS) offered by telecommunication companies. The MMS offers services that were initially offered by commercial banks, thus posing a threat to their operational sustainability. Commercial banks globally have started showing some signs of distress, and this ought to be examined because of their crucial roles in the economy. This study is aimed at examining how MMS influenced the long-term financial and operational sustainability of a bank in Kenya. The target population of this study were bank employees from Kenya registered banks. The targeted five seniors' officials in each bank, making a total target population of 210 respondents. A sample of 120 respondents was randomly selected from the target population. Questionnaires were used as the primary method of data collection. The study findings revealed that mobile money had a negative insignificant impact on banks' sustainability. It was concluded that mobile money did not have a significant influence on the sustainability of commercial banks in Kenya. Based on the research findings, it was recommended that the bank. However, it was recommended that banks should be more innovative to improve their operational efficiency. Also, to improve their mobile banking platforms, banks should look at how phone companies offer mobile money services.*

KEYWORDS: mobile money, financial and operational sustainability, registered commercial banks

INTRODUCTION

Background of the Study

Before the advent of money as a medium of exchange, people kept their wealth in the form of tangible goods. With the advent of money, however, the banking system emerged to provide a secure location for individuals to deposit their wealth and conduct business. Along with many other industries, the global financial industry has seen profound transformations over the past few decades as a result of technological developments that have revolutionized the way business is conducted (Mention, 2019). The development of Financial Technology is largely attributable to

technological advancements (Fintech). Financial technology (Fintech) is a disruptive innovation in the financial services industry that seeks to offer an alternative to the established norms of providing such services to customers. To a large extent, the banking sector has evolved in response to developments in the financial sector. Buckley and Webster (2016) defined financial innovation as the introduction of novel financial institutions, markets, securities, and technologies that simplify and secure monetary transactions. On the other hand, Pradhan (2012) argues that for a financial institution to be financially sustainable, it must be able to supply its customers with financial services in exchange for a steady stream of revenues. The repaid growth of Fintech has attracted many customers to the use mobile money services as opposed to visiting the banks. This has acted as a challenge to many banks across the world. Mobile money is a mobile phone-based money transfer service, payments and micro-financing service (Tangirala & Nlondiwa, 2019).

For instance, the Germany's financial sector, in the past experienced some challenges and this pattern had become increasingly noticeable. Mizrahi (2019) stated that in 2016, the IMF contacted Deutsche Bank due to the bank's vital role in the German economy following a slew of warning signs. Deutsche Bank is one of the world's greatest financial institutions, yet it has recently begun to post lower earnings and offer lower returns to investors. The company had previously stated that it would combine with Commerzbank to ensure the continuation of business. Later, however, it was declared that this course of action would not be economically inefficient. The same trend threat has been witnessed in the developing countries some banks have been showing some signs of distress.

On the other hand, the while the banking sector has been struggling, the Fintech industry has been expanding rapidly across Africa and the rest of the world. For that reason, the study was set out to examine how the new financial technologies and in specific mobile money services (MMS) were likely to influence the sustainability of Kenya's commercial banks over time

Statement of the Problem

For a nation needs to prosper and advance, its financial sector is essential. Commercial banks, are most widely used institutions in the Kenya. However, banks have been suffering serious difficulties in recent years, which have had a noticeable impact on their ability to conduct business (Kenya Bankers Association (KBA), 2019). Additionally, commercial banks' NPLs have climbed from an average of 8.5% over the previous five years to 12.5% this year (KBA, 2019). It is evident that Kenyan banks are having financial difficulties and their performance is declining. In conclusion, the introduction of a technological era marked by rapid financial innovation may exacerbate the issue and influence the future sustainability of commercial banks, which was the focus of this study.

Research Objective

The overreaching goal of this study was to examine the influence that mobile money was likely to have on sustainability of the registered commercial banks in Kenya.

LITERATURE REVIEW

Theoretical Frame Work

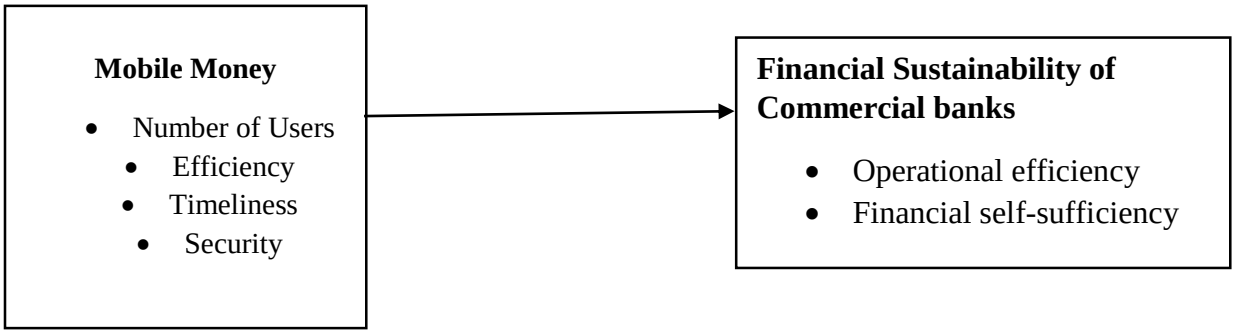
Diffusion of Innovation (DI) Theory

Diffusion of Innovation Theory, which is now considered a classic among the social science theories that attempt to account for the spread of new technologies was developed in 1962 by M. Rogers . This concept was developed by communicators to describe the rate and pattern of an idea's spread through a population or social system over time (Rogers, 2010). The ultimate goal of diffusion is for members of a social system to accept a novel concept, practice, or commodity. Changing the way something has always been done is what we mean when we talk about adoption. As a result of its success, the hypothesis has been accepted by a variety of sectors as an explanation for the adoption of newly developed technologies.

There are five stages of adoption of a new innovation, as proposed by this theory. Aware, persuaded, decided, implemented, and sustained are the processes involved (Rogers, 2010). At this point, the target audience has learned about the innovation. As a second step, you must convince them. At this point, the target audience forms an opinion about the invention. Each person has a predetermined opinion on whether or not the innovation is beneficial. At this point, viewers feel driven to learn more about the new development. Before deciding whether or not to use the information, they collect it from as many sources as possible. Users go on to the decision stage after they have amassed sufficient data about the invention. At this point, a person considers whether or not they want to employ the innovation. Users will embrace a new technology if its benefits surpass any potential drawbacks. If, however, the drawbacks are too severe, the idea is rejected. This is when the idea either moves forward or is rejected by its intended audience. The final, fourth step is to put everything into action (Rogers, 2010). This is the point that the intended consumers can start using the new technology. They haven't figured out how helpful it will be yet. Lastly, this idea posits continuation as a stage. A human verifies the outcome of the innovation choice. After much deliberation, they decide whether or not to continue implementing the breakthrough. A need for social approval or other interpersonal considerations may be at the root of this choice. Many of the financial innovations featured here have already received widespread adoption and are into the continuation phase of their life cycles.

Despite its widespread applicability in numerous fields of research, the theory has been criticized due to the following flaws. To begin with, the concept is at its most effective when behaviors are encouraged rather than forbidden (Rogers, Singhal & Quinlan, 2014). It also doesn't take into account whether or not the person has the means or social backing to adopt the novel behavior or innovation. Finally, the theory explains how and how quickly novel ideas, practices, or products spread throughout a culture (Rogers, Singhal & Quinlan, 2014). In order to explain where the practice of sending and receiving financial transfers first emerged and spread throughout the Kenyan populace, the DI theory was of great importance in coming with the study’s variable.

Conceptual Framework



Empirical Review

In 2016, Munga analyzed how mobile banking changed life in Kenya. M-Pesa was chosen as the subject of the study's case study because of its popularity among a large number of people in the country when compared to other mobile money services provided by various other telecommunications firms. The primary objective of the research was to investigate the social and economic effects that m-pesa had on the population of Kenya (Munga, 2016). The vast majority of respondents relied on M-pesa as their primary means of conducting commercial financial transactions and money transfers. This research provided a wealth of valuable information into demonstrating the impact that M-pesa, a recent financial innovation in the banking industry, has had. Nevertheless, the impact that it had on banks, which play a vital role in Kenyan economy, and the influence that mobile money had on the financial performance of those banks were not the primary focuses of this study. This gap was identified as a need to be filled, and the current study set out to do so by investigating the potential influence of financial innovation on the long-term viability of Kenyan banks.

Muisyo, Alala, and Musiega (2014) investigated the impact of mobile money services on the performance of Kenyan banks. According to the authors of the study, it had been increasingly usual in recent years for various MNOs providers to provide their consumers' mobile money (also known as MMS) services. The researchers set out to discover how the adoption of various mobile money services has affected the productivity of Kakamega town's financial institutions. In order to collect data from the 13 financial institutions located in the town of Kakamega, we employed a sample size of 115 respondents (Muisyo, Alala &Musiega, 2014). According to the study's findings, banks' bottom lines have improved since they began offering mobile money services. It was decided that this was the case. A plethora of data on mobile money's impact on Kakamega's banks was provided by the study. The research could be improved in a few areas, though. To begin, the study only focused on a small portion of the country, whereas the current study aimed to broaden its reach to encompass the entire country.

To determine if Fintech was beneficial to bank efficiency, Ky *et al*., (2019) conducted a study. Using an instance of mobile money in the East African Community, this investigation aimed to

cover a larger geographical area. This research primarily used financial records from these banks between the years 2009 and 2015 (Ky, Rugemintwari & Sauviat, 2019). The research showed that there was a strong positive and statistically significant correlation between financial institution performance and the use of MMS.

Research Gaps

As previously identified, the financial sector plays an essential role in the growth of an economy. Besides, financial innovation in mobile money was widely being used to offer services that were primarily offered by commercial banks. Majority of the studies have focused on the influence mobile money on performance of banks and thus there was need to focus on sustainability. Besides, the review of literature has shown that majority of articles have used the term ‘‘mobile money’’ and ‘‘mobile banking’’ interchangeably and yet they are not synonymous. This study aimed at filling this gap by examining how mobile money would affect the long-term sustainability of commercial banks. Also, most of the studies that were done focused on bank performance, hence there was need to examine their sustainability which is more concerned with the future and not profits that are short-lived.

RESEARCH METHODOLOGY

Research Design

In order to achieve the study’s purpose, the research employed descriptive and correlation designs. This descriptive design was used to explain the phenomenon of mobile banking and how it was likely to affect the long-term viability of banks. The correlation design was used to establish the relationship between the study variables.

Target Population and Sampling

The target population of this study were bank employees working in Kenyan registered banks. The researcher target 5 employees in a total of 42 banks. This made a total target population of 210 respondents. A sample of 120 respondents was selected through simple random sample technique.

Data Collection Methods and Procedure

Questionnaire containing both open and closed ended questions was used the key research instrument for data collection. The research instrument were distributed through drop and pick techniques and where not possible they were sent via the e-mail.

Reliability and Validity

The study instrument's reliability was examined by a Cronbach Alpha test. After a successful pilot research, the final questionnaires were fine-tuned before being distributed to the whole sample.

DATA ANALYSIS, FINDINGS AND DISCUSSION

Reliability Test Result and Response Rate

Cronbach's alpha was 0.730, which is above the threshold of statistical significance. This meant that the measured constructs were sufficiently reliable to proceed to the next levels of analysis. Results showed a response rate of 68.30%. According to Taber (2018) a response rate of 50% is sufficient for analysis and reporting, hence this was a good and representative response rate.

Descriptive Findings

The research aimed to find out if the bank workers were making use of mobile money services like Airtel Money, Safairom, and T-cash, which are all provided by different telecommunications firms in Kenya. The survey utilized closed –ended question in the questionnaire. The descriptive results of the analysis of the mobile money services are shown in Table 4.1 below.

Table 4.1: Descriptive analysis of Mobile Money

Response Statement	N	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Mean
Mobile money services have not reduced customer desposit in banks.	82	3	5	11	45	18	**3.85**
	%	3.7%	6.1%	13.4%	54.9 %	22%	
The total banks deposits and withdrawals are likely to reduce in future due to mobile banking services.	82	22	27	19	8	6	**2.38**
	%	26.8%	32.9%	23.2 %	9.8%	7.3%	
Mobile money services are not competing for the same numbers of customers with the banks.	82	17	43	14	8	0	**2.16**
	%	20.7%	52.4%	17.1%	9.8%	0	
The mobile money services are more effcient and flexible compared to banks	82	4	33	21	20	4	**2.84**
	%	4.9%	40.2%	25.6%	24.4 %	4.9%	
Mobile banking services have reduced customer visists to the banks	82	3	17	28	27	7	**3.22**
	%	3.7%	20.7%	34.1%	32.9 %	8.5%	
Mobile money services are more secure compared to the banks	82	17	43	13	4	5	**2.23**
	%	20.7%	52.4%	15.9%	4.9%	6.1%	
For commercial purposes many customer prefer using mobile money services compared to banks	82	21	33	15	11	2	**2.27**
	%	25.6%	40.2%	18.3%	13.4 %	2.4%	

Table 4.1's descriptive data show that most respondents (54.9%) agree and 22.0% (strongly agree) that MMS have not decreased customer deposits in banks. But 6.1% of people said they didn't agree with the remark, and 3.7% said they strongly disagreed with it. The average score of 3.85 on this indicator indicates that most respondents found the statement to be true. The data suggested that banks had managed to maintain their customer base despite the growth of MMS across the country.

Thirty-two percent of people polled had a negative opinion, with 26.8 percent having an extremely negative opinion, with the statement that the number of deposits and withdrawals at banks would likely decrease in the future as a result of mobile banking services. About a quarter of the sample (23.2%) didn't make up their minds; 9.8% agreed; 7.3% highly agreed. According to Table 4.10, the average response to this statement was 2.38, indicating that 59% of respondents strongly disagreed with it. The reasoning behind these replies was that the quantity of money sent will not likely decrease in the future because the funds are deposited in the bank for safekeeping after being transferred via mobile money networks.

When asked about the level of rivalry between mobile money providers and banks, 20.7% strongly disagreed and That mobile money businesses are not in direct competition with banks, as claimed by 47.6%, was rejected by 52.4% of respondents. While just 9.8% of respondents actually agreed with the statement, 171.1% were on the fence about it. This suggested that mobile money providers were in direct competition with banks for the same number of consumers.

Table 4.1 displays the results of a survey asking respondents whether they believed banks or mobile money services are more efficient and adaptable. Forty-two percent of respondents disagreed with the statement, while 24.4% agreed and 25.6% were unsure. While widespread adoption of mobile money services has led some to assume that they are more efficient than traditional banking methods, the mean value of this indicator was 2.84, which translates to "undiced." This indicatds that bank employees were confident in the services they provide to customers.

As can be seen in Table 4.1, the majority of respondents (34.1%) were uncertain how often consumers visit the banks, while 32.9% agreed that mobile banking had reduced client visits to the banks and 20.7% disagreed with the assertion. It's reasonable to assume that bank staff didn't immediately notice a sharp drop in consumer traffic. It was also unclear if customers used mobile money in place of in-person bank visits or if they instead utilized other financial innovations offered by banks, such as ATMs or mobile banking apps.

Inferential Statistics

Regression Findings on Mobile Money Services

The study's specific goal was to evaluate the impact of mobile money services on the sustainability of Kenyan commercial banks. The first hypothesis was tested to achieve this goal.

H_0: Mobile money has no significant impact on the financial sustainability of Kenyan banks' commercial operations.

The model results of mobile money are shown in Table 4.2 (a).

Table 4.2 (a): Mobile money and Financial Sustainability Model Summary

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.171[a]	.029	.017	.62370

a. Predictors: (Constant), Mobile Money

The regression analysis revealed a slightly positive relationship (R=0.171 and R2=0.029) between mobile banking services and the sustainability financial institution. According to table 4.2(a), the coefficient of determination (R2) revealed that mobile banking accounted for only about 2.9% of the variance in the dependent variable, with the remainder attributed to other variables.
A linear regression model was used to determine whether mobile money will have an impact on the sustainability of commercial banks in Kenya. The Anova overview for the model is shown in Table 4.2 (b).

Table 4.2 (b): Mobile money and Financial Sustainability Anova Summary

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.941	1	.941	2.419	.0124[b]
	Residual	31.120	80	.389		
	Total	32.061	81			

a. Dependent Variable: Financial Sustainability

b. Predictors: (Constant), Mobile Money

As shown in table 4.2 (b), the F-test findings indicated that the significance of the model (F (1, 81) = 2.419, P 0.0124) at the 5 percent significance level. This indicated the statistical significance of the variable at the 5% level of significance; hence, it was appropriate for analysis. The P-value method was employed to determine whether the null hypothesis held. Model summary results for the mobile money hypothesis are presented in Table 4.2 (c).

Table 4.2 (c): Mobile Money Co-efficient results

Model		Coefficients			t	Sig.
		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
1	(Constant)	.703	.564		1.247	.216
	Mobile Money	.207	.133	.171	1.555	.0124

a. Dependent Variable: Financial Sustainability

The *P-value* (same to the sig. output value) was 0.0124 that was less than 0.05 significance level. The beta co-efficient of mobile in the model was 0.207. This implied that a one unit change of mobile money would increase sustainability of finances by 0.207. The following is the linear regression model of agency banking and financial sustainability of commercial banks.
$Y=0.703 + 0.27\ X_1$

The null hypothesis was rejected based on the P-value because the p value (0.0124) was less than 5%, and it was deduced that mobile payment had a major impact on the financial sustainability of Kenyan commercial banks as seen in table 4.5(c).

DISCUSSION OF FINDINGS

The study's goal was to examine how mobile money services influenced the long-term sustainability of Kenyan commercial banks. The results of the correlational study revealed a weak but positive link (r= 0.171) between Kenyan commercial banks' long-term viability and mobile money. The findings of the regression showed that commercial banks' sustainability was influenced (R2 = 0.029) by mobile banking. With regard to the long-term viability of commercial banks, the use of mobile banking was found to be statistically insignificant (p=0.124).

Mobile money had no influence on bank performance, contrary to the conclusions of Moracha (2014), Munga (2016), Ky, Rugemintwari, Sauviat (2019) among others, who found that mobile money had an impact on the performance of banks. Contradictory to these results were the findings of Munyoki, Rotich, and Anyango (2015), who found that the number of mobile banking transactions had skyrocketed in the five years following the introduction of M-banking. However, Abong'o (2016) demonstrated that the primary functions of mobile banking were those of money storage and transfer, and hence did not serve as a significant predictor of the performance of the institutions evaluated here.

CONCLUSION AND RECOMMENDATIONS

It was concluded that mobile money did not have significant influence on sustainability of commercial banks. However, it was recommended that banks should be more innovative to improve their operational efficiency. Besides, banks should also benchmark with telecommunications providing mobile money services to improve their mobile banking platforms.

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