ISSN 2348-3156 (Print)
International Journal of Social Science and Humanities Research ISSN 2348-3164 (online)
Vol. 11, Issue 3, pp: (182-189), Month: July - September 2023, Available at: www.researchpublish.com

EFFECT OF MOBILE BANKING ON PERFORMANCE OF COMMERCIAL BANKS IN KENYA

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DOI: https://doi.org/10.5281/zenodo.8330345

Published Date: 09-September-2023

Abstract: **The study specifically focused on establishing the effect of mobile banking on performance of commercial banks in Kenya. The theories that anchored the study comprised of Technology Acceptance Model (TAM), Schumpeterian Theory of Creative Destruction, Disruptive Innovation Theory, and Diffusion of Innovation Theory. A descriptive research design was employed in the study. The target population comprised of 42 licensed commercial banks operating in Kenya. The units of observation comprised of strategic planning managers, operations managers and finance managers. Three employees were targeted from each commercial bank thus making a total of 126 respondents. Structured questionnaires formulated in a five-point Likert scale were employed in collection of data. The collected data was analyzed descriptively and inferentially and the statistics generated through SPSS and MS Excel. The results of the study were displayed in form of tables and figures. Prior data collection, a pilot study was conducted to assess the reliability and validity of the questionnaires. The respondents in the pilot study were exempted from the main study. The results established that mobile banking bears a positive and significant effect on performance of commercial banks in Kenya. The study recommended to the commercial banks operating in Kenya to enhance the level of mobile banking since the practice bears a positive significant effect on performance.**

Keywords: **Mobile Banking, Performance, Commercial Banks.**

1. INTRODUCTION

In Germany, Wever and Allen (2012) observed that financial institutions have been investing heavily on mobile technology and technology to pave ways for customers to carry out banking activities conveniently and safely. The development and introduction of smartphones with various apps have enabled the country to penetrate mobile banking services to the citizens. Additionally, emergence of app developing firms such as ‘bunq’ that facilitates transactions of banking services have enabled commercial banks in the country extend financial services to customers. Wever and Allen (2012) notes that majority of the commercial banks believe that channels for mobile banking greatly supports reduction of transactions costs while at the same time increasing customer retention and commitment. This culminates to enhanced performances amongst the commercial banks adopting the online and mobile banking platforms.

A study conducted in Iran by Thinh and Thu(2020)on how mobile banking influences performances of commercial banks in the country revealed that from the customers’ point of view, mobile banking had high returns amongst Iranians. This implied that financial institutions in Iran provide mobile banking services that customers derive satisfaction specifically the usage of mobile banking. As a result of adoption of mobile banking technologies, commercial banks benefits from improved competence accompanied by a reduction on client banking costs. Additionally, there is a reduction service provider costs as well as banking costs in areas of cash storage, checking and processing costs.

A study on whether adoption whether mobile phones usage works towards extending banking services to the unbanked citizens in sub-Saharan African countries established that majority of African citizens lacked bank accounts and experienced high costs when carrying out financial transactions (Elle, 2018). However, with the introduction of mobile banking, it was a great opportunity for the unbanked to access financial services through mobile phones. The penetration of the mobile banking services enables the financial institutions extend banking services to a widened area which culminates into increased customer base translating into increased profits.

The banking industry in Nigeria has for a long time operated in a competitive environment occasioned by existence of various institutions offering financial services (Mohammed *et al*., 2022). This has resulted to many commercial banks introduce newer innovative products, organizational innovations and technologies which have enabled them achieve greater operational efficiencies and service and products differentiations. Through technological innovations, commercial banks in the country can now offer multiple deposits, loan and investment products through various channels of distribution such as ATMs, mobile banking and internet banking (Isa-Olatinwo *et al.*, 2022). This has further prompted the commercial banks to initiate a shift towards marketing innovations and innovations aimed at delivering financial services to customers conveniently and efficiently. The technological innovations have proved to be of significant as they contributes to increased performances amongst the commercial institutions in areas of profit and market share.

2. STATEMENT OF THE PROBLEM

The operational environment surrounding commercial banks operating in Kenya is associated with volatility, complexity, ambiguity, and uncertainty. The situation is further worsened by a surge in dynamisms in the demands of customers, strict and intensive CBK regulations, and high competition of MFIs (Kanini, 2021). Kombo and Njuguna (2017)notes that existence of increasingly high costs of doing business amongst the commercial banks have exposed majority of the institutions with insufficient finances for running operations. The challenges have exposed the commercial banks into poor performances characterized by losses from an increase in the levels of NPLs. The institutions further continue to experience an increase in the levels of credit risks, low profitability and liquidity risks which have exposed the sector into performances instabilities(CBK, 2020). CBK (2020) further reported a drop in asset quality to 34.5% from 37.6%, a 43.7% increase in liquidity, and a stagnated capital adequacy at 18.8%. The indicators resulted to a 9.65 decline in the levels of PBT in the whole banking sector.

Hossain (2021)advocates for adoption of performance enhancers in areas of technology amongst commercial banks to reduce the costs associated with transactions. Adoption of innovations in the banking bears the capabilities of revolutionizing the commercial bank’s operations as witnessed by an increase in the adoption and usage of various platforms. A report from KEPSS (Kenya Electronic Payment and Settlement System) and EAPS (East African Payment System) revealed that there was approximately 2.855 million transactions worth kshs 27,000 billion conducted through various innovations platforms in 2016. This was a 30% increase in the volume of transactions and a12% increase in the value of the transactions. The daily transactions further had a rise of 27% CBK (2020). The statistics reveals that there has been an increase in the adoption of electronic banking platforms. The current study sought to assess the resultant performance of commercial banks as a result of adopting and implementing technological innovations.

Existence of research gaps from past studies further prompted the current study. A study by Tunay *et al.*,(2019) evaluated how technology innovation affects performances of banks in both emerging and advanced economies existence of a positive as significant relationship. A studyChaarani and Abiad (2018) sought to evaluate how technological innovations impacts performances of banks in Lebanon and established that investment on technological innovations in areas of ATMs and internet banking positively impacts the performances of the banks in Lebanon. These studies were conducted outside Kenya and focused on different aspects of financial innovations. Additionally, the studies adopted panel regression model to test the relationships of the study variables while the current study adopted a regression model. A study by Oketch and Weda (2020) assessed how financial innovations affects market capitalization of commercial banks listed in NSE. The study was in a different sector and revolved on a different concept. These studies left both conceptual and contextual knowledge gaps that the current study sought to fill by establishing the effects of mobile banking on performances of commercial banks operating in Kenya.

3. LITERATURE REVIEW

Mobile banking according to Rehman *et al*., (2019)refers to execution of banking related transactions through mobile devices such phones and tablets. Bagudua *et al.*, (2017)views mobile banking as any form of transaction encompassing transfer of rights or controls to utilizes goods and services which are initiated or concluded through mobile access other networks through the help of electronic devices like tablets or mobile phones. Muguna (2019)adds that mobile banking entails utilizing mobile phones or other mobile devices in executing financial transactions through a linked bank's account of a client. Over the past few years, information technology advancement has completely altered the manner in which institutions carry out their day-to-day operations.

Establishment of advanced technologies has consequently resulted into progress evidenced by mobile banking amongst financial institutions. This has fully changed the manner through which financial institutions especially commercial banks carry out their businesses. Through mobile banking, commercial banks are capable of offering financial services online through mobile devices. This has created avenues for customers to have accessibility of simple and readily available remunerations and financial services. Bagudua *et al.*, (2017)notes that mobile banking facilitates economical and quicker money transfers, increases trade volumes and financial accessibility to a larger portion of unbanked especially in the developing countries.

Mobile banking provides millions of people potential solutions in financial emerging markets that have accessibility to mobile phones but remain excluded from financial mainstream. This makes accessibility of basic financial services easier by minimizing distance and time to the retail branches of the banks which further reduces the bank's own transaction and overhead related costs.Muchiri (2018) notes that mobile banking avails an opportunity to commercial banks of extending banking services to new and prevailing customers thus increasing their market share levels. Muguna (2019)posits that mobile banking is largely driven by the notions of minimizing operational costs while maximizing on operating revenues.

Mobile banking technology has significantly penetrated large areas and is projected to increase in coming years. Financial institutions especially commercial banks which traditionally depended on setting up operational branches to provide financial services are currently adopting mobile banking technology as a branchless banking structure. This bears the effect of reducing the operational costs of the institution thus increasing the profitability ratios. Technological innovations in the banking sector especially mobile banking has offered huge opportunities to service providers to avail flexibility to clients when carrying out financial transactions (Rehman *et al*., 2019).

Rehman *et al*., (2019) sought to determine the determinants of mobile banking adoption in Malaysia. The study specifically sought to measure the behavioral intention of Malaysian consumers of using mobile banking. The study targeted sample consumers of mobile banking from samples Malaysian universities. Questionnaires formed the data collection instruments and were issued to 700 respondents. 384 were fully responded and returned for analysis. A structural equation model was utilized in analyzing the collected data. The results of the study revealed existence of a positive significant relationship between perceived attitude, usefulness and ease of use and using mobile banking. The study further established a significant but negative relationship between attitude, security risk and privacy risk and usage of mobile banking in the country.

Bagudua *et al.*, (2017) conducted a study on how mobile banking affects commercial banks performance in Nigeria. The study employed a descriptive research survey design. Structured questionnaires formed the main data collection instrument for gathering primary data. 22 commercial banks were selected and involved in the study. Descriptive statistics were applied in assessing the collected data and results displayed inform of graphical charts. The study revealed that mobile banking significantly and positively affects performances of commercial banks. The study recommended continuity in the adoption and usage of mobile banking services in the operations of the commercial banks due to an increasing trend in the number of individuals with accessibility to mobile handset.

Muguna (2019)sought to assess how mobile banking affect performance of firms focusing on Equity Banks operating in Nairobi CBD. The study employed a combination of both descriptive research design and explanatory research design and the target population comprised of 45 randomly selected employees from three Equity Bank branches. The selected employees were categorized into top, middle and lower management levels. The study used primary data that was collected using questionnaires. SPSS was used to conduct a quantitative analysis of the collected data. The study's findings showed a substantial and favorable correlation between mobile banking services and bank performance.

A study on the impact of mobile banking adoption on the performance of SMEs in Nairobi County was done by Muchiri (2018). The study used a descriptive survey research design, and 176 SMEs made up the target group. Crecy and Morgan (1970) sampling formula was utilized to derive a sample of 122 respondents. Primary data used in the study was gathered through pre-determined questionnaires containing both closed and open-ended questions. Quantitative data from questionnaires was analyzed through SPSS while content analysis was utilized to analyze qualitative data. Quantitative analysis comprised of both descriptive and inferential statistics. The results of the study established that adoption of mobile banking had resulted to increase in customer bases since it was perceived as an easy and convenient way of making payments. The resultant effect to the SMEs was an increase in the number of transactions, business efficiency and profit levels.

4. RESEARCH METHODOLOGY

A descriptive research design was employed in the study. The target population comprised of 42 licensed commercial banks operating in Kenya. The units of observation comprised of strategic planning managers, operations managers and finance managers. Three employees were targeted from each commercial bank thus making a total of 126 respondents. Structured questionnaires formulated in a five-point Likert scale were employed in collection of data. The collected data was analyzed descriptively and inferentially and the statistics generated through SPSS and MS Excel. The results of the study were displayed in form of tables and figures. Prior data collection, a pilot study was conducted to assess the reliability and validity of the questionnaires. The respondents in the pilot study were exempted from the main study.

5. FINDINGS

Table 1 outlines the descriptive results on mobile banking. According to the results, respondents agreed with the statements that the bank has established mobile banking platforms accessible to customers (mean=4.411), that the mobile banking platform is easy to use amongst customers (mean=4.159) and that the mobile platform is associated with reduction in operational costs(mean=4.101). Respondents further agreed with the statements that the mobile platform provides convenience to customers in accessing financial services(mean=4.109), that the bank has established a 24hr-support service dedicated to the mobile platform (mean=3.849) and that through the mobile platform, the banks has managed to widen its customer base(mean=3.967). All respondents according to a mean of 4.1 and std.dev of 0.371 agreed with the statements on mobile banking. The results are consistent with Bagudua *et al.*, (2017) who noted that mobile banking facilitates economical and quicker money transfers, increases trade volumes and financial accessibility to a larger portion of unbanked especially in the developing countries.

Table 1: Descriptive Statistics on Mobile Banking

Mobile Banking	N	Mean	Std. Dev
The bank has established mobile banking platforms accessible to customers	96	4.411	0.106
The mobile banking platform is easy to use amongst customers	96	4.159	0.147
The mobile platform is associated with reduction in operational costs	96	4.101	0.192
The mobile platform provides convenience to customers in accessing financial services	96	4.109	0.312
The bank has established a 24hr-support service dedicated to the mobile platform	96	3.849	0.696
Through the mobile platform, the banks has managed to widen its customer base	96	3.967	0.775
Average	**96**	**4.1**	**0.371**

Table 2 outlines the descriptive results on Performance of Commercial Banks. According to the results, respondents agreed with the statements that the bank has witnessed an increase in the number of new customers(mean=4.419), that the bank has managed to retain customers(mean=4.306), and that the market share of in the bank has increased from financial innovation(mean=4.458). Respondents also agreed with the statements that the bank's level of profits and competitiveness had increased and shown by a mean of 4.016 and 4.261 respectively. On average, all respondents were in agreement with the statements on performance of commercial banks as shown by average response mean of 4.292 and std.dev of 0.176. According to Aduda & Kingoo (2012), the majority of Kenyan banks are spending substantially in information and communication technology for the purpose of delivering quality and acceptable services.

Table 2: Descriptive Statistics on Performance of Commercial Banks

Performance of Commercial Banks	N	Mean	Std.Dev
The bank has witnessed an increase in the number of new customers	96	4.419	0.136
The bank has managed to retain customers	96	4.306	0.194
The market share of in the bank has increased from financial innovation	96	4.458	0.119
The level of profits in the bank has increased	96	4.016	0.213
The competitiveness of the bank has increased	96	4.261	0.219
Average	**96**	**4.292**	**0.176**

The study further assessed the Return on Investments of commercial operating in Kenya for the period between 2017 and 2018. The results in figure 1 shows that the commercial banks recorded a steady increase in ROA from 2017 to 2018 which declined steadily through 2019 and 2020. This was followed by a sharp increase between 2020 and 2021. The results portrays fluctuations in the levels of ROA for years under consideration.

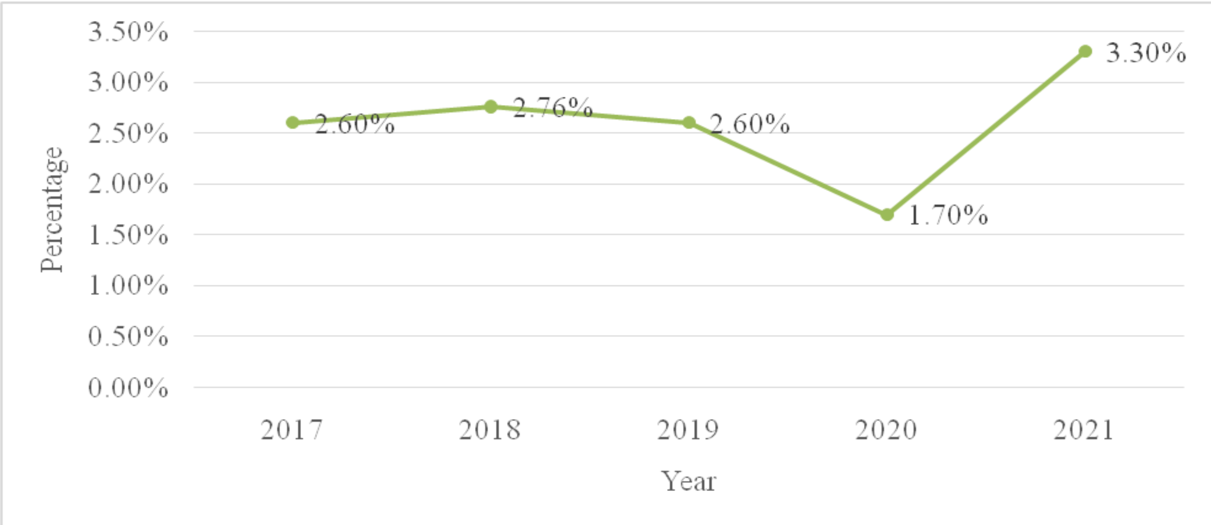

Figure 1 Return on Assets

The study gave the regression coefficient results to show how changes in the independent variable(s) affect changes in the dependent variable. Table 3 reveals that mobile banking has a positive significant effects on commercial bank performance in Kenya (beta=0.417, sig=0.0000.05). This means that improving the characteristics of mobile banking by one unit results in a 0.417 unit rise in the performance of Kenyan commercial banks. The findings are consistent with those of Bagudua *et al.*, (2017), who investigated how mobile banking affects commercial bank performance in Nigeria and discovered that mobile banking had a significant and favorable impact on commercial bank performance.

Table 3: Model Coefficients

	Unstandardized Coefficients		Standardized Coefficients		
	B	**Std. Error**	**Beta**	**t**	**Sig.**
(Constant)	0.944	0.11		8.582	0.031
Mobile Banking	0.417	0.079	0.369	5.278	0.000

Dependent Variable: Performance of Commercial Banks

The optimal model of the study becomes

Performance of Commercial Banks = 0.944 + 0.417(Mobile Banking)

6. CONCLUSION AND RECOMMENDATION

The study offers recommendations to commercial banks operating in Kenya to enhance the level of mobile banking since the practice bears a positive significant effect on performance. This can be realized by undertaking mobile banking practices such as establishing mobile banking platforms accessible to customers which is easy to use, provides convenience to customers in accessing financial services, establishing a 24hr-support service dedicated to the mobile platform, having a mobile platform associated with reduction in operational costs and ensuring that the mobile platform forms a basis of widening the customer base.

The findings of the study led to conclusions that mobile banking positively and significantly affects performance of commercial banks in Kenya. Additionally, mobile banking practices undertaken by the commercial such as establishing mobile banking platforms accessible to customers which is easy to use, provides convenience to customers in accessing financial services, establishing a 24hr-support service dedicated to the mobile platform, having a mobile platform associated with reduction in operational costs and ensuring that the mobile platform forms a basis of widening the customer base further contributes to a positive significant effect on performance of commercial banks in Kenya.

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