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FIRM SIZE, MOBILE BANKING TECHNOLOGY AND FINANCIAL PERFORMANCE OF MICROFINANCE INSTITUTIONS IN KENYA

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Abstract

Mobile banking technology has revolutionized the financial sector globally, driving significant improvements in financial inclusion, operational efficiency, and customer satisfaction and contributing significantly to the financial performance of financial institutions. However, as many financial institutions embraced the technology and more of the previously unbanked population started using it, the fraudsters saw an opportunity to infiltrate the systems through cyber-attacks. These eroded the gains brought by Mobile Banking Technology and raised concerns over the optimal firm size to maximize gains. The study sought to determine the effect of mobile banking technology on the financial performance of Microfinance Institutions in Kenya. And the moderating effect of firm size on the relationship between the two variables. The study used a descriptive research design and a questionnaire to collect data from 204 staff of 13 Microfinance Institutions licensed in Nairobi, Kenya. The study obtained Secondary data from the Central

Bank of Kenya Supervisory Reports of 2017 to 2022. The data was analyzed using descriptive and inferential statistics. The study findings showed that mobile banking technology positively and significantly affected the financial performance of Microfinance Institutions. Additionally, firm size positively and significantly affected the relationship between mobile banking technology and financial performance with large firms benefited more than smaller firms. The study recommended that firms invest more in mobile banking technology to boost financial performance and increase their capital base, outlets and market share to reap higher benefits from the economies of scale.

Keywords: Firm Size, Mobile Banking Technology, Financial Performance, Microfinance Institutions

INTRODUCTION

Mobile banking technology has revolutionized the financial sector globally, driving significant improvements in financial inclusion, operational efficiency, and customer satisfaction. In the United States, the adoption of mobile banking has surged, with studies indicating that approximately 80% of bank customers utilize mobile banking applications for transactions, account management, and financial planning (Federal Reserve, 2022). The convenience and accessibility offered by mobile banking have enhanced customer engagement and loyalty, leading to better financial performance for banks. This widespread adoption is supported by the advanced technological infrastructure and regulatory environment encouraging innovation in the financial sector. The Federal Reserve (2022) reported that mobile banking technology increased the volume of transactions in financial institutions and reduced operational costs, contributing to higher profit margins for financial institutions. Additionally, integrating mobile banking with other digital financial services, such as online loan applications and investment platforms, has further expanded the revenue streams for banks, demonstrating the multifaceted benefits of mobile technology.

Similarly, mobile banking has experienced exponential growth in China, driven by the widespread use of smartphones and the rise of fintech companies like Alipay and WeChat Pay. This technological advancement has increased the customer base and streamlined banking operations resulting in improved profitability and market competitiveness for financial institutions (Zhang & Tang, 2021). The Chinese government's supportive policies and regulations have played a crucial role in fostering a conducive environment for the growth of mobile banking. According to Zhang and Tang (2021), integrating mobile payment systems with e-commerce platforms has significantly boosted consumer spending, enhancing overall economic activity.

Additionally, mobile banking has facilitated access to financial services by rural populations previously underserved by traditional banks, thus promoting financial inclusion and economic development in remote areas. The success of mobile banking in China illustrates the transformative potential of digital financial services in enhancing financial performance and economic growth.

In Africa, mobile banking has emerged as a critical tool for financial inclusion, particularly in regions with limited access to traditional banking infrastructure. In Nigeria, the introduction of mobile banking has significantly expanded financial services to underserved populations, including those in remote areas. According to the Central Bank of Nigeria (2020), mobile banking transactions have grown by over 60% in recent years, enabling millions of Nigerians to participate in the formal financial system. This expansion has been facilitated by the widespread availability of mobile phones and the innovative efforts of fintech companies to develop user-friendly mobile banking applications. The increased access to financial services has led to enhanced financial performance for banks, evidenced by increased deposits, reduced transaction costs, and higher customer retention rates. Additionally, mobile banking has played a pivotal role in reducing the reliance on cash transactions, thus improving the efficiency and security of financial transactions across the country (Central Bank of Nigeria, 2020).

In South Africa, mobile banking has gained traction with major banks like Standard Bank and First National Bank leveraging mobile technology to offer innovative financial products and services. The integration of mobile banking has contributed to improved financial performance by enhancing operational efficiency and expanding the customer base (Nkosi & Matseke, 2019). South African banks have been at the forefront of adopting advanced mobile banking solutions, including mobile wallets and payment systems serving individual and corporate clients. Nkosi and Matseke (2019) opined that the application of mobile banking technology led to significant cost savings for banks, as it reduced the need for physical branch networks and associated operational expenses. Furthermore, mobile banking has facilitated financial inclusion by providing banking services to previously unbanked populations, thus promoting economic empowerment and development. The positive impact of mobile banking on financial performance in South Africa underscores the importance of embracing digital financial technologies to drive growth and inclusion in the financial sector.

Kenya is a pioneer in mobile banking technology, with the launch of M-Pesa in 2007 marking a significant milestone in the financial sector. M-Pesa has transformed how Kenyans conduct financial transactions, providing a platform for money transfers, bill payments, and savings. The widespread adoption of mobile banking in Kenya has profoundly impacted the financial performance of microfinance institutions (MFIs). A study by Muiruri et al. (2019),

showed that mobile banking improved financial performance among Kenyan MFIs by increasing accessibility to financial services, enhancing customer satisfaction, and reducing operational costs. The study highlighted that mobile banking enabled MFIs to reach previously unbanked populations, thus expanding their customer base and improving financial stability. Further, mobile banking has facilitated real-time transaction processing, significantly increasing the efficiency and effectiveness of financial operations (Muiruri et al., 2019).

The positive impact of mobile banking on financial performance is also reflected in the significant growth in Return on Assets (ROA) and other financial indicators among Kenyan MFIs (Ala & Ngugi, 2020). The adoption of mobile banking has allowed MFIs to offer a wider range of financial products and services, such as microloans and savings accounts, tailored to the needs of their customers. This diversification of services has contributed to increased revenue and profitability for MFIs. Additionally, mobile banking has improved the transparency and security of financial transactions, reducing the risk of fraud and enhancing customer trust. According to Ala and Ngugi (2020), the success of mobile banking in Kenya has set a precedent for other countries in the region, demonstrating the potential of digital financial technologies to drive financial inclusion and economic development. While the use of mobile banking technology is seen as a game changer in Kenya, the adoption of mobile banking by MFIs poses a unique challenge of contending with cyber security. This brings to the fore the need to assess the cost and risks of running the system vis-a-vis the benefits to the microfinance institutions in Kenya, and the importance of leveraging mobile banking technology to enhance the financial performance and sustainability of these institutions.

Firm Size and Financial Performance

Firm size is a critical factor when discussing the financial performance of organizations, including microfinance institutions (MFIs). Beck, Demirguc-Kunt, and Merrouche (2013) argued that larger financial institutions benefit from economies of scale, which enable them to operate more efficiently than smaller firms. This efficiency is often reflected in improved profitability, lower costs, and increased market share. Larger firms typically have more resources, better access to capital, and the ability to invest in advanced technologies and skilled personnel, thus enhancing their operational efficiency and financial performance. On the contrary, large firms face numerous challenges that stem from the diseconomies of scale. Additionally, mobile banking technology exposes financial institutions to attacks by cybercriminals which may potentially affect their performance. In the MFI sector, size is critical in influencing the decision to adopt and leverage technology to reduce costs, and increase profits.

Larger MFIs are more likely to have the financial capacity to invest in sophisticated mobile banking platforms and comprehensive training programs for their staff and customers. This investment can lead to greater perceived usefulness and ease of use, which are critical factors in technology adoption according to the Technology Acceptance Model (TAM) (Venkatesh & Bala, 2008). For instance, larger MFIs can afford to develop or purchase advanced mobile banking applications that offer a wide range of services, from basic transactions to complex financial planning tools. These applications can enhance customer satisfaction and loyalty, ultimately improving the financial performance of the MFIs.

Moreover, larger MFIs can leverage their extensive networks and customer bases to maximize the benefits of mobile banking technology. They can use data analytics to gain insights into customer behavior and preferences, allowing them to offer personalized services that meet the specific needs of different customer segments. According to a study by Chen, Wu, and Yang (2019), the ability to tailor services to individual customers can significantly enhance customer engagement and retention, leading to better financial performance.

In contrast, smaller MFIs may face challenges adopting mobile banking technology due to limited resources and technical expertise. They might struggle to afford the initial investment required for developing or purchasing mobile banking platforms, and the ongoing costs associated with maintaining and upgrading these systems. This limitation can hinder their ability to offer competitive mobile banking services, potentially affecting their financial performance. A study by Chuang, Liu, and Kao (2016) found that smaller firms often face difficulties in keeping up with technological advancements, which can put them at a disadvantage compared to their larger counterparts.

While firm size may affect the adoption and use of mobile banking technology, its impact on the relationship between mobile banking technology and the financial performance of MFIs is critical but undetermined.

Statement of the Problem

Microfinance Institutions (MFIs) are critical in providing financial services to low-income individuals and small businesses, resulting in financial inclusion and economic development in Kenya, and globally. However, despite their significant role, many MFIs face challenges in maintaining financial sustainability and improving their financial performance. The advent of mobile banking technology has been identified as a potential solution to enhance the financial performance of MFIs by increasing accessibility, reducing operational costs, and improving customer satisfaction. However, the introduction of mobile banking came with a fair share of challenges such as the threat of cybercrimes, the cost of installing

and maintaining the systems, and acceptance of the technology among the low-income members of society. Further, the extent to which mobile banking technology impacts the financial performance of MFIs in Kenya remains unclear, specifically considering the moderating effect of firm size, remains unclear.

Previous studies have shown mixed results regarding the impact of mobile banking on financial performance. Some studies indicate a positive relationship, suggesting that mobile banking technology increases financial performance due to improved efficiency and expanded customer reach (Muiruri et al, 2019, Mosoti, Wafula, and Nyangau 2023). On the other hand, some studies have reported negative or insignificant impacts, pointing out issues such as increased loan defaults and regulatory challenges (Memba & Wanyoro, 2017). These conflicting findings highlight the need for a comprehensive analysis to consider the unique context of Kenyan MFIs and the potential moderating effect of firm size.

This study aims to address this gap by investigating the effect of mobile banking technology on the financial performance of deposit-taking MFIs in Kenya, specifically focusing on how firm size influences this relationship between the two. By examining these factors, the study seeks to provide valuable insights that can inform strategies to enhance the financial performance and sustainability of MFIs, ultimately contributing to greater financial inclusion and economic growth in Kenya.

Study Objectives

a. To determine the effect of mobile banking technology on the financial performance of Deposit taking MFIs in Kenya
b. To determine the moderating effect of firm size on the relationship between mobile banking technology and the financial performance of deposit-taking MFIs in Kenya

THEORETICAL AND LITERATURE REVIEW

Theoretical Review

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) by Davis (1989) is one of the most influential models in explaining the adoption and usage of information technology. TAM posits that two main factors, perceived usefulness (PU) and perceived ease of use (PEOU), determine an individual's intention to use a technology, which subsequently influences actual usage behavior (Venkatesh & Davis, 2000). This theory provides a robust framework for studying how mobile banking technology can be adopted by microfinance institutions (MFIs) and their clients to enhance financial performance.

Perceived usefulness refers to the degree to which a person believes that using a particular system would enhance their job performance. In the context of MFIs in Kenya, the perceived usefulness of mobile banking technology is critical. Mobile banking can streamline operations, reduce transaction costs, and improve customer satisfaction by offering convenient and accessible financial services (Chuang, Liu, & Kao, 2016). For instance, mobile banking enables customers to perform transactions anytime and anywhere, leading to higher customer retention and increased volumes of transactions. This perceived benefit can drive the adoption of mobile banking technology among MFIs, ultimately improving their financial performance.

Perceived ease of use, on the other hand, refers to the degree to which a person believes that using a particular system would be free of effort. For MFIs and their customers, the ease of use of mobile banking platforms is paramount. If the mobile banking application is user-friendly and easy to navigate, it lowers the barriers to adoption (Oliveira, Faria, Thomas, & Popovič, 2014). In Kenya, where mobile phone penetration is high, the simplicity and accessibility of mobile banking platforms can significantly influence their adoption by both MFIs and customers. A user-friendly mobile banking system can reduce the learning curve and technical difficulties associated with new technology, making it more likely for users to adopt and consistently use the service, thus enhancing the overall financial performance of MFIs (Mutisya, 2017).

Moreover, external variables such as system quality, user training, and support can also impact PU and PEOU. For instance, high-quality mobile banking systems with reliable performance and robust security features can enhance the perceived usefulness and ease of use, encouraging adoption (Marangunić & Granić, 2015). Additionally, adequate training and customer support can mitigate any initial resistance to new technology and help users become more comfortable and proficient in mobile banking services use. For MFIs in Kenya, investing in high-quality mobile banking systems and providing comprehensive training and support can be crucial strategies for promoting technology adoption and improving financial performance.

Furthermore, the moderating effect of firm size on the relationship between mobile banking technology and financial performance can be easily explained by TAM. Larger MFIs may have more resources to invest in advanced mobile banking technologies and training programs, hence have a greater perceived usefulness and ease of use compared to smaller MFIs (Bagozzi, 2007). This difference can result in varying rates of adoption and benefits realized from mobile banking, highlighting the importance of considering firm size in studies examining technology adoption and financial performance.

Literature Review

The impact of mobile banking technology on financial performance has been widely studied, revealing significant insights into its benefits and challenges. In the United States, Smith and White (2018) conducted a comprehensive study to evaluate the effects of mobile banking on commercial banks' financial performance. Utilizing a quantitative approach, they analyzed economic data from a sample of 150 commercial banks over six years. Their findings indicated that mobile banking adoption led to a 12% increase in Return on Assets (ROA) and a 15% reduction in operational costs. The study concluded that mobile banking significantly enhances banks' financial performance by improving operational efficiency and customer satisfaction. However, the authors also noted the need for improved cybersecurity measures to address the increasing threats associated with digital banking (Smith & White, 2018).

In Germany, Müller and Zimmermann (2020) investigated the impact of mobile banking on the financial performance of fintech companies. Using a mixed-methods approach, the researchers combined quantitative analysis of financial data from 40 fintech firms with qualitative interviews with industry experts. The study revealed that mobile banking contributed to a 20% increase in profitability and a 25% growth in the customer base. The integration of mobile payment systems and personalized financial services identified mobile banking as a key driver of these improvements. Despite the positive outcomes, the study highlighted challenges related to regulatory compliance and technological infrastructure, suggesting the need for ongoing investments and policy enhancements to sustain growth (Müller & Zimmermann, 2020).

In Africa, mobile banking has been a pivotal tool for enhancing financial inclusion and improving financial performance in countries with limited access to traditional banking services. In Uganda, a study by Njeru and Mwangi (2019) examined the impact of mobile banking on the financial performance of commercial banks. The researchers employed a quantitative research design, analyzing financial data from 15 commercial banks over five years. Their findings indicated that mobile banking led to a 30% increase in transaction volumes and a 20% improvement in customer satisfaction, which in turn boosted the financial performance of the banks. The study also identified technological infrastructure and regulatory challenges as significant barriers to maximizing the benefits of mobile banking (Njeru & Mwangi, 2019).

Similarly, in Ghana, Koomson and Twumasi (2018) explored the influence of mobile banking on the financial performance of savings and loan companies. The study utilized a qualitative research methodology, conducting in-depth interviews with senior management from 10 leading savings and loan companies. The findings revealed that mobile banking resulted in substantial cost savings and enhanced customer engagement, leading to improved financial performance. The study also emphasized the importance of customer education and

technological literacy in maximizing the benefits of mobile banking. Despite the positive impacts, challenges related to digital fraud and cybersecurity threats were noted, underscoring the need for robust security measures and regulatory oversight (Koomson & Twumasi, 2018).

Kenya has been at the forefront of mobile banking innovation, with significant studies examining its impact on financial performance. Kamau and Rotich (2017) conducted a study to assess the impact of mobile banking on the financial performance of microfinance institutions (MFIs) in Kenya. The study adopted a quantitative research design, utilizing financial data from 25 MFIs over four years. The results showed that mobile banking significantly improved the financial performance of MFIs, with a 12% increase in ROA and an 18% reduction in operational costs. The study attributed these improvements to the increased accessibility and efficiency provided by mobile banking. However, it also identified challenges related to regulatory compliance and technological infrastructure, suggesting the need for supportive policies and investments in technology (Kamau & Rotich, 2017).

Omondi and Muturi (2019) further explored the relationship between mobile banking and financial performance in Kenya, focusing on the regulatory environment and technological advancements. The study employed a mixed-methods approach, combining quantitative analysis of financial data from 20 MFIs with qualitative interviews with industry experts. The findings confirmed that mobile banking positively impacts financial performance by enhancing efficiency and expanding customer reach. However, the study also highlighted the need for improved regulatory frameworks and technological investments to address challenges such as digital fraud and cybersecurity threats. The study concluded that while mobile banking offers significant benefits, its full potential can only be realized with supportive regulatory and technological environments (Omondi & Muturi, 2019).

Literature Review on Firm Size and Financial Performance

Firm size is a significant factor in determining financial performance, with larger firms typically experiencing advantages due to economies of scale and scope. According to a study by De Massis, Audretsch, Uhlaner, and Kammerlander (2018), larger firms benefit from more substantial financial resources, enabling them to invest in innovative technologies and attract skilled personnel. This investment leads to improved operational efficiencies and higher profitability. The study found that firm size positively correlates with financial performance, as larger firms can better manage costs and optimize their operations compared to smaller firms.

Additionally, a study by Lee, Kozlenkova, and Palmatier (2015) highlighted that larger firms have more diversified portfolios, which can mitigate risks and stabilize financial performance. This diversification allows larger firms to absorb market shocks and maintain

steady growth. The study emphasized that firm size provides a buffer against market volatility, contributing to sustained financial performance.

In the context of mobile banking, firm size can influence the adoption and implementation of technology. Larger firms are more likely to have the financial capacity to invest in sophisticated mobile banking platforms and comprehensive training programs, which enhance perceived usefulness and ease of use (Chen, Wu, & Yang, 2019). These factors are critical in technology adoption, as larger firms can leverage their resources to provide superior mobile banking services, leading to improved customer satisfaction and financial performance.

Conversely, smaller firms may face challenges in adopting mobile banking technology due to limited resources and technical expertise. A study by Chuang, Liu, and Kao (2016) found that smaller firms often struggle with the high costs of technology implementation and maintenance, which can hinder their ability to compete with larger firms. This limitation affects their financial performance, as they cannot fully capitalize on the benefits of mobile banking.

Overall, the moderating effect of firm size on the relationship between mobile banking technology and financial performance highlights the importance of considering firm size in studies examining technology adoption. Larger firms can maximize the benefits of mobile banking due to their resources and capabilities, while smaller firms may need additional support and strategies to overcome their limitations (Beck et al., 2013; De Massis et al., 2018; Lee et al., 2015).

CONCEPTUAL FRAMEWORK

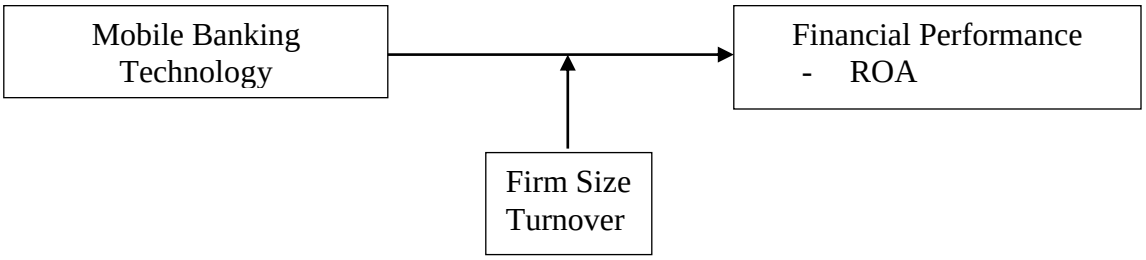

Figure 1: Conceptual Frame Work

Figure 1 above shows the direct relationship between mobile banking technology and financial performance representing the first objective of the study. The figure further shows the moderating effect of firm size in the relationship between the independent and dependent variables which represents the second objective of the study.

RESEARCH METHODOLOGY

Research Design

The study adopted a descriptive research design to investigate the effect of mobile banking technology on the financial performance of deposit-taking microfinance institutions (MFIs) in Kenya and the moderating effect of the firm size in the relationship between the two. A descriptive research design is appropriate for this study as it allows for a comprehensive analysis of the current status of the variables of interest and provides a detailed account of their relationships (Saunders, Lewis, & Thornhill, 2016). This design enables the researcher to gather quantitative data that can be statistically analyzed to determine the effect of mobile banking technology on financial performance and the moderating effect of firm size.

Target Population and Sample Size

The target population for this study comprised all the deposit-taking MFIs operating in Kenya, which are licensed and regulated by the Central Bank of Kenya. The current number as per the Central Bank of Kenya data of 2024, there are 14 licensed deposit-taking MFIs in the country. The study however involved 13 MFIs that were in operation during the period of study which were 13 in number. The respondents for the study were the staff in the departments of ICT, Operations, and Finance who are conversant with the use of mobile banking technology and financial performance measurements totaling 203. A census was used to select the identified staff of the MFIs operating in the Nairobi region. The census approach is advantageous as it provides comprehensive data and eliminates sampling bias, ensuring that the findings are representative of the entire population (Cooper & Schindler, 2018).

Data Collection Instruments

Primary data was collected using structured questionnaires, which were designed to capture relevant information on mobile banking technology, firm size, and financial performance. The questionnaire comprised both closed-ended and open-ended questions to facilitate quantitative analysis while also allowing for the collection of qualitative insights. The closed-ended questions utilized a Likert scale to measure the extent of agreement or disagreement with various statements related to mobile banking and financial performance. This approach effectively obtains quantifiable data that can be analyzed statistically (Bryman, & Bell, 2015). Additionally, secondary data on economic performance indicators such as Return on Assets (ROA) and relative size of MFIs measured by their turnover was obtained from the audited financial statements of the MFIs presented by the Central Bank of Kenya in the bank supervision and banking sector reports (2017-2021).

Model Summary

To measure the direct relationship between the dependent and independent variables, the following model was used:

$Y = \alpha + \beta\chi$.....(i)

Where, Y is the dependent variable of financial performance measured by Return on Assets (ROA), α and β are constants and X represents the independent variable (Mobile Banking Technology).

To measure the moderating effect of firm size on the relationship between Mobile Banking Technology and Financial performance, the following model was used:

$Y = \alpha + \beta\chi * M$.....(ii)

In the second model, the 'M' stands for the Firm Size measured by the turnover of the MFIs in the past five years of study.

FINDINGS

Mobile Banking Technology and Financial Performance

The first objective of this study is to determine the effect of Mobile Banking Technology on the financial performance of Microfinance Institutions in Kenya. To achieve this objective, the study tested hypothesis *Ho*: Mobile Banking Technology has no statistically significant effect on the Financial Performance of Microfinance Institutes in Kenya (Table 1 to 3).

Model Summary of Mobile Baking Technology on Financial Performance

The model summary below shows the values of R, R^2, and the adjusted R^2, as well as the standard error of the estimate, which was used to determine how well a regression model, fitted the data. The summary showed the extent of variation in the outcome variable to the predictor variables in the model. This is represented in Table 1 below.

Table 1: Model Summary of Mobile Banking Technology on Financial Performance

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.339[a]	.115	.110	6.56402	.115	26.198	1	202	.000

a. Predictors: (Constant), Composite Effect of Mobile Banking Technology

b. Dependent Variable: Financial Performance

The results in Table 1 above show a value for R^2 of 0.115 or 11.5%. This implies that 11.5% of variations in financial performance as measured by Return on Assets are explained by Mobile Banking Technology.

ANOVA on Mobile Banking Technology and Financial Performance

The Analysis of Variance (ANOVA) was used to check the fitness of the model in predicting the link between Mobile Banking Technology and financial performance. the results of the analysis for the variables are presented in Table 2 below.

Table 1 ANOVA on Mobile Banking Technology And Financial Performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1128.791	1	1128.791	26.198	.000[b]
	Residual	8703.440	202	43.086		
	Total	9832.231	203			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Composite Effect of Mobile Banking Technology

Table 2 shows the computed F values and the p-value. The calculated value of F (1,202) = 26.198 and the p-value = 0.000). Using the p-value to check the model's fitness, showed that the model was fit to explain the relationship between the predictor variable (Mobile Banking Technology) and the dependent variable (Financial Performance) since the p-value obtained 0.000< 0.05. The results agreed with those reported by Muiruri et al (2015), who found a coefficient of 0.764 and a signicant rate of; 0.01 and concluded that mobile banking strongly and positively influences financial performance.

The Coefficient on Mobile Banking Technology and Financial Performance

Based on the above results and discussions, the regression coefficients were established to show the mean change in the Financial Performance due to the change in Mobile Banking Technology, as shown in Table 3 below.

Table 3: Regression Coefficients on Mobile Banking Technology and Financial Performance

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-47.520	8.502		-5.589	.000
	Composite Effect of Mobile Banking Technology	11.414	2.230	.339	5.118	.000

a. Dependent Variable: Financial Performance

From Table 3 above the resulting model for the relationship between mobile banking technology and financial performance is Y= -47.52+ 11.414X3

The first objective of the study was to find out the effect of Mobile Banking Technology on financial performance. The study findings showed that there was a relationship between Mobile Banking Technology and the Financial Performance of deposit-taking Microfinance Institutions in Kenya since the calculated t-value of 5.118>1.960, the critical t-value.

Effect of Firm Size on the Relationship between Mobile Banking Technology and Financial Performance

The second objective of the study was to determine the moderating effect of firm size on the relationship between mobile banking technology and Financial Performance (Tables 4 to 6).

Model Summary On Effect of Firm Size on Mobile Banking Technology & Financial Performance

The model summary below shows the values of R, R^2, and the adjusted R^2, as well as the standard error of the estimates, which were used to determine how well a regression model, fitted the data. The results are shown in Table 4 below.

Table 4: Model Summary on Effect of Firm Size on Mobile Banking Technology and Financial Performance

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.339[a]	.115	.110	6.56402	.115	26.198	1	202	.000
2	.508[a]	.258	.251	6.02503	.258	34.926	2	201	.000

a. Predictors: (Constant), Firm Size, Composite Effect of Mobile Banking Technology
b. Dependent Variable: Financial Performance

Table 4 above shows an R^2 of 11.5%, before moderation, and an R^2 of 25.8% after moderation. This shows that firm size had a positive and significant effect on the relationship between mobile banking technology and the financial performance of the MFIs

ANOVA on the Effect of Firm Size on Mobile Banking Technology and Financial Performance

The Analysis of Variance (ANOVA) was used to ascertain the fitness of the model in predicting the link between the moderator, and the dependent and independent variables. In this

case, the link between firm size, forensic Auditing, and Investigation Techniques and financial performance. The results of the analysis for the variables are presented in Table 5 below.

Table 5: ANOVA on Effect of Firm Size on Mobile Banking Technology and Financial Performance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1128.791	1	1128.791	26.198	.000[b]
	Residual	8703.440	202	43.086		
	Total	9832.231	203			
1	Regression	2535.728	2	1267.864	34.926	.000[b]
	Residual	7296.503	201	36.301		
	Total	9832.231	203			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Firm Size, Composite Effect of Mobile Banking Technology

Table 5 shows that model 1 (before moderation) got a p-value = 0.00, and the p-value for model 2 (after the introduction of the moderator), had a p-value =.000. This showed that the model was fit to compute the moderating effect of firm size the relationship between mobile banking technology and financial performance.

Coefficients on Effect of Firm Size on Mobile Banking Technology and Financial Performance

The results of the moderating effect on the relationship between mobile banking technology and financial performance are presented in Table 6 below.

Table 6: Coefficients on the Effect of Firm Size on Mobile Banking Technology & Financial Performance

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-47.520	8.502		-5.589	.000
	Composite Effect of Mobile Banking Technology	11.414	2.230	.339	5.118	.000
2	(Constant)	-46.710	7.778		-6.005	.000
	Composite Effect of Mobile Banking Technology	10.601	2.051	.315	5.167	.000
	Firm Size	.148	.024	.378	6.211	.000

a. Dependent Variable: Financial Performance

Table 6 above shows the coefficients in the straight-line equation on the moderating effect of firm size on the relationship between Mobile Banking Technology and financial performance. In the study, the calculated t-value of 6.211 is higher than the critical t-value of 1.96 at a 95% level of significance. This led to the rejection of the null hypothesis that firm size has no statistically significant moderating effect on the relationship between mobile banking technology and financial performance. The model for the study was thus Y= -46.710+ 10.601X3 + 0.148M

CONCLUSIONS

The first objective of the study was to determine the effect of Mobile Banking Technology on the financial performance of Deposit-taking MFIs in Kenya. The study findings showed that mobile banking technology had a positive and significant influence on the financial performance of Microfinance. The findings are in line with the results found by Muiruri, Richu, and Karanja in 2015. The conclusion therefore is mobile banking technology has a positive and significant effect on the financial performance of deposit-taking Microfinance Institutions in Kenya.

On the second objective, the moderating effect of firm size on the relationship between mobile banking technology and financial performance, the study findings showed that firm size had a positive and significant effect on the relationship between mobile banking technology and financial performance. the conclusion therefore is that firm size has a positive and significant effect on the relationship between mobile banking technology and the financial performance of deposit-taking microfinance institutions in Kenya.

RECOMMENDATIONS

The study findings showed that mobile banking technology improved the financial performance of microfinance institutions, the study recommended that firms invest more in modern technology and mobile banking in particular to improve their financial performance.

Further, the study showed that larger microfinance institutions had better use of mobile banking technology which led to higher financial performance as measured by return on assets. The study, therefore, recommends that firms should strategically invest in more assets, and look for ways to increase their market share such as opening more branches and doing awareness campaigns to increase brand loyalty, enjoy economies of scale, and improve financial performance. This study focused on the effect of firm size on the relationship between mobile banking technology and financial performance. Firm size is influenced by ownership, hence the study recommended that Similar studies be done on the effect of ownership structure on the relationship between mobile banking technology and financial performance of microfinance.

Further, this study focused on microfinance institutions, similar studies can be done in commercial banks and non-financial firms.

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