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**Effect of Mobile Banking on Shareholder Wealth of Commercial Banks Listed on the  
Nairobi Securities Exchange (NSE)**

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**Abstract**

**Purpose:** This study examined the effect of mobile banking on shareholder wealth among commercial banks listed on the Nairobi Securities Exchange (NSE). Mobile banking has emerged as a transformative financial innovation that enables customers to conduct financial transactions through mobile devices using USSD codes and mobile applications. The increasing adoption of mobile banking in Kenya has enhanced financial inclusion, improved customer convenience, and strengthened the competitive position of commercial banks. The study sought to determine whether mobile banking contributes to shareholder wealth creation.

**Methodology:** The study adopted a quantitative exploratory research design and utilized secondary data obtained from the audited financial reports of selected NSE-listed commercial banks for the period 2016 to 2022. A sample of seven banks was selected based on data availability. Mobile banking was measured using the natural logarithm of mobile banking transaction values, while shareholder wealth was proxied by Tobin's Q. Data were analyzed using descriptive and inferential statistics, including correlation and linear regression analyses. Diagnostic tests for normality, multicollinearity, and autocorrelation were conducted to ensure the validity and reliability of the results. The study found that mobile banking has a positive and statistically significant effect on shareholder wealth among commercial banks listed on the NSE.

**Findings:** The findings indicate that increased mobile banking transactions contribute to shareholder value through enhanced revenue generation, expanded customer reach, reduced operational costs, and improved service efficiency. Mobile banking services such as fund transfers, bill payments, and digital lending were found to strengthen customer loyalty and improve overall financial performance, thereby increasing shareholder wealth. The study concludes that mobile banking is a key driver of shareholder wealth creation in the Kenyan banking sector.

**Unique Contribution to Theory, Practice and Policy:** The recommended that commercial banks continue investing in mobile banking technologies and digital financial services to enhance customer experience and operational efficiency. Banks should also address infrastructure challenges and cybersecurity risks to ensure sustainable growth, maintain customer trust, and enhance long-term shareholder value.

**Keywords:** *Mobile Banking, Shareholder Wealth, Commercial Banks, Nairobi Securities Exchange*

**JEL Classification Codes:** *G21, G32, O33, G14, L86*

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## INTRODUCTION

Mobile banking has emerged as a transformative innovation that is reshaping the global banking industry. It enables customers to perform a wide range of financial transactions, including fund transfers, bill payments, savings, and access to credit through mobile devices. Advances in information and communication technology have enabled banks worldwide to digitize their services, shifting from traditional branch-based banking to more efficient, customer-centered digital platforms. This transformation has enhanced service delivery, reduced operational costs, and expanded access to financial services, making mobile banking a critical component of modern financial systems (Anyasi & Otubu, 2009; Chen, 2021).

The rapid adoption of mobile banking is consistent with the Technology Acceptance Model (TAM) and the Diffusion of Innovations Theory, which suggest that technological innovations are adopted when users perceive them as useful, easy to use, and capable of delivering superior value compared to existing alternatives (Davis, 1989; Rogers, 2003). Mobile banking satisfies these conditions by offering convenience, speed, accessibility, and efficiency in financial transactions. Consequently, financial institutions across both developed and developing economies have increasingly integrated mobile banking into their strategic operations to enhance customer experience and improve organizational performance (Kamal et al., 2020).

Across Africa, mobile banking has played a significant role in addressing financial exclusion and expanding access to formal financial services. Many countries in Sub-Saharan Africa face infrastructural challenges that limit the reach of conventional banking systems. Mobile banking has helped bridge these gaps by leveraging widespread mobile network coverage to deliver banking services to rural and previously underserved populations. The result has been increased transaction volumes, enhanced operational efficiency, and accelerated growth within the financial sector (Sy et al., 2019; Enoch et al., 2015).

Kenya represents one of the most advanced mobile banking markets globally, driven by the widespread adoption of mobile money platforms and strategic collaborations between banks and telecommunications providers. The integration of mobile banking services has transformed the financial landscape by facilitating instant payments, fund transfers, digital lending, and access to a broader range of financial products. Consequently, commercial banks have increasingly invested in mobile banking technologies to enhance customer convenience, reduce transaction costs, improve service quality, and expand their market reach. These developments have contributed significantly to financial inclusion and strengthened the overall performance of the banking sector (Ndemo & Weiss, 2017; Central Bank of Kenya, 2015).

Despite these benefits, an important question remains regarding whether increased investment in mobile banking consistently translates into enhanced shareholder wealth. This phenomenon may be described as the Paradox of Digital Investment, in which substantial investments in digital banking technologies improve operational performance and customer acquisition, yet these gains may not always be immediately reflected in market valuations and shareholder returns. One possible explanation is that the high costs associated with technology acquisition, system upgrades, cybersecurity infrastructure, and continuous innovation may temporarily reduce profitability and dividend payouts. Another explanation is that investors may remain uncertain about the long-term return on digital investments, leading to cautious market valuations despite improvements in operational performance. Consequently, the relationship

between mobile banking adoption and shareholder wealth remains an empirical issue that warrants investigation (Central Bank of Kenya, 2015).

Within the Nairobi Securities Exchange (NSE), listed commercial banks have continued to increase their investments in digital banking platforms in response to changing customer preferences and growing competition in the financial services sector. While mobile banking has been associated with greater efficiency, enhanced customer retention, and new revenue opportunities, the extent to which these benefits translate into increased shareholder wealth remains unclear. Given the strategic importance of shareholder wealth maximization as a primary corporate objective, it is necessary to determine whether mobile banking investments create sufficient value for shareholders. This study therefore examines the effect of mobile banking on shareholder wealth among commercial banks listed on the Nairobi Securities Exchange (NSE).

### **Statement of the Problem**

Shareholder wealth remains the main goal of commercial banks and a key measure of firm value, often reflected through share price, earnings per share, and market capitalization. In Kenya, commercial banks listed on the Nairobi Securities Exchange account for a significant share of the total equity market, often exceeding 50%. Despite this dominance, shareholder wealth in the banking sector has fluctuated notably during the study period. For instance, some listed banks posted strong financial results with return on equity above 20%, yet their share prices did not always increase accordingly. While some banking stocks rose by over 30% in certain years, others either stagnated or declined. This variability indicates that improvements in accounting performance do not always lead to proportional growth in shareholder wealth, raising concerns about the factors influencing investor value in the banking industry.

Mobile banking in Kenya has seen rapid growth, becoming a vital aspect of financial services. Data indicate that mobile money and banking transaction values exceeded KES 6.5 trillion in 2024 (Central Bank of Kenya, 2025). The number of registered mobile money accounts increased dramatically, reaching approximately 79.4 million in 2024 from about 37 million in 2014, reflecting widespread adoption of digital financial services (Central Bank of Kenya, 2025; Telecom Review Africa, 2024). This expansion has driven higher transaction volumes, boosted non-interest income, and improved bank operational efficiency. Research suggests that digital innovations such as mobile banking can enhance firm value and shareholder wealth through increased revenues, improved customer retention, and reduced costs (Alalwan et al., 2022; Mbama & Ezepeue, 2023). However, despite the rapid rise in transactions and users, the anticipated increase in shareholder wealth among listed commercial banks has not always occurred, indicating a potential gap between digital banking growth and market valuation.

Additional evidence shows that while mobile banking significantly boosts bank revenues, mainly through fee income and transaction charges, its impact on market-based performance measures remains mixed. During periods of double-digit annual growth in mobile transaction volumes, some banks saw only slight share price increases of under 5%, while others experienced declines despite strong digital banking results. This suggests that although mobile banking improves operational efficiency, its effect on shareholder wealth may be influenced by factors such as investor perceptions, implementation costs, competitive pressures, and market conditions (Adewoye, 2022; Mugo & Kilonzo, 2021). Additionally, variations in technological capabilities and in how banks strategically integrate mobile platforms lead to

different outcomes, with some successfully increasing market value and others failing to achieve similar gains (Kithinji et al., 2022; Mwangi & Njuguna, 2023).

Moreover, existing empirical studies present mixed and inconclusive findings regarding the relationship between mobile banking and shareholder wealth. While some research suggests a positive link between digital innovation and company value, others report weak or insignificant effects, possibly owing to variations in methodology, context, and measurement approaches (Otieno & Ojera, 2021; Wanjiru et al., 2024). Furthermore, much of the previous research primarily focuses on accounting performance metrics such as profitability and efficiency, with less emphasis on market-based indicators that more directly capture shareholder wealth. Consequently, there remains a notable gap in understanding whether the rapid expansion of mobile banking truly results in sustainable wealth creation for shareholders.

Despite the rapid growth of mobile banking, which involves trillions of shillings in annual transactions and millions of users, shareholder wealth among listed commercial banks remains unpredictable and inconsistent. The concurrent rise in digital financial services and fluctuating share prices suggests a potential disconnect warranting further empirical investigation. This study aims to explore how mobile banking affects shareholder wealth for banks listed on the Nairobi Securities Exchange.

### **Objective of the Study**

The objective of this study is to assess the effect of mobile banking on the shareholders' wealth of commercial banks listed at the Nairobi Securities Exchange.

### **Research Hypotheses**

H<sub>0</sub>: Mobile banking has no significant effect on shareholders' wealth of commercial banks listed at the Nairobi Securities Exchange.

### **Significance of the Study**

This study is important for commercial banks, as it provides empirical evidence of the impact of mobile banking on shareholders' wealth. By examining the link between mobile banking and value creation, bank managers can make better-informed strategic choices about investing in digital platforms. The results will assist banks in refining their mobile banking services to boost operational efficiency, cut costs, and increase profitability, ultimately raising shareholder value.

This study is valuable for shareholders and investors because it provides insights into how mobile banking affects the financial performance and market value of banks listed on the Nairobi Securities Exchange. Investors can leverage these findings to assess the success of banks' innovation strategies and make better-informed investment choices. Moreover, the study helps shareholders understand how technological progress in banking influences their investment returns.

For policymakers and regulators, such as the Central Bank of Kenya, the study offers useful insights into how mobile banking can support financial sector stability and growth. The results can help shape policies and regulations that encourage responsible innovation while protecting financial systems. This is especially critical for ensuring that mobile banking services are secure, accessible, and advantageous for both financial institutions and consumers.

The study adds to academic research by addressing gaps in understanding the link between mobile banking and shareholders' wealth. Unlike many earlier studies that concentrated on financial performance metrics, this research highlights shareholder value, offering a broader view. As a result, it can serve as a useful reference for future scholars exploring financial innovation, digital banking, and corporate finance, especially in emerging markets.

Ultimately, this study benefits the wider economy and society by emphasizing the role of mobile banking in advancing financial inclusion and economic growth. It shows how mobile banking improves access to financial services, thereby boosting economic participation and efficiency. Consequently, this promotes sustainable growth in both the banking industry and the broader economy, highlighting mobile banking as a key driver of development.

## **LITERATURE REVIEW**

### **Theoretical Framework**

This study is grounded in two main theories that explain how mobile banking adoption affects shareholders' wealth: the Technology Acceptance Model (TAM) and the Innovation Diffusion Theory. These frameworks help clarify how users accept mobile banking and how its dissemination influences financial performance and value creation in commercial banks.

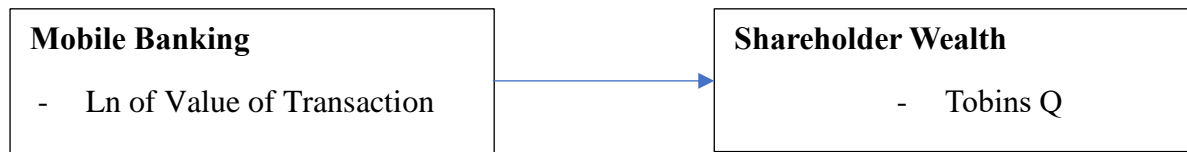
### **Technology Acceptance Model**

The Technology Acceptance Model, developed by Fred Davis in 1989, explains how users accept and begin using new technologies. It highlights that perceived usefulness and perceived ease of use are crucial factors that influence an individual's decision to adopt a technology (Davis, 1989). Specifically, in the context of mobile banking, customers are more likely to use the service if they consider it convenient, effective, and easy to use. Widespread acceptance leads to higher transaction volumes, improved service quality, and greater customer satisfaction, which in turn enhances financial performance and shareholder value. This model is relevant to this study because it provides insight into the behavioral factors that affect customers' adoption of mobile banking services.

Despite its strengths, the Technology Acceptance Model has limitations. It often oversimplifies technology adoption by emphasizing individual perceptions and neglecting external factors such as regulations, infrastructure, and social influence. Moreover, it may not fully capture the complexities of financial innovations in developing countries, where access to technology and digital literacy vary widely. Still, TAM remains a popular and effective framework for studying mobile banking adoption.

The Technology Acceptance Model (TAM) explains how mobile banking can enhance shareholder wealth through customer adoption of digital banking services. According to the theory, technologies perceived as useful and easy to use are more likely to be adopted by users (Davis, 1989). Among commercial banks listed on the Nairobi Securities Exchange (NSE), increased adoption of mobile banking can lead to higher transaction volumes, improved operational efficiency, reduced costs, and increased revenue. These benefits enhance profitability and firm value, thereby increasing shareholder wealth. Additionally, successful adoption of mobile banking may signal innovation and growth potential to investors, resulting in improved market valuation and shareholder returns.

## Conceptual Framework



*Figure 1: Conceptual Framework*

## Empirical Review

### Effect of Mobile Banking on Shareholder Wealth

Empirical research in developing countries shows that mobile banking has significantly changed how financial services are delivered and boosted banking efficiency. Donner and Tellez (2018) found that mobile banking improves access and reduces transaction costs, particularly in low-income areas. Their research emphasizes that mobile platforms allow banks to reach more customers efficiently, leading to higher transaction volumes and increased revenue. This growth in financial services improves financial results, which are closely linked to shareholder value.

In a related study, Jack and Suri (2017) examined mobile money systems and found that mobile banking significantly enhances financial inclusion and economic participation. Their research showed that mobile financial services enable faster, safer transactions, leading to greater use of banking services. This increased activity generates higher fee-based income for banks, which can improve profitability and ultimately enhance shareholders' wealth.

Mbiti and Weil (2016) provide further empirical support for the idea that mobile banking enhances the efficiency of financial transactions and reduces dependence on traditional banking infrastructure. Their research indicates that mobile banking platforms offer cost-effective services, helping banks streamline their operations. This boost in efficiency lowers operational costs and enhances financial performance, ultimately increasing value for shareholders.

Demirgüç-Kunt et al. (2018) highlight how digital financial services boost financial inclusion and banking success. Their research shows that mobile banking adoption leads to greater account ownership, higher savings, and better access to credit. These improvements expand banks' customer base and revenue opportunities, ultimately driving shareholder wealth.

In Kenya, Ouma, Odongo, and Were (2017) examined the effect of mobile financial services on commercial bank performance and found a positive and significant link. Their findings indicated that mobile banking boosts efficiency, raises customer transaction volumes, and enhances service delivery. These advancements lead to improved financial performance, a crucial factor in increasing shareholder wealth in the banking industry.

Similarly, Olweny and Shipho (2011) found that banking innovations, such as mobile banking, positively affect key financial metrics, including return on assets and profitability. Their research indicates that banks implementing innovative technologies are more competitive, attract more customers, and achieve higher returns, ultimately boosting shareholder value.

Although most findings are positive, some studies show different results. For example, Koivu (2022) argues that adopting electronic banking technologies doesn't always directly improve

financial performance, particularly in the short run. The research highlights that high upfront costs, technological risks, and low adoption rates can diminish the expected advantages of innovation. This suggests that while mobile banking can increase shareholders' wealth, its effectiveness depends on implementation, institutional capacity, and the market environment.

### **Literature Gap**

Despite the substantial body of literature demonstrating the positive effects of mobile banking on banking performance, a significant conceptual gap remains regarding its direct influence on shareholder wealth. Most studies, including those by Donner and Tellez (2018), Jack and Suri (2017), Mbiti and Weil (2016), and Demirgüç-Kunt et al. (2018), primarily focus on financial inclusion, transaction efficiency, customer outreach, and revenue generation. While these outcomes are important indicators of banking success, they do not directly measure whether the benefits of mobile banking translate into enhanced shareholder value. Consequently, the existing literature provides limited evidence on the extent to which mobile banking contributes to wealth creation for shareholders, thereby necessitating further investigation.

A notable measurement gap also exists in the literature. While scholars such as Ouma et al. (2017) and Olweny and Shipho (2011) focused on accounting-based performance measures, including profitability and return on assets (ROA), this study distinguishes itself by focusing on shareholder wealth, using Tobin's Q ratio. Unlike accounting-based indicators that primarily capture historical financial performance, Tobin's Q is a market-based measure that reflects investor expectations regarding a firm's future growth prospects and value creation. By employing Tobin's Q as a proxy for shareholder wealth, this study provides a broader assessment of how mobile banking influences market valuation and shareholder returns among listed commercial banks.

Methodological and contextual gaps are also evident in prior studies. Most existing studies were conducted in broader banking contexts, relied on cross-sectional data, or focused on mobile money and financial inclusion rather than the direct relationship between mobile banking and shareholder wealth. Furthermore, few studies have examined this relationship among commercial banks listed on the Nairobi Securities Exchange (NSE), where market valuation is a critical performance consideration. This study addresses these gaps by employing a quantitative exploratory research design using panel data from seven NSE-listed commercial banks over the period 2016 - 2022. Additionally, the study measures mobile banking using the natural logarithm of transaction values and applies correlation and regression analysis complemented by diagnostic tests to generate robust empirical evidence on the effect of mobile banking on shareholder wealth in the Kenyan banking sector.

### **METHODOLOGY**

The study employed a quantitative, exploratory research design to assess the impact of mobile banking on shareholders' wealth in commercial banks listed on the Nairobi Securities Exchange. Although a census of all listed banks was initially planned, a sample of 7 banks was selected due to data availability constraints. The research used secondary data from audited annual financial reports and the NSE database, spanning 2016 to 2022. Mobile banking was measured by taking the natural logarithm of transaction values, while shareholders' wealth was gauged using Tobin's Q ratio, reflecting the firms' market value relative to their assets. The data analysis combined descriptive and inferential statistical methods. Descriptive statistics, such as the mean, standard deviation, and variance, were used to summarize the data. Inferential

analysis involved correlation and simple linear regression models to examine the link between mobile banking and shareholders' wealth. Diagnostic tests, including the Variance Inflation Factor (VIF) for multicollinearity and tests for autocorrelation and heteroscedasticity, were conducted to assess the model's reliability and accuracy.

## FINDINGS AND DISCUSSION

### Descriptive Statistics

Descriptive statistics summarized the main characteristics of the data on mobile banking and shareholders' wealth for commercial banks listed on the Nairobi Securities Exchange. Metrics such as the mean, standard deviation, minimum, and maximum were used to illustrate the distribution and variability of these variables. This analysis clarified overall trends and patterns in mobile banking transactions and their potential connection to shareholders' wealth, providing a foundation for further inferential analysis. The findings were summarized in Table 1 below.

**Table 1 Descriptive Statistics**

Statistic	Mean	Maximum	Minimum	SD	Variance	Skewness	Kurtosis
Mobile Banking	1.662653	0.98	0.686406	0.471153	0.942227	1.638745	2.863821

The descriptive statistics reveal a mean of 1.662653, indicating that, on average, the sampled commercial banks engage quite actively in mobile banking transactions. This shows that mobile banking is broadly adopted and plays a significant role in the banking sector, emphasizing its status as a vital financial innovation. Additionally, the relatively high mean suggests that banks are progressively incorporating mobile banking into their strategies to improve service delivery and expand their customer reach.

A standard deviation of 0.4711532 indicates moderate dispersion around the mean, suggesting some variation in mobile banking adoption among the banks studied. While most banks generally embrace mobile banking, their usage levels vary, likely due to factors such as bank size, technological capabilities, customer demographics, and strategic priorities in digital banking. Overall, this moderate variability suggests that most banks are fairly consistent in their adoption of mobile banking services.

The values of 0.686406 and 0.98 represent the minimum and maximum ranges of mobile banking transactions among the sampled banks. This narrow span indicates no significant differences in mobile banking usage across these banks, underscoring its status as a common, well-established practice. Such consistency demonstrates the widespread adoption of mobile banking services and underscores its importance as a core component of modern banking operations in Kenya.

The skewness of 1.638745 indicates a positive skewness in mobile banking data, meaning most banks report lower to moderate transaction volumes, while a few display higher transaction volumes. The kurtosis of 2.863821 indicates the distribution is roughly normal but slightly flatter, with fewer extreme values than a normal distribution. Overall, these statistics suggest that mobile banking is broadly adopted, though a few banks may be leading in innovation and transaction volume, potentially giving them a competitive edge in increasing shareholders' wealth.

### Diagnostic Tests

In a simple linear regression analysis, diagnostic tests are performed to identify issues with the residuals and the model specification. The following checks were conducted to assess the suitability of the simple linear regression model.

#### Linearity Test

The researcher conducted a linearity test to assess the relationship between the independent and dependent variables. A linear relationship is indicated by p-values less than 0.05. The results demonstrate linear relationships between Internet banking and shareholders' wealth, mobile banking and shareholders' wealth, agency banking and shareholders' wealth, and ATM banking and shareholders' wealth. The findings were summarized in Table 2 below

**Table 2: Linearity**

		Sum of Squares	Df	Mean Square	F	Sig.
<b>Shareholders Wealth * Value of MB</b>	Linearity	.033	1	.033	55.109	.000
	Deviation from Linearity	.061	29	.002	3.545	.063

The results of the linearity test indicate a clear, statistically significant relationship between mobile banking (Value of MB) and shareholders' wealth. This is evidenced by an F-statistic of 55.109 and a p-value of 0.000, both indicating strong significance well below the 0.05 threshold. The findings suggest that fluctuations in mobile banking transactions are consistently linked to changes in shareholders' wealth. In practice, an increase in mobile banking transaction values is associated with a predictable rise in shareholders' wealth, highlighting mobile banking's vital role in shaping firm value. The high F-statistic underscores the robustness of this linear relationship, affirming its significance. Overall, these results support the inclusion of mobile banking as an important variable in the regression model, as it significantly helps explain variation in shareholders' wealth.

Additionally, the deviation from linearity supports the suitability of a linear model in analyzing the relationship between the two variables. The F-statistic for non-linearity deviation is 3.545 with a p-value of 0.063, which exceeds the 0.05 significance threshold. This suggests that deviations from a linear pattern are not statistically significant, providing no strong evidence for a non-linear relationship between mobile banking and shareholders' wealth. In essence, a straight-line model sufficiently explains the relationship, eliminating the need for more complex forms. This confirms that the linearity assumption essential for regression analysis is met. Consequently, using linear regression in further analysis is justified, increasing confidence in the model's validity and reliability in assessing mobile banking's impact on shareholders' wealth.

#### Normality Test

This study used the Shapiro-Wilk test to determine whether the data were normally distributed. In the Shapiro-Wilk W test, a p-value below 0.05 suggests the data is not normally distributed, while values closer to 1 indicate normality. The results from these tests will guide the choice between parametric and non-parametric analysis. The findings were summarized in Table 3.

**Table 3: Shapiro-Wilk test for Normality**

	Statistic	P- Value
Normality of Value of MB:	0.976984	0.446361

The Shapiro-Wilk test indicates that the mobile banking (Value of MB) variable is normally distributed. The test statistic is 0.977, with a p-value of 0.446361, which exceeds the 0.05 threshold. Therefore, we do not reject the null hypothesis of normality, indicating that the data are approximately normally distributed. This suggests that the mobile banking data is fairly symmetric and appropriate for parametric analysis. Consequently, the normality assumption for regression and other statistical methods is met, supporting the validity and precision of subsequent analyses.

### Serial Correlation Test

The serial correlation test assesses how strongly the values of variables are correlated with their lagged values. The Durbin-Watson test, used for this purpose, produces values between 0 and 4. Values near 2 suggest no correlation, values near 0 indicate strong positive serial correlation, and values near 4 imply strong negative correlation. The results are summarized in Table 4 below.

**Table 4: Serial Correlation**

Model	Durbin Watson
$Y=B_0 +B_1 *X_1$	2.0368

The Durbin-Watson statistic for the model ( $Y = \beta_0 + \beta_1 X_1$ ) is 2.0368, very close to 2, indicating no evidence of serial correlation (autocorrelation) in the residuals. Typically, values between 1.5 and 2.5 are considered acceptable, implying that the residuals are independent and not systematically related over time. Consequently, the model satisfies the no-autocorrelation assumption, enhancing its reliability. Regression estimates support the validity of the statistical inferences.

### Multi-Collinearity Test

Classical regression modeling assumes no collinearity between the independent variables. Multicollinearity was assessed using variance inflation factors and tolerance values. The cut-off criterion defined lack of collinearity as a Variance Inflation Factor (VIF) less than 10 or a tolerance greater than 0.1. This is consistent with Baltagi's (2005) suggestions. The findings are shown in Table 5 below

**Table 5: Multicollinearity Tests**

Model	Collinearity Statistics	
	Tolerance	VIF
ValueofMB	.918	1.089

The results of the multicollinearity test indicate no multicollinearity with the mobile banking variable. This is supported by a tolerance of 0.918, which exceeds the minimum threshold of 0.1, and a Variance Inflation Factor (VIF) of 1.089, well below the critical value of 10. These findings indicate that the mobile banking variable is not highly correlated with other explanatory variables and does not bias the regression estimates. Consequently, the lack of

multicollinearity improves the stability, reliability, and interpretability of the regression results, confirming that the model is appropriate for further analysis.

### Correlation Analysis

Correlation analysis was performed to assess the strength and direction of the relationship between mobile banking and shareholders' wealth among commercial banks listed on the Nairobi Securities Exchange. This method helps determine whether changes in mobile banking transactions are associated with movements in shareholders' wealth, providing initial insights into a potential connection. The analysis uses the Pearson correlation coefficient ( $r$ ), which ranges from -1 to +1. Values near +1 indicate a strong positive correlation, those near -1 indicate a strong negative correlation, and values near 0 indicate no linear relationship. The interpretation considers both the size and significance of the coefficient, with a p-value below 0.05 indicating statistical significance - meaning the relationship is unlikely due to chance. Correlation coefficients from 0.0 to 0.3 are considered weak, 0.3 to 0.7 moderate, and above 0.7 strong. This analysis provides a foundation for understanding the link between mobile banking and shareholders' wealth before applying more advanced techniques, such as regression analysis. The findings were summarized in Table 6 below

**Table 6: Correlation Analysis of the Study**

		ShareholdersWealth	ValueofMB
ShareholdersWealth	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	49	
ValueofMB	Pearson Correlation	.560**	1
	Sig. (2-tailed)	.000	
	N	49	49

The correlation analysis shows a positive and statistically significant relationship between mobile banking (Value of MB) and shareholders' wealth in the sampled commercial banks. A Pearson correlation coefficient of 0.560 indicates a moderate positive relationship, suggesting that higher mobile banking activity is generally associated with increased shareholders' wealth. This underscores mobile banking as a key driver of value creation, enhancing transaction efficiency, expanding customer reach, and improving financial performance. The moderate correlation also suggests that other factors may influence shareholders' wealth besides mobile banking. Moreover, with a p-value of 0.000, which is well below 0.05, the relationship is statistically significant and unlikely to be due to chance. This strengthens confidence in the results and indicates a meaningful linear connection between the variables. Based on 49 observations, the findings are reliable and offer initial evidence that mobile banking positively affects shareholders' wealth. Further regression analysis is advisable to examine the specifics of this relationship.

Empirical research consistently shows a positive and significant link between mobile banking and financial performance, which aligns with this study's findings. For example, Kathuo, Rotich, and Anyango (2015) found that mobile banking markedly boosts the financial performance of Kenyan commercial banks by increasing transaction efficiency and widening customer access to banking services. Likewise, Kithaka (2014) observed that the adoption of mobile banking enhances profitability and operational efficiency in Kenyan banks by reducing transaction costs and improving service availability. These results support the current study's

conclusion that mobile banking benefits shareholders' wealth through better overall bank performance.

Ouma, Odongo, and Were (2017) provide further evidence that mobile financial services significantly boost financial inclusion and savings, thereby improving banks' financial results. Similarly, Wambari (2009) found that mobile banking enhances customer convenience, broadens market reach, and increases banking efficiency, all factors that boost financial performance. Collectively, these studies reinforce the view that mobile banking is a crucial driver of value creation in the banking sector, ultimately benefiting shareholders.

### Model Summary

The final output model summary is shown in Table 7

**Table 7: Model Summary**

Model	R	R Square	Adjusted R-Square	Std. Error of the Estimate
1	.658 <sup>a</sup>	.433	0.381	.06368

a. Predictors: (Constant), ValueofMB

The summary shows a moderately strong positive correlation between mobile banking and shareholder wealth in commercial banks listed on the NSE. A correlation coefficient ( $R = 0.658$ ) indicates that variations in mobile banking value are linked to notable changes in shareholder wealth. This suggests that mobile banking is more than a minor innovation; it plays a crucial role in shaping financial outcomes in the banking industry. The strength of this connection underscores the growing importance of digital financial services in improving operational efficiency, expanding customer access, and creating new revenue opportunities for banks.

The coefficient of determination ( $R^2 = 0.433$ ) indicates that approximately 43.3% of the variation in shareholder wealth is attributable to mobile banking. This is a significant factor, especially in financial research, where many factors, such as macroeconomic conditions, regulations, and company strategies, influence performance. The adjusted  $R^2$  (0.381) provides a more precise estimate by accounting for the model's complexity and sample size, reaffirming that mobile banking remains a robust explanatory variable even after adjustment. Nonetheless, it shows that approximately 56.7% of the variation is attributable to factors not included in the model, underscoring the need for caution when attributing changes in shareholder wealth exclusively to mobile banking.

The standard error of the estimate (0.06368) represents the average deviation of observed values from the regression line, reflecting the model's predictive accuracy. A lower standard error indicates that the model estimates shareholder wealth more accurately from mobile banking data. Overall, the results show that mobile banking has a statistically and economically significant impact on shareholder wealth, underscoring the strategic importance of digital transformation in Kenya's banking industry.

### ANOVA Test

The ANOVA (Analysis of Variance) test was employed to evaluate the overall significance of the regression model. Its purpose was to determine whether mobile banking, as an independent variable, explains a substantial portion of the variation in shareholder wealth. The test assesses the null hypothesis that the model has no explanatory power (meaning all regression coefficients are zero) against the alternative that at least one predictor is significant. By

partitioning the total variation into explained and unexplained components, ANOVA yields an F-statistic and a p-value that help assess whether the relationship between mobile banking and shareholder wealth is statistically meaningful and unlikely to be due to chance. This was summarized in Table 8 below

**Table 9: ANOVA<sup>a</sup>**

	<b>Model</b>	<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
1	Regression	.018	4	.005	5.72	0.0010
	Residual	.177	44	.004		
	<b>Total</b>	<b>.195</b>	<b>48</b>			

a. Dependent Variable: S\_HWealth

b. Predictors: (Constant), Value of MB

The ANOVA results show that the regression model analyzing mobile banking's impact on shareholder wealth is statistically significant. It has an F-statistic of 5.72 and a p-value of 0.0010, which is much lower than 0.05. This indicates that we can reject the null hypothesis that mobile banking has no effect on shareholder wealth. In practical terms, the results indicate that the model fits the data better than one without predictors, confirming that mobile banking plays a meaningful role in explaining differences in shareholder wealth among NSE-listed commercial banks.

Additionally, the variance decomposition reveals that the regression sum of squares (0.018) represents the portion of total shareholder wealth variation explained by the model, whereas the residual sum of squares (0.177) represents the unexplained variation. Although the explained variation is smaller than the residual, it remains statistically significant, emphasizing the importance of mobile banking as a predictor. The mean square values (0.005 for regression and 0.004 for residual) support the F-statistic results, indicating that the variation explained by the model is notably larger than the unexplained variation. In conclusion, the ANOVA findings confirm the model's effectiveness in examining the link between mobile banking and shareholder wealth.

### Regression Coefficients

The study went further to provide the regression coefficients, and the findings were summarized in Table 9

**Table 9: Coefficients**

<b>Model</b>		<b>Unstandardized Coefficients</b>		<b>Standardized Coefficients</b>	<b>T</b>	<b>Sig.</b>
		<b>B</b>	<b>Std. Error</b>	<b>Beta</b>		
1	(Constant)	.126	.115		1.104	.000
	ValueofMB	1.058	.658	.241	1.608	.000

The coefficients table reveals the relationship between mobile banking and shareholder wealth, indicating both the direction and strength of that relationship. The constant term (B = 0.126) represents the expected shareholder wealth level when mobile banking is zero, serving as a baseline unaffected by mobile banking activities. Significantly, the coefficient for mobile banking's value (B = 1.058) indicates a positive relationship: a one-unit increase in mobile banking is associated with a 1.058-unit increase in shareholder wealth. The standardized

coefficient (Beta = 0.241) indicates that mobile banking has a moderately positive effect on shareholder wealth when all variables are on a comparable scale.

The t-statistic for mobile banking ( $t = 1.608$ ) indicates that this variable contributes to the model, and the significance level ( $p = 0.000$ ) shows the effect is statistically significant at standard levels. This means mobile banking is a key predictor of shareholder wealth among NSE-listed commercial banks. However, the fairly small Beta value suggests other important factors are missing from the model. Overall, the results support previous findings, confirming that mobile banking has a positive and meaningful impact on shareholder wealth and emphasizing the need to include additional explanatory variables in future research.

## **CONCLUSION AND RECOMMENDATIONS**

### **Conclusion**

The study finds that mobile banking has a positive and significant impact on shareholders' wealth in commercial banks listed on the Nairobi Securities Exchange. The results show that greater use of mobile banking services boosts transaction efficiency, broadens customer access, and increases revenue, thereby enhancing overall financial performance and creating value for shareholders. Mobile banking is more than just a service improvement; it is a strategic innovation that fosters the financial growth and competitiveness of commercial banks.

The study highlights that mobile banking plays a key role in promoting financial inclusion and improving operational efficiency within the banking sector. It reduces transaction costs and broadens access to financial services, which boosts customer satisfaction and loyalty—both essential for profitability. As a result, banks that invest in and enhance their mobile banking platforms are better prepared for sustainable growth and increased shareholder value. Overall, mobile banking remains a vital element for success amid the fast-evolving digital financial landscape.

### **Recommendations**

Commercial banks ought to continue investing in and enhancing their mobile banking platforms to improve efficiency, service quality, and customer satisfaction. This involves upgrading digital infrastructure, enhancing system reliability, and expanding the services offered through mobile apps. Such efforts can lead to higher transaction volumes, a larger customer base, and greater shareholder value. Moreover, banks should prioritize intuitive interfaces and customer education to encourage broader adoption and usage of mobile banking services.

Banks need to implement robust cybersecurity measures to protect mobile banking platforms from fraud and other cyber threats. As mobile banking expands, safeguarding customer data security and privacy is essential to preserving user trust and confidence. Improving security systems will help protect customers, reduce financial losses, and prevent reputational harm, ultimately enabling sustainable value creation for shareholders.

Policymakers and regulators, such as the Central Bank of Kenya, should develop supportive regulatory frameworks that foster innovation and maintain financial stability. This involves encouraging interoperability among mobile banking platforms, strengthening consumer protection policies, and backing digital financial inclusion efforts. These policies will help create an environment in which banks can fully leverage mobile banking to drive growth and create value.

Finally, commercial banks should form strategic alliances with telecommunications providers and fintech companies to broaden the reach and effectiveness of mobile banking. These collaborations can drive innovation, improve service quality, and increase access to financial services, especially in underserved regions. By leveraging such partnerships, banks can strengthen their competitive edge, boost operational efficiency, and enhance long-term shareholder value.

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