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Benson Mutua Kivuitu

Prof. Josiah Aduda (PhD)

Dr. Duncan Elly Ochieng' (PhD, CIFA, CPA)

Dr. Winnie Njeru (PhD)

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Effect of Bank Innovation on the Financial Performance of Commercial Banks in Kenya

By: Benson Mutua Kivuitu¹, Prof. Josiah Aduda (PhD)², Dr. Duncan Elly Ochieng' (PhD, CIFA, CPA)³
& Dr. Winnie Njeru (PhD)⁴

Abstract

Evidence available from Kenya's main commercial banks shows a downward trend in investment revenue. There are a number of elements inherent to the banking industry that contribute to the aforementioned issues with banks' financial performance. This study's main goal was to investigate the aspects that contribute to the success of Kenya's commercial banking industry with respect to innovation and overall financial performance. Three theories served as the basis for the research: the theory of transaction costs, the theory of finance and growth, and the Agency theory. The study combined quantitative and qualitative approaches, using a cross-sectional survey methodology. A total of 42 commercial banks in Kenya that were operational between 2009 and 2021 were analyzed for this report. These banks had all been licensed and registered under the Banking Act. The percentage of those that answered the survey was 83.3%. It has been determined that mobile banking, automated teller machine banking, and agency banking significantly impact the performance of Kenya's commercial banks. Additionally, synergy between mobile banking and automated teller machine banking has a significant influence. When all factors were analysed jointly, mobile banking, ATM banking, and Agency banking were found to have a significant effect on financial performance. However, ATM banking had no effect. It was also demonstrated that the association between firm financial performance and financial innovation is reversed. The study concluded that adoption of mobile banking and agency banking influenced the financial performance of most commercial banks in Kenya. Theoretically, the contribution of this study is that bank innovation in Kenya has a beneficial influence on profitability and that institutions should continuously seek and execute durable business links to accelerate the diffusion of innovations and achieve the desired economic consequences.

Keywords: Bank Innovation, Performance, Commercial Banks

Introduction

The fundamental function of financial institutions is to improve the efficiency of financial markets by mediating the flow of money from savers to borrowers. Assuming that the participants could find each other quickly and at no cost, banking institutions would have little to do in facilitating the transactions. In reality, commercial banks are sought after by market participants because of the expertise, convenience, and protection offered by these institutions (Oldfield & Santomero, 1995). The connection between bank

¹ PhD Student, Faculty of Business and Management Sciences, University of Nairobi, Kenya, Email: kivuitubenn@gmail.com

² Professor, Faculty of Business and Management Sciences, University of Nairobi, Kenya

³ Senior Lecturer, Faculty of Business and Management Sciences, University of Nairobi, Kenya

⁴ Lecturer, Faculty of Business and Management Sciences, University of Nairobi, Kenya

innovations and financial performance has gradually created interest in the banking industry (Francesca & Claeys, 2010). Aduda and King'oo (2012) state that banks' survival, competitiveness, and ideal financial performance are guaranteed by the speedier, more efficient, and more accessible services provided to customers by technological advancements. In other cases, the diversity in bank performance may be difficult to pinpoint factors other than individual banks' innovativeness. It is possible for other factors to act as mediators, either slowing down the interaction or speeding it up, or acting as a moderator overall.

Concepts from Adam Smith's theory of financial development from the 1870s, Hicks and Niehans' theory of transaction cost innovation from 1983, and Stephen Ross and Barry Mitnick's theory of agencies from 1973 form the basis of this research. Financial institution managers, according to Agency theory, act as shareholders' agents and seek to maximise shareholder value. Expenses are incurred by businesses as a result of managers' need to act responsibly and avoid improperly serving their personal interests while handling company funds (Jensen & Smith, 2000). In order to reduce cost, banks innovate thereby boosting efficiency and growing the institutions financial performance (Anthony & Harry, 2015). Finance-growth theory (Serrao et al., 2012) proposes that supply and access of money in the economy results to economic growth. In addition, the theory proposes that slow development and difference in earnings depend on access to money in the economy (Serrao et al., 2012). However, the focus of transaction cost innovation theory is on how transaction costs affect whether or not an organisation would embrace new technology. The theory advances that bank innovations are a result of change of technology globally. By extension, there is a reduced transaction cost which leads to better financial performance (Hicks & Niehans, 1983).

The banking industry in Kenya is regulated by the Central Bank of Kenya (CBK), which implements the Banking Act (Chapter 488), the Companies Act (Chapter 486), and its prudential criteria (Cap 491). The sector has 43 commercial banks and deals with banking activities (CBK, 2017). Weru (2010) suggests that the Kenyan banking system bears equivalence with the inventions and innovations as evidenced by continued advancement in the use of credit and debit cards as a form of bank innovations from the late 1990s. As an additional component of financial inclusion and a boost to bank financial performance, Kimenyi and Ndung'u (2009) highlight commercial banks' internet and cell banking.

The term "financial performance" used in this research refers to the potential of banks to profit over time from their investment in new resources (Abata, 2014). Activities like increasing shareholder wealth and

increasing earnings fall under this category. Simply said, a bank's financial performance demonstrates how the institution turns its assets into profits after deducting expenses, which also an indicator of a bank's long-term financial stability. To evaluate monetary efficiency, academics employ a wide variety of indices. Example: Olatunji et al. (2014) use commercial banks' net profits as a performance metric. Key performance indicators such as return on assets (ROA) and return on equity (ROE) were used in Muigai's (2016) investigation of the relationships among ownership structures and the efficiency of non-financial listed enterprises (KPIs). The modern business climate seems both tough and dynamic, necessitating banks to endure various restructuring to comply with the updated industry operations that finally affect beneficial financial performance (CBK, 2017).

Research Problem

The banking system in general and in Kenya has seen growth in recent years, increasing the number and complexity of financial institutions like banks (CBK, 2016). There has been a significant shift in the financial sector. The million-dollar issue, however, is whether factors—innovations in banking, broadening access to banking services, or institutional strengths—most strongly affect economic growth. Commercial banks in Kenya may significantly impact the financial system by introducing new products and services, expanding access to credit, improving the efficiency of financial markets, and boosting the performance of businesses. Long-term investment, corporate assets, and financial soundness are yardsticks for commercial banks' financial success (Muigai, 2016).

The banking industry in Kenya demonstrates dismal financial performance and zero expansion (World Bank, 2016). For instance, studies on industry estimates suggest underperformance in Kenya's banking sector. The dismal showing is a result of the year-to-date financial performance of banks generally. There is a wealth of data on the effect of asset values on bank financial performance in developed markets like the United States and Europe, but much less for developing nations like Kenya. The opinion on degradation in the quality of bank assets influences the overall operation and financial performance and the overall monetary stability within the banking sector (IMF, 2015).

While Osei-assibey and Asenso (2015) favored the ratio difference between expense on interest income and interest income to total earnings, Sangmi and Nazir (2010) utilized the CAMEL model to evaluate bank performance in Northern India. One possible reason for the contrasting findings is that factors other than

financial inclusion and institutional features influence the connection between bank innovations and business financial success. It is vital to investigate the link between innovation and commercial bank financial performance in Kenya and whether institutional variables and financial inclusion impact this relationship. As a result, this inquiry aims to answer the initial research question: How much do technology advances in banking, the development of banking services, and other institutional elements influence bank financial performance?

Walker (2004) argues that innovation boosts corporate performance, allowing businesses to obtain an edge in the market. According to Metcalfe (1998), once new ideas and innovations flow slow, organizations' financial building settles into relative stagnation. Thus, innovation is a significant factor in shaping the competitive dynamics between businesses, regions, and nations. Since there has been a rise in the public's interest in banking innovations, there has been a corresponding rise in scholarly curiosity about the impact of banking innovations on fiscal outcomes for banks. Commercial banks in Kenya have operational issues such as cybercrime and other internet-related crimes, including identity theft, due to the present global market's competitiveness in the banking sector. The opportunity costs and financial losses incurred by commercial institutions and individuals due to these crimes are described in depth. The costs required to manage these risks affect the company's financial performance.

According to Mwanja and Muganda (2011), financial innovations are often well-received since their advantages exceed their drawbacks. Nkem and Akujinma (2017) looked at the impact of banking innovations and efficiencies in Nigeria, specifically focusing on deposit money banks and a few electronic banking tools. De Young, Lang, and Nolle (2007) analyzed banks in the United States for their productivity and online performance. Kibugo (2016) investigated financial sector trends and the results of Nakuru Town's microfinance organizations.

The above studies exclude the local demographics and the banking industry. Studies on whether bank innovations affect banks' financial performance have shown conflicting results. Francesca and Claeys's (2010) research shows no correlation between banking technology advancements and financial results. In contrast, Batiz-Lazo and Woldeesenbet (2006) and Gakure and Ngumi (2006) recognized the significance of banking innovations to bank success (2013). De Young, Lang, and Nolle (2007) conducted a study that neglected to explore innovation causes. According to Okiro and Ndungu, mobile banking appears to have

a minimal influence on the efficiency of financial institutions (2013). This research aimed to answer the following question: "what is the effect of bank innovations on the financial performance of commercial banks in Kenya?"

Research Objective

The study's main purpose was to assess financial inclusion, financial innovation on the financial performance among Kenya's commercial banks. The specific objective was to:

- i) Determine the effect of bank innovations on the financial performance of commercial banks in Kenya.

Literature Review

Artz, Norman, Hatfield, and Cardinal investigated the link between Innovation and financial success (2010). The research looked at 272 enterprises from 35 different industries over the course of 19 years to determine the companies' ability to profit from their discoveries and innovations and the impact of innovation on corporate financial performance. Results show that patents have a detrimental impact on performance indicators, including return on investment and revenue growth. De Young et al. (2015) examined the influence of the web on productivity and performance at community banks in Oslo, Norway. From 2006 through 2010, a descriptive research approach was utilised to study 29 banks. Utilization of online accounts, and debit and credit services were among the factors. The study employed online questionnaires to collect data. The yearly financial reports of banks were used to acquire secondary data.

From 1998 to 2007, Nader (2011) analyzed the effect of banking innovations on the bottom lines of Saudi Arabia's commercial banks. The study used a descriptive research technique to estimate the impact of bank innovation deployment in Riyadh's banks between 2005 and 2009. Questionnaires were utilised to collect primary data, while bank fiscal and annual reports provided secondary data for the study. Researchers in Saudi Arabia found that banks' use of branch networks, mobile phone banking, and ATM networks favored productivity and profitability. The findings supported the idea that bank innovations impact financial performance. However, the study found that many point-of-sale (POS) devices, Internet banking, and mobile banking did not improve profitability. This study did not examine how financial inclusion could have impacted the association between banking advances and financial outlook.

Kajewski (2014) examined innovations: advantages, problems, and recommendations for practice using a descriptive research design in the Australian banking business. Secondary data sources included risk manuals, financial reports, and financial product reports from 38 typical Australian commercial banks. Data analysis techniques including autocorrelation, correlation, and regression were applied. According to the poll, banks have boosted their investments in various technology platforms to improve consumer financial access over time. According to the research, the number of transactions grew due to these developments. The research found that innovation greatly improves banks' performance by reducing operational expenses and increasing customer service quality. This research was done in Australia, a developed country, and not Kenya, a developing economy.

The impact of FinTech on the performance of financial institutions was studied by Frederica et al. (2017). Financial technology (fintech) innovation was found to significantly increase bank profits. More research found that there is an inverse relationship between the number of traditional bank branches and the overall financial soundness of a bank. In this case, there is evidence to support the current study's claim that fresh ideas change the nature of operations, which eventually adds to the bank's performance.

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and online performance. Kibugo (2016) investigated financial sector trends and the results of Nakuru Town's microfinance organizations.

The investigation discussed in the preceding section demonstrates a correlation between financial innovation and corporate success. According to the data, there may be a connection between innovative financial practices and the level of financial performance of large and small businesses. By innovating their products and processes, small businesses may stay competitive with major firms. To compete with larger companies on price, small businesses must find niches for their new goods (Frederica et al., 2017). Since there appears to be a two-way relationship between innovation and company performance, it may be argued that the two are reciprocally causally connected. With the help of innovation, even the smallest businesses may eventually expand to the point where they can engage heavily in Research and Development and other innovation-related activities.

To answer the research question of this study, the following null hypothesis was formulated:

H₀₁: Bank innovation does not significantly affect financial performance of commercial banks in Kenya.

The hypothetical association was presented as indicated in Figure 1 below.

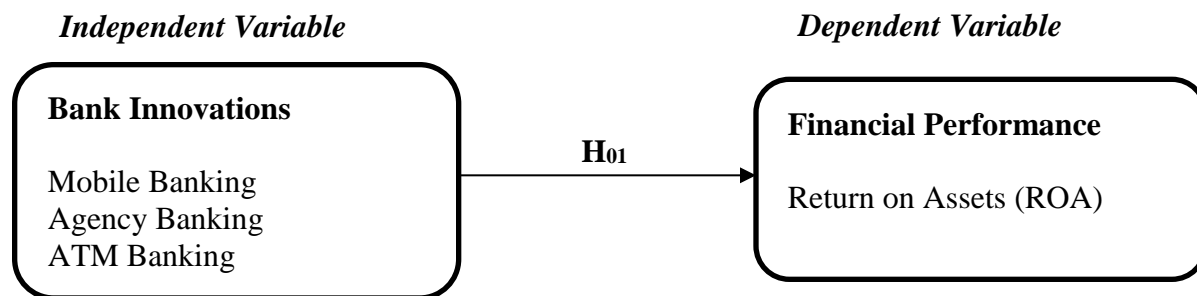


Figure 1: Conceptual Framework

Research Methodology

The study employed a cross-sectional survey design that applied quantitative and qualitative methods. In the cross-sectional survey design, there is a provision of a virtuous picture, which reveals the trends and expedient for documenting conditions within the study population and various characteristics, including their perspective at specific times (Maninder, 2016). The design is judged appropriate for this study since it employs questionnaires as data gathering instruments. In addition, the researcher gathered data that would

be subjected to statistical analysis for testing hypotheses and drawing objective findings (Saunders et al., 2007).

This study's data analysis was appropriate to the regression analysis model. The dependent variable was Firm financial performance, the independent variable was bank innovations, and the intervening and moderating factors were financial inclusion and Institutional features, respectively. Financial institution performance as a function of innovation and the resulting regression equation.

$$ROA_{it} = \alpha_{r11} + \beta_{bm1} MB_{rit} + \beta_{ba1} AB_{rit} + \beta_{bta1} ATB_{rit} + \varepsilon_{r11}$$

Where:

ROA - return on assets,

MB - Mobile Banking,

AB - Agency Banking,

ATB - ATM Banking,

ε_{r11} - constant term,

β_{bm1} , β_{bta1} , and β_{ba1} - the regression coefficients,

i - investment (Kes) for bank i

t - year when the bank invests in Kenya Shillings, and

ε_{r11} - the error term.

Diagnostic Tests for Statistical Assumptions

The predictor variables (independent variables) in the multiple regression model were tested for multicollinearity to see if they are strongly interrelated. Tolerance and variance inflation factor (VIF) values of predictor variables were used to screen for multicollinearity. Tolerance reflects the extent to which one independent variable may be explained by reference to other independent variables (VIF). Multicollinearity does not occur if the Tolerance factor is larger than 0.1 and the VIF is smaller. As a result, the results of the multicollinearity test may be shown in Table 1 below.

Table 1: Multicollinearity Statistics for Bank Innovation

Variables	Multicollinearity Statistics	
	Tolerance	VIF
Value of Mobile Banking Transactions	.155	6.459
Value of ATM Banking Transactions	.374	2.672
Value of Agency Banking Transactions	.263	3.799

Independent Variable: Bank Innovations

It may be stated that the independent variables under consideration are not vulnerable to multicollinearity because all Tolerance factor values in Table 1 are more than 0.1. There was no evidence of multicollinearity because all of the VIF values for the variables in the study were under 10. That is why we don't have to worry too much about collinearity among the study's independent variables. Multiple regression provides the greatest analysis and evaluation of the hypothesized associations in this investigation. Using the values of more than two independent variables, multiple regression analysis can provide predictions about the target variable (Cox, 2015). Using the statistical regression model, one may determine how much certain factors affect the outcome (the dependent variable) (Sekaran, 2006; Bougie, 2016).

Results and Discussions

The dataset were visualized using descriptive statistics as shown in Table 2 below.

Table 2: Descriptive Statistics for Bank Innovation and Financial Performance

	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis			
Value of Mobile Banking Transactions	1.688	13.257	10.259	.0782	1.464	-.347	.130	2.081	.260
Value of ATM Banking Transactions	.438	11.7203	8.042	.102	1.913	-.157	.130	-.472	.260
Value of Agency Banking Transactions	2.202	12.0512	8.159	.108	2.021	-.433	.130	-.092	.260
Return On Assets	-.1360	.1040	.02402	.0015	.029212	-1.518	.130	5.221	.260
Return on Equity	-.7670	.4940	.15087	.0093	.174952	-1.442	.130	3.780	.260

The pertinent results are presented in Table 2 above, where the mean and standard deviation scores for Mobile Banking Transactions were 10.259 and 1.45, respectively. The mean score of 10.259 is not far from the maximum value of 13.257. Therefore, this indicates that most of the banks under investigation were involved in mobile bank transactions. The standard deviation score of 1.464 further reveals the mean value as a true estimate of the population mean as it showed low variability of data. It also showed that the analysis tilted towards the position, confirming that most of the banks involved in mobile banking transactions. In addition, skewness and kurtosis values stood at -.347 and 2.081. These values indicate that the data analyzed in this study are not far from normal distribution because of the closeness to the mean value at a 95% confidence level. Based on the mean and standard deviation scores recorded in the analysis, it can be described and explained that banks under investigation engaged in mobile banking transactions during the investigation periods.

In Table 2 above, the mean and standard deviation scores for the value of ATM banking transactions stood at 8.042 and 1.913, respectively. The mean value of 8.042 based on the maximum value of 11.7203 indicates that most of the selected banks used ATMs for banking transactions. In addition, the mean value was further supported by the standard deviation value, which indicated low variability of data from the selected banks. In addition, the skewness and kurtosis values of -.152 and -.472, respectively, represent the data spread very close to normal distribution. This depicted negative skewness and platykurtic.

According to the results in Table 2, the mean and standard deviation values for Agency banking transactions stood at 8.159 and 2.021, respectively. The mean value, based on the maximum value of 12.051, indicates that most of the selected banks were involved in transactions through agency banking services. The standard deviation value is also low, indicating that the mean value is a true estimate of the population mean. Therefore it can be concluded that the value obtained reflects the involvement of the selected banks via agency banking transactions. The descriptive results of skewness (-.433) and kurtosis (-.092) indicate that the gathered data are close to a normal distribution and indicate agency banking activities. Agency banking was negatively skewed and Platykurtic.

According to Table 2, the mean and standard deviation scores for ROA were 0.02402 and 0.029212, respectively, while the mean and standard deviation scores for ROE were .15087 and 0.174952. The mean score of 0.02402 was between the minimum and highest values of -0.1360 and 0.1040, respectively.

Therefore, this indicates that the statistics represent ROA as a financial performance indicator. Additionally, the standard deviation score of 0.029212 indicates a modest degree of data variability as a measure of ROA. The aggregate mean ROE value was 0.15087, which fell between the greatest value of .4940 and the lowest value of -0.7670. Therefore, the mean value indicates that the data exposed to analysis were measurements of ROE and measures of the overall financial performance construct.

The skewness and kurtosis values for ROA were -1,518 and 5,221 while for ROE they were -1,442 and 3,780. Consequently, for the ROA, the skewness value is extremely near the mean value at the 95% confidence level, indicating that the data analyzed had a normal distribution. Moreover, the skewness and kurtosis values for ROE imply, with a 95% confidence that the analyzed data were not too far from a normal distribution. ROA and ROE were negatively skewed and Leptokurtic.

Effect of Bank Innovation and Financial Performance of Commercial Banks in Kenya

The Mobile, ATM, and Agency banking transactions were operationalized as latent variables, and financial performance was operationalized as a composite construct of ROA and ROE. ROA was regressed on the composite structure of bank innovation during the analysis. The first objective of this study was to assess the effect of bank innovation on the financial performance of commercial banks in Kenya. The first hypothesis tested was:

H₀₁: Bank innovation does not significantly affect financial performance of commercial banks in Kenya.

Table 3: Regression Model Summary

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.636 ^a	.404	.399	.1356097	.404	78.292	3	346	.000

The results in table 3, the summary of the regression study, demonstrate that the composite concept of bank innovation significantly predicts ROE as a measure of financial success. The coefficient of determination (R²) has a value of .402 and is significant at the 95% confidence level (R² = .402, p = .000; R² = .402, p = .000). These data suggest that the composite concept of bank innovation accounted for 40.4% of the variance in financial performance. Consequently, the remaining 59.6% of variance in financial performance

is described by variables not explored in this research. In this instance, the R square value indicates the variance in ROE explained by the composite concept of bank innovation. The coefficient of 0.404 indicates that the composite concept of bank innovation explains 40.4% of the variance in ROE as a measure of financial success. The remaining 59.6 percentage points of variance in ROE are measured by variables beyond the scope of this research. The results showed that a key indicator of financial performance among Kenyan Commercial Banks was return on equity (ROE), suggesting that creative banking practices were highly predictive of ROE.

Table 4: Analysis of Variance (ANOVA)

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.319	3	1.440	78.292	.000 ^b
	Residual	6.363	346	.018		
	Total	10.682	349			

The ANOVA table offers findings indicating whether the model fits the data obtained for the investigation. As indicated in Table 4 above, the F-value of 78.292 was significant at the 0.05 level of confidence, indicating that the data gathered in this investigation are consistent with the stated regression model. The composite construct of bank innovation was shown to be significant in predicting ROE (F=78.292), indicating the importance of this metric for evaluating a bank's performance.

Table 5: Regression Coefficients

Model	Coefficients ^a							
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B		
	B	Std. Error	Beta			Lower Bound	Upper Bound	
	(Constant)	.528	.061		8.599	.000	-.648	.407
1	Value of Mobile Banking Transactions	.073	.013	.609	5.775	.000	.048	.098
	Value of ATM Banking Transactions	.035	.006	.387	5.714	.000	.023	.048
	Value of Agency Banking Transactions	.043	.007	.500	6.180	.000	.057	.079

The intercept coefficient of 0.528 indicates that the usage of bank innovations would rise by 0.528 if the three independent variables were equal to zero. The regression coefficient summary are Mobile banking: = 0.073, $t = 5.775$, and $p = 0.000$; ATM banking transaction: =.035, $t = 5.714$, and $p = .000$; and Agency banking transaction: = 0.043, $t = 6.10$, and $p = .000$). The beta coefficient values indicate that the bank innovation construct (mobile banking and ATM banking transactions) has a substantial impact on ROE as a measure of financial success.

These statistics suggest how the increased use of mobile, ATM, and agency banking has boosted the profitability of Kenya's commercial banks. In addition, the investigation found that mobile banking transactions generated a 0.073 boost to ROE, while ATM banking transactions gave a 0.035 increase to ROE as a measure of financial success. In addition, a unit rise in Agency banking transactions contributed to a 0.043 improvement in ROE as a financial performance indicator.

Conclusions and Recommendations

The primary objective of this study was to determine the impact of bank innovation on the bottom lines of Kenyan commercial banks. Banks have implemented innovation indirectly through the use of mobile banking, banking at automated teller machines, and banking at agencies. Financial performance at banks was evaluated using Return on Assets and Return on Equity.

According to the corresponding hypothesis, bank innovation has no meaningful association with the financial performance of Kenyan commercial banks. The findings of the regression analysis done on the data gathered demonstrated that the composite construct of bank innovation had a substantial influence on the financial performance of Kenyan commercial banks. H01A: Mobile banking has no discernible effect on the financial performance of Kenya's commercial banks, H01B: Agency banking has no significant effect on the financial performance of Kenya's commercial banks, and H01C: There is no significant relationship between ATM banking and financial performance of commercial banks in Kenya, according to the sub-hypothesis under H01. However, based on the data, it was discovered that each variable assessing bank innovation had a considerable impact on financial performance. The findings of a substantial influence of bank innovation on financial performance were consistent with prior results of significant evidence of a favourable association between bank innovation and performance-related outcomes by Nadal (2011), De Young et al. (2015), and Kajewski et al. (2015).

The findings of this investigation are congruent with the findings of Malak (2014), who demonstrated that financial innovation has a favourable impact on financial performance. Nyathira (2013) found that financial innovation through advanced payment technologies enhanced financial performance in research to investigate how financial innovations influenced the financial performance of commercial banks in Kenya. According to Kibugo (2017), banks could remain competitive through financial innovation. In another study, George (2013) investigated how financial innovation strategies affected performance across Kenyan commercial banks and discovered that process innovation substantially influenced the performance of Kenyan commercial banks.

According to the studies, improved financial outcomes correlated with banking technology advancements. Similarly, Sionfou (2015) found a positive relationship among online banking and financial inclusion in his research into the impact of ICT on financial inclusion. Aduda and Kangoo (2012) investigated the relationship between e-banking and the effectiveness of Kenyan banking systems and discovered that it has a significant impact on the financial performance of the Kenyan banking industry. The results are at odds with those of Side et al. (2014). They used a hybrid of the innovation diffusion theory and the deconstructed theory of planned behavior to demonstrate that e-banking does not significantly contribute to financial inclusion.

The study concludes that bank innovation affects how well commercial banks in Kenya do financially. All of the "proxies" for bank innovation affected how well the bank did financially. So, we can say that as long as banks keep coming up with new ideas, their financial performance is likely to get better, especially in Kenya. The results of the descriptive statistics showed that the average financial performance was low but that there was a lot of variation. As shown by mobile banking, ATM banking, and agency banking, bank innovations have low means and a lot of differences. Means for financial innovation were high with a lot of variation, while means for institutional characteristics were high with a lot of variation.

The findings indicated that banking innovations impact financial performance and that clients in individual institutions have equitably embraced this technology. The results also showed that banking innovations related to financial inclusion might be attributed to service simplicity. More people can access financial services thanks to the widespread adoption of mobile banking; information security is robust, and customers are confident in the service, luring new customers to the bank; the mobile banking support service is quick

to respond to questions and concerns, drawing in new clients; and the mobile banking design is straightforward and user-friendly, luring in more clients.

This study's scope was confined to Mobile, ATM, and Agency banking advancements; hence, more research into the relationship among these developments and the financial performance of banks is required. Further research into bank innovations using COVID 19 as a metric should extend its scope through 2020 and 2021. Consequently, the CBK and other regulatory agencies will be better equipped to evaluate the impact of natural catastrophes on the capital expenditures for new banking products and the financial performance of current products. Finally, research on the effects of innovations driven by other variables on SACCOs and digital financial institutions, and their role in promoting financial inclusion, are needed. The result will be increased revenues for the institutions' regulators as more of them embrace technological advancements. It might benefit from using many approaches to make the research process more fluid.

According to the results of this research, financial innovation is the single most crucial element in boosting financial results. If banks haven't done a good job of adopting innovation techniques, they may find it harder to accept deposits, maintain customer information, and offer new products and services. Investment in financial technologies that reduce costs and make the industry more efficient was highlighted as crucial to maintaining and expanding financial inclusion. According to the findings, banks may better serve their customers by providing convenient and efficient services. Financial institutions should promote the extensive use of technological applications, particularly for depositing and withdrawing funds and creating new accounts.

This research advises that banks find ways to expand the availability of agency banking and enhance access to remote communities. In addition, the report recommends that financial institutions take measures to increase the safety of their platforms, which would inspire more confidence among their clientele. Since agency banking does impact financial inclusion, banks need to advertise and spread the word about the platforms so that more individuals use them.

This study's findings show that the various commercial banks authorised by CBK may benefit from investing more in the quality of their services. Since technological advancements in the banking industry

have a statistically significant impact on financial institutions' success, they must be factored into budgetary forecasts and long-term business plans.

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