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Innovative Banking Practices and Financial Performance of Commercial Banks in Kenya

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ABSTRACT

Commercial banks serve as key financial intermediaries in facilitation of the flow of money in the banking industry. Commercial banks offer credit to investment banks in order to offer investment opportunities for risky investments especially for financial securities using depositors' money. Globally, banks are affected by broad difficulties in the operating environment. The banking industry has embraced innovation to sustain competitiveness. Financial innovations used by commercial banks revolve around the latest product, service and its conveyance to consumers. Consequently, this information influenced the research with its aim as; investigating innovative banking applications and monetary capability of banks. Particular goals included examining how; real time gross settlements (RTGS), electronic fund transfers (EFT), pay bill innovation in mobile banking and the extent of agency banking influence monetary potential of banks. Research anchored on the Schumpeter theory of innovations, the agency and bank-led theories. It was explanatory in nature and applied a census approach to gather information. The targeted group included commercial banks registered under the Central Bank totalling to 42 tiers 1. Raw and derived data was equally utilized including, financial statements and face to face interviews with top level managers. Collected information was examined by SPSS. Given conclusions were dispensed descriptively, and by inferring to statistical presentations. The resulting conclusion was that; when RTGS, agency banking, EFT, and mobile banking are solely brought up/down by a single unit, financial performance increased/ decreased by 0.163, 0.27, 0.197, and 0.318 units. At a constant however, financial performance remained at 0.236 out of 5 units. In conclusion, commercial in banks have significantly relied on innovative banking practices to shift their financial performance to new heights. The study has particularly placed both mobile and agency banking at a more central position in driving financial performance to the desired level than other factors including the RTGS and EFT. As part of the recommendations, managements of commercial banks should consider scaling up their adoption of RTGS, agency banking, EFT, and mobile banking as ways of reducing the operating cost of their respective banks reducing banking hall congestions since most of the frequently sought banking services can be achieved without one on one meeting with the bank tellers. Management should also consider adopting more innovative banking practices besides those this research investigated.

Key Words: *Bank Innovation, Innovative Banking Practices, Automation Practices*

1.0 Introduction

Caprio and Levine (2006) emphasize the key element of a financial market is a banking system. Thus, Commercial banks serve as key financial intermediaries in facilitation of the flow of money in the banking industry (Li, Madura and Richie (2013). According to Crawford (2011) Commercial banks offer credit to investment banks in order to offer

investment opportunities for risky investments especially for financial securities using depositors' money. Globally the banking sector has been affected by myriad of challenges in the operating environment. The aftermath of global financial crisis, the market share of US banks increased, while the European banks declined however since 2015 Chinese banks have overtaken the position of American and European commercial banks in the Asian – pacific market (Goodhart and Schoenmaker, 2016). As business environment is continuously changing, there is the need of evolving their service and offerings (Robert and Amit (2003). Hence the requirement of embracing innovation to remain competitive especially in banking sector. Innovations are critical to the sustainability of firms (Kumar, 2011). According to Gorton and Metrick (2010), they categorize innovations into different groups depending on whether they effect changes on products or services or processes. In this respect, there are market, financial, product and process developments. Ventures seeking to remain competitive in terms of efficiency and sustained performance, must be innovative (Beaver ,2002). The banking sector has embraced innovation in areas like agency, RTGS, EFT and pay bill innovation in mobile technology. Innovations are conscious developments of advanced organizational products and functions (Lawrence, 2010). The study shall focus on those elements of financial innovation on performance in the banking sector.

1.1 Innovative Banking Practices

Goh (2002) suggests that technological innovation is related with the possibility of an age, application and spread of innovations. He additionally suggests that the development procedure includes interconnected exercises that include the ability to create new merchandise and ventures (item advancements) or to actualize new types of creation (process developments). The developments forms are viewed because of joint effort for combination of aptitudes and capacities while going after the and fierce unique future market (Hamel, 2002). In this way the need to adjust different advancement process so as to increase upper hand the endurance of the organizations in the financial segment. Along these lines, mechanical advancements in the financial segment assume a significant job in improving the proficiency and decreasing the expenses of banking exchanges for clients (Yasuharu, 2003). Associations in different division particularly banking segment develop as a method for adapting to firms' adjustment, extreme rivalry pressures, changing clients' requests and consistent weight for new and better items and administrations (Jansen et al., (2006); Prajogo & Ahmed, (2006)). In any case, the accomplishment of advancement isn't ensured in delivering anticipated returns in term of execution and proficiency (Bakerand, Sinkula, 2005). The advancement can be seen as an intricate action where existing and new information is applied for business closes (Escribano, Fosfuri, and Tribò, 2009; Galende, 2006). As indicated by (OECD, 2005), development can be characterized into four classifications; Product advancements include significant changes in the abilities of merchandise or administrations; Process developments incorporates changes underway and conveyance techniques; Organizational advancements includes usage of new authoritative strategies and Marketing developments which includes the execution of new advertising strategies.

1.2 Financial Performance of Commercial Banks

It is stipulated either via subjective, or objective criteria (Kotey, Reid and Ashelby, 2002). Objective criteria uses financial metrics of payback, investment returns and generated income (Whittington and Kurt, 2001). Sometimes subjective methods are rarely used by SMEs given the challenges of collecting data and the reliability of the available financial information. According Echeboka, (2014) mostly used measuring tools are financial ratio analysis, benchmarking, and measuring performance against budgets.in addition, financial performance

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of commercial banks are assessed through accounting metrics i.e. profitability, economic value added and sales growth (Crabtree and DeBusk, 2008). Hyvönen, (2007) proposes that innovation rate, market permiability and consumer gratification can be used to gauge non-capital performance. Kariuki (2013) and Kinyua (2016) states that financial performance is used to measure company's progress against its corporate objectives.

1.3 Commercial Banks

43 commercialized banks; 27 private, 13 foreign commercial banks and 3 communal monetary institutions exist in Kenya; owned by the government and state corporations (CBK, 2015; CMA, 2012). According to Kithinji, (2010) Kenyan banks are in excess to the ratio of the populous compared to South Africa; with 19 banks administering to a populous of 55 million. Commercialized banks dominated the Kenyan finance sector. A country where this scenario happens, any failure in industry negatively impacts overall development (Ongore, 2013) the crises in the banking sector would lead to overall financial crisis and economic depression in a country. However, the good performance of banks in Kenya, some are declaring losses (Oloo, 2011).

1.4 Statement of the Problem

The monetary growth of any country is highly reliant on the bank operations. Eventually, inclined banks and competitiveness over customers has gone a notch higher. However, the deposit protection fund board has placed more than 10 banks under receivership as they have either collapsed or liquidated. Moreover, there was a decline in the number of financial institutions that were rated strong, from 22 banks in 2014 to 11 banks in 2015(CBK, 2015). According to Onjala (2009) an analysis of what factors influence banks' financial performance is significant to the banks this will help in establishing the determinants of performance and do the necessary strategic decision. The Kenya's financial market which is characterized by competitive and turbulent forces that has been brought by emergence of new technologies, products, processes, markets, globalization, declined revenues, and competition. Therefore, companies must embrace innovations to be competitive and gain market share in the increasing competitive advantage (Onal, 2011; Erdoğan, 2011). According to Mbugua, (2017) Kenya banking sector is characterized by long queues, transaction errors, insecurity and network failures. The study done by Osewe, (2017) on e-banking transformations and its influence on bank performance determined that innovation influences financial performance. The need to carry out the research with other variables and in Nairobi county as it is capital city and it has more banks.

According to, (Muia, 2017) considering influences financial advancements have on the execution of Kenyan banks; there exists a positive influence. Consequently, it created a research gap as it dwelt on some of components of innovation such as internet banking, electronic fund transfer and mobile banking whereas the other key elements. The research conducted in turkey by Akcali, (2016) on how innovation influences performance in IT companies found that innovation indeed produced positive results on the sales growth, thus the need to replicate the study in other sectors and nations.

1.3 Objectives of the Study

  i.   To examine how RTGS influences financial execution of banks.
 ii.   To know the extent agency banking influences the execution of banks.
iii.   To examine how EFT influences monetary performance of banks.
 iv.   To discover the relationship of pay bill innovation on mobile banking and execution of banks.

2.0 Literature Review

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2.1 Theoretical Literature Review

The research was influenced by; Schumpeter theory of innovations, agency theory and bank-led theory. They were selected relative to their analyses on economic performance indicators of commercial banks.

2.1.1 Schumpeter Theory of Innovations

Schumpeter (1934) proposes innovation as a procedure of modern transformation, that tenaciously modifies the monetary structure from inside, continually pulverizing the bygone one, and making another one. He likewise refers to that buyer inclinations are now given and don't experience precipitously consequently they can't be reason for the monetary change. Schumpeter (1942) sets that advancement sorted into five kinds: dispatch of another item; use of new strategies for creation or deals; opening of another market; securing of new wellsprings of supply of crude material and production of new industry structure. Schumpeter 1934 additionally contended that a firm looking for benefits and development must advance. In this manner, development is considered as a basic driver of intensity and monetary elements (Hanush and Pyka, 2007). As per Schumpeter (1939) enterprise is a one-of-a-kind factor of creation and the uncommon social information that causes monetary history to advance. It pre-dominantly focuses on entrepreneurship as useful tool for the economy for innovation. Burton (1999) the act of innovating has phases: creation, assimilation, and emulation. The commercial bank must be cognizant and adopt among many innovation options in the industry.

2.1.2 Bank-Led Theory

The model centers on using a contracted establishment such as banks to offer financial assistance via authorized agents (Lyman, Ivatury & Staschen, 2006). The commercial bank is the distributor of monetary services and the clients sustain their accounts with banks and not agents. According to Owens, (2006) specified; agents have in person contact with clients and do deposit and withdrawal functions, as the bank does. The bank led theory backs up representative banking approach, postulating functions of a commercial bank is coming up with monetary products and services, then collaborating with agents to handle all customer interactions and enquiries (Lyman et al, 2006). The commercial banks virtually connect retail agents through communication gadgets such mobile phones or an EPS terminal that interprets customers bank cards. Examining the theory is important as agency banking is an influence of performance in this research.

2.1.3 Agency Theory

It elaborates various challenges that arise from agency relationships and resolving mechanisms (Jensen and Meckling, 1976). The agency is created where principals engage an agent to run the firm as per principal's requirements. Padilla, (2002), argues that the firm's management and employees could follow egocentricities at detriment of investors, therefore shareholders requires agents to act in good faith. Therefore, agents are expected to perform their as per principal guidelines and expectation so as to reduce conflict and maximizing principal's interest. The agency banking concept is concerned with at providing infrastructure at the customers' convenience so as to foster efficient financial services. This theory was purposely created to divide proprietorship from administration (Bhimani, 2008). The concept agency banking adaptation varies across commercial banks; while developing economies face challenges in implementation due to infrastructure and legal challenges (Cetorelli & Goldberg, 2012). Examining the theory is important as agency banking is part of independent variable that influences monetary execution of the banks.

2.2   Empirical Review

It assists in building information on existing work related to the subject being researched (Pyrczak & Bruce, 2011). This section shall analyze information connected to the research. RTGS is a computerized system dedicated to moving money in real time between banks. According to Manalac, Yap and Torrej (2001), the system allows for in time processing and settlement of cash orders. This is characterized intraday funds transfer system for individual as long there is sufficient fund. Muhoro (2018) suggest that disbursements in RTGS are done independently and immediately the payment instruction has been instructed by remitter. RTGS is an important component financial infrastructure, it reduces costs of transactions, is essential for easing interbank operations, capital and money market (Manalac et al., 2001). Nofie (2011) notes that inventions in the finance industry are the invasion of new inventions such as new or developed products and new procedures to reduce the overall pricing in the financial sector. Thus innovation encompasses firms' increase in new services, products or procedures in bettering their financial performance (Lawrence, 2010). Research conducted on real time gross settlement (RTGS) system by Manalac et al, (2001) found that adoption of (RTGS) has brought many benefits to banks and customers such cost-effective fund transfer, inter-bank loans transaction, accuracy and reliable transmission and faster communication regarding liquidity. According to Muhoro (2017), RTGS affects positively the return on investment i.e. the more RTGS transactions, the revenue generated increases. The research further adds that RTGS improves profitability, customer service and loyalty.

Agency banks are retail outlets outsourced by other banks, hence acting as representative to the parent bank (Getanga, 2010). CBK, (2010) states that the banking agency model was introduced in 2010.the uptake of the model is at slow pace as a few of banks have embraced the technology. Agency model of banking embraces branchless approach, hence it is vital in driving performance of commercial banks in growing nations such Peru, Colombia, India and Brazil (Shankaran and Roy (2009). Njuki (2012) suggested that agency banking model aided in raising profits through the cost-saving due to branchless approach, accessibility of banking services and better customer service. Ivatury and Timothy (2006) suggest that agency banking promotes better services; minimizes transaction cost, longer opening hours, efficient and more accessibility of financial services. The agency benefits in form of commissions and generated income from customers on location and their distinctiveness resultant from commercial banks affiliation. The commercial banks finally gain from growing consumers and an inexpensive and broader customer reach (Mbugua, 2017). However, the great success of agency banking model globally, there are operational challenges. The commercial banks have realized that agents are insufficiently capable of dealing with voluminous transactions due to security and operating fund issues (Mbugua, 2017). According to analysis on how innovation affects financial performance by Osewe, (2012) it determined positive influences from agency banking; especially on the portfolio output of banks. It implies, increased application improved performance. However, the research focused on Kisii County where the banks concentration is lower as compared to Nairobi County. Another study conducted in Embu County found out; agency banking affected the price of banking for both customers and banks thus affecting its financial performance (Mbugua, 2017).

Kumar (2010) posits an increase in mobile banking payments. According to a research on financial innovations, research results indicated a high influence to performance of Kenyan banks. The leading cause was from mobile banking levies and charges. On the other hand, EFT, agency and online banking are insignificant determinants despite existing as an indirect link to financial growth in liquidity aspect (Kiplangat, 2017). Kumar (2010) analysed minimum financing and mobile banking. The results determined general expenses was much
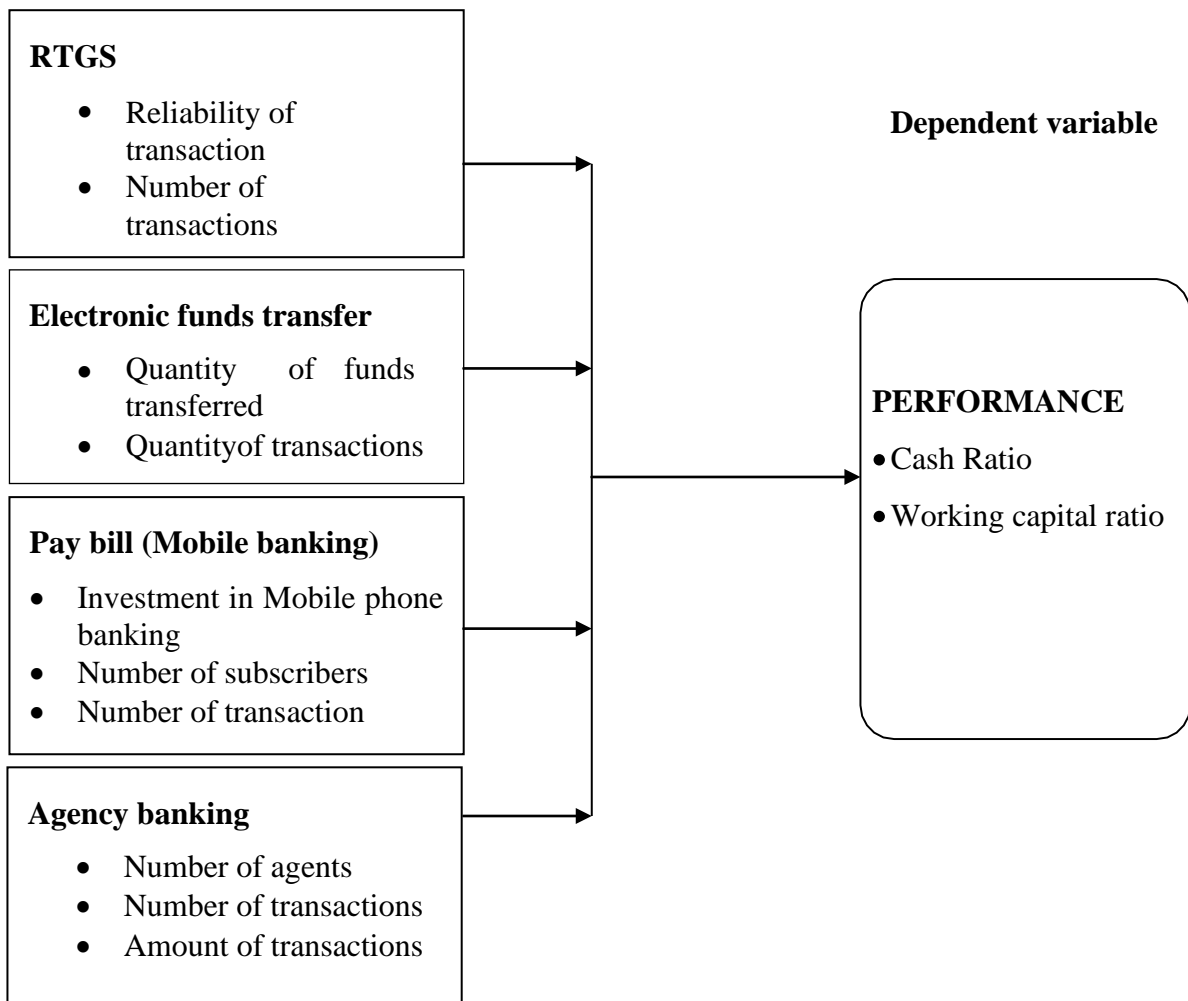
lower compared to common banking. Moranga (2018) study on strategies applied in phone banking and the execution of KCB bank, Kericho noted mobile tech influenced progressive gains in banks by cutting down costs. According to the study mobile technology has enabled the unbanked customers to bank. There was a significant improvement of performance therein overall due to adaption of technology. The study concluded that the mobile technology strategies were significant to the firms' performance. Another research on mobile banking further solidified its benefits after going through varied statements, transfers and loan applications. Anova tests were predictive of the influence on the bank output in Kenya (Ndirangu, 2014). Therefore, mobile banking has become an essential part of banking and has ability to influence the output of banking.

Analysis by Ogare (2013) on electronic betting in Kenya determined that e-banking had a critical impact and there existed a positive connection between e-banking and bank execution. Kagendo (2015) examined e-banking and execution of business banks. As per examination discoveries, e-banking systems are imperative to business banks execution; there existed a solid positive connection between e-banking procedure and execution, where 71.2% of changeability in execution were related with Online Banking, electronic reserve move, ATM Infrastructure, Mobile banking. Asia (2015) examined on e-banking and money related execution of Rwandan banks. It determined; electronic financial framework such ATM, Pay immediate, electronic check change, cell phone banking and E execute affected bank execution as they expanded gainfulness, decrease tasks cost and increment resource and bank effectiveness. Study directed by Mabrouk and Mamoghli (2010) on effect of monetary advancement and execution of business banks inspected the impact of new item improvement. The emphasis was on: item improvement and procedure advancement on how business banks performed. The examination found that those components had constructive outcome on gainfulness and effectiveness. Kariuki (2005) concentrated on six riddles in electronic cash and banking; appropriation of cutting edge ICT prompted high benefit development, bank turnover and benefits was utilized as execution measure. The investigation inferred that the appropriation and backing of electronic banking improved bank execution in term of piece of the overall industry increment, assortment scope of items, altering administrations with great clients' reaction fulfillment. The indicated breaches observe that prior research was not taken in Kenya or either centered singularly on innovation. Less focus has been given to the research independent variables i.e. RTGS, agency, EFT and paybill innovation in mobile technology effects on bank performance.

2.3 Conceptual Framework

Conceptual frameworks are utilized for examining differing ideas and arranging them in a logical manner. It shows the link connecting independent and dependent variables in a subject (Ravitch and Riggan, 2012). It as well indicates RTGS, agency, electronic fund transfer and pay bill innovation in mobile technology effects on bank performance. It is measured in terms of ROI and NIM.

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Independent variable

Dependent variable

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┌─────────────────────────────┐
│ RTGS                         │
│   • Reliability of           │
│     transaction             │─────┐
│   • Number of                │     │
│     transactions             │     │
└─────────────────────────────┘     │
┌─────────────────────────────┐     │      ┌──────────────────────────┐
│ Electronic funds transfer    │     │      │                          │
│   • Quantity  of  funds      │─────┤      │ PERFORMANCE              │
│     transferred              │     ├─────▶│  • Cash Ratio            │
│   • Quantityof transactions  │     │      │  • Working capital ratio │
└─────────────────────────────┘     │      │                          │
┌─────────────────────────────┐     │      └──────────────────────────┘
│ Pay bill (Mobile banking)    │     │
│   • Investment in Mobile phone│    │
│     banking                  │─────┤
│   • Number of subscribers    │     │
│   • Number of transaction    │     │
└─────────────────────────────┘     │
┌─────────────────────────────┐     │
│ Agency banking               │     │
│   • Number of agents         │     │
│   • Number of transactions   │─────┘
│   • Amount of transactions   │
└─────────────────────────────┘
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Figure 1: Conceptual Framework

Source: Researcher, (2019)

3.0 Research Methods

The study adopted an explanatory survey method. This entails gathering information on the; how, who, when and where to assist in constructing a broader image of the aspect/ individual under study (Mugenda and Mugenda, 2003). Descriptive design helps where research calls for a precise depiction of persons, circumstances and inferences about the target population (Saunders, Lewis & Thornhill, 2012). The study population was 41 commercial banks and the respondents were 41 IT managers and 41 marketing managers. Research took place within Nairobi County. Raw and derivative facts were gathered via drafted questions that contained all study objectives and adopted close-ended questions to produce more candid answers. Anonymity approach was adapted when administering them and the researcher offered to collect them at a later date.

To ensure wider coverage, the questionnaires were distributed to each interviewee and collected after a given time period. Regular contact was made via phone and email to guarantee response. Application of derivative data in the research further provided in depth knowledge on the topic of research. It was sourced online via NSE website and company accounts and reports. Firstly, the gathered information was listed and checked for inaccuracy and interpreted via descriptive and inferential statistics. The statistical method used enables the researcher to

determine the connectiveness between variables.

4.0 Data Analysis Results

Table 1: Correlation Coefficient

	RTGS	Agency banking	EFT	Mobile banking	Financial performance
RTGS	1	.616	.598	.558	.712
Agency banking	.616	1	.457	.573	.757
EFT	.598	.457	1	.474	.632
Mobile banking	.558	.573	.474	1	.733
Financial performance	.712	.757	.632	.733	1

All the variables correlated, with financial performance showing a correlation index of .712, .757, .632, and .733 for RTGS, agency banking, EFT, and mobile banking respectively. The highest correlation was betwixt m-banking and financial performance (0.733) implying that the variable is a key innovative banking practice which correlates significantly with financial performance of commercial banks. All correlations had p-Value < 0.05 indicating every variable substantially correlated with the next.

Table 2: Coefficient of Determination

R	R Square	Adjusted R Square	Std. Error of the Estimate
.880	.774	.759	.116

Indications present an R-Square of 0.774 and a standard error of estimate of 0.116. It suggests innovative banking methods (vis a vis RTGS, agency banking, EFT, and mobile banking (pay bill)) do explain changes in monetary execution of commercial banks up to 77.4 %. The later 22.6 % is of elements not contained within the research.

Table 3: Analysis of Variance

	Sum of Squares	df	Mean Square	F	Sig.
Regression	2.906	4	0.727	53.811	.000a
Residual	0.851	63	0.014		
Total	3.757	67			

Predictors: (Constant), Mobile banking, RTGS, EFT, Agency banking

Dependent Variable: Financial performance of commercial banks

F-Calculated $(4, 63) = 13.938 >$ F-Critical $(4, 63) = 2.518$ at 2-tail test and 95% confidence level and p-Value $= 0.000 < 0.05$. It suggests that; innovative banking practices (RTGS, agency banking, EFT, and mobile banking) significantly influence execution of banks.

Table 4: Regression Model

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.236	0.292		0.807	0.423
RTGS	0.163	0.076	0.186	2.132	0.037
Agency banking	0.27	0.06	0.365	4.485	0.000

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	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
EFT	0.197	0.076	0.199	2.595	0.012
Mobile banking	0.318	0.077	0.325	4.152	0.000

Dependent Variable: Financial performance of commercial banks

When RTGS, agency banking, EFT, and mobile banking solely rise/drop by a single unit, financial performance of banks rise/drop by 0.163, 0.27, 0.197, and 0.318 units correspondingly. At a constant, monetary performance of banks is 0.236 out of 5 units. The predictors entirely had p-Value < 0.05 at 95% confidence level suggesting they each affected performance of banks. The model is stipulated below: $Y = 0.236 + 0.163X_1 + 0.270X_2 + 0.197X_3 + 0.318X_4$ Where Y is the dependent variable (Financial performance of commercial banks), X_1 = RTGS, X_2 = Agency banking, X_3 = EFT, X_4 = Mobile banking.

5.0 Conclusions and Recommendations

In conclusion, commercial in banks have significantly relied on innovative banking practices to shift their financial performance to new heights. The study has particularly placed both mobile and agency banking at a more central position in driving financial performance to the desired level than other factors including the real time gross settlement and electronic fund transfer. This is because, both mobile and agency banking offer much more service delivery on either end (that is for both consumer and the commercial banks) beyond funds transfer thus yielding much more customer satisfaction. It has been revealed that mobile banking has significantly increased income from commissions and interests, offers more prospects for creating income and high income from m-banking has affected annual profit. Additionally, both agency and mobile banking have lower operational costs thus offers banks more profits besides creating convenience in accessibility of banking service hence affect the performance. RTGS and EFT have also contributed to enhanced sales volume of commercial banks, their market share, customer loyalty, and the rate of profitability.

The study recommended that bank managers need to consider scaling up their adoption of RTGS, agency banking, EFT, and mobile banking as ways of reducing the operating cost of their respective banks reducing banking hall congestions since most of the frequently sought banking services can be achieved without one-on-one meeting with the bank tellers. Management should also consider adopting more innovative banking practices besides those that are considered in this study. Government though the relevant departments should ensure adequate and effective policies that are relevant in ensuring financial performance of commercial banks is on an improvement path should be put in place and their implementation ensured. Banking institution should also consider putting proper infrastructures to ensure that, innovative banking practices are achieved even in rural set-ups without compromising the quality of services sought by their customers.

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