



Vol. 7, Issue No. 2, pp 1 - 15, 2022

# INFLUENCE OF TELEPHONE BANKING ON COMPETITIVE ADVANTAGE OF COMMERCIAL BANKS IN KENYA

**Ong'ara Elias Odhiambo** 

College of Human Resource and Development, Jomo Kenyatta University of Agriculture and

Technology

P. O. Box 62000, 00200 Nairobi, Kenya

Corresponding Author email: <u>eongara@gmail.com</u>

# Dr. Robert Mang'ana

College of Human Resource and Development, Jomo Kenyatta University of Agriculture and

Technology

P. O. Box 62000, 00200 Nairobi, Kenya

# ABSTRACT

**Purpose:** The current study sought to establish how telephone banking technologies influences competitive advantage of commercial banks in Kenya.

**Methodology:** The study was anchored on Disruptive Innovation Theory. A descriptive research design was employed and the target population comprised of 43 commercial banks operating in Kenya where the unit of analysis comprised of 1 Branch Manager, 1 Head of Customer Service, 1 Head of IT Support and 2 Relationship officers from each bank making a total of 215 respondents. The primary data collection instruments used was a semi-structured questionnaire containing both closed and open-ended questions and issued to 215 study population respondents. The collected data was analyzed by employing both inferential analysis and descriptive statistics using Statistical Package for Social Science (SPSS) V25 and Microsoft Excel. A random pilot study carried on 21 respondents was done to assess the data collection instrument on validity and reliability. Out of the issued 215 questionnaires to the respondents, 192 were completed and successfully returned. This equates to 89.3% response rate, an appropriate for conducting analysis and making inferences. Tables and figure formats were used in presenting the study results and findings.

**Results:** The study findings were that the adoption of Telephone banking technologies had positive and significant influence on competitive advantage of Commercial banks in Kenya. The study also concluded that telephone banking technologies bears a positive and significant influence on competitive advantage of commercial banks. Remarkably, telephone banking technologies aspects such as establishing a simplified USSD services for customers, creating avenues where customers can access bank's financial services through agency banking, and having a paybill service that enables customers to conveniently pay their bills directly from their bank account services further enhances the levels of competitive advantage of the commercial banks.

**Unique contribution to theory and practice:** The study recommends to the commercial banks to enhance their telephone banking technologies in order to remain competitive in the market.

Key Words: Telephone Banking Technologies, Competitive Advantage and Commercial Banks

Journal of Business and Strategic Management ISSN 2520-0402 (online) Vol. 7, Issue No. 2, pp 1 - 15, 2022



#### **Background of the Study**

The 21st century saw the emergence of technological innovations such as telephone banking that significantly transformed the way banks operate (Zhao, Tsai, & Wang, 2019). With the impact of globalization, the business world continues to receive important innovations and advancements, which are swiftly transforming the way banking institutions operate. Banking institutions worldwide have implemented the new innovations into their business operations as a mean towards, attaining competitive advantage. (Oke & Goffin, 2019), indicate that developed nations of Europe and United States have successfully embraced telephone banking technologies for over the last five decades to improve the institutional internal operations, and as approach for organizational development and growth. With this regard, business organizations which remains in the market and profitable have to effectively utilize their resources well (Davila, Epstein & Stretton, 2010), by embracing the technologies as a changing agent. Ombati et al., (2017) indicate that the idea of telephone banking technologies was as a result of theoretical school of thought that was seen as the innovation systems method. By the late 1980s, the concept of technological innovations gradually became a central part of efficiency process, business organizations operational management, and some technologies were implemented to minimize the organizational operational costs, and yet at the same time improving organizational performance Howard, 2018).

For instance, in Jodan, Al-Shbiel & Al-Olimat, (2019), asserts that banking institutions have welcomed and implemented new innovations such as telephone banking technologies into their business operations as a means of attaining competitive advantage. The innovations have enabled most of the financial institutions to introduce new systems so as to automate different interfaces of internal operations, thus cutting the overhead expenses, and improving performance. Newbert in his definition, describes competitive advantage as the degree to which a firm discovers the available opportunities, neutralizes threats and reduces its cost (Newbert, G and Ma N, 2017). In the global economic framework, stiff competition pushes organizations to review their position against their rival competitors across the globe. Porter (1996) notes that the competitive strategies that differentiates a particular firm from its competitors is the determinant of such a business survival. On the other hand, Sharm and Rugman (2018) asserts that a firm that is capable of designing, producing and marketing its products or services in the market far better than its competitors, is considered more competitive. All these market dynamics are indications that none of the industry players can ever refuse to technologically innovate (Hurley and Hult, 2018).

#### **Statement of the Problem**

Banking institutions have implemented new innovations such as telephone banking technologies into their business operations as a mean to attaining competitive advantage. The innovations have enabled most of the financial institutions to introduce new systems, products and services so as to automate different interfaces of internal operations, thus cutting the overhead expenses, and improving performance. There has been a recent upsurge in uptake of financial services in Kenya, more people are using formal services for keeping their money. However, given the stiff competition from the mobile phone operators that also offer efficient money transfer, quick loans and more convenient means of saving money, banks have been negatively affected (Lorenz & Pommet, 2020; Kipchumba & Sulaiman, 2020). That creates another form of competition where banks do not only compete amongst themselves for customers but also with the mobile service

Journal of Business and Strategic Management ISSN 2520-0402 (online)

Vol. 7, Issue No. 2, pp 1 - 15, 2022



providers (Koomson, Bukari & Villano, 2019). As a result, banks soften the processes of opening an account, accessing funds, transferring them and saving them by fusing their operations with the mobile service providers. Whereas that served the purpose of having more people embracing former banking, it also led to upsurge in the number of persons seeking financial services. The reports from Central Banks of Kenya indicated a significant increase in the proportions of Kenya with access to banking and formal financial services that show an increase from 75.3% in 2016 to 82.9% in 2019, meaning that 89% can access any form of financial products/services (FINACCESS, & Central Bank of Kenya, 2019).

This increase in the bank's operations and services significantly placed a considerable burden on the Bank's internal and external operations, in terms of efficiency, effectiveness, planning, quality of work and staffing across the Banks' geographical locations (Crytonn, 2016). However, with the current trend in the increase in the numbers, there is need for improvement in terms of operational management to have products and services needed by the customers to attain competitive advantage (Zhao et al., 2019). Banks do not have the capacity and resources to have branches or extend services to parts of the country but can leverage on the existing technologies, notably, telephone banking technologies to bring banking services closer to the customers (Houenou & Djogbenou, 2020; Mugo & Ngugi, 2021; Bochaberi & Job, 2021). With the adoption of such technologies, banks opened up another frontier of competition where banks that have embraced the disruptive effects of technological innovation are believed to have a competitive edge over others (Muchemi & Moronge, 2019). But beyond competition, there are other factors that may be the contributors toward establishing a competitive edge. The links between technological innovations such as telephone banking technologies as a strategy and competitive advantage of commercial banks in Kenya remains very shallow with little presentation to the banking institutions (Nzioka & Kariuki, 2021; Waithaka, 2020). As a result, this study has been designed to expand on the existing studies on telephone banking technologies in banking sector, and fill the gap in the literatures on its influence on a bank's competitive advantage.

#### **Objective of the Study**

To determine how telephone banking technologies influences competitive advantage of Commercial Banks in Kenya

#### **Research Question**

How does telephone banking technologies influence competitive advantage of Commercial Banks in Kenya?

#### Significance of the Study

This study is significant to the leaders of the various banks as the outcome of the study intends to give insights of the competitive strategies in technological advancements that commercial banks can apply to accelerate performance amid stiff competition. To the Central Bank of Kenya (The Regulator), the study findings provides knowledge and the telephone banking technological insights on the Industry dynamics and the emerging trends in financial service sector. The strategies on telephone banking technological innovations is crucial in guiding the regulator to come up with the appropriate policies that offer competitive platform for a growing banking sector. To the policy makers, the outcome of the study can be considered a benchmark in deducing the

Journal of Business and Strategic Management ISSN 2520-0402 (online)

Vol. 7, Issue No. 2, pp 1 - 15, 2022



efficiency and effectiveness of technologies applicable in the banking sector. To the academicians and Scholars, the study result aims to support the Educational sector that looks to raise the bar of quality in their product offering, market reputation and financial resources as they remain competitive in their service deliveries. In the increasingly competitive market for knowledge, the study is useful to academicians and researchers in deepening their understanding of the market and the uses, challenges and the strategic impact of using telephone banking technological innovations for competitive advantage.

# LITERATURE REVIEW

#### **Theoretical Review**

#### **Disruptive Innovation Theory**

Clayton M. Christensen, Harvard professor in 1997, coined the theory and explains through his book The Innovator's Dilemma, how existing market or sector tend to fail as a result of disruptive technologies (Christensen & Raynor, 2003). This theory highlights a process where small or new firms with fewer resources use disruptive technologies to challenge existing firms (Christensen & Raynor, 2003). The theory notes that a well-managed organization with good managers risk losing their space in the industry when they ignore their rivals with disruptive innovations when they do the same things, expecting to succeed and remain competitive. Danneels (2014) defines Disruptive Innovation as a concept, product or a service that either disrupts an existing market or creates a completely new market segment. Assink (2015) argues that disruptive innovations are created when various emerging smaller ideas that challenge the existing suppositions are combined with the spotted unidentified customer needs and trying new ways that challenge our state of minds. The theory elaborates a concept by which a complicated and high cost oriented sector or an existing market is transformed by an innovation through an introduction of a simpler, convenience, accessible and affordable product or idea that redefines an industry.

Disruptive innovations help create new markets and networks when products and services features are improved to persuade not only new customers but also, presents affordable prices that existing customers find more convincing and convenient to continue using the product – a competitive pattern (Christensen, 2015). This narration provides a window of how technological innovation can be applied by the commercial banks in Kenya to exploit a competitive market and remain at the top (Gitau, 2018). This theory thus validates how various commercial banks in Kenya continue to nurture technological innovations, Research and Development Department in exploring new ideas that conquers the untapped markets and embed them into the system to solidify market base.Kamau and Oluoch (2016) on the strategies adopted by the commercial banks in Kenya, suggested the need for the banks to collectively develop strategies that works for the sector and offers a fair play in the market. Kumaraswamy, et al. (2018) describes this as an era of continual disruptions where technological innovation and new business models affect the entire industries and subsystems. Christensen, et al. (2015) however, notes that the disruption process affects different industries in different ways. The theory of disruptive innovation is thus useful to this study as it cautions managers and other decision makers on the need to consider and understand the emerging threats and how fast an organization can respond. The theory being an innovation that creates new markets and adds value to the organization, it's considered a long term sustainer

ISSN 2520-0402 (online)

Vol. 7, Issue No. 2, pp 1 - 15, 2022



of any organization that is proactively exploiting the available resources through technological innovation to remain competitive (Gitau, 2018).

# **Conceptual Framework**



# **Telephone Banking Technology**

Mukwana and Sander, (2003) defines Telephone banking as a channel used by banks to deliver services to the customers. The telephone device is integrated with the banking software application to pick the bank details and transfer them into an interactive voice response (IVR) system. The facility allows customers through the telephone calls, access their bank's information by dialing the telephone numbers given to them by their bankers. According to (Sarpong, 2016), the use of telephone banking is innovative in nature as it brings the services to the doorstep of customers. It's also seen as a strategic tool for a competitive advantage as the banks that have adopted it, have a wider coverage in connecting with the customers. Telephone banking has enormous advantages as the customers are able to transfer money from deposit accounts or pay loans automatically without the presence of the bank's representatives. As a result, banks benefit from the low cost profile and are able to sustain competitive advantage and profitability. According to Ahmad and Buttle (2017), engaging customers through telephone banking platform increases their net present value and as a result more customer retention with the potential to manage the market. In addition, the adoption of telephone banking in the banking industry has widened the network in remote areas where banks could not set branches. This enable customers to easily get access to the accounts without having to be online. It's an efficient, accessible, secure, user friendly and affordable means of performing financial transactions (Mithika & Liu, 2018).

# **Competitive Advantage**

Newbert defines competitive advantage as the degree to which a firm explores its opportunities, neutralizes threats and reduces cost (Newbert, G and Ma N, 2017). Competition in Kenyan commercial banks has transformed drastically and continues to grow with the demand to expand their market share. Financial institutions are developing strategies that would respond to the competitions caused by the dynamics in business environment (Akumu, 2015). The adoption of telephone banking technologies amongst commercial banks in Kenya is increasingly improving the banking products and services through knowledge sharing and standardization. As a result, high pressure is developed on competition. Dhufairi (2014) argues that the intense competition emanates from the need to build new advantages that keeps the business ahead of its rivals. The relentless pressure from competition exposes creativity and innovation in an organization to develop new products that are efficient, user friendly, cost effective and, high quality to attract and retain customers and still, ensures the business stays ahead of its competitors. The emergence of technological innovation such as telephone banking technologies has thus created unique forms of

ISSN 2520-0402 (online)

Vol. 7, Issue No. 2, pp 1 - 15, 2022



banking products and services such as the use of mobile banking to make cash deposits and cash withdrawals. Sulaimani (2020) in his study of the adoption of ICT noted that the quality of services provided by a business increases their competitive advantage. Kim et al., (2019) inferred that an organization needs efficient and effective strategies that can help transform itself into a competitive institution. A firm should ensure the process of innovation is continuous to respond to the customers' needs in a secure, faster and more convenience manner to keep the organization competitive advantage.

# **Empirical Review**

# **Telephone Banking on Operations**

Chiteli (2013) highlights that a competitive strategy involves searching for favorable competitive positioning in the whole industry. It is directly linked to how a given company gains advantage through product/service distinction while competing. Through competition, companies establish profitable positions against the forces that play a role in determining the completion in the industry. Chiteli (2013) investigated how agent banking affects the operations of commercial banks in Kisumu when used as a competitive strategy. A remarkable response validated the findings that indeed banks expanded their geographical scope which also reduced the long queues at the banking halls that were being experienced prior to introduction of agent banking. The study suggested as a strategy, the need for tighter internal control systems that are flexible which should be periodically evaluated for an effective agent banking operations. Sharma (2017) notes that the policies and procedures in the Kenya Bankers' association have to be periodically updated. Additionally, there should be frequent audits on the bank system as well as automation process on a quarterly basis so as to identify any loopholes that need to be addressed. Training of the Agents and their staff on the operation of the agent banking to be considered as well to upskill and empower them (Sharma, 2017).

A research study by Gathee (2018) on how electronic banking, mobile banking and process innovation influence the operations of banks in Kenya, discovered that although electronic funds transfers, point of sale banking had an impact on operational management of banks, that result was not enough in explaining operational management. The results further show that the introduction of mobile credit financial innovations had a significant relationship with customer process innovations. The study thus concludes that inasmuch as the electronic innovation technologies had no effect on operational management, the ATM and POS technologies had a positive influence on the effectiveness and efficiency of commercial banks. Gathee (2018) thus concludes that process innovations and credit process transactions are important in enhancing operational management and efficiency of commercial banks. They can help the banks reduce on the overall operational costs.

# **Research Gaps**

Globally, researchers have conducted variety of studies on the technological innovations and strategies and how an organization can gain competitive advantage. A study by Gakuhe and Ngumi (2018) in Kenya, focused on technologies innovation adopted by commercial banks and concluded that an organization benefits from technological innovation as it improves the products quality and service deliveries. The result is better performance and profitability. From the reviewed literature, most of the studies have focused on how a firm can improve performance but has minimal focus

Journal of Business and Strategic Management ISSN 2520-0402 (online) Vol. 7, Issue No. 2, pp 1 - 15, 2022



on how an organization gains competitive advantage. Lack of focus on the link between telephone banking technologies used as a strategy by the researcher to determine the extent of competitive edge, remains unclear with minimal study outcome. In lieu of this view, this study worked to broaden the scholarly works of the existing researchers on how commercial banks can apply telephone banking technologies as a strategy to leverage on competitive advantage.

# **Research Methodology**

The study adopted a descriptive design and study population comprised of 215 respondents from branches of commercial banks in Nairobi. A total of 43 branches of Commercial Banks in Nairobi County. The study relied on primary data and data collection instruments used a semi-structured 5-point likert scale questionnaire. Inferential and descriptive statistics was used to analyze data. Results of the analysis were presented by use of tables and figures. Inferential statistics was used to establish the association between independent variable and dependent variable. The study used the following regression model:

# $\mathbf{Y} = \boldsymbol{\beta}_0 + \boldsymbol{\beta}_1 \mathbf{X}_1 + \boldsymbol{\varepsilon}$

Where, Y = Competitive Advantage,  $X_1 = Telephone Banking Technology$ ,  $\mathcal{E} = Error term$ ,  $\beta 0 = Regression constant or intercept$ . From the formula, Y is determined by the changes in  $X_1$ ,  $\beta 1$  is the unknown coefficients of independent variables in which a change of X influences Y.

#### Results

A total of 215 questionnaires were administered and the survey collected 192 of the 215 respondents within the County of Nairobi. The overall response rate was 89.3%, appropriate for conducting analysis and making inferences. With the drop and pick data collection technique, interviewees were given sufficient time to respond to questionnaires hence high response.

#### **Descriptive Findings and Analysis**

# **Descriptive Statistics**

The researcher adopted Descriptive statistics in the study to describe the distribution of measures of the indicator variables. Both means and standard deviation were equally used as the descriptive statistics in the current study. Using semi-structured questionnaire as data collection instrument, the researcher used a scale of 1 -5 to rate responses where the scale 1- Strongly Disagree at all, 2 - Disagree, 3 - Moderate, 4 - Agree and, 5 - Strongly Agree.

#### **Telephone banking technologies**

The study further investigated the influence of Telephone banking technologies on competitive advantage of the commercial Banks in Kenya. Respondents were presented with statements on Telephone banking technologies and were requested to rate their levels of agreement. The study results summarized in table 1 indicate that the respondents agreed with the statements that their bank has established USSD services for customers to query their bank account balances, mean=4.61, that the USSD service is simplified for ease of use to all customers, mean=4.52, that the bank has established agency banking where customers can access majority of our banking services, mean=4.58 and that through agency banking, our bank has simplified means of serving

ISSN 2520-0402 (online)

Vol. 7, Issue No. 2, pp 1 - 15, 2022



our customers, mean=4.31. Respondents further agreed with the statements that through agency banking, the bank has managed to reduce the number of customers visiting the branches of the bank, mean=4.25, that the bank has a pay-bill service to enable customers pay their bills directly from their bank account, mean=4.36 and that the pay-bill services creates operational convenience to our customers, mean=4.49. An overall mean of 4.45 implied that respondents agreed with the statement on E-Money technologies adopted by Commercial Banks. The study results affirms Mithika & Liu (2018) findings that telephone banking technologies are efficient, accessible, secure, user friendly and affordable means of performing financial transactions.

Count	Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree	Mean
102			4.500/	20.200/	(5.400/	4 6 1
192	-	-	4.50%	30.20%	65.40%	4.61
192	-	-	6.70%	34.60%	58.70%	4.52
192	-	-	5.60%	30.70%	63.70%	4.58
192	-	-		26.70%	73.30%	4.31
192	-	-		29.60%	70.40%	4.25
192	-	-		24.70%	75.30%	4.36
192	-	0.60%	5.60%	38.00%	55.90%	4.49
	192 192 192 192 192 192	Disagree       192     -       192     -       192     -       192     -       192     -       192     -       192     -       192     -       192     -	Disagree       192     -       192     -       192     -       192     -       192     -       192     -       192     -       192     -       192     -       192     -       192     -       192     -       192     -	Disagree         -         4.50%           192         -         -         6.70%           192         -         -         6.70%           192         -         -         5.60%           192         -         -         5.60%           192         -         -         192           192         -         -         5.60%           192         -         -         192           192         -         -         -           192         -         -         -           192         -         -         -	Disagree         -         4.50%         30.20%           192         -         -         6.70%         34.60%           192         -         -         6.70%         30.70%           192         -         -         5.60%         30.70%           192         -         -         5.60%         30.70%           192         -         -         26.70%           192         -         -         29.60%           192         -         -         24.70%	Disagree         Agree           192         -         -         4.50%         30.20%         65.40%           192         -         -         6.70%         34.60%         58.70%           192         -         -         5.60%         30.70%         63.70%           192         -         -         5.60%         30.70%         63.70%           192         -         -         26.70%         73.30%           192         -         -         29.60%         70.40%           192         -         -         24.70%         75.30%

#### Table 1: Telephone banking technology (Wired and wireless services)



## **Competitive Advantage of Commercial Banks**

Respondents were presented with statements on competitive advantage of commercial banks as a result of adoption of strategic technological innovations and were requested to rate their levels of agreement in a 5-point Likert scale where-1=Strongly Disagree, 2=Disagree, 3=Moderate, 4=Agree and 5=Strongly Agree. The study results summarized in table 2 shows that as a result of adopting strategic technological innovations, commercial banks had recorded increased level of profits, mean=4.61, witnessed an increase in the levels of market share, mean=4.59, and recorded an increase in the number of customers in our bank, mean=4.61. Similarly, commercial banks have managed to retain old customers while attracting new ones, mean=4.72, have recorded an increased competitive niche in all our products and services, mean=4.62 and that their customers' Net Promoter Score had shown an upward trend, mean=4.60. An overall mean of 4.63 implied that respondents agreed with statement on competitive advantage of commercial banks as a result of strategic technological innovations. The result resonates well with the Kungu, Desta & Ngui (2014) findings that banks are expected to develop strategies for countering competition as they possess several strengths that enable survival and favorable competition with other players. Equally, Ndung'u, Otieno & Rotich (2016) adds that competitive strategies enable firms to survive in fierce competitive operating environments and reveals that the adopted competitive strategies by banks have a profound effect on the overall financial performance.

Parameter	Count	Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree	Mean
Our bank has recorded an increased level of profits	192		0.0%	0.6%	37.4%	62.0%	4.61
Our bank has witnessed an increase in the levels of market share	192		0.0%	1.1%	39.1%	59.8%	4.59
There is an increase in the number of customers in our bank	192		0.0%	3.4%	31.8%	64.8%	4.61
Our bank has managed to retain old customers while attracting new ones	192		0.0%	0.0%	27.9%	72.1%	4.72
Our bank has recorded an increased competitive niche in all our products and services	192		0.6%	1.1%	34.1%	64.2%	4.62
Our customers' Net Promoter Score has recorded an upward trend	192		0.0%	1.7%	36.9%	61.5%	4.60
Overall Mean score = <b>4.63</b>							
Standard Deviation = <b>0.502</b>							

## Table 2: Competitive Advantage of Commercial Banks



# Assumptions of the Regression Model

Prior regression analysis, the study carried out the following diagnostic tests to ensure the model complies with the assumptions of the ordinary lest square model;

## **Normality Test**

The study employed Kolmogorov-Smirnov (K-S) Test in testing the normality of the dependent variable. K-S test as stated by Ghasemi and Zahediasl (2012) has proven to be the most used test of normality as it can be easily computed through SPSS and also due to the fact that other normality tests are associated with several disadvantages. According to table 3 the dependent variable (Competitive Advantage of Commercial Banks) had insignificant Shapiro Wilk values and Kolmogorov Smirnov values exceeding 0.05 implying that the null hypothesis is not rejected hence the variables are normally distributed.

#### Table 3: Kolmogorov-Smirnov test of Normality

	Kolmogorov-Sminorv			Shapiro-V	Wilk	
	Statistic	Df	Sig.	Statistic	df	Sig.
Competitive Advantage Commercial Banks	of <sub>.397</sub>	191	.065*	.487	191	.086

\*. This is a lower bound of the true significance.

. Lilliefors Significance Correction

#### Linearity Test

Linearity is arrived at when the data is distributed along the line of best fit. The data further need to assume an oval shape and when this is not observed, there is high probability that there is no linearity form the population the data was acquired from in terms of the variables being analyzed. The results outlined in figure 2 shows that the data points for telephone banking technologies was arranged in an oval form along the best line of fit implying that the data was linear.

Journal of Business and Strategic Management ISSN 2520-0402 (online) Vol. 7, Issue No. 2, pp 1 - 15, 2022





Telephone banking technologies

# **Figure 2: Linearity Test Results**

#### **Inferential Statistics**

# **Correlation Analysis Results**

The purpose of the correlation was to establish if any possible relationships between the dependent variable and the independent variable or between the independent variables exists. In this analysis, a correlation matrix was developed, Pearson correlation results were obtained and significance tested at 0.05 level. The correlation matrix in presents a collage of individual scatter plots between all the variables in the model. From the results telephone banking technology, the correlation results indicate that there is a positive and significant (r = 0.69, P-Value < 0.05) correlation between competitive advantage and telephone banking technology in the Kenyan commercial banks. The study results affirms Mithika & Liu (2018) findings that telephone banking technologies are efficient, accessible, secure, user friendly and affordable means of performing financial transactions.

#### **Table 4: Correlation results**

			Telephone Banking Technology	Competitive Advantage
Telephone	Banking	Pearson Correlation	1	
Technology		Sig. (2-tailed)		
Competitive		Pearson Correlation	.690**	1
Advantage		Sig. (2-tailed)	.0086	
-		N	192	192



# Multiple Regression Analysis

A multiple regression analysis was conducted in the study to assess the level of relationships between Telephone banking technologies and competitive advantage of commercial banks. The model summary shows the degrees of relationship between the independent variable and the dependent variable. The results outlined shows that the R-value was 0.525 implying existence of moderate relationship between the independent variable and the dependent variable. The R-Square value was 0.276 implying that 27.6% of variations in the competitive advantage of commercial banks can be accounted by Telephone banking

#### Table 4 Model Summary

Model		R R Square				Adjusted R Square	Std. Error of the Estimate
	1	.525 <sup>a</sup>	.276	.234	.0421851		

a. Predictors: (Constant), Telephone Banking Technology

The results of Analysis of Variance(ANOVA) outlined shows that the model linking Telephone banking technologies and competitive advantage statistically significant. This is shown by sig value of 0.000 which is less than 0.05. Thus the model is a good fit for the study and can be used to assess the relationship between the variables of the study.

#### Table 5: ANOVA

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.794	4	.4485	17.85977	.000b
	Residual	4.696	187	.02511		
	Total	6.489	191			

a. Dependent Variable: Competitive Advantage

b. Predictors: (Constant), Telephone Banking Technology

Table 6 outlines the coefficients of the model. The regression results further revealed that Internet Banking Technology bears a positive and significant influence on Competitive Advantage(Beta=0.126, P-value = 0.009). The results bears implications that increasing Internet banking technologies with one unit would improve competitive advantage by 12.6%. The results tallies with Ndunga, Njati and Rukangu (2016) findings that that financial performance of the commercial banks in was significantly influenced by the use and adoption of innovative financial technologies.

ISSN 2520-0402 (online)



Vol. 7, Issue No. 2, pp 1 - 15, 2022

# Table 6: Model Coefficients

Variables	<b>Unstandardized</b> Coefficients		t	<b>P-Value</b>	
	В	Std. Error	-		
(Constant)	2.232	.345	6.465	.000	
Telephone Banking Technology	.054	.045	1.208	.0229	

The optimal model become:

#### $Y = 2.232 \pm 0.054 X_1$

Where,

 $Y = Competitive Advantage; X_1$  Telephone Banking Technology;  $\beta 0 = Regression$  constant or intercept.

# Conclusion

The study also concluded that telephone banking technologies bears a positive and significant influence on competitive advantage of commercial banks. Remarkably, telephone banking technologies aspects such as establishing a simplified USSD services for customers, creating avenues where customers can access bank's financial services through agency banking, and having a paybill service that enables customers to conveniently pay their bills directly from their bank account services further enhances the levels of competitive advantage of the commercial banks.

# **Research Recommendations**

The study recommends to the commercial banks to enhance their telephone banking technologies in order to remain competitive in the market. Commercial banks can achieve this by undertaking mobile banking activities such as establishing a simplified USSD services for customers, creating avenues where customers can access bank's financial services through agency banking, and having a paybill service that enables customers to conveniently pay their bills directly from their bank account services

# References

- Al-Shbiel, S., & Al-Olimat, N. H. (2019). Impact of information technology on competitive advantage in Jordanian commercial banks. *Strategic Management Journal of Academic Research in Accounting, Finance and Management Sciences*, 5(4), 206-217
- Bochaberi, E, & Job, O. (2021). The impacts of Fintech on the performance of top Tier Banks in Kenya. *Journal of Business and Strategic Management*, 4(2).

Central Bank of Kenya. (2012). CBK, Y1 Financial Report CBK/PG/49, Nairobi.

ISSN 2520-0402 (online)



Vol. 7, Issue No. 2, pp 1 - 15, 2022

- Chiteli, N. (2015). Agent banking operations as a competitive strategy of commercial banks in Kisumu City. *Strategic management journal*, 2(26).
- Davila, A., Epstein, M., & Stretton, B. (2010). Do Internet activities add value? Evidence from traditional banks, *International Journal of Production Economics*, 8 (2): 101-122
- FINACCESS, & Central Bank of Kenya. (2019). 2019 FINACCESS Household Survey. Nairobi: *Techniques for Analyzing Industries and Competitors in Kenya Report*: Central Bank of Kenya, 2(13-22).
- Gathee, B. W. (2018). *The Effect of Technological Innovation on Operation Management of Commercial Banks in Kenya: A Case of Equity Bank* (Doctoral dissertation, United States International University-Africa).
- Houenou, B., & Djogbenou, E. F. (2020). Predicting Household's Mobile Banking Saving Behavior in Western Kenya: An Algorithmic Approach. *Journal of African Development*, 21(1), 41-67.
- Howard, C. (Ed.). (2013). Strategic Adoption of Technological Innovations. IGI Global.
- Kamau, J. G., Senaji, T. A., Eng, R., & Nzioki, S. C. (2019). Effect of information technology capability on competitive advantage of the Kenyan banking sector. *International Journal* of Technology and Systems, 3(5), 5-21.
- Kariuki, F. K. (2015). Gaining sustainable performance in the financial sector in Kenya. Kenya Bankers Association. Working Paper Series
- Kipchumba, E., & Sulaiman, M. (2020). Digital Finance and Intra-household Decision-making: Evidence from Mobile Money Use in Kenya.
- Koomson, I., Bukari, C., & Villano, R. A. (2019). Mobile money adoption and response to idiosyncratic shocks: Empirics from five selected countries in sub-Saharan Africa. *Technological Forecasting and Social Change*, *167*, 120728.
- Kungu, G., Desta, I., & Ngui, T. (2014). An assessment of the effectiveness of competitive strategies by commercial banks: A Case of Equity Bank. *International Journal of Education and Research*, 2(12), 333-346.
- Lorenz, E., & Pommet, S. (2021). Mobile money, inclusive finance and enterprise innovativeness: an analysis of East African nations. *Industry and Innovation*, 28(2), 136-159.
- Muchemi, C., & Moronge, M. (2019). Effects of implementation of strategic innovation: The performance of Financial Institutions in Kenya: A case study of equity bank. The Strategic Management Journal, 5(37), 595-644.
- Mugo, D. W., & Ngugi, L. (2021). Project Financing and Implementation of Mobile Banking Projects: A Case Selection of Commercial Banks in Nairobi County, Kenya. Journal of Entrepreneurship & Project Management, 5(2), 1-9.
- Ndung'u, Rotich, G., & C. M., Otieno. (2017). financial performance: Competitive business strategies in Kenya: Case study of Equity Bank Limited. *International Academic Journal of Economics and Finance*, *3*(2), 39-59.

ISSN 2520-0402 (online)



Vol. 7, Issue No. 2, pp 1 - 15, 2022

- Ndunga, R. M., Ibuathu, C. N., & Rukangu, S. (2017). Influence of Technological Innovation on Bank Performance in Meru town.
- Nzioka, C., & Kariuki, P. (2021). Influence of Strategic Internal Factors on Competitive Advantage. *Journal of International Business and Management*, 4(7), 01-16.
- OECD (2020), Digital Disruption in Banking and its Impact on Competition http://www.oecd.org/daf/competition/digital-disruption-in-financial-markets.htm
- Oke, A., & Goffin, K. (2019). Technology Adoption and Consumer payments: Evidence from survey data, Review of Network Economic, 2(2), 45-62
- Ombati, R.B., Magutu. S.M., Nyamwange, N.K., & Nyaoga, P.O. (2019). Technology and Service Quality in the Banking Industry: Importance and Performance of Electronic Banking Services. *African Journal of Business and Management*, 2(7): 147-166
- Waithaka, P. (2020). Market place opportunities and competitive advantage: Focusing on Commercial Banks in Kenya. *International Academic Journal of Human Resource and Business Administration*, 4(7), 301-318.
- Wang, Y., Xiuping, S., & Zhang, Q. (2021). Can fintech improve the efficiency of commercial banks? Big Data Analysis. *Research in International Business and Finance*, 52, 101338.
- Zhao, Q., Tsai, P. H., & Wang, J. L. (2019). Improving financial service innovation strategies for enhancing china's banking industry competitive advantage during the fintech revolution: A Hybrid MCDM model. *Sustainability*, 11(5), 1419.