Effect of Internet Banking on Service Quality among Commercial Bank Customers: Evidence from Rwanda

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Abstract: **With the development of information technology, customers increasingly expect higher services in this information era. Despite the upsurge in internet banking users, the customer acceptance of internet banking has not yet reached the expected levels. The general objective of the study was to examine the effect of internet banking on quality service. The study was guided by Technology Acceptance Model. Explanatory research design was adopted while the study sample size was 149 customers. The study utilized questionnaire as a data collection instrument and analyzed using inferential statistics. The results revealed that internet banking had a positive and significant effect on quality services (β= 0.286, p<0.05). Thus, the study concluded that the predictor variable enhance service quality in the organization offered to their customers. The research added new knowledge on how internet banking to the service quality and also forms a foundation for further research. The study suggests that banks need to adopt electronic systems in all their banking systems and services that are involved in the economy.**

Keywords: **Customers, Electronic Banking, Internet Banking, Service Quality and Technology Acceptance Model.**

I. INTRODUCTION

The technological innovation of electronic channel of service delivery has brought in a level playing field for businesses by eliminating geographical, regulatory, and industrial barriers (Zafar *et al.*, 2021). Banking services are important in human being's life. Of late, banks have been undergoing operational difficulties owing to the ever changing technology and expectations of the bank customers. As a result, to provide efficient customer services, banks have used technology as a tool to deliver financial services. The competitions are increasing in the banking sectors and customer expectations towards banking services have also increased. In the dynamically changing banking sector, product variation is difficult as most banks offer similar services. Hence, it becomes essential for the banks to differ from other banks by means of service quality (Stamenkov and Dika, 2015) to enhance customer fulfillment. Prior studies found that almost all the banks in India use internet banking as a delivery channel and strategic tool for business development (Safeena *et al.*, 2013). Prior studies have found the benefits of net banking usage and highlighted that internet banking service is beneficial for banking sectors and customers (Vetrivel *et al.*, 2020).

Internet banking is an electronic payment system that enables customers of a financial institution to conduct financial transactions on a website operated by the institution, such as a retail bank, virtual bank, credit union or building society. This innovative channel has added a new facet to the concept of quality services offered to customers' and how it can be affected in a positive manner (Firdous and Farooqi, 2017). Most organizations exist and attempt to become an integral part of the lives of their customers and therefore always strive harder to keep satisfying their customers through via delivery of quality services. Due to the varying nature of the products offered in manufacturing sector and in the services sector the definition and measurement of service quality was seen could not be the same for both. Especially, in the present era, with the emergence of internet as a major channel of service delivery, the need for a scale to measure the service quality in electronic media of services was felt strongly. Hence, service quality was taken up by the research scholars specifically in terms of the e-services which lead to the development of various models that helped in measuring e-service quality in the services sector.

African countries such as South Africa, Ghana, Nigeria, Kenya and Egypt have largely reduced some of their challenges faced by users in performing transactions more than all the other African countries. Recently, banks in Africa have experienced great success in terms of e-banking provides a variety of value-added products and services, which has enhanced e-banking acceptance (Ayo& Adewoye, 2010). Idowu *et al.*, (2002) indicated that Nigerian banks have been established by the use of technology, they are able to gain competitive advantage and override their competitors. In the East African Community, Internet allows small businesses to access markets and helps them to compete against the big players in the industry. Banking industries in Rwanda have of recent witnessed drastic changes that are profound to the adoption of information technology and their operations due to the demanding rate of their customers who limit their visits physically at the banks. The banking industry has a tremendous impact on the economic growth all over the world especially in Rwanda (BNR, 2017). Bank of Kigali has branch Networks of 68 locations and is currently looking at growing its customer's base from just over 400,000 to one million by

2021. Internet banking is one way to achieve such an objective by Bank of Kigali. The network attained has 1427 banking agents who help customers to access Bank of Kigali services near them.

With the development of information technology, customers increasingly expect higher services in this information age. At the same time, most of them are becoming more and more time saved and wanting more convenience (Kolter and Keller, 2006). It is desirable for online service providers to find out what attributes that consumers used in their assessment of overall service quality and which attributes are more important. Good customer service quality is the major issue for the businesses that are operating in e-commerce, which will determine whether the businesses will survive or fail in the future. Maintaining effective customer service helps to build and maintain customers' relationship that is the key success in e-commerce. In order to satisfy customer's needs, many companies need to set up web sites that provide quality information and services to customers. Better service quality typically can help to get higher profitability (Lin, 2007). Recently, many banks have used the Internet as a new market channel to offer their customers a variety of services 24 hours a day. This Internet banking, compared to traditional banking, heavily involves non-human interactions between customers and online bank information systems (Furst *et al.*, 2002). Previous study find that bank service quality plays a very important role in customer's perception of overall banking service quality (Cai and Jun, 2003).

Existing literature on internet banking in Rwanda indicates that despite its growing use and adoption by many banks, no significant effort has been made to understand whether the customers whom the technology is meant for are satisfied or not with the quality of services offered by internet banking (Firdous and Farooqi, 2017). Even though internet banking has improved banking services in Rwanda, technical issues related to the breakdown of some facilities may cause delays in transactions, time wasting, high costs being charged to the users and various banks rely heavily on their online platforms which finally result to substantial losses when systems crash. Despite the upsurge in internet banking users, the customer acceptance of internet banking has not yet reached the expected levels. Collectively, poor service quality coupled with customer dissatisfaction remains concerns that hinder the adoption of internet banking (Li-hua, 2012). To bridge this gap and contribute to the research, the study therefore sought to establish the linkage between internet banking and service quality among customers' of banking institutions in Rwanda.

II. REVIEW OF RELATED LITERATURE

Theoretical Review

Technology Acceptance Model has been developed by Davies (1989) as one of the most popular research models to predict use and acceptance of information systems and technology by individual users. TAM has been studied extensively and verified by numerous researches who viewed at the individual technology acceptance behavior in different information systems constructs. In TAM models, two factors are relevant when it comes to computer use behaviors; these are perceived usefulness and perceived ease of use. Perceived usefulness of technology suggests the personal conviction is the best way to perform specific new technologies or information system. Perceived ease on the use of new technology implies that a person can easily understand different ways to use or run new technologies or information system (Fathali & Okada, 2018). The model underpins this study in the sense that it espouses the relevance of the knowledge and understanding of information technology to the value of internet banking practices to customers which in turn raises quality services and continuous patronage of the banks by their customers

Internet Banking and Service Quality

Internet banking is a system that facilitates bank customers in accessing their accounts and general information regarding bank products and services via a personal computer or any other electronic internet enabled devices such as mobile phones (Perera & Priyanath, 2018). It offers banking at the go, enabling transactions and payments over the internet through a bank's website (Devi & Revathy, 2011). According to Premarathne and Gunathilake (2016), internet banking is defined as a set of technological tools offered by financial institutions for its customers to do banking transactions via computers using an internet connection. Internet banking is an integrated system that offers customers flexible, suitable and low-cost platforms with integrated services of online personal banking such as online checking and saving accounts, certificate of deposit, money market accounts, investment services and other related financial services (Bhattacherjee, 2001).

Service quality according to Titko *et al.*, (2013) involves the customer judgment about a service provider's overall excellence. Conferring to Nagabhushanam, (2011), customer service is a dynamic interactive process which needs continuous improvements. Further, he expounded that quality is paramount in selling a product and it is a factor that sways the purchasing behavior of the customer. Service Quality is the primary factor that defines the achievements and shortcomings of electronic commerce (Santos 2003). Failure to assess service quality is detrimental to the growth of the internet banking. Customers are apt to demand equal or higher standard of service quality based on-line than the traditional services, (Santos, 2003). Although Jayawardhena & Foley, (2000) demonstrated that internet banking saves banks money and improves efficiency, just a few banks were adopting it, and only about half a million consumers were online in the United Kingdom. Rwandan commercial banks according to Osage (2012) found that while electronic banking adoption was good, it was influenced by factors such as the availability of services 24 hours a day, seven days a week quickened transactions and customer convenience. Indeed, there is a need to conduct further studies on this area and therefore, the study hypothesized that;

H_01: Internet banking no significant effect on service quality among Commercial Bank customers.

III. RESEARCH METHODOLOGY

The research design is the conceptual structure within which research is conducted. It constitutes the blueprint for the collection and measurement (Kothari, 2004). The research employed explanatory research designs while the study sample size was 149 customers. Five point likert scale close ended structured questionnaire were used as a data collection instrument. Descriptive and inferential statistics were used to draw inferences from the data. Simple linear regression analysis was applied in the study to test the hypotheses formulated and is expressed as:

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Where:

Y = Service Quality

X_1= Internet Banking

β_0= Constant

β_1 = Coefficient of estimate

ε = Error tem

IV. RESULTS

This section provides the empirical results of the research data analysis and the corresponding interpretations.

Descriptive Statistics - Internet Banking

Descriptive statistics relating to internet banking in table 1 revealed that, customers can obtain financial products/services at a mean of 3.231, standard deviation of 0.750, skewness of 0.281and kurtosis of -0.046. Besides, bank of Kigali facilities can be reached with minimal hindrances at a mean of 3.982, standard deviation of 0.712, skewness of 0.279 and kurtosis of -0.078. Further, customers can easily transact, pay bills and access their account at a mean of 4.00, standard deviation of 0.851, skewness of 0.285 and kurtosis of -0.865. The banks quality services have improved after the adoption of electronic banking implementation at a mean of 4.022, standard deviation of 0.423, skewness of 0.279 and kurtosis of -0.078, finally, customers can bank, check balances, & access financial statements at any time at a mean of 4.042 standard deviation of 0.795, skewness of 0.281 and kurtosis of -1.572.

Table 1: Descriptive Statistics of Internet Banking

	Mean	S td Deviation	Skewness	Kurtosis
Customer can obtain financial products/services at any time.	3.231	0.750	0.281	-.046
Bank of Kigali facilities can be reached with minimal hindrances.	3.982	0.712	0.279	-0.078
Customers can easily transact, pay bills and access their account	4.00	0.851	0.285	-0.865
Bank of Kigali service quality has been improved after internet banking implementation	4.002	0.423	0.279	0.078
Customers can bank, check balances, & access financial statements anytime	4.042	0.795	0.281	1.572

Source: (Field data, 2021)

Inferential Statistics and hypothesis testing

From the findings in Table 2, the strength of the relationship between internet banking and service quality was found to be positive and significant, r = 0.631, p<0.05). The model summary of the simple linear regression model and the results showed that the internet banking explained 67.7 per cent variation of service quality (R^2 = 0.677). The findings further revealed that the model was fit to predict service quality using internet banking as evidenced in the F ratio of 77.759 with a p<0.05 level of significance.

The hypothesis stated that internet banking has no significant effect on service quality among banking customers. Nonetheless, the study findings showed that internet banking has a positive and significant effect on service quality based on (β= 0.286, p<0.05) implying that internet banking increases service quality among banking customers. The effect of internet banking was stated by the t-test value = 3.886 which implies that the standard error associated with the parameter is less than the effect of the parameter. These findings corroborated with the results presented by Kotler and Armstrong (2012), who confirmed that internet banking provides significant and effective increase on quality services

Table 2 Regression and Correlation Results

	Unstandardized Coefficients		Standardized Coefficients			
	B	Std. Error	Beta	T	Sig.	Correlation
(Constant)	0.569	0.091		6.252	0.000	
Internet Banking	0.286	0.073	0.194	3.886	0.000	.631**
Model Summary						
R	0.823					
R Square	0.677					
Adjusted R Square	0.651					
F	77.759					
Sig.	0.000					
a Dependent Variable: Quality Services						

V. CONCLUSION AND RECOMMENDATIONS

The aim of this study was to examine the effect of internet banking on quality service delivery. The extant literature has

indicated that internet banking is instrumental in enhancing quality of services among banking customers. The findings indicated that internet banking is a key indicator in enhancing quality services. Consequently, there is a strong positive link between the two variables. Based on the research findings the researcher concludes that internet banking has an effect on the banking sector. However, it has also increased quality of service in terms of time management and on the bank's operations in general some banks offer home banking, whereby a person with a personal computer makes transactions via a direct connection. Also, the researcher concluded by saying that internet banking vastly reduced the physical transfer of paper money and coinage from one place to another or even from one person to another.

The study recommends that banks need to adopt electronic systems in all their banking systems and services that are involved in the economy. More still, there is great need for banks to develop innovative products for registered small and medium enterprises that wish to invest. This should particularly target the increasing number of startups that are active to enhance cashless payments and practice electronic banking services. At the same time, constant maintenance and service should be ensured in, order to provide reliability of services. More so, the bank should subscribe to reliable internet providers for effective and efficient service delivery. There is need for further research to determine the relationship between internet banking and quality service of commercial banks in Rwanda.

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