
DOI: <https://doi.org/10.53555/eijbms.v3i2.28>

THE ROLE OF ACCESS TO INTERNET ENABLED DEVICES ON CUSTOMER SATISFACTION IN COMMERCIAL BANKS. A SURVEY OF SELECTED BANKS IN MERU COUNTY

Anne Nkirote Kimathi^{1*}, Mr. Wilson Muema Lecturer^{2*}, Dr. Scholastica Gatwiri Mathenge (PHD)^{3*}

¹*School of Business and economics, Kenya Methodist University*

²*School of Business and Economics, Kenya Methodist University*

³*Kenyatta University*

***Corresponding Author:-**

E-mail: annkithinji96@gmail.com^{1*}, wilson.nthenge@kemu.ac.ke^{2*}, mathenge.scholastica@ku.ac.ke^{3*}

Abstract:-

With commercialization of the internet, businesses world over began to explore ways of delivering services via internet to reduce their operating costs especially in regard to labor overheads. This study sought to establish the role that access to internet enabled devices plays on customer satisfaction in online based services, in commercial banks in Meru County in Kenya

Keywords: - *Internet Enabled Devices, Customer Satisfaction, Profitability*

INTRODUCTION:

The importance of customer satisfaction in banks cannot be overemphasized. Levesque and McDougall (2011) observed that customer satisfaction and retention impact greatly on profitability of retail banks because satisfied customers not only become loyal, doing more business, but also spread a positive word of mouth which is a strong and highly customized form of advertisement. In a business world where costs of customer acquisition are steep, pleasant customer experiences are vital for customer retention and loyalty. (Reichheld & Thomas, 2006; Hackl & Westlund, 2000).

Internet based services are accessible to customers who have access to internet enabled devices. This refers to any device that one can use to connect to the internet, load applications and through these applications conduct various online banking services.

While banks have invested heavily in reengineering and the acquisition of core banking systems that are virtual platform compliant, no research has been done yet to establish the role access to internet enabled devices plays on customer satisfaction in online services.

Descriptive research survey design was used whereby structured questionnaires were administered to 384 respondents of selected commercial banks to solicit their responses. Data collected was analyzed using descriptive statistics and logistic regression. From the research, it was found that access to internet enabled devices significantly associated with customer satisfaction in commercial banks in Meru County in Kenya

Literature review

Technology Acceptance Model

Technology acceptance model (TAM) puts forward that two beliefs; perceived ease of use and perceived usefulness govern the manner in which individuals behave regarding acceptance of new technology (Bruner & Kumar 2005; Davis, 1989). Perceived usefulness is a subjective opinion of the consumer about whether using a certain new device will improve performance of his tasks while perceived ease of use is about the extent to which the endpoint user expects the appliance to be operated effortlessly (Davis, Bagozzi & Warshaw 1989). The adoption of new technology is highly correlated to the belief that it will enhance performance of their tasks. This is not enough, as the customers may feel that the system is too hard to use which obliterates the performance benefits. Accessing services offered on the internet platform demands acceptance of technology regarding use of internet enabled devices and website navigation all which will depend on perceived usefulness and perceived ease of use. This theory therefore supports the specific objective regarding the role of access to internet enabled devices and the customer satisfaction outcomes.

Disconfirmation Theory

This theory is based on a comparison of customers' expectations regarding a service and their perceived performance of the service. Suffice it to say that an individual's expectations are confirmed when a product performs as expected and disconfirmed when a service underperforms. Mattila and Neill (2003) document that satisfaction is a function of the magnitude of confirmation or disconfirmation experience adding that how a service is delivered is more important than the outcome of the service processes and dissatisfaction towards a service often merely comes about when consumers' perceptions of manner of delivery of service do not meet their anticipations. How firms offer their services is more important than the outcome. This theory is relevant because diverse groups of customer have different expectations regarding mode of delivery of banking services. Those that are at ease with traditional counter service, especially the rural masses and the aged that are not conversant with use of internet enabled devices, cannot be satisfied with online services, while the urban folks that have embraced modern ICT expect the banks to ensure all their services are offered on the virtual platform and anything short of this may result in disconfirmation hence dissatisfaction. This theory therefore supports the objective that services via a device that is difficult to afford, will sway customer satisfaction outcomes.

Overview of Access to internet enabled devices in Meru County

The average cost of a Smartphone in Kenya as of 2016 was kshs.10, 000 (100USD) per unit while the GDP per capita income stood at 684.84USD (KNBS, 2016). This means that a Smartphone is out of reach of the poor rural Kenyans, where household incomes are less than one dollar per day. The overall handset market in Kenya is dominated by Techno and Samsung who together control around 75% of the total volume and only 58% of sales recorded were in cities (KNBS, 2016). The electricity grid in Kenya stood at 28% (ERC 2016). This means that over 70% of population are not connected and have no access to electricity so as to charge their electronic equipment.

Methodology Used:

Research design

The study combined correlational and descriptive research survey designs. Mugenda and Mugenda (2003) noted that the purpose of descriptive research is to determine and report the way things are and it helps in establishing the current status of the population under study. Descriptive survey design seeks to describe experiences as they are lived examining uniqueness of individuals lived situations.

Target population

The target population in this study comprised customers that visited the banks in Meru town on an ordinary working day. For this study five banks that were in operation for more than ten years and had relatively high and diverse customer base were selected. These banks were listed in the Nairobi stock exchange which means they were highly visible. Thus the sample was drawn from, Kenya Commercial bank, Equity Bank, Cooperative Bank, Barclays and National Bank.

Sample design and Size

Systematic random sampling was used to pick the respondents. This method ensures even sampling when the population is a stream of traffic. 384 respondents were picked from the selected banks

Data collection instrument and procedure

The instrument used was the questionnaire. Questionnaires were administered by researcher to customers in the banking hall, at customer's premises, mailed via e-mail, dropping and picking at the respondents convenience.

Research Objectives

The general objective of this study is to examine the role of access to internet enabled devices on customer satisfaction in commercial banks.

Specific objectives

1. To examine the role that affordability of internet enabled devices plays regarding customer satisfaction in commercial banks in Meru County.
2. To evaluate the role of usability of internet enabled devices in customer satisfaction in commercial banks in Meru County.
3. To appraise the role maintenance of internet enabled devices plays on customer satisfaction in commercial banks in Meru County.

The Empirical Model

The increased appetite for internet and connectivity leave the masses with a thirst for internet enabled devices. The devices have a myriad of uses and serve to enhance satisfaction in enjoying services offered on the internet.

Daniel (2009), in a study of electronic banking in UK, observed that customers who used office desktops to carry out the online banking transactions reported greater satisfaction on banking services as compared to those who visited the banks or called. He used descriptive survey design. Questionnaires were mailed to some 300 respondents. He described electronic banking as the provision of banking services to customers through Internet technology. The findings were that customers used office desktops which had access to internet to carry out the online transactions.

In Vietnam, Ye, Ooi, Lin and Tan (2010) researched on perceived usefulness, perceived ease of use, and trust and government support's influence on adoption of online banking. The findings were that customers who used laptops to carryout online banking reported greater satisfaction on banking services. A survey questionnaire was distributed to 156 respondents in Vietnam with 103 usable samples giving a response rate of 66 percent.

Customers who cannot afford smart phones are generally dissatisfied with slow counter service due to low teller-customer ratio. This was observed by Juma (2013) in a study about the influence of electronic banking services on customer service delivery in banking industry in Kenya. She applied descriptive research design with a sample size of 208 respondents. The research instrument was a questionnaire with both open and closed ended questions. The instrument was administered through interviews and self-administration. The findings were that with evolution of technology most respondents preferred the use of smart phones and tablets to carry out their online banking as opposed to visiting bank halls. 38% of the respondents could not afford Smartphone and they expressed dissatisfaction with levies imposed on them in addition to slow counter service caused by low teller – customer ratio.

Research Hypothesis

- H₁: Affordability of internet enabled devices plays an important role in customer satisfaction in commercial banks in Meru County
- H₁: Usability of internet enabled devices plays an essential role in customer satisfaction in commercial banks in Meru County
- H₁: Maintenance of internet enabled devices plays a significant role in customer satisfaction in commercial banks in Meru County

Reliability of the Instrument

The study employed Cronbach's Alpha Test of Reliability to test and ensure internal reliability of the model used. An alpha score of 0.908 was obtained.

Hypothesis testing

Logistic regression was used to test the hypothesis, that is, to establish the role of access to internet enabled devices on customer satisfaction in commercial banks. Logistic regression was deemed to be the most appropriate model for this

study because the dependent variable was categorical (binary) that is customers were categorized in terms of whether they are satisfied or satisfied.

Data Analysis and Interpretation

Data was analyzed using descriptive statistics and logistic regression. Descriptive statistics was used to establish the general features of the study population and involved use of frequencies, percentages and cross tabulations.

Results

Table 1 Customer Satisfaction

Variable	Satisfied		Dissatisfied	
	Frequency	Percentage	Frequency	Percentage
Affordability of IED	93	26	267	74
Usability of IED	173	47	187	53
Maintenance of IED	107	29	253	71
Average	124	34	235	66

Only 47% were satisfied regarding usability. This was in harmony with the findings of Rahman and Aldhaban (2015) in their research exploring the adoption and use of smart phone technology in emerging regions where they found that only 51% of respondents were proficient in smart phone usage and that proficiency in use of smart phone was highly correlated to facilitating conditions specifically the degree to which an individual believes that technical and infrastructure supports are available to support use of smart phone.

Results for logistic regression

Table 2 Variables in Equation

Variable	B	S.E.	Wald	Sig.	Odds Ratio
Affordability of internet enabled devices					
Not affordable (Ref)					1.00
affordable	-1.410	0.258	29.859	0.000	4.095
Usability of internet enabled devices					
Yes (Ref)					1.00
No	-0.899	0.205	19.311	0.000	0.407
Maintenance of internet enabled devices					
Maintenance Ease (Ref)					1.00
Maintenance challenge	-0.150	0.098	2.334	0.127	0.860

The general form of logistic regression is as follows

$$F(z) = 1/1+e^{-z}$$

Where z is a linear combination of covariates

$$Z = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3$$

Where

X₁= Affordability of internet enabled devices

X₂ = usability of internet enabled devices

X₃ = maintenance of internet enabled device

Model test

Table 3 Omnibus Test of Model Coefficients

	Chi-square	df	Sig.
Step	161.154	10	.000
Block	161.154	10	.000
Model	161.154	10	.000

According to the omnibus test in table 3 the chi-square result is 161.154 with a p-value of 0.000. This indicates that the model is a significant predictor of customer satisfaction at p<0.001. This therefore indicates that access to internet enabled devices is a significant predictor of customer satisfaction.

Model summary

Table 4 Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	329.165 ^a	.361	.485

The Nagelkerke R Square shows that about 48.5 % of the variations in the outcome variable (Customer satisfaction) is explained by the independent variables (affordability of internet enabled devices, usability of internet enabled devices and maintenance of internet enabled devices), implying that the model is relatively good for explaining the role of access to internet enabled devices on customer satisfaction in commercial banks in Meru county.

Discussions and conclusions

The study established that only 34% of the respondents were satisfied regarding access to internet enabled devices. The results agree with findings of Juma (2013) who in her study about the influence of electronic banking services on customer service delivery in banking industry in Kenya established that customers who could not afford smart phones were generally dissatisfied with slow counter service due to low teller-customer ratio.

Only 29% of respondents were satisfied with maintenance of the internet enabled devices. Maintenance of these devices is closely correlated to availability of power because the devices are loaded with functions and applications that consume much battery power hence need frequent recharging of batteries. This means availability of electricity plays a key role in satisfaction regarding maintenance of the device. The results tally with the ERC (2016) report that the electricity grid in Kenya today stands at 28% and is concentrated in urban areas. Majority of rural folks, therefore lack access to electricity which limits usage of internet enabled devices that required frequent charging.

The results show that affordability of internet enabled devices is significantly associated with customer satisfaction in commercial banks in Meru County. The results are significant at 1% and so we uphold the alternate hypothesis. Moreover, the study established that customers who can afford the internet enabled devices are 4.095 times more likely to be satisfied compared to those who cannot afford the internet enabled devices.

From the results it can also be adduced that usability of internet enabled devices is also significantly associated with customer satisfaction in commercial banks in Meru County. The results were significant at 1% and so we are 99% confident that usability of internet enabled devices plays a significant role in customer satisfaction in commercial banks in Meru County. Where customers are not proficient in using the internet enabled devices they are 0.407 times less likely to be satisfied compared to those who are proficient in usage.

No significant relationship was established between maintenance of internet enabled devices and customer satisfaction in commercial banks in Meru County. This is because $p > 0.001$ ($p = 0.127$). So we reject the alternate hypothesis.

Internet enabled devices are crucial to connect to the internet, load applications and through these applications conduct various online services. Most customers usually use Smartphone's, laptops, tablets and desk tops to access internet. If a customer cannot afford a smart phone they would have to visit a cyber café to access the internet.

Many of the customers could not afford the internet enabled devices and the maintenance required. The cheapest of the internet enabled devices is the smart phone. Smart phones are loaded with functions and need frequent recharging of batteries. Most customers indicated that they had to cover long distances in search of electricity to keep their devices active. Illiteracy levels also do not help matters as many users especially those over sixty years rely on friends and family members to use the devices. Most customers do not develop proficiency in use as they use their phones for calling only. Lack of proficiency in Smartphone usage leads to unpleasant experiences which directly hampers customer satisfaction regarding online services. Dissatisfied customers cannot be loyal and they spread negative word of mouth which leads to loss of business and consequently low profitability. Acquisition, usability and maintenance of smart phones is a major reason for poor uptake of online banking services and is an area where banks need to apply customer improvement efforts. PwC (2015) reports the future in banking sector demands a shift from branch dominance to distribution dominance and that customer centricity is the key to achieving this. Customer centricity demands clear understanding of customers, and a clear commitment to appreciate reasons behind their behavior so as to create a positive consumer experience at the point of sale and post-sale.

There is need for banks and other institutions that serve most of their services online to come up with a strategy to help their clients acquire smart phones or other internet enabled devices of their choice. It is also important to plan programs to induct their clients on usage. Since most banks in the region draw their clientele from rural areas owing to the fact that the main economic activity in Meru County is farming. Farms are situated in rural areas which are served with poor electricity grid. The banks should plan their CSR activities towards rural electrification projects. Smart phones are loaded with functions and need frequent recharging of batteries. Charging such equipment requires a reliable supply of electricity. These devices are not cheap and closely related to this is the fact that the gadgets require power to remain functional.

References

- [1]. Bruner, G & Kumar A. (2005). "Explaining consumer acceptance of hand held internet Devices". *Journal of business research*, 58(5), 553-558 retrieved from <https://dx.doi.org/10.1016/j.jbusres>
- [2]. Daniel, M. R., (2009) "The future of the Canadian financial services sector: A life and health insurance industry perspective", *Journal of Internet Banking and Commerce*, April 2009
- [3]. Davis, Bagozzi & Warshaw (1989) "User acceptance of computer technology: A comparison of Two theoretical models" Retrieved from <https://dx.doi.org/10.1287%252Fmnsoc.35.8.982>
- [4]. ERC (2016). 2016 August news bulletin; Connection status: Electricity grid in Kenya.
- [5]. Retrieved from "www.erc.go.ke/index.php?articlesandpublicationsnews-buletin/html"
- [6]. Hackel, P & Westlund, A.H (2000) "On structural equation modeling for customer satisfaction measurement," *Total quality management*, 11(4/5/6), pp 820-825
- [7]. Juma, N.S. (2013) "influence of electronic banking services on customer service delivery in banking industry, a case of Bungoma county, Kenya" *Mediterranean Journal of social Sciences* vol 6 no 4 s2 July 2015.
- [8]. KNBS (2016). 2016 Annual economic survey publication. Retrieved from www.knbs.or.ke/index.php?economicsurveyreport.
- [9]. Levesque, T. & McDougall, H.G (2011) "Determinants of customer satisfaction in retail banking" *International journal of banking marketing* 14(7), 12-20
- [10]. Mattila, A. & O'Neill, J. (2003) "Relationship between Hotel room pricing, Occupancy and guest satisfaction. A longitudinal case of a midscale hotel in the united states" *Journal of Hospitality & tourism Research* 27,(3) pp.328-341
- [11]. Mugenda, O.M. & Mugenda, G.A. (2003). *Research methods. Qualitative and quantitative Approaches*, Nairobi: Acts Press
- [12]. PwC (2015) *banking in emerging markets: seizing opportunities, overcoming challenges*. Retrieved from www.ey.com/GL/en/industries/financialservices/banking on 1/6/2016
- [13]. Rahman, N. & Aldhaban, F. (2015) *Exploring adoption and use of the smart phone technology in emerging regions*. Accessed from http://pdxscholar.library.pdx.edu/etm_fac
- [14]. Reichheld, F. & Thomas, T. (2006) "The loyalty Effect: The hidden force behind growth, profits and lasting value." (6th Ed.) Harvard business school press
- [15]. Ye, K.J., Ooi, K.B., Lin, B. & Tan, B.I (2010) "Online banking adoption: An Empirical analysis." *International journal of bank marketing* 28 (4):267-287