



Contribution of Mobile Banking Informational Service on Customer Satisfaction in Tanzanian Commercial Banks

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Abstract; *This study examined the contribution of mobile banking Informational Service to customer satisfaction. Three elements of mobile banking, i.e., information service, were assessed to determine their role in customer satisfaction at CRDB Chamwino Branch bank. The study adopted a cross-sectional survey design where data was collected at one point in time. In addition, both qualitative and quantitative approaches were employed in collecting data for triangulation. Quantitative data was collected from 99 CRDB- Chamwino Branch customers through a survey, whereas qualitative data were collected from CRDB officials through interviews. Quantitative data was analysed through SPSS, where descriptive statistics and inferential and Logistic Regression models were used.*

Furthermore, the relationships between variables were established through binary Logistic Regression. The qualitative data also were analysed through the Thematic Analysis technique. Findings show a significant positive relationship between mobile banking information service and customer satisfaction with P-Value 0.002. The study concludes that mobile banking enhances customer satisfaction in commercial banks. The study recommends that more efforts be made to ensure mobile banking technology is enhanced. Also, more investment should be made in making sure that challenges associated with mobile banking technology are minimised.

1.0 INTRODUCTION

Mobile banking also recognized as m-banking is a recent innovation in the mobile scientific discoveries. It is a new service delivery channel which followed the already established traditional banking means such as “automated teller machines, telephone, and internet banking” (Amiri & F, 2012) Various terms are used to mean mobile banking comprising “m-banking Kahandawa & Wijayanayake (2014) “branchless banking (Balogun, Ajiboye, & Dunsin, 2013) “m-payments”, “m- transfers”, “m-finance” Yousuf (2017) and “pocket banking” (Amin, 2006). These terms associated with mobile banking unambiguously suggest that this innovative service is conducted using a portable or mobile device such as mobile phone or tablet (Sakhaei, Afshari, & Esmaili, 2014). It offers customers an

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opportunity to cooperate with a bank through a “portable device” (Gomachab, 2016).

Three devices are mentioned to qualify to provide mobile banking service: mobile phone, smartphone, and tablet in a bid to distinguish mobile banking from electronic banking that is accessed through a different user interface, a laptop or desktop PC (Yousuf, 2017). The first mobile banking service was thrown at the end of the 1990s by Paybox in association with Deutsche Bank, both Germany institutions. In the beginning it was introduced and verified in some European nations: Germany itself, United Kingdom, Austria, Spain, and Sweden. In the category of the unindustrialised countries, Kenya took the lead by introducing an m-banking service based on text, M-Pesa (Worku *et al.*, 2016).

Mobile banking is used to offer a variety of financial and non-financial services. The services offered are divided into transaction and information services. Transaction services includes but not limited to payment of bills (LUKU, TAXES, TV subscriptions), payments between users, transfer of funds, remittances, shopping and contributions, and mobile balance recharge while information services include inquiring balance, brief bank statements, changing PIN, Check book request, due alerts for expenses, and locating ATMs (Shaikh & Karjaluo, 2015). The introduction of mobile banking technology was meant to offer variety of services to the customers to enhance customer satisfaction. Customer satisfaction (CS) has become essential in marketing originating from the 1960s when it was viewed as “satisfying the needs and desires of the consumer” although the word was already in use in English from the 13th century (Keith, 1960; Parker & Mathews, 2001). Customer satisfaction then has become to be viewed in two approaches, first as an outcome of consuming something and secondly as process, which suggests an evaluation of what one received against their expectation (Parker & Mathews, 2001).

The rapidly developing Statistics and Communication Technology (ICT) consumes many changes in the society, including on ways of which service providers communicate to customers. With the technological revolution in this century the world is becoming a village through the process of globalisation. At the end of the last century, the Global System for Mobile Communications (GSM) was advanced, this revolutionised on how mobile devices are used (Hillebrand, 2002; Mouly, Pautet, & Haug, 1992; Scourias, 1995). With the development of GSM and its improvements, the need for mobile banking in the finance industry arose where users could conduct all financial and non-financial transactions via their mobile devices and reducing the need to physically visit branches. Mobile banking was preceded by web-based banking or internet banking where users accessed their accounts and carried out transactions through banks’ web pages.

2.0 LITERATURE REVIEWS

2.2.1 Kano’s Model of Customer Satisfaction

In this model, Kano (1984) the model deal deals the least values that clientele expect

from a facility or product., regarding the cost of services, the Kano`s model discusses on the attractive requirements of customer satisfaction where the cost of services could be looked as one of them.



Figure 1: Kano`s model of customer satisfaction

Source: Literature Review, 2022

Must-be requirements (Must be): If these desires are not achieved, the consumer will be particularly disappointed. On the other hand, as the client receipts these desires to be settled, their fulfillment which does not increase satisfaction. The must-be requirements are elementary measures of an invention. Satisfying the must-be requirements on individually lead to a state- owned of “unhappy”. The client respects the must-be requirements as basics, he receipts them for decided and hence does not openly. Here the bank customers seem to be happy with the mobile banking services although it seems to be happy even before the mobile banking launched at NCBA the customer were happy with the services given at NCBA bank. Hence the Mobile banking adds more satisfaction to customers is now customer transacts at their own remote`s areas.

One-dimensional requirements (Attractive): With respect to these necessities, buyer gratification is comparative to the equal of satisfaction - the advanced the level of self-actualisation, the advanced the consumer`s gratification and vice versa. Basic provisions are usually openly obligatory from the purchaser. **Attractive requirements (indifferent):** These desires are the invention dealings which must exciting effect on how fulfilled a client with assumed product. Smart desires are neither apparently stated nor assessed by the purchaser. Sustaining this necessity leads to more than comparative fulfillment. If they are not met, though, there is no sensation of displeasure.

In the relation to the subject the Kano model help the use of the categories to measure the levels satisfaction of the customer on the performance, basic, excitement, indifferent and reverse. Kano`s model helped on identifying the satisfying customers and the dissatisfying customers through the products or services given by the NCBA bank.

Weather its basic to them or performed are the categories for satisfaction.

2.2.2 Disconfirmation Theory

Disconfirmation theory developed by Oliver (1977 and 1980) argues that satisfaction is connected to the scope and way of the disconfirmation involvement that happens as a consequence of linking service routine beside prospects. Szymanski and Henard start in the meta-analysis that the disconfirmation model is the best analyst of consumer fulfillment. Ekinci *et al* (2004) cites Oliver's modernised meaning on the disconfirmation model, which shapes "Fulfillment is the guest's self-actualisation reaction. It is a decision that an invention or facility feature, or the creation or facility itself, delivered (or is if) an agreeable level of consumption-related gratification, counting heights of below- or over-fulfillment.

3.0 RESEARCH METHODOLOGY

To attain this objective qualitative and quantitative research approaches were used whereby survey research design techniques of data compilation method were used. Both primary data and secondary data were involved in the form of interviews, document reviews and survey. Systematic and unsystematic random sampling and purposive sampling was used as sampling procedures in the study, this study involved with the sample size of 99 respondents from customers in CRDB Chamwino Branch.

$$n = \frac{N}{1 + N(e)^2}$$

Whereby n = Sample size, N = Targeted population, e = Level of precision or confidence interval i.e., 10%. The reasons of adopted 10% and not 5% or 1% is due to the coefficient variation of the population within the researcher interest.

$$n = \frac{12,670}{1 + 12,670(0.1)^2} = \frac{12,670}{127.7} = 99 \text{ Customers}$$

3.1 Econometric Model Specification

The study used binary logistic regression model to approximate the chances of the binary variable with two probable result events such as pass/fail, win/lose, high/low as recommended by (Ozsari and Food, 2016). The customer satisfaction is the discrete random variable and dummy in scenery that could be measured through binary logistic regression or logit model.

$$\text{Log(Odd ratio)} \text{Log} \frac{\text{(High)}}{\text{(Low)}} \text{Log} \frac{Y_i = 1}{(Y_i = 0)} X_i ' \beta \dots \dots \dots (1)$$

4.0 FINDINGS AND DISCUSSION

Therefore, internal reliability of the 18-item scale was assessed. Results indicated a reliability alpha value of 0.965. This indicates that the internal consistency of items is to the extent of 0.965 out of 1 indicating a very high and reliable consistency of the items. Table 1. indicates the findings

Table 1: Reliability Statistics for All Items

| Variable | Number of Items | Alpha Value |
|------------------------|-----------------|-------------|
| Cronbach`s Alpha Value | 18 | 0.965 |

Source: Research Findings (2022)

4.1 Binary Logistic Regressions Analysis

A binary logistic regression analysis was carried out to estimate the logit model. Since the responses of a dependent variable (Customer Satisfaction) had 5-point Likert scale responses; then a cutoff point of was created where all the mean values of 3.5 and above represented customers who are satisfied and were given a value of one

(1) while the rest represented unsatisfied and were assigned a value of zero (0) to make binary logistic regression possible.

4.2 Binary Logistic Regression Goodness of Fit Test

The Hosmer and Lemeshow test were used to run the goodness of fit test for the model. Therefore, the Hosmer & Lemeshow test (**Table 2**) of the goodness of fit proposes the model is a good fit to the data as $p=0.279$ which is greater than 0.1

Table 2: Hosmer and Lameshow Goodness of Fit Test

| Step | Chi-square | Df | Sig. |
|------|------------|----|-------|
| 1 | 9.810 | 8 | 0.279 |

Source: Research Findings (2022)

4.3 Omnibus Test of Model Coefficients

The omnibus test of model coefficients tests whether the model is statistically significant and can further be interpreted. From the fact that the model has a p-value of 0.000 (Table 4.2.2) which below 0.05 this suggests that the model is statistically significant and can further be used for estimations since the overall model is statistically significant; $\chi^2(3) = 59.465$, $p < 0.05$ as indicated on table 4.

Table 3: Omnibus Test of Model Coefficients

| | | Chi-square | Df | Sig. |
|--------|-------|------------|----|-------|
| Step 1 | Step | 59.465 | 3 | 0.000 |
| | Block | 59.465 | 3 | 0.000 |
| | Model | 59.465 | 3 | 0.000 |

Source: Research Findings (2022)

4.4 Logistic Regression Model Summary

Table 4.4 explains the variance in the model; in this case the model explains 71.2% (Nagelkerke R Square) of the variations in customer satisfaction while 28.8% variations of customer satisfaction are explained by other variables than mobile banking. Results are as indicated on Table 4 below;

Table 4: Logistic Regression Model Summary

| Step | -2 Log likelihood | Cox & Snell R Square | Nagelkerke R Square |
|------|-------------------|----------------------|---------------------|
| 1 | 40.166 | 0.452 | 0.712 |

Source: Research Findings (2022)

Table 5: Logistic Regression Results on the influence of Information Service and Customer Satisfaction

| Variable | | B | S.E. | Wald | df | Sig. | Exp(B) |
|--------------------------------------|-----------|--------|-------|--------|----|-------|--------|
| Bank inquiry (IS1) | balance | 2.354 | 0.504 | 21.817 | 1 | 0.001 | 10.530 |
| Bank request (IS2) | statement | 1.587 | 0.744 | 4.550 | 1 | 0.033 | 4.887 |
| Cheque inquiry (IS3) | deposit | 0.211 | 0.077 | 7.448 | 1 | 0.005 | 1.235 |
| Receipts Payments confirmation (IS4) | and | 6.185 | 2.333 | 7.031 | | 0.008 | 4.102 |
| Constant | | -8.873 | 2.648 | 11.233 | 1 | 0.001 | 0.001 |

Source: Research Findings (2022)

The study obtained similar findings from interviews, findings of the study revealed that apart from transaction services through mobile money services, the platform also offers information service on whatever is happening from the customer's bank account. Likewise, a customer is able to inquire anything from the account through a mobile phone. One of the respondents commented;

“Mobile money doesn't offer transaction services only, it also offers information services; the registered customers are able to see anything happening in their bank accounts; they can also inquire anything they wish to know from their bank accounts at anytime and anywhere without visiting the banking hall” (CRDB-Chamwino Branch, January, 2022).

Findings also reveal that customers may inquiry about the balances at their bank accounts, unlike those who are not using mobile banking services where they have to visit the bank. Customers can also get their bank statements through their mobile phones. Other services such as confirmation of receipts and payments are also available through mobile money services. One the respondent responded;

“Before the introduction of mobile money services customers had to visit the bank for information from their bank accounts. However,

after the introduction of mobile money services, all the information services can be obtained through a mobile phone. Customers may inquire about their bank balances; bank statements and they can confirm various transactions through their mobile phones” (CRDB-Chamwino Branch, January, 2022).

“I can check my account balance in any place any time wherever am especially on salary session without visiting the banking hall.”

Findings are not far from other researchers where (Yousuf, 2017) piloted a study on the impact of electronic banking on customers’ satisfaction in Ethiopian banking industry (The Case of Clients of Dashen and Wogagen Banks in Gondar City). The study revealed that mobile banking services such as transactions (saving) and information.

According to Khot (2019), whose study address on customer’s satisfaction towards mobile banking services. The Reserve Bank of India has made Mobile banking services accessible to all bank customers regardless of the mobile network. Through mobile banking customers can now add as many receivers in the list as they poverty for fund transfer (Amiri & F, 2012). Also, the investigator found that mobile speculation blackboard is very casual to understand and circle, mobile banking delivers earlier services, it is informal to make broadcast funds, it is informal to make an equilibrium appraisal and less grade of risk in practice of mobile investment group it results. Mobile investment that influences customer gratification the most, as well as smallest making it informal to transact deprived of delays hence limits of time limits.

CONCLUSION AND RECOMMENDATIONS

Mobile banking transaction service are found to have a positive effect on the customer satisfaction and therefore the research establishes that the transaction services provided (convenient funds transfer, bills payment, funds withdrawal) by mobile banking technology positively contributes to the level of customer satisfaction. It can also be established that there are convenient transaction services through mobile banking service and positively enhances the satisfaction of customers (Balogun *et al.*, 2013).

Tanzanian Commercial banks should accommodate customers who frequently wire money transfers across countries and therefore increase their satisfaction. Consequently, the challenges for mobile banking information services (such as network problems)

should be observed and dealt with so that customers enjoy the services perfectly.

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