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 information service on customer satisfaction. Three elements of mobile banking i.e., information service were assessed to find out the role they play on customer satisfaction at CRDB Chamwino Branch bank. The study adopted a cross-sectional survey study design where data was collected at one point in time. In addition to that, both qualitative as well as quantitative approaches were employed in collecting data for triangulation. Quantitative data was collected from 99 CRDB- Chamwino Branch customers through survey, whereas, the qualitative data were collected from CRDB officials through interviews. Quantitative data was analyzed through SPSS, where, descriptive statistics as well as inferential and Logistic Regression model were used. Furthermore, the relationships between variables were established through binary Logistic Regression. The qualitative data also were analyzed through Thematic Analysis technique. Finding show there is positive significant relationship is also established 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 for more efforts to be made in making sure mobile banking technology is enhanced. Also, more investment should be made in making sure that challenges associated with mobile banking technology are minimized.

Index terms — commercial banks, customer satisfaction, informational service, mobile banking, Tanzania.

1 I. 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 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, smart phone, 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 unindustrialized countries, Kenya took the lead by introducing an m-banking service based on text, M-Pesa Workuet 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...
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 globalization. At the end of the last century, the Global System for Mobile Communications (GSM) was advanced, this revolutionized on how mobile devices are used (Hillebrand, 2002; Ouly, Pautet, & Haug, 1992; Courias, 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 II. Literature Reviews a) Kano’s Model of Customer Satisfaction

In this model, Kano (1984) the model deals deals the least values that clienteles 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.

3 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 receives 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.

4 One-dimensional requirements (Attractive):

With respect to these necessities, buyer gratification is comparative to the equal of satisfaction -the advanced the level of self-actualization, 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.

5 b) 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. Ekiniciel et al. (2004) cites Oliver’s modernized meaning on the disconfirmation model, which shapes "Fulfillment is the guest’s self-actualization reaction. It is a decision that an invention or facility feature, or the creation or facility itself, delivered (orisif) an agreeable level of consumption-related gratification, counting heights of below-or over-fulfillment.

6 III. 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 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.

8 a) 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 scenery that could be measured through binary logistic regression or logit model.

\[ \text{logit} \text{ ( } \text{Customer Satisfaction} \text{ ) = } \beta_0 + \beta_1 \text{ ( } \text{Variable1} \text{ ) + } \beta_2 \text{ ( } \text{Variable2} \text{ )} \]

The Hosmer and Lemeshow test was 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 modelisa good fit to the data as p=0.279 which is greater than 0.1. 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 aim 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 (Ameri & 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.
Mobile banking transaction services are found to have a positive effect on customer satisfaction and therefore the research establishes that the transaction services provided (convenient funds transfer, bills payment, funds withdrawal) by mobile banking technology positively contribute 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.

Figure 1: Figure 1:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of Items</th>
<th>Alpha Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cronbach’s Alpha Value</td>
<td>18</td>
<td>0.965</td>
</tr>
</tbody>
</table>

Source: Research Findings (2022)

Figure 2: Table 1:

<table>
<thead>
<tr>
<th>Step</th>
<th>Chi-square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9.810</td>
</tr>
</tbody>
</table>

Source: Research Findings (2022)

c) Omnibus Test of Model Coefficients The omnibus test of model coefficients tests whether the model is statistically significant; \( \chi^2(3) = 59.465, p < 0.05 \) as indicated in Table 4.2.2. The p-value of 0.000 (Table 4.2.2) which below 0.05 this

Figure 3: Table 2:
3

<table>
<thead>
<tr>
<th>Step</th>
<th>Chi-square</th>
<th>Df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9.810</td>
<td>8</td>
<td>0.279</td>
</tr>
</tbody>
</table>

Source: Research Findings (2022)

Figure 4: Table 3:

4

Figure 5: Table 4.

4

<table>
<thead>
<tr>
<th>Step</th>
<th>-2Log likelihood</th>
<th>Cox &amp; Snell R Square</th>
<th>Nagelkerke R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>40.166</td>
<td>0.452</td>
<td>0.712</td>
</tr>
</tbody>
</table>

Source: Research Findings (2022)

Figure 6: Table 4:

5

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank balance inquiry(IS1)</td>
<td>2.354</td>
<td>0.504</td>
<td>21.817</td>
<td>1</td>
<td>0.001</td>
<td>10.530</td>
</tr>
<tr>
<td>Bank statement request(IS2)</td>
<td>0.587</td>
<td>0.744</td>
<td>4.550</td>
<td>1</td>
<td>0.033</td>
<td>4.887</td>
</tr>
<tr>
<td>Cheque deposit inquiry(IS3)</td>
<td>0.211</td>
<td>0.077</td>
<td>7.448</td>
<td>1</td>
<td>0.005</td>
<td>1.235</td>
</tr>
<tr>
<td>Receipts confirmation(IS4)</td>
<td>6.185</td>
<td>2.333</td>
<td>7.031</td>
<td>1</td>
<td>0.008</td>
<td>4.102</td>
</tr>
<tr>
<td>Constant Payments receipt</td>
<td>-8.873</td>
<td>2.648</td>
<td>11.233</td>
<td>1</td>
<td>0.001</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Source: Research Findings (2022)

Figure 7: Table 5:
B) BINARY LOGISTIC REGRESSION GOODNESS OF FIT TEST


[Gomachab ()] The Impact of Mobile Banking on Customer Satisfaction: Commercial Banks of Namibia (Keetmanshoop), R Gomachab. 2016. p. (Jornal of Internet Banking and Commerce)
