Mobile Banking Service Quality, Customer Perceived Value and Customer Retention in the Kenyan Banking Industry

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Abstract
Customer retention is increasingly becoming an important managerial issue, especially in this era characterized by high levels of competition and assertive customers who make stay or switch decisions guided by their rational and emotional influences. Moreover, customers are increasingly becoming quality conscious and value driven. To date, there is limited evidence of studies that investigated the effects of mobile banking service quality, customer perceived value and customer retention constructs in a single framework, hence, the study seeks to fill the gap. This study examines the effect of mobile banking service quality, customer perceived value on customer retention. Additionally, the study examines the mediating effect of customer perceived value on the relationship between mobile banking service quality and customer retention. The study was guided by the ‘leaky bucket theory’ of marketing and the MS-QUAL model. An explanatory research design was adopted, employing multistage, simple random and systematic sampling techniques in collecting data from a sample size of 400 university staff drawn from two public and two private universities based in Nairobi City County who are consumers of mobile banking services. A self-administered questionnaire was used. Hierarchical and multiple regression models using Hayes Process macro were used to analyze data obtained and to test the hypotheses. The study found that: mobile banking service quality ($\beta = 0.565$, $p = 0.000$), perceived customer value ($\beta = 0.363$, $p = 0.000$), significantly affect customer retention. Additionally, the results show that customer perceived value mediates the relationship between mobile banking service quality and customer retention ($\beta = 0.193$, CI = 0.127, 0.266). This study concludes that, customers will remain committed to patronize a bank whose services are deemed of high quality and with a high value. The study contributes to knowledge by revealing customer perceived value mediates the relationship between mobile banking service quality and customer retention. Bank management and policy makers should; develop quality assurance policies and devise value-centered strategies that focus on customer perceived value in order to enhance customer retention rates.

Key Words: Mobile Banking Service Quality, Customer Perceived Value, Customer Retention, Kenyan Banking Industry

INTRODUCTION
Customer retention is increasingly becoming an important managerial issue, especially in this era characterized by high levels of competition and assertive customers who make stay or switch decisions guided by their rational and emotional influences. Moreover, customers are quality conscious, value driven and get attracted by strong and positive corporate images. As technology becomes...
the order of the day and new development in the economy creates new opportunities which are hard to assume, many organizations are looking for ways on how to embrace technology as way of survival. Mobile banking services can be used to raise efficiency and boost business growth through cheap, efficient and reliable money service support systems that reduce the need for cash transaction and the risks associated (Rahman et al., 2017).

Since the inception of M-banking, Kenyan banking sector has witnessed tremendous changes. Customers now have access to fast, efficient and convenient banking services. Most of the Kenyan banks are now investing large sums on money in mobile banking technology. However, while the rapid development of mobile banking technology has made some banking tasks more efficient and cheaper, technological advancements have their fair share of problems that may compromise the quality of service such as; restructuring challenges, customer reluctance and cost challenges, system failure, network vulnerabilities, software defects and operating mistakes, processing error and data loss due to virus among others. If unchecked, these challenges pauses threatens the whole idea behind mobile banking service technology (Manali, 2014). It is therefore important to initiate a discourse on whether mobile banking service quality matters in influencing customer retention in the Kenyan banking industry.

Empirically, studies have proven that a two percent increase in customer retention improves the profit in the same proportion as a ten percent reduction in cost does (Ahmad & Buttle, 2002). It has also been established that higher retention rates lead to higher net present value of customers (Ahmad & Buttle, 2002). Sweeney and Soutar, (2001) avers that in the services industry, the best way to retain customers is to improve customer service quality and consequently, customer satisfaction. In their study, Ahmad and Buttle, (2002) established that customer retention is influenced by service quality and customer relationships. They also reveal that lack of trust plays a major role in customer defections followed by general product features (Ahmad & Buttle, 2002). Unfortunately, although many banking institutions are aware of the need for retaining customers, the firms spent most of their resources only in attracting new customers into the businesses and invest little on retaining them (Reichheld, 2003).

The relationships between mobile banking service quality and customer retention has been tested (MoyoTalak, 2013; Surendra, 2015; Tamuliene & Gabryte, 2014), customer perceived value and customer retention has also been tested (Angel Moliner Tena et al., 2006; Cronin et al., 2000a; Evans, 2002), there seems to be lack of published research testing the mediating effects of customer perceived value on the relationship between mobile service quality and customer retention. Therefore, this study seeks to examine the relationship between mobile banking service quality and customer retention and how perceived customer value mediates the relationship between mobile banking service quality and customer retention among the Kenya’s tier one banks.

**THEORETICAL AND LITERATURE REVIEW**

**The Leaky Bucket Theory of Marketing:**
The leaky bucket theory is the model that seeks to describe the process of customer gain and loss, otherwise known as customer churn. The theory was coined by (Ehrenberg, 1988) to describe the fact that most companies operate on a ‘leaky bucket’ basis, seeking to refill the bucket with new customers while ignoring the ones leaking away through the bottom of the bucket. The theory uses a bucket that has several holes in the base and its walls. A hose is put into the bucket and it is filled with water. Some of the water will run out the holes. In the analogy, water going into the bucket represents new customers being acquired and the water flowing out of the bucket represents customers lost to the firm. The amount of water in the bucket
represents the total customer base of the firm at that time. Andrew Ehrenberg coined the phrase ‘leaky bucket’ to describe a syndrome where most companies concentrate on recruiting new customers to replace customers who move on, rather than seeking to retain customers, in effect, firms are putting customers into a leaky bucket, and instead of preventing them from leaking away through the bottom of the bucket, the firm keeps topping up the bucket with new customers.

**MS-QUAL Model:** The M-S-QUAL model is an extension of SERVQUAL model by Parasuraman et al., (1985). Its development was necessitated by the limitation of the original model in dealing with service quality. M-S-QUAL model also known as multidimensional measurement model for accessing the quality of service. (MS-QUAL) was designed by (Surendra, 2015), as a scale for measuring service quality offered to mobile banking customers. According to Surendra, (2015), customers form their service quality perceptions based on their evaluations of five primary dimensions including: 1). Efficiency: This is the ease and speed of accessing and using the mobile banking service. 2). Fulfillment: This is the extent to which the mobile banking service’ promises about service delivery are fulfilled. 3). Availability: This describes the correct technical functioning of the mobile banking service platforms. 4). Privacy: This is the degree to which the banks’ mobile service platforms are safe and protect customer information. 5. Responsiveness: This is the effective handling of problems through the banks’ mobile service platforms.

**Mediating role of customer perceived value:** Customer perceived value has been studied as a consequence of service quality as well as the antecedent of customer retention in multiple past investigations. Zeithaml (1988) was among the first researchers who established that service quality has a positive effect on perceived value. Later, Groth and Dye, (1999), argued that customers perceive value originates from both the service act itself and the quality of the service act. Hapsari et al.,(2016) established a positive and significant relationship between service quality and perceived value. Past studies have also established that customer perceived value is a trigger of customer retention. Parasuraman & Grewal (2000) established that perceived value is the most important predictor of repeat purchase intention. Extant literature also indicate that perceived value is a common construct between the quality of service and customer retention (Chen & Zhu, 2012; Hanaysha, 2018; Keshavarz & Jamshidi, 2018). The mediating role of perceived value for the relationship between service quality and customer retention is summed up by the argument by Hapsari et al., (2016) that consumer perceptions of the inherent characteristics of banking service quality can help to reinforce favorable brand associations that eventually lead to long-lasting customer commitment towards a firm’s banking services.

The purpose of this study was to examine the effect of mobile banking service quality and customer perceived value on customer retention. Specific objectives were to examine the effect of; mobile banking service quality on customer retention and customer perceived value perceived on customer retention, the mediating effect of customer perceived value on the relationship between mobile banking service quality and customer retention. Figure 1 illustrates the conceptual model of the study. Based on the literature review.

This study proposes the following hypotheses:

- **H01:** Mobile banking service quality has a significant effect on customer retention.
- **H02:** Customer perceived value has a significant effect on customer retention.
- **H03:** Customer perceived value mediates the relationship between mobile banking service quality and customer retention.
METHODOLOGY

**Design and participants:** An explanatory research design was adopted in collecting data from consumers of mobile banking services, drawn from two public and two private universities located in the Nairobi City County, Kenya. Data was collected from a sample size of 400 respondents randomly selected from a target population of 3958 using a self-administered, closed-ended questionnaire between June 4th and 21st 2019.

A multistage sampling technique was employed in this study. The first stage was the choice of study location, Nairobi County was purposively chosen based on the fact that it is Kenya’s capital city and most of the banks’ headquarters are domiciled in the county and the fact that a greater number of public and private universities (23 out of 46) are located in Nairobi county (uniRank™, 2020). The second stage was choice of the universities to draw respondents from. The Universities were clustered into two; public and private, where four (4) universities were randomly selected; two (2) from public universities and two (2) from private universities based on the list of Commission for University Education Accredited Universities - November 2017. Third stage was the choice of a university staff who formed the study’s unit of analysis. Systematic sampling was then be employed which will allow every $K^{th}$ element in the population to be sampled, beginning with a random start of the element in the range of $1$ to $K$. Then finally, the respondents’ consent was sought to participate in the study before administering the questionnaire.

Findings indicate a response rate of 81%, which is above the acceptable threshold of 50% as recommended by most researchers. The results indicate that male respondents were more than the female, (54%) and (46%) respectfully, while majority of the respondents were of ages between 26 and 35 years (N=143) accounting for 43.9% of the respondents while those above 66 years were the minority (N=12) accounting for 3.7% of the respondents. In terms of service experience, the results reveal those respondents with between 5-10 years of mobile banking service experience were the majority (39.0%) the least being those with below 1 year of mobile banking service experience (5.8%). The demographic statistics further indicate the majority of the respondents (46.3%) had acquired an undergraduate degree, while a minority (3.7%) of the customers were Ph.D. holders. Additionally, the findings also revealed that most of the respondents had monthly income ranging from (KSh. 10,000 - KSh. 50,999) accounting for 36.8% of the total respondents, while those whose monthly income was less than Khs. 9,999 were a minority accountant for 5.5% of the total respondents.

**Measures**

**Customer Retention:** Customer retention, refer to the propensity of a mobile banking service customer to stay with his/her bank for the foreseeable future. The variable had three items adapted from (Siu et al., 2013). Each question was assessed on a five-point Likert-type scale with anchors "1=strongly disagree" and "5=strongly agree". The three questions in the questionnaire are; I intent will repatronize my bank’s mobile banking services for the foreseeable future, I would recommend my bank’s mobile banking services to my relatives and friends, and I intent to increase the usage of the various mobile banking services offered by my bank.

**Mobile Banking Service Quality:** This variable was measured using seventeen items
adapted from (Surendra, 2015) with modifications to suit the study. The questions were assessed on a five-point Likert-type scale with anchors "1=strongly disagree" and "5=strongly agree". The seventeen questions were; My bank’s Mobile banking system is always available for use, My bank’s Mobile banking system operates smoothly and without delays, My bank’s Mobile banking system does not crash, Mobile banking related problems are quickly resolved by the bank, I obtain accurate and error free service from my bank’s mobile banking services, I feel safe using my bank’s mobile banking services, Risk associated with my bank’s mobile banking services is low, Personal information exchanged over mobile banking services is not misused by my bank, I feel secure in providing sensitive information during mobile banking transactions, My bank’s Mobile banking services are prompt hence, it takes shorter waiting time, My bank’s Mobile banking services are prompt hence, it takes shorter waiting time, My bank’s mobile banking services saves my time.

**Customer Perceived Value**: Customer perceived value was measured using five items adapted from (Yang & Peterson, 2004). The five items include: Continuous innovations to mobile banking service makes me feel good, I get good value from the mobile banking services for a reasonable price, I don’t mind sacrificing time and efforts to access and use mobile banking services, Compared with other bank services such ATM, it is wise to choose this mobile banking services and, I believe that mobile banking services are designed with customer’s best interests at heart. All the questions were assessed on a five-point Likert-type scale with anchors "1=strongly disagree" and "5=strongly agree".

**Measurement of Perceived Corporate Image**: Perceived corporate image was measured with eight items adapted from (Nguyen & Leblanc, 2001). The questions were assessed on a five-point Likert-type scale with anchors "1=strongly disagree" and "5=strongly agree". The eight items were; My bank is innovative and pioneering, My bank has a good reputation, My bank has a better image than its competitors, My bank does its business in an ethical way, My bank is open and responsive to consumers, My bank contributes to the society, In my opinion, my bank has a good image in the minds of its customers, and Overall, I have a good impression of my Bank.

**Covariates**: The study controlled gender, age, experience, education level and income of the customer to eliminate their adverse influence on mobile banking service quality, customer perceived value and customer retention. Gender was measured as either ‘Male’ or ‘Female’, age was measured as ‘18-25 years’, ‘26-35 years’, ‘36-45 years’, ‘46-55 years’, ‘56-65 years’ and ‘above 66 years’, customer experience was measured based on the duration of being a customer as ‘below 1 year’, ‘1-5 years’, ‘5-10 years’ and ‘above 10 years’ and education level was measured at ‘Primary Certificate’, ‘Secondary Certificate’, ‘Diploma holder’, ‘Undergraduate degree’, ‘Master’s Degree’ and ‘PhD holder’ and income level was measured as ‘less than Kshs. 9,999’, ‘Kshs. 10,000- Kshs.50, 000’ ‘Kshs. 51,000- Kshs.99, 999’ and ‘above Kshs. 100,000’.

**Statistical Analysis**
Data analysis process involved identifying analytical tools, using different tests based on the study goals. Data was checked, recorded, and cleaned. Completed questionnaires were further checked for missing values and inconsistencies in responses given by the respondents. Simple frequency runs were made to screen the data to identify missing values. Descriptive statistics for the variables of interest were first calculated, this was followed by correlation analysis to determine the associations among these variables. Finally, to examine the mediation effect, the four-step procedure proposed by (MacKinnon et al., 2012) was adopted.

**Model Specification**: The following statistical models were used in testing the hypotheses in this study.
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i. \( Y = \beta_0 + \beta_1 \text{gender} + \beta_2 \text{age} + \beta_3 \text{education level} + \beta_4 \text{experience} + \beta_5 \text{income} + \epsilon \) (Testing the effect of the control variables on the dependent variable)

ii. \( Y = C_0' + C + C_1'X + \epsilon \) (Ho1) (Testing the effect of the Independent variable on the dependent variable while holding constant the control)

iii. \( Y = b_0 + C + C_1'X + b_1M + \epsilon \) (Ho2) (Testing the effect of the Mediating variable on the dependent variable while holding constant the controls and Independent variable)

iv. Testing for mediation (Ho4) = a1 x b1 or C (total effect) – C’ (direct effect)

RESULTS

The study aimed to ascertain whether: mobile banking service quality have significant effect on customer retention, customer perceived value significantly affected customer retention and to explore the mediating effect of customer perceived value on the relationship between mobile banking service quality and customer retention.

Descriptive Statistics

Table 1 displays the means, standard deviations, reliability, and correlation results for all research variables. The results show that customer retention had the highest mean of 4.016 with a standard deviation of .610. In contrast, mobile banking service quality had the lowest mean of 3.860 and a standard deviation of 0.592. Additionally, reliability had a Cronbach’s Alpha above 0.7 for all variables in the accepted range. Results of correlation shows that all variables were positively associated with customer retention with mobile banking service quality having the highest relationship with \( r = .569, p < .01 \), while customer perceived value had \( r = .536, p < .01 \), while Perceived Corporate Image had the lowest but positive association with \( r = .246 p < .01 \).

Table 1: means, standard deviations, reliability, and correlation results

<table>
<thead>
<tr>
<th>Name of Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Reliability</th>
<th>Correlation1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Retention</td>
<td>4.016</td>
<td>0.610</td>
<td>0.762</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobile Service Quality</td>
<td>3.860</td>
<td>0.592</td>
<td>0.714</td>
<td>.569**</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Customer Perceived Value</td>
<td>3.974</td>
<td>0.642</td>
<td>0.701</td>
<td>.559**</td>
<td>.536**</td>
<td>-</td>
</tr>
</tbody>
</table>

**Correlation is significant at p < .01 (2-tailed)**

Results for the Direct Effect

The Influence of Mobile Service Quality on Customer Retention

Model 2 of Table 2 shows the results of Hypothesis Ho1 which sought to examine the influence of mobile service quality on customer retention while controlling for the covariates as shown in the statistical model, \( Y = C_0' + C + C_1'X + \epsilon \). The findings of model 2 shows that all the covariates were insignificant in this model, Gender (\( \beta = .003, p = 0.974 \)); Age (\( \beta = 0.036, p = 0.505 \)), Experience (\( \beta = -0.035, p = 0.577 \)), Education (\( \beta = 0.045, p = 0.487 \)) and income (\( \beta = -0.065, p = 0.355 \)). Most importantly, results show that mobile service quality positively and significantly influences on customer retention as shown by \( \beta = 0.565, p = 0.000 \). Results further shows an increased R\(^2\) of 0.317, with change in R\(^2\) of 0.313, F= 145.663, p = 0.000. The change in R-Square of 0.313 implies that 31.1% of the total variance in customer retention is explained by mobile service quality. Based on these findings, hypothesis Ho1 the null hypothesis was that mobile banking service quality has no significant effect on customer retention was rejected hence the alternate hypothesis was supported by the study.

The Influence of Customer Perceived Value on Customer Retention

Table 2 and Model 3 indicates results for
testing Hypothesis H02, testing the effect of customer perceived value (mediator) on customer retention while holding constant mobile service quality and the control variables depicted in statistical model, “Y = b0 + C + C1X + b1M + E”. Results of this model shows that the control variables remained insignificant in this model with p > .05. The findings also show that mobile service quality was significant with β= 0.372, p = 0.000. Furthermore, results reveal that perceived customer value (mediator) was found to have a positive and significant influence on customer retention as indicated by β= 0.363, p = 0.000.

DISCUSSION

The study established that indeed, mobile banking service quality has a positive and significant effect on customer retention. Literature on service quality indicate that the greater the quality perceived, the stronger the relationship commitment and repurchase intentions Srivastava and Sharma’s (2013). Furthermore, Surendra (2015), established that mobile banking service quality is one of the critical success factors that influence bank’s competitiveness. The findings are supported by earlier findings by Ranaweera and Neely (2003), who established that there was a positive association between perceived service quality and customer repurchasing or retention. We, therefore, argue in this study, that the customers consider the quality of the mobile banking services when evaluating the service provider in order to make a decision on whether to continue using the service or not. Hence, the higher the service quality, the higher the retention rates and to the contrary, the lower the quality of the mobile banking services, the higher the defection rates or customer churn.

The study findings also reveal a positive and significant effect of customer perceived value on customer retention. These findings support previous research in customer relationship management which links customer perceived value and customer retention. For instance, Milan et al. (2015) established that clients in the corporate
market are more willing to keep relationships with existing suppliers if they are being attended to with elevated value. The findings are also supported by the ideas of Carlos et al. (2006), who suggested that a relationship journey between a bank and its customer where both parties hope to obtain certain advantages and benefits (value) through the working and developing of the relationship, the advantages that the service provider obtains from the relationship are linked to the loyalty of the customer. We argue in this study that customers engage in a matching process in establishing value for their money. Hence, where services match or exceed the customers’ perceived value expectation, they are influenced to make repeat purchases.

The study findings further reveal that corporate positive and significant effect of customer perceived value on customer retention.

Moreover, the findings confirm that customer perceived value mediates the link between mobile service quality and customer retention. We argue in this study that, when a bank offers superior quality of mobile banking services, it improves customer perceived value and which will in turn influence patronage of the m-banking services. This shows how critical it is for the mobile banking service providers to offer their customers with the right information and quality m-banking services via m-banking channels since this contributes to high perceived value in the mind of their clients which influences their decisions no whether to stay with or switch from the m-banking services.

CONCLUSION
This study provides an important research model in understanding the role of mobile banking service quality and customer perceived value in influencing consumers of mobile banking services to commit to patronize a particular bank consistently in the future. On the basis of this study results, it has been clarified that mobile banking service quality and customer perceived value are the powerful drives of customer retention. Additionally, the study reveals that customer’s perception of the banks’ service quality influences their attitudes towards the bank and how they make their commitment to patronize the mobile banking services consistently in the future. The implication of this is that the customer decisions to commit to stay with the bank is partly depend on their perceptions towards the quality of the banks’ mobile banking services and the customer's perceived value, hence the variables used in this study plays a critical role in the customer’s decision making the process.

REFERENCES


