Mobile Banking Service Quality and customer retention among Commercial Banks' customers: An empirical evidence from Southeast Nigeria

Abstract
In the era of a cashless economy, customers now emphasize banking services that are convenient, reliable and responsive. Mobile banking (m-banking) is among the latest in a series of recent mobile technological wonders. For this reason, the research aimed at investigating the effect of mobile banking service quality on customer retention from commercial bank customers in Nigeria. The study examined the effect of reliability, responsiveness, information quality, privacy issues and system quality on customer retention. The study used an explanatory research design method using quantitative approach. The population of the study was drawn from commercial bank customers that make use of mobile banking services and Taro Yamane's formula was used to obtain the sample size (400). Among the 400 questionnaires that were distributed 395 were valid and were used for the research. The study used Pearson's Correlation Coefficient to measure the relationship between mobile banking service quality and customer retention. Then regression analysis was used to estimate the cause-and-effect relationship between the variables of the mobile banking service quality and customer retention. The study found that customer retention is positively affected by all the variables. Among all, responsiveness, system quality and information quality have a significant effect on customer retention while reliability and privacy issues do not affect customer retention in mobile services. Therefore, to increase customer retention, the bank management should implement programs that support awareness creation, customer satisfaction, brand image and reputation by continuously assessing the service quality and delivery of mobile banking services provided to their customers, and also provide an adequate set of security components of mobile banking that protects customer's bank details from fraud.

Keywords: mobile banking, service quality, customer retention, mobile banking services, information quality, system quality

Introduction

As national governments pursue cashless fiscal policies across societies, consumers are shifting their emphasis to demand banking services that are convenient, reliable and responsive. More so, these demands are supported by the proliferation and expanded use of smartphones. As a consequence, banks and financial institutions are invested in providing mobile banking services to meet these changing consumer demands. Mobile banking (m-banking) is among the latest in a series of recent mobile technological wonders with a huge impact on the marketing of financial services and financial inclusion (Safeena, Date, Kammani and Hundewale, 2012). "Presently, many banks including microfinance institutions, software houses, and service providers offer this innovative service together with new sets of products and applications designed to extend their client reach (including to unbanked populations), enhance operational efficiency, increase market share, and provide new employment opportunities, and improve customer retention" (Shaikh, 2013).

Given that bank customers are relationship customers – that is, they buy bank products they use over a long period such as savings accounts. These commercial banks strive to achieve competitive advantage by building and maintaining a strong relationship with customers through providing improved services with good quality and high security. Therefore, commercial banks are investing

and improving the quality of their mobile banking services to get customers' confidence, increase satisfaction and ultimately retain customers and prevent them from switching.

"Customer retention is maintaining the existing customer base by establishing good relations with all who buy a company's products" (Motiwala, 2008). "In simple terms, it is the ability to maintain existing customers by establishing profitable and cordial relationships with them while delivering superior quality services. Customer retention can be seen as the mirror image of customer defection, where a high retention rate has the same significance as a low defection rate" (Ahmad and Buttle, 2001). And managing customer retention can be problematic if it is not defined precisely in a way appropriate to the firm's business. To improve customer retention, it is not enough to satisfy customers, empirical evidence suggests that satisfied customers do switch, but also exceed customers' expectations and gain customer loyalty. Loyal customers are repeat customers; hence, customer loyalty increases the odds of customer retention (Bowen & Chen, 2015).

Retaining customers can yield numerous benefits. Evidence suggests that customer retention positively impacts on profits and increases customer lifetime value. It also offers a competitive advantage over competitors, which is vital for business growth and profitability (Flambard-Ruaud, 2005). However, as banks incentivized customers to use mobile banking services and the emerging evidence of customers' vulnerability to identity theft, fraud, and service failure while using mobile banking services, protecting customers' funds and keeping customers from switching in the event of service failure has become an important marketing challenge for most commercial banks. Over time, these mobile banking services have not been consistent and dependable. Due to network failures, they seldom do not provide prompt and accurate service. Also, it is sometimes complex to use, less secure and can be manipulated by hackers. Against this background, this study seeks to examine the effect of mobile banking service quality on customer retention. In particular, this study investigates the effects of mobile banking services quality on the dimensions of reliability, responsiveness, information quality, system quality and privacy issues on customer retention. Based on these objectives, the following hypotheses guide the study:

$H_{1:}$ *The reliability of the mobile banking service has a significant effect on customer retention*

$H_{2:}$ *The information quality of mobile banking services has a significant effect on customer retention*

$H_{3:}$ *The degree of responsiveness of the mobile banking service has a significant effect on customer retention*

$H_{4:}$ *Privacy issues in the mobile banking service have a significant effect on customer retention*

$H_{5:}$ *System quality of the mobile banking service has a significant effect on customer retention*

Literature Review

Mobile Banking Services

"M-banking is the newest e-banking platform" (Mukhlis, 2014). "It refers to a technological system that allows customers to conduct some financial transactions through mobile devices" (Oladejo & Yinus, 2013). "It is a system that uses technologically innovative resources, especially mobile phones that are java enabled, to effect financial transactions" (Shih & Fang, 2004). "They further noted that m-banking is a facilitator of banking transactions including a balance enquiry, bill payment, transaction history downloads through a mobile phone and funds transfer. It is banking services through java enabled mobile phones, allowing them to personally access bank accounts and perform various banking-related transactions from anywhere and time in the world" (Luarn & Lin, 2015). It is

simply bank transactions conducted with mobile phones or tablets. Mobile devices are the most promising way to reach the masses and to create a tie-in among current customers, due to their ability to provide services anytime, anywhere, high rate of penetration and potential to grow.

Dimensions of Mobile Banking Service Quality

Reliability: This means the ability of the service to perform the service it promised accurately and dependably. Reliability involves consistency of performance and dependability. In the banking sector, it means that the bank performs the service right the first time. Also, the company honours its promises. It involves accuracy in billing, keeping records correctly, performing the service at a designated time, keeping promises, etc. Reliability items include: account accuracy, keeping promises, meeting deadlines, providing timely and accurate information, availability and dependability.

***Responsiveness*:** This refers to the ability of mobile banking services to help customers and to provide prompt service. "Responsiveness concerns the willingness or readiness of employees to provide service; mailing a transaction slip immediately, calling the customer back quickly, and giving prompt service. Responsiveness items include: the readiness of staff to tell customers, when exactly things will be done, the provision of prompt service, giving customer's undivided attention, and being demonstrably responsive to the customer's requests. In analyzing which of these dimensions has the highest level of relationship with customer service, Appannan, Doraisamy, and Hui (2013) found out that responsiveness is the most important variable in customer service in Butterworth, Malaysia".

***Information Quality*: "**The quality of information is the quality of output that is in the form of information generated by the information system used" (Rai, Lang & Welker, 2002). Webber (2010) assessed "the quality of information by grouping it into the following characteristics: authenticity, accuracy, completeness, uniqueness, timeliness, relevance, comprehensibility, precision, and conciseness and informative". The more appropriate decisions are taken if the quality of information is better. Information quality can also be seen as "Desirable characteristics of the system outputs. (Petter, DeLone & McLean, 2013). Information quality i defined as "the desirable characteristics of the system outputs; that is, management reports and Web pages. For example, relevance, understand-ability, accuracy conciseness, completeness, timeliness, and usability" (Petter et al., 2013).

System Quality: "is the degree to which the system is easy to use and complies with functionality, reliability, flexibility, data quality, and integration requirements to accomplish certain tasks" **(**DeLone & McLean, 2003). Also, System quality is: a "Desirable characteristic of an IS, ease of use, system flexibility, system reliability, and ease of learning, as well as intuitiveness, sophistication, flexibility, response time" (Petter et al., 2013).

Privacy Issue – "Privacy plays an important role in providing satisfaction and expected outcomes for m-banking users" (Li & Yeh, 2010). "Privacy including security is required to ensure that users have confidence and trust in m-banking services" (Li & Yeh, 2010). This makes customers feel secure while using m-banking services.

***Customer Retention*:** "these are efforts of a company for preventing customers from switching to competitors. This business strategy helps to decrease costs and increase the profitability of the organizations. The customer retention concept is given special attention in the banking industry also when the number of customers is losing and the cost of acquiring new customers is very high, it results from competition for deposits among banks which makes banks to give focus on this strategy" (Mbithi, 2013).

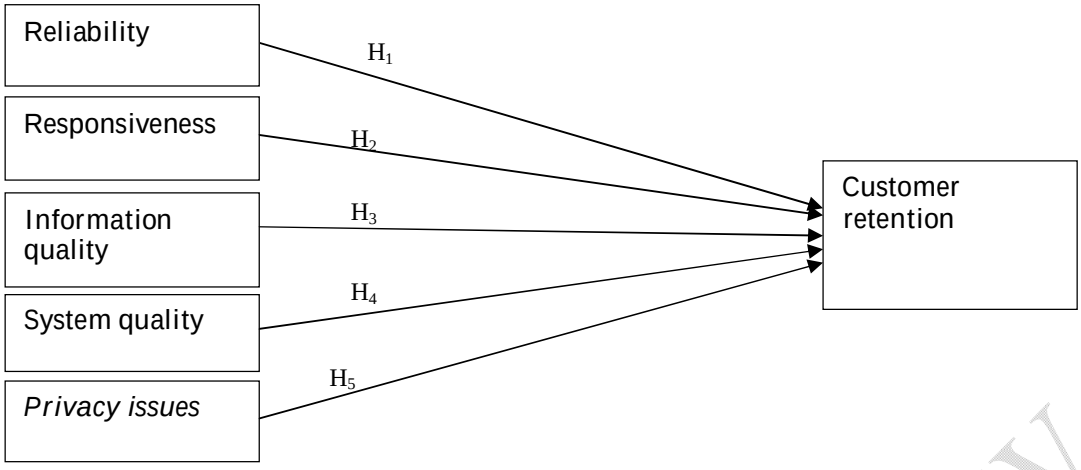


Fig. 1. Conceptual framework

Theoretical Framework

The DeLone and McLean IS Success Model (IS success models)

In 1992, DeLone & McLean developed Information Systems (IS) success model as a comprehensive framework for measuring the performance of information systems (DeLone & McLean, 1992). This model consists of six interrelated dimensions of information systems success: System Quality, Information Quality, Use, User Satisfaction, Individual Impact, and Organizational Impact. The model is to be interpreted in the following ways: "Systems Quality and Information Quality singularly and jointly affect both use and user satisfaction. Additionally, the amount of use can affect the degree of user satisfaction – positively or negatively -- as well as the reverse being true. Use and user satisfaction are direct antecedents of individual impact; and lastly, this impact on individual performance should eventually have some organizational impact" (DeLone & McLean 1992). Given the technical properties of mobile banking services, the information and system quality constructs of IS success model is relevant to this study.

Service Quality (SERVQUAL) Model

"In the initial research relating to SERVQUAL, Parasuraman, Zeithaml and Berry (1985) established ten dimensions for measuring service quality. Those original dimensions were tangibility, reliability, responsiveness, competence, courtesy, credibility, security, access, communication, and understanding the customer". "This ten-dimension breakthrough approach to measuring service quality was criticized by Cronin and Taylor (1992) who did not only agree with the measurement issue, but also criticized the conceptualization of SERVQUAL, and reported that the perceptions aspect of SERVQUAL was a much better measurement device than SERVQUAL itself".

Method

Sample

The data were collected from customers of commercial banks that use mobile banking services. An online questionnaire was mailed to them. The sample size used was 400 respondents. Of the total 400 questionnaires distributed, 395 were obtained and used as valid in the final analysis, representing a 99% response rate. The profile of the respondents as shown in Table 1 below suggest that male respondents constitute the largest portion of respondents, which is about 57.8% of the sample size, while female respondents cover 41.9% of the total. Concerning age category, the largest number of respondents fall within the range of age 21-30, which constitutes 40% of the sample, while the second-largest portion of respondent's age range belongs to 31-40, which is about 37%, 52% of the respondents were married while 46% were single. For income level, the majority of the respondents fall within the income level of greater than ₦100,000 – ₦150,000, which accounts for 49% and followed by those earning below ₦100,000 which constitute about 23.5% of the respondents, next in line are those earning above ₦150,000 – ₦200,000 this category constitutes about 11% of the

respondents. For the occupation category majority of the respondents are self-employed which constitutes about 38% of the respondents, followed by private employees.

Measures

In this study, closed-ended questions were used with Likert 7-point rating scale. The respondents were asked to respond according to how strongly they disagree, disagree, somewhat disagree, neither agree nor disagree, somewhat agree, agree and strongly agree to the statements relating to mobile banking service quality. A questionnaire survey using a 5-point Likert scale is widely used by researchers in analysing relationships between variables.

Based on the literature reviewed and field observations a set of proposed questionnaires based on the research variables and objectives for the study were administered to test validity before the survey was conducted. The proposed questionnaires were subjected to critical analysis and tested and each research variable has at least three questions that are related to it before administering for the purpose of the study. The study used a mixture of statistical techniques to achieve the intended objectives. First descriptive statistics were employed to analyse the profile of the respondents, which is necessary for analysing the results. Secondly, multiple regression analysis was used to measure the relationship between mobile banking service quality and customer retention.

Results

Factor Analysis and Reliability test

The data collected were subjected to data reduction using principal component analysis. The extraction method of Principal Component Analysis was performed using Varimax rotation with an expected number of six factors. The measurement items loaded successfully on six factors and explained 71% of the total variance. Four items accounted for 45% of the explained variance and a Cronbach alpha (α) of 0.90 loaded on the first factor. The items relate to *privacy* measures and are labelled accordingly. The items loading on the second factor were those measuring *reliability* and labelled as such. The reliability factor accounted for 8 per cent of the explained variance and a Cronbach alpha (α) score of 0.87. The items measuring *systems quality* loaded on the third factor. The factor accounted for 5.7% of the total variance explained and a reliability score of Cronbach alpha (α) = 0.77.

Similarly, six items relating to the dependent variable customer retention loaded on the fourth factor and labelled accordingly. The total variance explained and reliability score of the customer retention factor are 5.3 percent and Cronbach alpha (α) = 0.80 respectively. The fifth factor consists of the items "I like using mobile banking services because it provides me with accurate and timely Information about my account" and "Mobile banking services are highly efficient". One item "I have a clear understanding of mobile banking services" loaded poorly and was dropped. The factor was labelled information quality and accounted for 4.3 percent of the explained variance and a Cronbach alpha (α) = 0.77. Finally, items measuring responsiveness, that is, "*I use mobile banking service because it provides prompt service", "I derive pleasure from using mobile banking services because I can use it anytime and anywhere" and "My bank provides innovative mobile banking services"* all loaded on six factor and labelled 'Responsiveness'. The factor accounts for 3.5 % of the total variance explained and a reliability score of Cronbach alpha (α) = 0.72.

Table 1. General Information of the Respondents

Variable	Frequency	Percentage
Gender		
Female	166	41.9
Male	229	57.8
Age in years		
<20	8	2.0
21-30	163	40.9

31-40	150	37.9
41-50	58	14.6
51-60	10	2.5
>=61	6	1.5
Marital status		
Single	183	46.2
Married	207	52.3
Widowed	5	1.3
Divorced	0	0.0
Others	0	0.0
Monthly net income		
Less than 100,000	93	23.5
101,000-150,000	194	49.0
151,000-200,000	44	11.1
201,000-250,000	10	2.5
251,000-300,000	12	3.0
301,000-350,000	8	2.0
351,000-400,000	4	1.0
401,000-450,000	3	0.8
451,000-500,000	6	1.5
>=501,000	21	5.3
Occupation		
Student	56	14.1
Academic	13	3.3
Private employee	118	29.5
Government employee	42	10.6
Entrepreneur manager	9	2.3
Self-employed	152	38.4
Others;		
Clergy	5	1.3
Total	395	100

Source: SPSS Output from survey result, 2022

Test of Hypotheses

To test the hypotheses, a multiple regression analysis was performed via SPSS version 22 using customer retention as the dependent variable and reliability, information quality, responsiveness, privacy, and systems quality as dimensions of the independent variable, mobile banking service quality. The regression result is shown in Table 3.

The model is represented as $Y = a = bX_1 + bX_2 + bX_3 + bX_4 + bX_5 + e$
where
Y = dependent variable customer retention
X1 = Reliability
X2 = Information Quality
X3 = Responsiveness
X4 = Privacy Issue
X5 = Systems Quality
e = error term

The decision criteria for the hypotheses testing is set at $p < 0.05$ significance level. Overall, the model is a good fit ($F_{5, 370} = 24.21$, $p < .01$) and explains 25% of the changes in the dependent variable customer retention.

Table 2. Factor analysis and reliability test

	Component					
	Privacy	Reliability	SQ	CRT	INFQ	Resp.
I believe my personal and bank information are well protected by my mobile service provider	0.834					
I believe privacy is assured with my mobile service provider	0.809					
I believe my mobile service provider adheres to a set of rules which protects my bank details.	0.792					
I trust my bank's security features	0.756					
I believe my mobile service provider is competent and trustworthy		0.806				
Mobile banking services are very reliable		0.746				
I find mobile banking service very flexible and comfortable to use		0.648				
I find mobile banking service very convenient to use		0.654				
I am willing to use new mobile banking technologies that are clear and easy to understand			0.806			
My bank use up-to-date equipment and technology that allows me to confirm the transaction process			0.685			
I use mobile banking services in my everyday life				0.900		
I use mobile banking service to manage my account always				0.828		
I use mobile banking services because it is cost effective				0.837		
I derive utmost enjoyment in using mobile banking services				0.724		
I am content with using mobile banking services				0.545		
I like using mobile banking service more than any other banking services				0.534		
I like using mobile banking services because it provides me with accurate and timely Information about my account					0.644	
Mobile banking services are highly efficient					0.503	
I use mobile banking service because it provides prompt service						0.456
I derive pleasure from using mobile banking services because I can use it anytime and anywhere.						0.559
My bank provides innovative mobile banking services						0.477
Total Variance explained	44.97	8.01	5.62	5.33	4.29	3.46
Cronbach alpha (α)	0.90	0.87	0.77	0.80	0.77	0.72

Extraction Method: Principal Component Analysis

Hypothesis 1 predicted a positive and significant effect of reliability on customer retention. The result as shown in Table 3 show a beta coefficient of 0.02 and a p-value of 0.82. Since, the -value is greater than the 0.05 criteria, we accept the null and reject the alternate. It is therefore concluded that

reliability has no significant effect on customer retention ($\beta = 0.02, t = 0.22, p = 0.82$). Thus, H1 is rejected. In the second hypothesis, we predicted a positive and significant effect of information quality on customer retention. The result showed a beta coefficient of 0.18 and a p-value of 0.027. Since, the -value is less than the 0.05 criteria, we reject the null and accept the alternate. Therefore, it is concluded that Information quality has a positive and significant effect on customer retention ($\beta = 0.18, t = 2.23, p = 0.02$). Thus, $H2_1$ is accepted.

In hypothesis 3, the responsiveness dimension of mobile banking service quality is predicted to have a positive and significant effect on customer retention. The result showed that the p-value is less than 0.05. And since the p-value is less than the 0.05 criteria, we reject the null and accept the alternate. It can therefore be concluded that there is a positive and significant effect of responsiveness on customer retention ($\beta = 0.39, t = 4.87, p = 0.01$). Thus, $H3_1$ is accepted.

Table 3. Regression Result

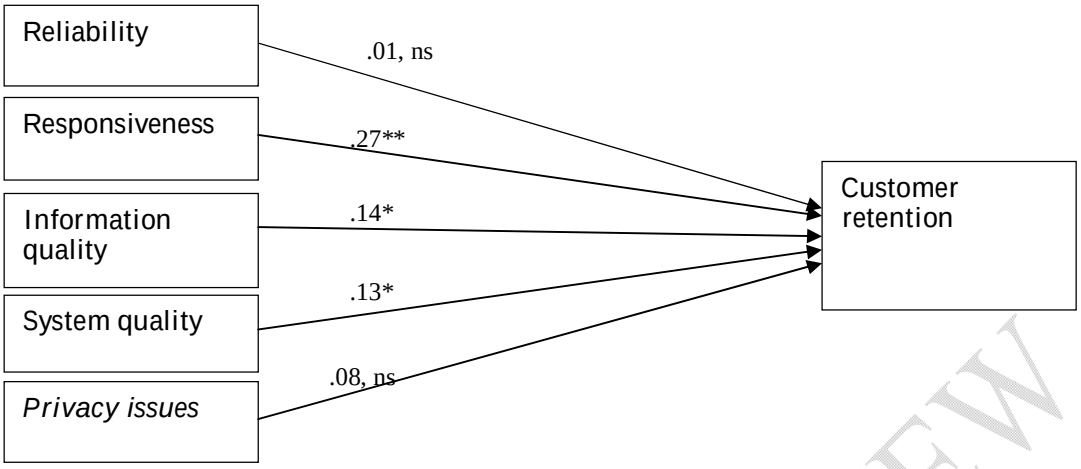
Model	Unstandardized coefficients		Standardized coefficients	T	Sig.
	B	Std. Error	Beta		
Constant	0.381	0.483		0.789	0.430
Reliability	0.015	0.069	0.014	0.222	0.824
Info Qual.	0.184	0.082	0.148	2.228	0.027
Resp.	0.394	0.081	0.267	4.869	0.000
Privacy Issue	0.107	0.084	0.077	1.271	0.205
Sys. Qual.	0.193	0.086	0.129	2.247	0.025
F –stat	*24*				*0.00*
R^2	*.25*				
Adj. R^2	*.24*				

Dependent Variable: Customer Retention

In the fourth hypothesis, customers' data of privacy issues are predicted to have a positive and significant effect on customer retention. The result showed a p-value greater than 0.05. Thus, the null hypothesis is accepted and the alternate hypothesis is rejected. Therefore, it is concluded that there is no significant effect of privacy on customer retention ($\beta = 0.11, t = 1.27, p = 0.21$). Thus, $H4_0$ is accepted. Finally, in hypothesis 5, we expected the systems quality dimension of mobile banking service quality to have a positive and significant effect on customer retention. The result showed that the p-value is 0.025, thus less than 0.05. Therefore, since the p-value is less than the 0.05 criteria, we reject the null and accept the alternate and therefore, we conclude that there is a positive and significant effect of systems quality on customer retention ($\beta = 0.19, t = 2.25, p < 0.025$). Thus, $H5_1$ is accepted.

Discussion

In a bid to provide convenience and make banking accessible and inclusive, most banks provide mobile banking services to their customers. This mobile banking services are usually facilitated through information technology and systems which might malfunction, become inaccessible, or threaten privacy and cause customers to switch. This study examined how mobile banking service quality predicts customer retention.



*** p < 0.001, ** p < 0.05, n.s = not significant*

Fig.2 Hypotheses Result

According to the findings reliability has no significant effect on customer retention. This finding contradicts our expectations and showed that the convenience, flexibility, and competency of mobile banking services do not affect customer retention. This finding contradicts earlier findings of Daniel (2016), who studied the relationship between service quality dimensions and customer retention. The analysis showed that there is a significant relationship between the variables of service quality, reliability inclusive. However, a possible reason for this finding is that most customers believe that the reliability of mobile banking services is beyond the control of the banks. Customers believe that technology often malfunctions and inconveniences and as such, may not base their decision to continue with a bank on the reliability of their mobile banking IT systems.

As expected, the result showed that information quality predicts customer retention confirming previous findings by Folarin (2015) who found that the adoption of advanced information technology improves customer retention. The significant effect of information quality suggests that banks would retain their customers as long as their mobile banking services can enable customers to access timely and accurate information efficiently.

Similarly, the result indicated a positive and significant effect of responsiveness on customer retention supporting Daniel (2016), which showed that there is a positive relationship between the service quality dimension and customer retention. Interestingly, the responsiveness of a mobile banking system is the most important determinant of customer retention. Therefore, mobile banking systems that provide prompt services and are convenient and innovative would surely increase customers' retention rate.

Contrary to expectation, the result showed that there is no significant effect of privacy on customer retention contradicting previous findings by Samsudin et al (2011), the research revealed that privacy is the main factor that affects customers not to use online services including mobile phone services. The analysis of the study shows that privacy is positively significant towards customer loyalty. Privacy is usually a critical issue with respect to mobile banking due to potential financial and identity fraud. Thus, the insignificant result is surprising. However, a potential reason for this result is that customers are usually educated on how to protect their mobile banking details, thus they tend to believe the task of protecting and securing their details lies with them and not entirely with their respective banks. Also, they may expect that privacy could be strengthened with adequate data protection law which is a matter of regulation.

Finally, the result showed that systems quality positively predicts customer retention supporting Auniel & Obino, (2018) whose study selected four variables that affect customer retention by developing a hypothesis. The conclusion of the study shows that service quality, service delivery,

customer relationships, and customer satisfaction are positively related to customer retention in commercial banks in Tanzania. The result suggests that customers would remain with their banks once the bank's mobile banking system provides up-to-date banking information and is easy to use and understand.

Conclusions

Customer retention is the major factor contributing to the success of service sector. Mobile banking has recently become a major factor to retain customers. For this reason, the study was intended to investigate the effect of mobile banking on customer retention from commercial banks using a structured questionnaire. By undertaking a detailed analysis of the situation, the following findings were obtained.

Descriptive analysis revealed that the majority of current mobile banking customers are males between 21-40 years of age, earning about 101.000 – 150,000, some of which are self or privately employed. Based on the analysis male and younger generations are ready to use new and existed mobile banking services offered by their banks. The study concludes that customer banks can retain their customers when they provide mobile service quality that is responsive with quality information and through a systems that hitch-free. In other words, mobile banking applications should provide prompt and innovative services anytime, anywhere using up-to-date equipment and technology that allows me to confirm the transaction process and are clear and easy to understand. Also, the mobile banking applications should be easy to use and unambiguous and provide timely and accurate banking information.

Practical Implications

The findings hold some implications for practices. First, according to the result of the study, information and system quality of mobile banking service has a significant influence in customer retention among the independent variables of the study. Thus, this implies that bank management need to take up major activities to improve more on the quality of information disseminated. They should also develop a strategy to deliver proactive services by adding new features on mobile banking service and giving out information that are clear to understand in order to deliver superior & unique customer experience. Second, the findings on the significant effect of responsiveness implies that bank management should take a major review of their daily banking activities by providing prompt service, tracking and addressing individual customer feedback that needs improvement actions to deliver quality customer service consistently across their service outlets. Third, the findings also imply that banks should implement programs that support awareness creation, customer satisfaction, brand image and reputation by continuously assessing the service quality & delivery of mobile banking services provided to their customers. Finally, the finding implies that banks should also provide an adequate set of security components of mobile banking like two-factor authentication or the use of fingerprints, which helps to protect customers' bank details from fraud.

Suggestions for Further Research

In general, the findings of this study offer additional insights into the effect of mobile banking service quality on customer retention. This study included only five factors, there could be some other relevant factors that may be perceived as important by customers, but those were excluded from this study. Secondly, targeting only commercial banks could not adequately represent the population of customers in the banking industry in Nigeria. Therefore, it necessitates conducting further research by incorporating other banks like mortgage banks, microfinance banks etc. located in the country.

Future research, Furthermore, can survey the feedback of bank staff and management towards customer retention. Therefore, future researchers could expand their analysis by incorporating bank staff and management in examining the factors affecting customer retention.

References

Appannan, S., Doraisamy, B., & Hui, T. X. (2013). Customer Perception of Service Quality of Commercial Banks: A case study in Penang, Malaysia. *Academic Research International, 4(5)*.

Ahmad, R., & Buttle, F. (2001). Customer retention: A potentially potent marketing management strategy. *Journal of Strategic Marketing, 9(1), 29–45*.

Auniel, E. &. Obino (2018). Factors Affecting Customer Retention in Commercial Banks in Tanzania; A Case of Azania Bank Arusha. *International journal of scientific research and management, 6 (4)*.

Bowen, J. T., & Chen McCain, S. L. (2015). Transitioning loyalty programs: a commentary on "the relationship between customer loyalty and customer satisfaction". *International Journal of Contemporary Hospitality Management, 27(3), 415–430*

Caruana, A., & Malta, M. (2002). Service Loyalty the Effect of Service Quality and the Mediating role of customer satisfaction. *European Journal of Marketing, 36 (7), 811-828.*

Cronin, J., & Taylor, A. (1992). Measuring service quality: A re-examination and extension. *Journal of Marketing, 56, p 55-68.*

Daniel, W.S. (2016). *Effects of service quality on customer retention among commercial banks in Kenya.*

DeLone, W.H. & McLean, E.R. (1992). "*Information systems success: The quest for the dependent variable." Information Systems Research, 3 (1),60-95*.

Flambard-Ruaud, S. (2005). Relationship marketing in emerging economies: some lessons for the future. *Vikalpa, 30(3), 53–64.*

Folarin, Tolulope & Hassan, Z. (2015). Effects of technology on customer retention: a study on tesco malaysia. *International Journal of Accounting and Business Management. 4. 16-38.*

Li, Y. & Yeh, Y. (2010), "Increasing Trust in Mobile Commerce through Design." Aesthetics, *Computers in Human Behavior. 26 (4), 673-684*

Lin, H.F. (2011). An empirical investigation of mobile banking adoption: The effect of innovation attributes and knowledge-based trust. *International Journal of Information Management, 31(3), 252–260.*

Luarn, P. & Lin, H.H (2015). "Toward an understanding of the behavioral intention to use mobile banking," *Computers and Human Behaviour, 1(21), 73-91.*

Mbithi, W.N., (2013). Challenges of Customer Retention in the Kenyan Banking Sector: A case study of KCB Treasury Square Branch, Mombasa. *International journal of science: basic and applied research.*

Mukhlis, Y. (2014). "Diffusion of innovation, consumer attitudes and intentions to use mobile banking". *Information and Knowledge Management, 4(10), 12-18.*

Oladejo, M.O. & Yinus, O. (2013). Does mobile banking influence service delivery? An Empirical Investigation of the Nigerian Money Deposit Banks. *Journal of Management and corporate governance, 5(1), 50-69.*

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). Scales for measuring service quality: A comparatives assessment based on psychometric and diagnostic criteria. *Journal of Retailing, 70 (3), 201 – 230.*

Petter, S., DeLone, W. & McLean, E. (2008). Measuring information systems success: models, dimensions, measures, and interrelationships. *European Journal of Information Systems,17(3),236–263. DOI: 10.1057/ejis.2008.15*

Petter, W. DeLone, & McLean. (2013). Information systems success: The quest for the independent variables. *Journal of Management Information Systems, 29(4), 7–62. DOI: 10.2753/MIS0742-1222290401*

Rai, A., Lang, S. S. & Welker, R. B. (2002). Assessing the validity of IS success models: An Empirical test and theoretical analysis. *Information system research, 13(1), 29-34.*

Riquelme, H.E. & Rios, R.E. (2010) The Moderating Effect of Gender in the Adoption of Mobile Banking. *The International Journal of Bank Marketing, 28, 328-341. http://dx.doi.org/10.1108/02652321011064872*

Rootman, C. & Sharp, G. (2010). An international comparative study on the relationship marketing and customer retention of retail banks: lessons for South Africa.

Safeena, R., Date, H., Kammani, A., & Hundewale, N., (2012). Technology adoption and Indian consumers: Study on mobile banking. *International Journal of Computer Theory and Engineering 4(6), 1020 – 1024.*

Samsudin, W, Zahari, A, Al-Momani. K & Mohammed, N.A., (2011). The influence of perceived privacy on customer loyalty in mobile phone services: An Empirical Research in Jordan. *International journal of trade, economics and finance.*

Shaikh, A.A., (2013). Mobile banking adoption issues in Pakistan and challenges ahead. *Journal of the Institute of Bankers Pakistan 80(3), 12 – 15.*

Zhang, L. & Liu. Q (2012). A meta-analysis of mobile commerce adoption and the moderating effect of culture. *Computers in Human Behavior, 28 (5), 24-36*