Perceived Quality and Customer Satisfaction of E-banking Account Holders in Commercial Banks in Nairobi City County, Kenya

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Abstract: **Customer satisfaction in e-banking in Kenya has been on the decline despite scholarly research contributions. In 2015 customer satisfaction in e-banking was approximately at 64%, in 2016 trust was at 78% with only 13% reporting an experience with some form of online fraud attempts while using e-banking platforms. Unfortunately, in 2017 satisfaction in e-banking dropped to 50% and trust to 66.7% while in 2020 satisfaction in e-banking was a meagre 33%. The study aimed at establishing the effect of perceived quality on customer satisfaction of e-banking account holders of commercial banks in Nairobi City, Kenya. The five areas where this was tested were: expectation of superior quality; consistency of quality of e-banking services; the excellence of e-banking features on bank platforms; performance of one's bank's e-banking features in the industry and finally comparison with other banks e-banking platforms on performance, customer service and safety. The research design used in this study was descriptive and explanatory. Explanatory research design allowed for examination of causal relationships, while descriptive allowed comparisons of study variable's response by the study population. The study context was Nairobi County which has 564 bank brand branches, allowing access to variety of customer demographics and all bank tiers. The target population was 66,315,699 with Nairobi accounting for 40% hence 26,040,000 account holders from commercial banks in Nairobi. Sampling took the form of stratified, disproportionate stratified and random sampling techniques. A sample of 400 respondents was selected. Primary data was used and collected using questionnaires disseminated using google forms with questions on a 5 point Likert scale. The relationship between perceived quality and customer satisfaction of e-banking account holders in commercial banks in Nairobi City County, was found to be statistically significant at 5% significance level. The expectation of superior quality from the bank; having excellent features on the e-banking platform and the evaluation of e-banking platforms in terms of performance, customer service safety when compared to other banks were all found to be statistically significant to customer satisfaction.**

Keywords: **perceived quality, customer satisfaction, e-banking.**

1. INTRODUCTION

In this age of internet access and high speed bandwidth, most things have become automated and connected to the internet including banking services. Electronic banking is the means through which banks can conveniently connect with customers and straight forwardly prepare, manage and control all financial transactions using different distribution channels (Maitlo, Kazi , Khaskheley , & Shaikh , 2015).These channels can include internet banking and mobile banking. There has been uptake of online banking in various countries over the years. In Great Britain, it is estimated that the use of online banking has increased to 90% in 2022 up from 33% in 2007 indicating that online banking has become integrated in society (Statista, 2022). In the United States, 65.3% of the population uses digital banking as of 2022 up from 61% in 2018 (Statista , 2022).

E-banking is popular in many African countries especially because of the use of mobile money transactions. Mobile banking allows people to access their bank accounts from their phones, make payments for goods and services and also access loans. In West Africa, about 70% of the adult population has access to mobile banking services. In Benin there are 74.5% adults with access to mobile banking while Togo has 71.9% and Cote d'Ivorie has 70.45% of adults with access to mobile banking (Sasu, 2022).

Africa is ranked as one of the most underbanked regions in the world and yet it has a large share of digital banking transactions. In 2019 alone, there were 200 million users of mobile banking in sub-Saharan Africa and MENA (Middle East and North Africa) who made transactions of $24.46 billion accounting for about 65% of all mobile money transactions made worldwide. In Kenya, mobile banking is a big industry that is powered by M-pesa owned by Vodafone and Safaricom. M-Pesa reached 41.5 million users in 2020 in a country of 47 million people and thus covering about 89% of the country's population. M-pesa transactions also involve access to bank accounts through the M-Pesa menu for various commercial banks. Transactions to and from banks can be made via M-pesa (Statista, 2022).

With the growing popularity of e-banking services, there has been need to ensure that customer satisfaction is met. A study conducted in Malacca, Malaysia indicated that even though there are many e-banking services offered in the country, few bank customers are willing to use various e-banking services because they are yet to meet customer satisfaction requirements. Customers identified various factors such as web design, service quality of banks, privacy, security, speed of transactions and convenience among others as the reasons as to why they are unwilling to use online banking services (Ling & Huat, 2016).

In Pakistan, there has been a rise in the number of people who have adopted e-banking but the numbers are still below what is expected because of various factors. Inferior service quality and customer dissatisfaction have been identified as the main causes for the slow uptake of e-banking in the country. However, an improvement in service quality was found to have a significant positive impact on customer satisfaction which in turn was found to influence customer loyalty (Raza, Umer, Qureshi, & Dahri, 2020). A similar situation is also observed in Vietnam where although e-banking has been implemented for a long time, there are few users and also low awareness of the services. Factors such as convenience, speed, security and ease of use among others are identified as reasons why uptake of e-banking services has been low and have also been identified as reason for customer dissatisfaction. Improvement of these factors as well as improvement of quality of service have also been identified as significant to customer satisfaction in the e-banking system (Nguyen & Tran, 2020).

Thus the perceived quality of services in e-banking is believed to play a role in the uptake of e-banking. This is determined by a number of factors from security, privacy, transaction speed and many more. Perceived brand quality is the already thought out; imagined quality of a brand by a consumer as such is subjective (Aaker, 1991). It is a customers' perception on a brands product's performance that is different from actual objective quality and performance, (Tang & Hawley, 2009). Perceived quality is an indicator of customer satisfaction and influences purchase intentions positively as it differentiates brands in markets (Huang & Sarigoellue , 2012). Perceived quality is conceptualized as: tangibility, reliability, responsiveness, assurance and empathy. Tangibility, responsiveness and reliability positively affect brand loyalty as a dimension of customer based brand equity while assurance and empathy positively affect brand image as a brand association dimension (Kayaman & Arasli, 2007).

A study was conducted in Kenya on the effect of perceived quality on electronic banking. Research findings indicated that: flexibility, ease of use and customization of services were major predictors for internet banking and its customer satisfaction, convenience a major predictor for mobile banking and its customer satisfaction. Use of debit and credit cards had moderate effect on customer satisfaction. This study limitation is that a deserved two-way analysis that compares use of e- banking and ordinary banking was not provided and it only focused on first tier banks as thus disallows generalization of findings (Simon & Thomas, 2016).

Kenyan banks provide e-banking services. With the popularity of mobile banking, it is likely that almost all people who have a bank account have used some form of online banking. However, other online banking services are not very popular in the country and it is estimated that more than half of those who use e-banking services do not become active users (Waititu, 2019). This is attributed to negative customer perceptions of e-banking services because of a quality gap between promises made by the banks and the actual services provided (Maranga, 2017). Further, there is a lot of uncertainty around the security of online banking transactions and fear that the services will be risky. As such, many customers are torn between the convenience provided by e-banking services and the possible security risks resulting in many people preferring to use traditional banking services (Waititu, 2019).

Thus it is clear that the perceived quality of transactions is of interest to customers and that it determines whether they actually use e-banking services or not. Therefore, this study sought to assess the effect of perceived quality on customer satisfaction of commercial banks account holders of e-banking in Nairobi County, Kenya.

2. STATEMENT OF THE PROBLEM

There is a service quality gap in the e-banking systems. A study by (Maranga, 2017) identified that banks did not deliver on the quality that they promised to customers on the platforms which leads to distrust in customers. Other studies have also indicated that there are quality gaps in the ease of use of e-banking systems, poor design and navigation of websites as well as lack of support from the banks when one is unable to complete a transaction (Waithaka & Nzeveka, 2015).

A 2015 study showed that approximately 62% of users of e-banking services in commercial banks in Kenya were satisfied with service performance, 55.7% were satisfied with efficiency and about 40% were satisfied with the characteristics of the websites. Only 32% indicated that they were satisfied with the ability to get support or assistance from banks when unable to complete an online transaction (Mayaka, 2015). Similarly, another 2015 study also indicated that there was a 60% overall level of satisfaction with e-banking services in Kenya (Kombo, 2015).

A different study in 2020 indicated that only 50% of e-banking users were satisfied with the services (Mwangi, 2020) indicating that the level of satisfaction in e-banking services have decreased. The same study however found that 47.2% of e-banking services users were satisfied with the level of assistance that they get from banks when unable to complete transactions online. Only 30.6% of e-banking customers were satisfied with the cost effectiveness of the e-banking services (Mwangi, 2020).

A study in 2016 showed that only 78% of e-banking users in Kenya trusted the services and 13% indicated that they had experienced some form of online fraud attempts while using e-banking platforms (Kombo, Korau, & Belas , 2016). In 2020, the percentage of e-banking users who trust the services had dropped to 66.7% (Mwangi, 2020).

All these studies are indicative of the fact that there is a gap in the quality of services offered by banks on their e-banking platforms. This study seeks to investigate the relationship between perceived quality and customer satisfaction, to better understand how the variables interact and their resultant impact on customer satisfaction of e-banking customers in the Kenyan context.

3. OBJECTIVE OF THE STUDY

This study sought to assess the effect of perceived quality on customer satisfaction of commercial banks account holders of e-banking in Nairobi County, Kenya.

4. LITERATURE REVIEW

Empirical Review

A study in Qatar investigated the service quality of e-banking services on customer purchase intention with customer satisfaction as a mediator. The study has 235 respondents drawn from different banks in Qatar. the findings indicated that factors associated with service quality had a significant and positive impact on purchase intentions. The factors included reliability, efficiency, security, responsiveness and privacy. Customer purchase intention were found to significantly increase when there was high service quality. Customer satisfaction was found to be a mediator because service quality was found to have an impact on customer satisfaction. Thus, higher customer satisfaction led to higher purchase intention (Khatoon, Zhengliang, & Hussain , 2020).

Singh (2019) investigated the relationship between service quality of e-banking services and customer satisfaction in India. The study also aimed to investigate the critical factors that were important to service quality of e-banking services. There were 650 respondents from various banks in India. The study found that there were three critical factors to service quality of e-banking services namely: efficiency, responsiveness and perceived credibility. Responsiveness was found to be the most significant of the three but all three were significant to service quality. The service quality of e-banking services was found to be significant to customer satisfaction and any improvements made to any of the critical factors were found to subsequently increase customer satisfaction with e-banking services.

Amin, Onyeukwu, & Osuagwu (2018) conducted a study in Nigeria investigating service quality of e-banking services on customer satisfaction. The study had a total of 398 respondents from various banks in Nigeria who were interviewed or

filled out structured questionnaires. The findings showed that there was a positive and significant relationship between the quality of service of e-banking services and customer satisfaction. the study further found that e-banking had a positive impact on the improvement of quality of service in other traditional banking services in the Nigerian banking sector because e-banking had prompted improvements in efficiency and security of transactions.

Firdous & Farooqi (2017) conducted a study in New Delhi investigating impact of service quality of internet banking services on customer satisfaction. The study had 194 respondents who were users of internet banking services. The study findings showed that service quality dimensions of internet banking services had a positive and significant effect on customer satisfaction. The service quality dimensions that were found to be important to customer satisfaction were privacy, efficiency, fulfilment, availability and responsiveness. Together, they accounted for 70% of the satisfaction levels of customers with internet banking service quality.

Theoretical Review: Disconfirmation Paradigm Theory

The Disconfirmation Paradigm theory (DPT) was developed by (Oliver, 1980). DPT asserts that consumers compare a firms' offering with a standard that they themselves developed, as thus is subjective. The consumers' brand belief is based on how accurately it measures up to or exceeds this standard. The theory, presumes that customers purchase intention and decision is based on their motive, expectation and attitude. DPT is made up of four constructs; expectations, perceived performance, disconfirmation of beliefs, and satisfaction (Oliver, 1980). Figure 1 depict Disconfirmation Paradigm theory (DPT) by Oliver (1980).
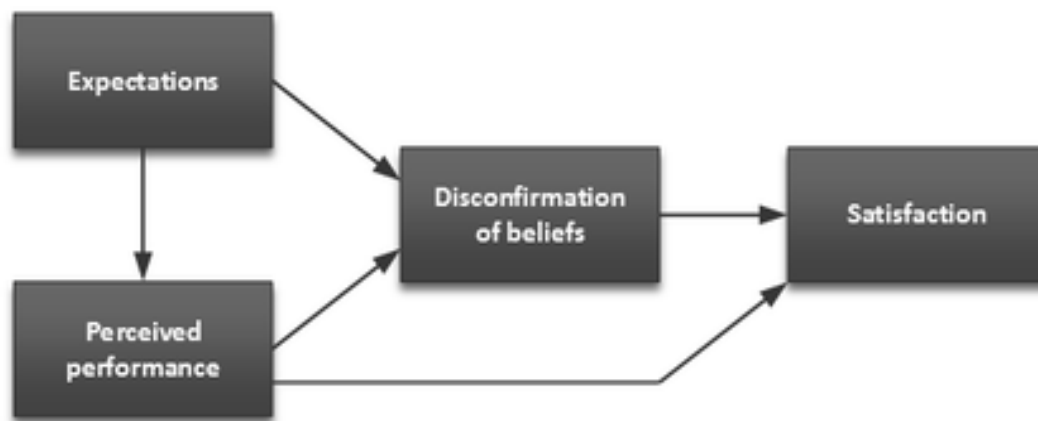

Figure 1: Disconfirmation paradigms Theory

Source: (Oliver, 1980)

Satisfaction is the degree to which a consumer is content with a product or brand post purchase. Satisfaction is directly dependent on pre-purchase disconfirmation of beliefs and perceived performance both mediated by consumer expectations (Bhattacherjee, 2001); (Oliver, 1980). DPT is limited in that, its main mediating construct expectations is more meaningful for tangible products pre-purchase not services that are intangible, the service quality construct of brand equity corrects this shortcoming in the proposed study. Further DPT ignores that the degree of disconfirmation beliefs is not based on a specific standard of consumer subjectiveness but is also based on personality disposition of a consumer such as perfectionist consumers will have high expectations than a scrappy consumer.

However, DPT is extensively used by scholars of satisfaction in e-services (Nevo & Furneau, 2009);(Wixom & Todd, 2005); (Mwencha, 2015). Disconfirmation of beliefs is the evaluation made on a brand or product post purchase against pre-purchase expectations, of which if actual performance of brand exceeds expectations it positive disconfirmation which enhances consumers brand satisfaction and if negative it enhances dissatisfaction. This is further ascertained by in electronic banking context by (Bhattacherjee, 2001).

DPT is relevant to this study in that usage or continued usage of e-banking is dependent on perceived and actual systems and information satisfaction. Expectations are the preconceived attributes that influence post purchase satisfaction as they form the basis of comparison between expectation and actual performance of an offering or brand. Perceived performance is as a result of pre-purchase expectation which impact disconfirmation of consumers brand beliefs and satisfaction post purchase.

5. RESEARCH METHODOLOGY

Research Design

This study is quantitative in nature and thus follows a descriptive and explanatory research design. Descriptive design allows for evaluation of the study phenomena without interfering with the variables. This means the researcher just facilitates data collection to investigate relationships between variables without altering causal relationships if any (Swanson & Holton, 2005). As such the proposed study will employ the descriptive design to establish if causal relationships exist between the study variables. Further explanatory research design allows for testing of study assumptions that are inferred from theory to examine causal relationships between the dependent and independent variable to determine significance or insignificance and to what degree (Saunders, Lewis, & Thornhill, 2009). Based on this, for purposes of hypothesis testing and ascertaining to what degree variables have a causal relationship and explain each other explanatory resign design will be adopted in the proposed research.

Target Population

The total e-banking account holder's stands at 65,100,000, while the total banking population is approximately 66,315,699 account holders from all commercial banks in Kenya, grouped as large, medium and small tier (Central Bank of Kenya, 2021). E-banking account holders, as such form 99.5% of commercial bank customers. Based on this, the population of the current study was assumed as 65,100,000 as a percentage of, point zero, zero five is negligible margin of error. The population was drawn from Nairobi city county, as it availed access to all consumer demographics variables, all 39 bank brands, 564 branches for all banks making up 40% of the total bank branches countrywide (Central Bank of Kenya, 2021). Based on this, the population for e-banking account holders in Nairobi was estimated at 40% of the total 65,100,000 which translates to 26,040,000.

Sample Size and Sampling Technique

A sample size of 400 was determined using Taro Yamane (1967) formula for calculating the sample size from a finite population.

$$n = N/(1 + N)(e)^2$$

Where: n is the sample size

N is the population size and;

e is the allowed margin of error = 0.05 hence N=26,400,000

$$n = \frac{26,400.000}{(1+26,400,000)(0.05)^2} = 400$$

Data Collection Instrument

A structured questionnaire was used to collect primary data. A five point likert rating scale was used for both the independent variables and for customer satisfaction. This scale which has equal intervals where objects were arranged according to their degree and values cannot be comparable (Malhotra, Hall, Shaw, & Oppenheim, 2002). Each scale item is modeled to be a reflective indicator of its hypothesized latent construct.

Data Collection Procedure

The researcher obtained authorization to conduct the proposed research from the National Council of Science, Technology and Innovation (NACOSTI). The researcher also obtained verbal consent to carry out the study from the management of the commercial banks, the officer in charge of education in Nairobi City County and authorization and consent to collect information from study respondents. The questionnaire was administered online to e-bank account holders.

Data Analysis and Presentation

Quantitative data was analyzed using both descriptive and inferential statistics in Statistical Package for Social Sciences (SPSS) version 20. Descriptive statistics included mean and standard deviation that was computed to provide respondents profiles and study variables.

Further the Pearson's Product Moment correlation (R^2) was computed to show the amount of variation in e-customer satisfaction (dependent variable) that is explained by independent variables. Simple and multiple linear regression analysis was carried out to establish the effect of independent variables on the dependent variable. This was based on the following formula.

$CS = \beta_0 + \beta_1 PQ + \varepsilon$

Where;

CS=Electronic customer satisfaction

PQ=Perceived quality

β_0= Beta Coefficient

ε= error term

More specifically the equation can be written as follows:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$**……………**

where:

y= Customer satisfaction

$\beta_{1, 2, 3, 4}$ are the coefficients of the variation for perceived quality.

X_1= superior quality

X_2 = Consistency

X_3 =Excellent e-banking features

X_4 = best performing e-banking features

X_5= Better customer service quality than other banks

ε_1 is the error term of 0.05

6. RESULTS

Response rate

Data was collected using google forms. There was a target population of 400 respondents. There were a total of 251 responses but only 247 of the questionnaires were adequately filled. The remaining were not filled after the question on whether they had bank accounts where all four indicated they did not have said accounts. They were thus excluded from the analysis. The response rate was thus 61.8%. This response rate is considered to be good (Mugenda & Mugenda, 2009). The response rate is shown in table 1.

Table 1: Response rate

Respondents	Number	Percentage
Targeted respondents	400	100%
Total number of responses included in the study	247	61.8%
Questionnaires omitted	4	1%
Actual respondents	251	62.8%
Response rate included in study		**61.8%**

Source: Survey Data (2023)

Demographic Information

Demographic information on age, level of education and monthly income were collected from the respondents.

Most of the respondents (45.3%) were aged between 18-26 years followed by those who were between 27-35 years (30.8%). Respondents aged 36-44 made up 20.2% of the respondents and those between 45-53 years were 3.6%. There were no respondents in the age categories 54-63 years and above 63 years.

Majority (68%) of the respondents had a bachelor's degree followed by 20.6% of respondents who had a master's degree. 5.3% of the respondents had professional certificates and 3.2% had doctorate level degrees. Only 2.8% of respondents had a High School certificate and none of the respondents had a diploma.

Most of the respondents (42.1%) indicated that they had a monthly income of below KSH. 24,999 followed by 24.3% who indicated that their income was KSH. 125,000 and above. This was followed by 17% who indicated that they earned between KSH 25,000-49,999. The monthly income range of KSH 75,000-99,999 had the least respondents with 3.6% of respondents. The demographic information is indicated in table 2.

Table 2: Demographic Information

Variable	Frequency	Percentage
Age		
18-26	112	45.3%
27-35	76	30.8%
36-44	50	20.2%
45-53	9	3.6%
54-63	0	-
Above 63 years	0	-
Total	**247**	**100%**
Level of education		
High school certificate	7	2.8%
Diploma	0	-
Bachelor's degree	168	68%
Master's degree	51	20.6%
Doctorate	8	3.2%
Professional	13	5.3%
Total	**247**	**100%**
Monthly Income		
Below KSH. 24,999	104	42.1%
KSH. 25,000-49,999	42	17%
KSH. 50,000-74,999	12	4.9%
KSH. 75,000-99,999	9	3.6%
KSH. 100,000-124,999	20	8.1%
KSH. 125,000 and above	60	24.3%
Total	**247**	**100%**

Source: Survey Data (2023)

Information on whether they had bank accounts and subscribed to e-banking services were also asked as was the name of the bank that they belonged to. All the respondents indicated that they had bank accounts. Further, majority of the respondents (86.2%) indicated that they had subscribed to the e-banking services in their banks. Only 13.8% of respondents indicated that they had not subscribed to e-banking services. This information is presented in table 3.

Table 3: Bank Accounts and E-banking Subscriptions

Variable	Frequency	Percentage
Do You have a Bank Account		
Yes	247	100%
No	0	-
Total	**247**	**100%**
Do you subscribe to E-banking services		
Yes	213	86.2%
No	34	13.8%
Total	**247**	**100%**

Source: Survey Data (2023)

Descriptive Statistics

This study sought to determine the effect of perceived quality of e-banking services on customer satisfaction. To that end the measures used to investigate perceived quality included trust in the quality of services, consistency of quality of e-banking services, perception of the e-banking features and the customers' perception of the e-banking quality as compared to those of other banks in the industry. These variables were measured using a five point likert scale with a response of 1 being equivalent to strongly disagree and a response of 5 being strongly agree. The results are shown in table 4.

Table 4: Perceived quality

Variable	1	2	3	4	5	Mean	SD	SE
I expect superior quality from my bank brand	7 (2.8%)	-	24 (9.7%)	67 (27.1%)	149 (60.3%)	4.4	0.88	0.056
The e-banking services at my bank are of very good quality consistently	8 (3.2%)	9 (3.6%)	57 (23.1%)	123 (49.8%)	50 (20.2%)	3.8	0.91	0.049
My bank offers excellent e-banking features on their platform	8 (3.2%)	9 (3.6%)	57 (23.1%)	112 (45.3%)	61 (24.7%)	3.8	0.95	0.052
I think my bank's e-banking features are the best performing in the industry overall	24 (9.7%)	50 (20.2%)	74 (30%)	50 (20.2%)	49 (19.8%)	3.2	1.25	0.078
My bank is better in comparison to others in performance, customer service and safety	-	41 (16.5%)	74 (30%)	74 (30%)	58 (23.5%)	3.6	1.02	0.064
Overall/aggregate Mean and SD						**3.76**	**1.00**	

*Standard error is a measure of reliability and the smaller the Se the more reliable the results (Kothari, 2004).

Source: Survey Data (2023)

The first statement on the expectance of superior quality from e-banking services had a majority (60.3%) of respondents who strongly agreed that they trusted their banks e-banking quality. This was followed by 27.1% who agreed that they trusted the quality of their banks e-banking services. Together these accounted for 87.4% of the responses indicating that many respondents trusted the quality of e-banking in their banks. In the second statement, 49.8% of the respondents agreed that the e-banking services at their banks were consistently of good quality. This was followed by 23.1% who were neutral on the matter and 20.2% who strongly agreed. In the third statement on the perceived excellence of e-banking features, most of the respondents (45.3%) agreed that their banks had excellent features. This was followed by 24.7 who strongly agreed that the features were excellent and 23.1% who were neutral. In the fourth statement on perception of performance in the context of industry, most respondents (30%) were neutral on the matter. The results in this variable were very varied with 20.2% of respondents disagreeing, 20.2% agreeing and 19.8% strongly agreeing. In the fifth statement on their banks being better in comparison to other banks, most of the respondents were either neutral or agreed with the statement. Both had 30% of respondents. This was followed by 23.5% who strongly agreed with the statement.

The highest mean was 4.4 for the first statement on expecting superior quality of e-banking services. This indicates that most of the responses were agreed or strongly agreed. The SD was 0.88 indicating that there was not much variation in the responses given. The next two statements on consistency of quality and the perception of excellence in features had similar means of 3.8 and nearly similar standard deviations of 0.91 and 0.95 respectively. The means indicate that while many respondents agreed with the statements, many were also neutrals and the SDs indicate that the response were not very heavily varied. The statement on comparison of banks had a mean of 3.6 indicating that many respondents were either neutral or agreed with the statement. The standard deviation was 1.02 indicating that there was some deviation in the responses.

The lowest recorded mean was for the last statement that juxtaposed the performance of the e-banking platforms in respondents' banks against the industry. The mean was 3.2 indicating that most of the respondents were unsure on whether their banks had the best performing e-banking services. The SD was 1.25 indicating that the responses given for this statement were highly varied across all the points. The overall mean was 3.76 indicating that the responses for most of the statements fell in the neutral or agree categories and the standards deviation of 1.00 indicated that there was a lot of deviation in the responses. The SE also indicated that there was not much deviation in the responses except in the statement bon the banks being the best performing where the std. error was 0.078 which showed a lot of deviation in the responses.

The aggregate mean was 3.76 indicating that most of the responses were in the neutral and agreed categories indicating that perceived quality was important to customer satisfaction in e- banking. The low standard error values indicated sample reliability as such the perceived quality dimensions responses findings are population representative, as such can be generalized

The standard deviation was 1.00 indicating that there were some variations in the responses given by the respondents, this indicated variations of customer centered significant dimensions of perceived quality that banks should deliver to the varied customer groupings they serve. These findings variations are reflective of Singh (2019), who investigated whether service quality was significant to e-banking services and customer satisfaction in India. The study found that there were three critical factors to service quality of e-banking services namely: efficiency, responsiveness and perceived credibility. Responsiveness was found to be the highest predictor of the three but all three were significant to service quality. Firdous & Farooqi (2017) who conducted a study in New Delhi that examined the function of service quality of internet banking services on customer satisfaction and found out that service quality dimensions (privacy, efficiency, fulfilment, availability and responsiveness) of internet banking services had a favourable and significant influence on customer satisfaction. This hints at perceived quality dimensions been customer segment specific, hence the variations in the dimensions that were important to customer groupings, but in general it points to a consensus that perceived quality is a predictor of customer satisfaction.

Customer Satisfaction

The study also sought to measure the levels of customer satisfaction that customers experienced with their banks and e-banking services. This was also measured using a number of statements on a five point Likert scale of one to five with one being strongly disagree and five being strongly agree. The results are indicated in Table 5.

Table 5: *Customer satisfaction*

Variable	1	2	3	4	5	Mean	SD	SE
I am satisfied with the e-banking information and services on the bank website	-	25 (10.1%)	65 (26.3%)	83 (33.6%)	74 (30%)	3.83	0.97	0.059
My e-banking queries are sufficiently answered as such I will strongly recommend others to use	-	33 (13.4%)	90 (36.4%)	66 (26.7%)	58 (23.5%)	3.60	0.99	0.065
My bank provides precise sufficient information on costs incurred when using e-banking prior to confirming a transaction	24 (9.7%)	17 (6.9%)	25 (10.1%)	107 (43.3%)	74 (30%)	3.77	1.23	0.073
My e-banking platform processes accurate data and generates right format reports	-	-	74 (30%)	91 (36.8%)	82 (33.2%)	4.03	0.80	0.051

My e-banking platform is user friendly and gives timely response to agreed communication channels linked to my account	8 (3.2%)	25 (9.7%)	58 (23.5%)	83 (33.6%)	74 (30%)	3.77	1.08	0.070
I feel assured that technological structures such as firewall and encryption on the e-banking platforms make it safe for me to conduct banking transactions there	8 (3.2%)	25 (10.1%)	74 (30%)	73 (29.6%)	67 (27.1%)	3.67	1.08	0.068
I will continue to use e-banking services in the future	8 (3.2%)	24 (9.7%)	26 (10.5%)	73 (29.6%)	116 (47%)	4.07	1.12	0.074
I consider myself loyal to my bank	8 (3.2%)	16 (6.5%)	91 (36.8%)	91 (36.8%)	41 (16.6%)	3.57	0.95	0.054
In the future if I want another e-banking account my current bank will be my first choice	41 (16.6%)	32 (13%)	90 (36.4%)	42 (17%)	42 (17%)	3.05	1.28	0.081
I would love to recommend my bank to family and friends	16 (6.5%)	41 (16.6%)	41 (16.6%)	107 (43.3%)	42 (17%)	3.47	1.15	0.069
I will use my bank e-banking services even if it increases the price of transactions	82 (33.2%)	33 (13.4%)	90 (36.4%)	17 (6.9%)	25 (10.1%)	2.47	1.29	0.085
I am satisfied by my choice of buying e-banking services from my bank	-	41 (16.6%)	81 (32.8%)	67 (27.1%)	58 (23.5%)	3.57	1.02	0.067
I am satisfied with the overall performance of e-banking services in my bank	8 (3.2%)	25 (10.1%)	72 (29.1%)	100 (40.5%)	42 (17%)	3.58	0.99	0.062
Overall Mean and SD						3.57	1.07	

*Standard error is a measure of reliability and the smaller the Se the more reliable the results (Kothari, 2004).

Source: Survey Data (2023)

In the first question on bank website information satisfaction, majority (63.6%) either agreed (33.6%) or strongly agreed (30%) that they were satisfied with the information on the websites. This was followed by 26.3% who were neutral on the same. In the second statement on sufficiency of e-banking queries answers, most of the respondents (36.4%) were neutral. This was followed by 26.7% who agreed and 23.5% who strongly agreed that their queries were sufficiently answered. In the third statement on sufficient information about costs of e-banking transactions, 43.3% of respondents agreed that they had sufficient information from the bank. This was followed by 30% who strongly agreed together accounting for 73.3% of the responses in the statement. In the fourth statement on accuracy of data and reports, there were only three responses in the neutral (30%), agree (36.8%) and strongly agree (33.2%) categories. Those who agreed and strongly agreed that the banks provided accurate data and timely reports on transactions accounted for 70% of the responses. The strongly disagree and disagree categories did not have responses.

In the fifth statement on user friendliness and timeliness of the e-banking, 63.6% of respondents agreed (33.6%) and strongly agreed (30%) that the e-banking services were user friendly and timely followed by 23.5% who were neutral on the matter. In the sixth statement on assurance of safety of transactions as it regards the technological structures, 30% of the respondents were neutral followed by 29.6% who agreed with the statement while 27.1% of respondents strongly agreed with the statement. In the seventh statement on continuation of use of e-banking, 47% of respondents strongly agreed that they will continue with e-banking followed by 29.6% who agreed. Together they accounted for 86.6% of the responses. In the eighth statement on loyalty to the bank, 36.8% of respondents were neutral and another 36.8% agreed that they were loyal to their current bank/s while 16.6% strongly agreed with it. In the ninth statement on whether the current bank would be the bank of choice in another e-banking account, 36.4% of respondents were neutral. 17% agreed with the statement and another 17% strongly agreed. 16.6% of responses strongly disagreed with the statement while 13% disagreed with the statement.

In the tenth statement on bank recommendations to others, 43.3% of respondents agreed that they would recommend the bank services to family and friends while 17% strongly agreed. 16.6% of responses disagreed and another 16.6% were neutral on the matter. In the eleventh statement on continued usage of e-banking with increased prices, 36.4% of responses were neutral followed by 33.2% who strongly disagreed that they would continue using the e-banking if the prices went up. In the twelfth question on satisfaction with the e-banking services from their respective banks, 32.8% of respondents were neutral followed by 27.1% who agreed with the statement and 23.5% who strongly agreed that they were satisfied. In the last statement on satisfaction with overall performance of the e-banking in respective banks, 40.5% of respondents agreed that they were satisfied with the performance followed by 29.1% who were neutral and 17% who strongly agreed.

The highest mean was 4.07 for the statement on continuation of use of e-banking services in the future. This indicates that most of the responses were in the agree and strongly agree category. The SD however was high at 1.12 indicating that there was a lot of variation in the responses to the question indicated by the fact that there were a lot of responses in the three other categories. The second highest mean was 4.03 for the statement on accuracy of data and reports indicating that most of the responses were in the agree and strongly agree categories.

The SD was 0.80 indicating that there was not much variation in the responses in this statement. In fact, all the responses for this question were only in the neutral, agree and strongly agreed categories thus they did not deviate much. The lowest mean was 2.47 for the statement on whether respondent would continue in the same bank if prices were raised. Even though most of the responses were in the neutral category, the second highest set of responses were in the strongly disagree category hence the low mean. Further, the SD was 1.29 indicating this highly varied set of responses for the question. The second lowest mean was 3.05 for the statement on whether the current bank would be the first choice for future e-banking, most of the responses fell in the neutral category while the other categories had almost similar number of responses. The SD was 1.28 because of all the variation observed in the question. The SE in some of the questions where the SD was high were also high indicating that there was a lot of deviation in the responses given in some of the questions.

The overall was 3.57 pointing to moderate satisfaction among e-banking customers and the significance of brand equity in customer satisfaction. This indicates that most of the responses for all the questions were mostly in the neutral category and some in the agreed category. The SD of 1.07 indicated that the responses for all the questions were quite varied an indicator to the broad spectrum and to what customer satisfaction entails in e- banking as per the varied customer groups served by the banks. This means the banks have to deliver varied significant value in brand equity dimensions, to varied customer bases, satisfied by varied significant dimensions as per the tool of the data collection tool of the study. The low to moderate standard error values indicated sample reliability because of the complexity of the customer satisfaction variable that was dependent on trust, customer demographics and brand equity, as such the customer satisfaction dimensions responses findings are population representative, as such can be generalized.

Multiple Regression

Multiple linear regression was also carried out for perceived quality and customer satisfaction using the variables from perceived quality as the independent variables. The results are indicated in Table 6.

Table 6: Perceived quality and Customer satisfaction

Perceived Quality and Customer Satisfaction			
Model Summary: R=0.641 R squared= 0.411 Adjusted R Squared= 0.399 Std. error estimate=0.753			
ANOVA: F=33.678 sig=0.000			
Independent variables	**Coefficients**	**t-statistic**	**p-value**
Constant	0.241	0.734	0.464
I expect superior quality from my bank	0.271	4.261	0.000
e-banking services consistently good quality	0.028	0.293	0.770
Excellent e-banking features on platform	0.344	3.742	0.000
e-banking features are best performing in industry	-0.050	-0.697	0.486
Better in comparison to others in performance, customer service and safety	0.312	3.818	0.000

Source: Survey data, (2023)

The value of adjusted R squared indicated that 39.9% of the changes observed in customer satisfaction were as a result of perceived quality. The F value (33.678) and sig (0.000) indicated that model was sufficient and adequate meaning that perceived quality was a factor in customer satisfaction. The variables expectation of superior quality from the bank, excellent e-banking features on the platform and the bank being better in comparison to other banks were significant to customer satisfaction. While holding all other factors at a constant, a unit increase in superior quality would result in a 0.271 increase in customer satisfaction while a unit improvement in excellence of e-banking features would result in a 0.344 increase in customer satisfaction. Further, a unit increase in better performance, customer service and safety while compared to other banks would result in a 0.312 increase in customer satisfaction. E-banking services being consistently good quality and having e-banking features that are best performing in the industry were not found to be significant to customer satisfaction. The constant was not significant in this model indicating that perceived quality by itself could influence customer satisfaction on its own. The equation for perceived quality and customer satisfaction can be rewritten in this way:

$$y=0.271x_1+0.344x_3+0.312x_5$$

7. DISCUSSION

Most of the respondents in the study were young people aged between 18-35 years. Those from 18-26 and those from 27-35 together accounted for 76.1% of the respondents. This is representative of the youthful population in the country. According to the last census, about 80% of the country is made up of people below the age of 35 which would explain why most of the respondents in the study were young people (Kenya National Bureau of Sta tistics, 2019). 86.2% of the respondents indicated that they had e-banking accounts. This is in agreement with previous findings that showed Kenya has about 89% of e-banking users who accessed their bank accounts through mobile phones and websites (Statista, 2022).

The responses indicated that most of the respondents perceived that their banks provided quality services. Many respondents were also neutral on the issue and were not sure if the quality was superior. Most of the respondents fell in the categories neutral and agree for all the statements as indicated by the overall mean of 3.76. This is to be expected as customers generally bank with banks whose services they trust. Customers generally bank in banks where they know their money and their data is also safe and this is especially important in e-banking which this study was testing (McIntyre, 2019). This would explain why most of the respondents seemed to have some form of trust in their banks. According to the Kenya Bankers Association, Kenyan banks have consistently improved their quality with service excellence increasing from 82.7% in 2019 to 96.2% in 2021. This might be why many respondents agreed that the quality of their banks was good (Kenya Bankers Association, 2023).

The multiple regression output showed that perceived quality was a factor in customer satisfaction. This was in agreement with findings by Singh (2019) which indicated that service quality was important to customer satisfaction.

8. CONCLUSION

The measures used to investigate perceived quality included; trust in the quality of services, consistency of quality of e-banking services, perception of the e-banking features and the customers' perception of the e-banking quality as compared to those of other banks in the industry. These variables were measured using a five point Likert scale with a response of 1 being equivalent to strongly disagree and a response of 5 being strongly agree. Descriptive statistics analysis generated an aggregate mean of 3.76 which indicated that most of the responses were in the neutral and agreed categories. The standard deviation was 1.00, indicative of some variations in the responses given by the respondents, this is because perceived quality is highly subjective to customer value sought. However, inferential statistics analysis indicated that 15% of the changes observed in customer satisfaction were as a result of perceived quality. The F value (218.011) and sig (0.000) indicated that perceived quality is a predictor of customer satisfaction. The study thus established that perceived quality was significant on customer satisfaction of e-banking account holders in commercial banks in Nairobi City County, Kenya.

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