Research Article

e-Banking and Customer Satisfaction in Commercial Banks: A Case of Centenary Bank Main Branch-Mapeera House of Uganda

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Abstract: This study aimed to investigate the correlation between electronic banking (e-banking) and customer satisfaction within Centenary Banks. Employing a cross-sectional survey design, the research involved 85 participants, from whom a sample of 70 was selected. Data collection was facilitated through a self-administered questionnaire. Rigorous data processing and analysis, utilizing relevant statistical software packages, were applied to evaluate the relationships explored in the study. The results demonstrated positive and significant associations between e-banking and customer satisfaction. Moreover, the findings indicated that the model could only account for a 24.4% variance in service quality. In summary, the study affirmed that independent variables such as e-banking, networking, and customer perceptions regarding service value were crucial predictors of service quality in Centenary Bank. Based on the conclusions drawn, the study recommends expanding the investigation to encompass factors not initially included in the model for a more comprehensive understanding of service quality at Centenary Bank. Additionally, it suggests that Centenary Bank's management place significant emphasis on e-banking and networking to enhance overall service delivery. Furthermore, the recommendation extends to conducting a longitudinal study to unveil the evolving nature of the subject. Finally, the model proposed in this study should be applied to explore sectors beyond the financial domain.

Keywords: Centenary, e-Banking, Finance.



1. Introduction

Centenary bank was founded in 1983 as a credit Trust, Centenary Rural Development Trust (CRDT), by Simeon Lutaakome, Hugh Francis Pulle, Paul Kateregga, Vicent Kirabo Kya Maria, Emmanuel Mpande and John Ogutu. In 1983, CRDT began to provide financial services to the public. The bank became a fully licensed commercial bank in 1993 after receiving a license from the bank of Uganda. As of May 2016, centenary bank, branches alone, centenary bank was arguably the fastest growing bank in 2008. Not only did the Catholic Church owned bank open five new branches in 2008, it also started building its new eight-storey headquarters on Kampala Road. Mapeera complex, as it is to be called, is due for completion in 2010, having been financed by the bank's own resources. Started in 1983 as a credit trust, Centenary Rural Development Bank (CERUDEB), as it was later to be called, has since grown into perhaps the biggest indigenous bank with 680,000 customers, 32 branches and 51 ATMS outlets.

In today's world, customers have very high demands for the financial services organizations are trying to become more customer-focused [1]. Therefore, for Centenary bank to gain customer satisfaction through E-banking, it should focus not only on acquiring new customers but also on the retention of existing customers [2]. E-banking is defined as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels. E-banking includes the systems that enable financial institution customers, individuals or businesses to access accounts, transact business, or obtain information on financial products and services through a public or private network, including the Internet. Customers access e-banking services using an intelligent electronic device, such as a personal computer (PC), personal digital assistant (PDA), Kiosk, or Touch Tone telephone. Sharma and Patterson, (1999) assert that effective communication plays a central role in impacting customers' perceptions regarding both technical and functional quality and service value.

2. Literature Review

Electronic banking has experienced explosive growth and has transformed traditional practices in banking [3]. According to [4], E banking has become an important channel to sell the products and services and is perceived to be necessity in order to stay profitable. A perception is formed as a result of interpreting the experience. There is a growing interest in understanding the users' experience [5], as it is observed as a larger concept than user satisfaction. From this perspective, assessing the user experience is essential for many technology products and services [6]. According to [7], noted that the challenge to expand and maintain banking market share has influenced centenary bank to invest more in making better use of the Internet. They suggest that the banks that fail to respond to the emergence of e-banking in the market are likely to lose customers and that the cost of offering e-banking services is less than the cost of keeping branch banking.

According to [8] the introduction of E-banking services may change crucially the way centenary bank builds and maintains its customer relationships. The increased use of the Internet in the future will increase the expectations and perceptions of customers, thus increasing customer satisfaction. In addition, delivering high quality services is a way centenary bank manages to improve its customer relationships. Delivering high quality services is a prerequisite for achieving customer satisfaction and only through customer satisfaction can centenary bank gain more and loyal customers [9]. Because of the highly undifferentiated products and services that financial organizations, and specifically centenary bank offers, customer satisfaction becomes main tool for competing in today's banking marketplace [10] [11].

In general, because of the higher profits and higher customer retention to which centenary bank leads, high-quality services and customer satisfaction are believed to provide centenary bank with competitive edge in the marketplace [12]. From the mentioned above, it becomes obvious that customer satisfaction is essential for surviving in the highly competitive banking environment [13]. This leads to the fact that a good understanding of the attributes that customers use to judge service quality is necessary in order for centenary bank to be able to monitor and enhance its service performance and improve its overall service quality. It is evident that centenary bank exhibits weaknesses in communication where the major medium of communication/ provision of information and handling customers' queries is through the helpdesk attendants who are in most cases overwhelmed by the number of customers and hence compromise the services of the bank. This explains the delays in addressing customer complaints which have greatly hindered the effective flow of information between the management of the bank and the customers which forced centenary to

adopt e-banking. The banks' embracement of e-banking and networking meant that there was going to be efficient and effective service delivery. For instance, all public servants' salaries are by law supposed to be paid through the Electronic Funds Transfer (EFT) which credits peoples' accounts within a day or two. But this has not been the case ever since the implementation of the EFT salary payment system. There are delays at the EFT file verification stage by the Bank of Uganda and where the files are authorized by BOU and still contain problems with particular accounts, all the people to be paid have to wait until the problem is cleared which takes long.

Despite the advancement of e-banking and customer satisfaction in the commercial banking sector, there still remain questions on whether this advancement will help to improve service quality in terms of delivery time, reliability, security, effectiveness and efficiency. Long queues, congested banking halls and various complaints in newspapers about poor services from the banks reveal evidence that there is a gap somewhere (The Daily Monitor dated March 22nd 2007). Additionally, various complaints in the customer suggestion boxes at the banks show that e-banking and networking are integral parts of the whole service delivery of the banks so as to cause efficiency and effectiveness during service delivery. In line with rendering quality and acceptable services, most banks in Uganda are gearing towards investing large sums of money in Information and Communication Technology. Centenary Bank, Stanbic Bank, DFCU Bank and other commercial banks of Uganda are at the forefront of the use of IT in rendering services to their customers. They also seek the challenges involved in e-banking and best industrial practices and the approach to implementing them in the Ugandan banking system. While the rapid development of information technology has made some banking tasks more efficient and cheaper, technological investments are taking a large share of bank's resources thus customer satisfaction. Banks need to manage the costs and risks associated with ebanking hence it is important that e-banking innovations are made through sound analysis of the risks and costs associated so as to avoid customer dissatisfaction in commercial banks. Customer satisfaction is directly related to the efficiency and effectiveness of e-banking but tight controls and standards are needed to prevent losses associated with e-banking. The banks have to balance these variables in order not to impair their overall prosperity. This is only possible if the use of e-banking in Centenary Bank is understood by customers, this has encouraged the researcher to carry out research on E-banking and customer satisfaction in commercial banks of Uganda using Centenary Bank's main branch as a case study.

This study sought to examine the relationship between e-banking and customer satisfaction in centenary banks.

Conceptual Framework

The conceptual framework was developed for the study of independent and dependent variables. The model shown in the figure below examines the relationship between e-banking, networking, customer satisfaction and service quality. E-banking plays a big role in connecting the service to the consumer in such a way that service quality is attained. According to [14], networking is positively related to perceived Value. Authors in [15] recognized a perceived value as independent contributors to service quality.



Figure 1. Conceptual Framework [14] [16]-[21]

3. Methodology

3.1. Research Design

This provided a detailed outline of how an investigation took place. It typically included how data was collected, what instruments were employed, how the instruments were used and the intended means for analyzing data collected [22]. Both qualitative and quantitative approaches were used. Case study

method was useful for trying to test theoretical models by using them in real world situations [23]. This method was preferred because it was an ideal method that eased the collection of information from the respondents at both individual and group levels. The researcher used cross sectional design and findings were displayed and described in table form with figures in percentage form.

3.2. Target Population

The population of the study comprised of 85 respondents from centenary bank that is operational in the banking sector. The target population of the study was from corporate and non-corporate customers, a bank manager and assistant manager, Head of IT and loans departments, and customer care staff were selected to constitute the respondents of the study basing on their frequency of the use of E-banking and networking.

3.3. Sample Size

Sometimes it is difficult to include the whole population in research therefore a researcher selected a portion from the population known as sample of 70 respondents to represent the entire population of the study. The Slovene's formula was used to come up with appropriate sample size to use in the study.

Slovene's Formula states that, given a population, the minimum sample size is given by (Equation 1):

$$n = \frac{N}{1 + N\alpha^2} \tag{1}$$

where, n= the sample size N=total population of respondents, that is 85 $\alpha=$ the level of significance, that is 0.05

$$n = \frac{85}{1+85(0.05)^2}$$

n = 70

A sample size of 70 respondents were used in the study.

3.3. Sampling Techniques

The researcher used both probability and non-probability sampling methods and in particular purposive or stratified sampling and simple random sampling were used to select sample population. In stratified sampling, the researcher divided the population of none and corporate customers into sub populations. Then simple random sampling was used to select a sample independently from each sub-population especially customers of centenary bank who are perceived to have information suitable for the study.

3.4. Data Collection Methods

Closed ended questionnaire was designed to suit the objectives of the study. The approved questionnaire was hand delivered to the respondents of centenary bank main branch by the researcher. The researcher designed a questionnaire on e-banking and customer satisfaction in centenary bank on 5point scale rating. Therefore, a 5 point Likert scale self-administered questionnaire comprising of statements and responses ranging from 1=Strongly Agree to 5=Strongly Disagree were formulated. Questionnaire was designed to capture all the aspects of the objectives of the study.

3.5. Interview Method

This is face to face interaction between the researcher and respondents where the researcher asked questions and recorded responses from respondents. This enabled the researcher to help respondents against confusing items or questions where respondents would not have understood a question (s) thereby obtaining relevant responses.

Customer satisfaction

Perceived value

3.6. Validity of Instrument

Validity of the instrument was obtained through the development of the scales with the help of the experts in the field using the Content Validity Index (CVI). This confirmed the dimensions of the concept that was operationally defined, to ensure appropriateness of results [24].

3.7. Reliability of Instrument

The reliability of the questionnaire was improved through pre-testing of pilot samples both from staff and clients. This enabled the re-phrasing of some questions. All alpha reliabilities (α) for all scales are expected to score above 0.5 so as to meet the acceptance standards for research according to [25].

Variable	Cronbach Alpha Value
E-Banking	0.62
Networking	0.80

 $\frac{0.84}{0.70}$

Table 1. Reliability Coefficients

Table 1 displays the reliability indices/coefficients for all constructs used in the study. All alpha reliabilities (α) for all scales were above 0.6, ranging from 0.62 to 0.84 therefore meeting acceptance standards for research [25].

3.8. Data Processing and Analysis

Data from the field was compiled, sorted, edited and coded to have the required quality, accuracy and completeness. Then entered into the computer using the Statistical Package for Social Sciences (SPSS v. 16.0) for analysis. The data was analyzed according to the research questions. Cross tabulations were used to describe sample characteristics; the Pearson Correlation coefficient was used to establish the relationship between the study variables. The regression analysis was used to establish the combined effect of study variables on independent and dependent variables.

3.9. Ethical Considerations

The respondents were protected by keeping the information given confidential and where there is a need to reveal, consent would first be sought and obtained. The questionnaire did not disclose the details of respondents for the issue of privacy and secrecy. After the collection of data, questionnaire was destroyed to avert leakage of information.

Limitations of the study, are:

- 1. Respondents withholding information due to fear of being victimized but however, the researcher convinced the respondents that the information would be kept.
- 2. Unwillingness of respondents to fill out the questionnaire. The researcher tried to be in constant touch with the respondents and made sure reminders could be sent to them to fill out the questionnaire.
- 3. Respondents have a view of not obtaining any direct benefit from the research results. The researcher tried his level best to convince the respondents to spare some little time to answer the questions.

4. Finding and Discussions

4.1. Finding

• Sample Characteristics

To present sample characteristics, frequency tabulations were used to indicate variations of respondents based on gender, level of education, tenure and age group. The sample characteristics were presented based on the responses from the respondents.

• Gender Distribution of the Respondents

Frequency tabulation was used by the researcher to present the gender distribution of the respondents. Table 2 presents the results.

		Frequency	Percent	Cumulative Percent
Valid	Male	30	42.9	42.9
	Female	40	57.1	100.0
	Total	70	100.0	

The gender responses of the respondents revealed that 42.9% were male whereas, 55.9% were female. From the results it is clear that the female were more responsive compared to their male counterparts.

• Level of Education Distribution of the Respondents

Frequency tabulation was used by the researcher to present the level of education distribution of the respondents and the results are presented in Table 3.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	University	48	68.6	68.6	68.6
	Secondary	10	14.3	14.3	82.9
	Tertiary	12	17.1	17.1	100
	Total	70	100.0		

Table 3. Level of Education

From the results in Table 3, the majority of the respondents had attained a university level of education (68.6%) whereas, the proportion of those who had attained a secondary level of education (14.3%) and those who had attained a tertiary level of education (17.1%).

• Level of Age Group Distribution of the Respondents

Frequency tabulation was used by the researcher to present the age group distribution of the respondents and Table 4 presents the results.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	25 & below	6	8.6	8.6	8.6
	26-35	18	25.7	25.7	34.3
	36-45	38	54.3	54.3	88.6
	46+	8	11.4	11.4	100
	Total	70	100.0		

Table 4. Age Group

According to the results in Table 4 above, 8.6% of the respondents were in the 25 years and below age group, 25.7% belonged to the 26-35 years' age group, 54.3% belonged to the 36-45 years' age group and 11.4% belonged to the 46 years and above age group. The results indicated that the majority of the respondents belonged to the 26-35 years' age group.

• Period Worked Distribution of the Respondents

Frequency tabulation was used by the researcher to present the tenure distribution of the respondents and Table 5 presents the results.

The results in Table 5 show that the bulk of the respondents had worked for the institutions for a period 4 years and above (71.4%), followed by those who had worked for a period ranging from 2-4 years (17.1%) and 11.4% had worked less than 2 years.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 2 yrs	8	11.4	11.4	11.4
	2-4 yrs	12	17.1	17.1	28.5
	Above 4yrs	50	71.4	71.4	100
	Total	70	100.0		

Table 5. People Worked for the Institution

• Factor Analysis

Factor analysis was done to extract factors that measured E-banking, Networking, perceived value and service quality using principle component analysis and varimax rotation methods.

	С	omponent	
	Perceived	Perceived	System
	Userunness	Ease of Use	Usage
Using E-banking will improve the quality of the work my bank does	.816	Ost	
Using E-banking will give my bank greater control over work schedules	.707		
E-banking will enable our bank to accomplish tasks more quickly.	.895		
E-banking will support critical aspects of staff jobs	.788		
Using E-banking will increase staff productivity	.620		
Using E-banking will improve my bank performance	.810		
Using E-banking will allow my bank to accomplish more work than would otherwise be possible.	.707		
Using E-banking will enhance my bank's overall effectiveness.	.806		
Using E-banking will make it easier to pay my utility bills.	.789		
Overall, I feel that E-banking will be useful in my life.	.770		
I find E-banking cumbersome to use		.836	
Learning to use E-banking functions and services will be easy for me.		.814	
Interaction with and use of E-banking will be difficult.		.746	
I find it easy to use E-banking to do what I want to do.		.622	
E-banking will be rigid to operate for the bank staff.		.820	
It will be easy for me to remember how to perform access what service I want using E-banking		.783	
Interacting with E-banking will require a lot of mental effort.		.788	
My interaction with E-banking will be clear and understandable		.773	
I feel that it will take a lot of effort to become skilful at using E-banking technologies.		.791	
Overall, I feel that the Mobile Phone- Commerce will be easy to use.		.881	
Each week. I use the bank systems in performing my job tasks.			.701
I have been using E-banking for a very long time now.			.899
I have sufficient knowledge on how to operate the functions of E-banking			.730
I really enjoy learning new E-banking functions.			.896
Generally, I give more E-banking advice to other people than I receive.			.710
I find E-banking extremely easy to use.			.770
I find it so easy to save and edit entries in using E-banking			.621
I do not need any help when E-banking.			.635
Eigen values	5.799	4.768	4.086
Variance %	27.793	21.201	19.866
Total	27,793	48,994	68.860

Table 6. Rotated Component Matrix for E-Banking

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization. a Rotation converged in 6 iterations.

Factors with Eigen values greater than 1 were extracted. Eigen values measured the amount of variation in the total sample accounted for by each factor. Kaiser criterion "The Kaiser Rule" is to drop all components with Eigen values under 1.0 and the Kaiser criterion is the default in SPSS and most computer programs [26].

Table 6 shows that, perceived usefulness, perceived ease of use and system usage components in the matrix are the true measures of E-banking in the given order. Total variance in E-banking explained by these components was 68.86%. This also serves a confirmatory test for the validity and reliability of the questionnaire as seen in chapter three.

	Com	onent
	Cohesion	Diversity
In our organization, networking serves as a transitional stage to help our organizations to become leaner,	.722	
Networking has helped our organization to become more innovative	.720	
Networking has helped our organization to become more responsive	.883	
Through networking, our organization is able to target and focus marketing approaches	.736	
One-on-one marketing strategies, through networking are custom-tailored, high-quality interactions between company and client.	.714	
Through networking we are able to seek out potential clients	.646	
Through networking we are able to reveal what clients are like	.679	
Through networking we are able to satisfy customer needs	.685	
Networking is attributed to changing the way the bank uses computers and sophisticated communication technology.	.653	
In our bank, the success of corporate strategies is dependent on data communication networks	.678	
In our bank, the success of corporate strategies is dependent on the value- added services networks provide.	.602	
Through networking our organization has been able to grow		.831
Through networking we are able to demonstrate how important customers are to the bank.		.801
In our bank, we support operations with lean, flexible networks		.799
Through networking we have been able to offer timely services to customers		.730
Through networking we have been able to offer services more cost- effectively		.696
Through networking we have been able to offer services in an integrated manner to make information available throughout the bank		.650
In our bank, we use networking techniques to eliminate routine tasks		.650
At the bank, networking aims at structuring the system's environment to optimal location.		.788
Networking has made a strong impact on our bank's use of information (communication) technology.		.670
Networking enables information systems and peripherals to be accessible by everyone in a cost-effective way.		.530
In our bank, advances in networking are making it easier and more practical for our bank to forge strategic marketing and information technology alliances.		.512
Eigen values	2.705	2.120
Variance %	24.593	29.271
Total	24 593	53 864

Table 7. Rotated Component Matrix for Networking

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization. a Rotation converged in 6 iterations.

Table 7 shows that, cohesion and diversity components in the matrix are the true measures of Networking in the given order. Total variance in Networking explained by these components was

53.9%. This also serves a confirmatory test for the validity and reliability of the questionnaires as seen in chapter three.

	Component	
	Acquisition	Transaction
Considering the quality of services offered by the bank, the salaries	.831	
they are paid could be appropriate.		
My bank values its customers	.801	
As a result of valuable service delivery by my bank, I am willing to	.799	
remain a customer of the bank		
Am likely to receive value for the services I pay for.		.730
My bank is always willing to offer its services for value		.696
Compared to the bank charges, the services the bank offers are of		.650
value.		
Beyond saying my bank offers valuable services.		.650
I value the relationship with my bank		.788
There is value in the collaborations with my bank		.730
In my transactions with my bank, I ensure that the value for money		.743
My bank delivers valuable services to customers		.711
Value is the driving force behind all my transactions with the bank		.689
Eigen values	2.359	1.836
Variance %	15.214	11.841
Total	49.841	61.682

Table 8. Rotated Compone	nt Matrix for	r Perceived Service	Value
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Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization. a Rotation converged in 6 iterations.

Table 8 shows that, acquisition and transaction components in the matrix are the true measures of perceived service value in the given order. Total variance in perceived service value explained by these components was 61.7%. This also serves a confirmatory test for the validity and reliability of the questionnaires as seen in chapter three.

Table 9 shows that, reliability, responsiveness, assurance, empathy and tangibles components in the matrix are the true measures of service quality in the given order. Total variance in service quality explained by these components was 69.8%. This also serves a confirmatory test for the validity and reliability of the questionnaire as seen in chapter three.

• The Relationship between the Study Variables

In this section, the results that address the research objectives are presented and Pearson's Correlation Test was used to answer the research questions of the study. Correlation is a technique for investigating the relationship between two quantitative, continuous variables. Pearson's correlation coefficient (r) is a measure of the strength of the association between the two variables. The Pearson correlation coefficient is a measure of the strength of the linear relationship between two variables. Where the relationship between the variables is not linear, then the correlation coefficient does not adequately represent the strength of the relationship between the variables. Pearson's r can range from -1 to 1. An r of -1 indicates a perfect negative linear relationship between variables, an r of 0 indicates no linear relationship between variables, and an r of 1 indicates a perfect positive relationship between variables. To investigate the relationship among the constructs a Zero-order correlation table was generated. The Pearson correlation coefficient (r) was employed to establish the relationship between e-banking, networking, perceived service value and service quality.

Table 10 shows that to establish the relationship between the study variables (E-banking, networking and perceived value) and service delivery, Pearson Correlation coefficients were generated with use of SPSS V17. The correlations revealed the level of strength and significance of the relationships between the study variables and the independent variable.

Reliability	Component				
	a	b	c	d	e
The services of my bank are reliable	.722				
Customer accounts are serviced regularly to ensure	.720				
accurate account balances					
When the bank promises to do something by a certain	.683				
time, it does so.					
My bank is dependable	.736				
Information about my bank is easily accessible		.714			
Am happy with the time it takes to get a service from my		.646			
bank					
Customers are always reminded to pay their loans on time.		.479			
Customers pay loans in the specified period by the bank		.695			
The reported complaints are rectified within a short period.		.673			
My bank has got timely provision of its services		.628			
My bank tells customers exactly when services will be			.866		
interrupted.					
Customer help desks and suggestion boxes are provided to			.809		
get feedback from customers					
Any disruptions in the services of the bank are			.736		
communicated to the customers in time					
Our bank has put effort in improving the services offered			725		
Our bank undates the public if there will be any			.688		
disruptions in the services					
The staff are well informed of the rules and precedures of				621	
the bank				.031	
Our bank personnel are friendly and help clients				621	
Customers are treated well every time they access the bank				769	
services				.707	
Exceptional treatment is extended to long term customers				728	
of the bank				.720	
The staff of my bank are always too busy to respond to				628	
clients' requests				.020	
My bank has clients' best interests at heart				735	
My bank has convenient operating hours for its staff				.735	
The account opening form and other documents are very				.,	759
clear					.155
All bank branches are easily accessible for payments					.716
My bank has up to date facilities					.711
The appearance of the physical facilities of my bank is in					.700
line with the services provided.					.,
I receive prompt services from the staff of my bank.					.683
My bank gives adequate individual client attention.					.673
Eigen values	12.441	8.64	5.799	4.768	2.705
Variance %	19.773	16.343	13.285	11.811	8.593
Cumulative%	19.773	36.116	49.401	61.212	69.805

Table 9. Rotated Component Matrix for Service Quality

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization. a Rotation converged in 6 iterations.

Component:

a = Reliability	b = Responsiveness	c = Assurance
d = Empathy	e = Tangibles	

	E-Banking	Networking	Perceived Value	Service Quality
E-Banking	1.000			
Networking	.441**	1.000		
Perceived Value	.512**	.433**	1.000	
Service Quality	.375**	.454**	.198**	1.000
** Correlation is sign	ificant at the 0.01 l	evel (2-tailed).		

Table 10: Relationships between the Variables/Zero Order Matrix

• E-banking and Service Quality

Correlation results indicated a significant positive relationship between e-banking and service quality ($r = 0.375^{**}$, p<.01). This signifies that when the deployment of banking services and products over electronic and communication networks directly to customers is effective and efficient, this would have a positive effect on the quality of services offered by the banks.

Therefore, a unit change in e-banking would enhance service quality by 37.5%.

• Networking and Service Quality

Correlation results indicated a significant and positive relationship between networking and service quality ($r = .454^{**}$, p<.01). This is indicative of the fact that the more the operations of the banks are networked, the more the quality of the services delivered will be improved. This implies that networking of baking operations highly influences the resultant service quality.

• E-banking, Perceived Value and Service Quality

Correlation results indicated significant and positive relationships between E-banking and perceived value ($r = .512^{**}$, p<.01) and between perceived value and service quality ($r = .198^{**}$, p<.01). Therefore, when the clients hold favorable perceptions about the value of ebanking, there will enhance delivery of quality banking services.

• Networking, Perceived Value and Service Quality

Correlation results indicated significant and positive relationship between networking, perceived vaue $(r = .433^{**}, p < .01)$ and the relationship between perceived value and service quality $(r = .198^{**}, p < .01)$ was found to also be positive. From the results, it is clear that when the consumer's overall assessment of the utility of a network based on perceptions of what is received and what is given, this will greatly influence the delivery of reliable, timely and desired services to the clients.

Regression Model

Regression analysis includes any techniques for modeling and analyzing several variables, when the focus is on the relationship between a dependent variable and one or more independent variables. More specifically, regression analysis helps understand how the typical value of the dependent variable changes when any one of the independent variables is varied, while the other independent variables are held fixed. Most commonly, regression analysis estimates the conditional expectation of the dependent variable given the independent variables. Regression analysis is widely used for prediction and forecasting, where its use has substantial overlap with the field of machine learning. Regression analysis is also used to understand which among the independent variables are related to the dependent variable, and to explore the forms of these relationships. In restricted circumstances, regression analysis can be used to infer causal relationships between the independent and dependent variables. Therefore, regression analysis was carried out to examine the extent to which study variables (e-banking, networking and perceived service value) predict service quality.

According to Table 6, e-banking, networking and perceived service value predict 24.4% of service quality (Adjusted R Square = .244). The regression model was significant and thus reliable for making conclusions and recommendations (Sig. <.05). The most significant predictors of service quality were e-banking (Beta= .253, t= 4.572, Sig. = 0.000) and networking followed by perceived value (Beta= .106, t= 1.917, Sig. = 0.056). The findings revealed that e-banking, networking and perceived service value were strong predictors of service quality.

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Coefficients	Unsta Coe	ndardized fficients	Standardized Coefficients	t	Sig.
Model	В	Std. Error	Beta		0
(Constant)	2.617	.190		13.763	.000
E-Banking	.246	.054	.253	4.572	.000
Networking	.310	.042	.389	7.342	.000
Perceived Value	.102	.053	.106	1.917	.056
Dependent Variable: Ser R Square = .251 Adjusted R Square = .24 Sig. F Change = .000	rvice Quality 14	7			

Table 11. Prediction Model

4.2. Discussion

• E-banking and Service Quality

The findings revealed a significant positive relationship between e-banking and service quality. This is in agreement with extant literature which according to [27], posits that service industries are mostly customer driven and their survival in competitive environment largely depends on quality of the service provided by them. In this context, quality of service furnished by banking sector is very important and profitability of their business is closely connected to the quality of service they render. Here, technology plays a vital role in improving the quality of services provided by the business units. The financial sector being no exception, numerous factors such as competitive cost, customer service, increase in education and income level of customers, etc. influence banks to evaluate their technology and assess their electronic commerce and internet banking (i-banking) strategies. Internet banking allows banking from anywhere, anytime and is used for transactions, payments, etc. over the internet through a bank, a credit union or society's secure website. So, basically, in i-banking a client has one-to-one interaction with the bank's website, and in such a situation it is essential on the part of bank to provide high quality services over the internet. So, in contrast to traditional banking, i-banking involves non-human interactions between customers and online bank information system.

Customer satisfaction, customer retention and new customer acquisition are the key factors in ibanking system. This becomes more important since the acquisition costs in online banking exceed that of traditional offline business by 20%–40% [28]. Providing i-banking is increasingly becoming a "need to have" than a nice to have" service. The i-banking, thus, now is more of a norm rather than an exception in many developed countries due to the fact that it is the cheapest way of providing banking services [29]. Internet banking is a new delivery channel for banks in India. The i-banking channel is both an informative and a transactional medium. However, i-banking has not been popularly adopted in India as expected [27].

• Networking and Service Quality

According to the findings of the study, a significant and positive relationship between networking and service quality was observed. According to [30], successful networking can positively influence career outcomes such as increased job opportunities, job performance, income, promotions, and career satisfaction, providing access to information, gaining visibility, career advice, social support, business leads, resources, collaboration, strategy making and professional support. The Author in [31] found that managers⁴⁷ ability to network was the strongest predictor of managerial success, ahead of their ability to undertake traditional management activities, routine communication and human resource management. Networking is incorporated into commercial banks and in particular levels of management and the service delivery channels. According to [32] asserted that there have been many studies identifying the key service quality factors in the traditional banking environment, where the interaction between employees and customers is the main communication channel. Another key factors is the relationship between the staff's job performance in relate to administrative strategies [33] [34]. The Author in [32], argued that the categorization of technology-based service delivery options may be applied across a spectrum of industries that utilize technology in delivering their

service to the customer. The first classification in this categorization is based on who uses technology to deliver what service.

• E-banking, Perceived Value and Service Quality

From the findings correlation results showed significant and positive relationships between e-banking, perceived value and service quality. Service quality has been wildly used to assess the service performance of various service organizations including banks. According to [35], banks with younger age, private ownership and lower branch intensity possess high probability of adoption of new technology. Banks with lower market share also perceive i-banking technology as a means to increase the market share by attracting more and more customers through this new channel of delivery. However, the service quality in i-banking from customers' needs thorough analysis to find out the determinants for success and growth of new channel of delivery so that useful guidelines for bankers can be extracted. Perceived value is the result of an evaluation that is based upon the customers' experience with the service, whereas objective quality refers to a combination of quantified factors associated with the superiority of materials, the manufacturing process, workmanship, and with design and aesthetics. The researcher in [36] found quality to be the most important of value. Firms also focus on achieving customer satisfaction and loyalty by delivering superior value, an underlying source of competitive advantage [37]. Future intentions are determined in part by perceived value. The scholar in [15] recognize the potential impact of perceived value but also proposed to view perceived value as independent contributors to service quality. They state that customers that are less satisfied may still be loyal on the basis of perceived value.

• Networking, Perceived Value and Service Quality

From the findings, significant and positive relationships between networking, perceived value and service quality were observed. These finding are consistent with [38] who believes that favorable service quality perceptions lead to improved value attributions and higher levels of networking enhanced value. The scholar in [39] viewed value as one of the key linkages between the cognitive elements of service quality or performance and behavioral intentions, primarily because it incorporates perceived monetary sacrifice [39].

The scholar in [40], posits that technology has had a remarkable influence on the growth of service delivery portions. According to [31], the banking industry has been significantly influenced by evaluation of new technology, the growing applications of computerized network to banking industries have reduced the cost of transaction and increase the speed of services sustainability [41] [42]. The nature of financial intermediaries makes banks improve their production technology by focusing on destination of products. In other words, the evolution of banking technology has been mainly driven by change in distribution channels [43] [41]. However, it seems natural to consider progress in banking technology as a reason for market consumer given the nature of network in the banking sector.

5. Conclusions

In conclusion, the research findings underscore a strong and positive correlation between e-banking and service quality, indicating that a greater emphasis on electronic banking enhances overall effectiveness and efficiency in service delivery. Likewise, the study reveals a noteworthy positive association between networking and service quality, emphasizing that an interconnected staff environment leads to more effective and efficient service delivery, ultimately contributing to customer satisfaction. Moreover, the results highlight significant and positive relationships among e-banking, perceived value, and service quality.

This suggests that increased electronic access to banking services correlates with customers perceiving higher value in the services provided. Additionally, the research demonstrates similar positive connections between networking, perceived value, and service quality, affirming that the interconnectedness of staff workstations influences customers' perceptions of the value of banking services. When customers perceive value, it encourages the bank to enhance its service delivery. Furthermore, the study identifies e-banking and networking as the most significant predictors of service quality, jointly explaining 24.4% of the variance in service quality at Centenary Bank. It is important to note that other factors not considered in this study account for the remaining 75.6% of the variance in service quality within the bank.

In light of the research findings, the following recommendations were made:

- 1. The model could only explain 24.4% in variance of service quality in centenary bank, it recommended that a study be carried out consisting of other factors which were not part of the model so as to predict service quality.
- 2. From the findings e-banking was found to be a significant predictor of service quality. Therefore, the management of centenary bank should embrace e-banking in the delivery of banking services as this will improve on service delivery and also reduce costs.
- 3. According to the findings, networking was found to be a strong predictor of service quality. Therefore, the bank should draw a lot of emphasis on networking bank operations as this will influence the consumer's overall assessment of the utility of a network based on perceptions of what is received and what is given.
- 4. The researcher recommends that a longitudinal study be carried out so as to study the factual nature and quality of e-banking, networking, perceived value and service quality because it is deemed more appropriate.

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