



## The Determinants of Bank Service Quality in the Banking Sector of Botswana

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### Abstract

The study explored the determinants of bank service quality in the banking sector of Botswana. 800 respondents from commercial banks of Botswana were randomly served with the survey questionnaires. The study was based on quantitative research involving testing of the hypothesis. The data collected from the survey was subjected to confirmatory factor analysis and reliability analysis prior to running Structural Equation Modelling. The results of testing the hypothesis revealed that banking service quality is significantly and positively correlated with service characteristics of tangibles, responsiveness, assurance and empathy. Inconclusive evidence was obtained concerning the relationship between bank service quality and service characteristics of reliability. The study inverted a new Structural Equation Model A that balances theory and data collected in this study. The study hereby recommends bank managers to take proactive action towards significant improvement of appealing tangible bank processes and systems, providing inevitable assurance, responsiveness and empathy as well as consistently applying reliability to all its services characteristics. In addition, policy makers should strive to enact legislation that ensure that banking institutions provide services that strongly encourage sustainable economic development. The limitation of the study is that the results can not be replicated to other areas as the research focused entirely on the banking sector of Botswana.



### Article History

Received: 18 November 2024

Accepted: 16 April 2025

### Keywords

Bank Managers;  
Bank Service Quality;  
Quantitative Research;  
Structural Equation Modelling;  
Sustainable Economic Development.

### Introduction


The research examined the variables that affected the quality of bank services in Botswana's banking

industry. The study concentrated on commercial banks and other private banks that are part of Botswana's banking sector. Providing high-quality

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Doi: <http://dx.doi.org/10.12944/JBSFM.07.01.08>

banking services promotes both economic growth and social welfare.

The level of satisfaction of bank customers depends on the level of bank service quality delivered to them by the individual banks through their various systems, processes and activities. Parasuraman & Zeithami, and Berry (1988) divided the characteristics of service quality into the following categories: reliability, empathy, responsiveness, assurance and tangibles.

Desklip (2021) stressed that quality of the service, waiting and the customer complaint management are vital for a bank in the attainment of sustainable competitive position. The study was based on an empirical evaluation on how service quality dimensions impact customer satisfaction in the banking sector.

### Research Gap

Anecdotal literature on the correlation between banks service quality with SERVQUAL characteristics of the tangibles, responsiveness, reliability, assurance and empathy lacks empirical evidence with Sub-Saharan examples but is abundant with Western, Latin America and Asian world cases (Dongol and Khadka, 2024; Ifedi *et al.*, 2024; Wang *et al.*, 2023; Thao, 2022; Zhou *et al.*, 2021; Islam *et al.*, 2021; Suzan *et al.*, 2021 and Monosimanegape *et al.*, 2020).. Therefore this research sought to close that gap

### Problem Statement

Provision of excellent service in the banking sector of Botswana remains an extreme challenge that is worthy to be addressed as the banking sector of Botswana is a major contributor to the GDP of the country. The banks in Botswana are frequently the subject of negative comments and criticism regarding formation of long queues, high bank charges and lack of banking services in the rural areas (Jefferis, 2015). Thus, this study looked at the variables that influence the quality of bank services in Gaborone's banking industry.

### Research Questions

The following comprise the study's research questions:

1. What factors influence service quality in Botswana's banking industry?
2. How do certain service features provided by banks in Botswana relate to the quality of bank services?

### Research Objectives

The study's objectives were to:

1. Analyze the factors that influence service quality in Botswana's banking industry and
2. Examine the connection between certain service attributes provided by banks and service quality.

### The Research Hypothesis

The null hypothesis for the study was:

1. **H0:** Bank Service Quality is not significantly and positively correlated with service characteristics of the tangibles, empathy, assurance, responsiveness and reliability.

The alternative hypothesis for the study was that:

2. **H1:** Bank Service Quality is significantly and positively correlated with service characteristics of empathy, assurance, responsiveness, reliability and tangibles.

### Materials and Methods

The goals of the study, which focuses on the factors that influence service quality and the connections between bank service quality and service quality dimensions, form the basis of the empirical review under this part.

According to Ifedi *et al.* (2024), consumer happiness is unaffected by tangibles or empathy. The survey also discovered that Malaysian banks' customer satisfaction is impacted by responsiveness, assurance, and dependability. The study used multiple regression analysis to test the hypothesis based on the social package for social sciences (SPSS) and was based on a sample of 317 respondents who were customers of Malaysian banks. Data for the study was gathered using structured questionnaires.

According to Awara *et al.* (2022), customer satisfaction is significantly impacted by the combined effects of the service quality elements of customer friendliness, bank automation efficacy, service attractiveness, and secure transactions. A sample of 947 respondents who were commercial bank clients served as the basis for the study. Cross-sectional surveys and phenomenological research served as the foundation for this study's research designs.

Neupane (2019) asserted that banks should focus more on the improvement of the tangibles, responsiveness and assurance. The study was based on a sample of 150 respondents of the public bank of Nepal and adopted a quantitative research design. The statistical tools used were the correlation and regression analysis based on statistical package for social science (SPSS).

Chiguvi *et al.* (2025) revealed a profound and positive correlation between bank customer satisfaction and bank customer experience enhanced by technological advancement and innovation in the banking sector of Botswana. The study underscored the importance of effectively managing customer experience leading to bank customer loyalty. The study was based on quantitative research and deployed descriptive statistics and applied regression analysis to examine the relationship between bank customer satisfaction and bank customer experience.

Wang *et al.* (2023) found that while accessibility and empathy had little impact on customer satisfaction for Bangladesh's non-banking financial institutions, assurance, dependability, responsiveness, and tangibility had a substantial impact. The SERVPERF model served as the foundation for the investigation, which used partial least square structural equation modeling.

According to Lim *et al.* (2023), client satisfaction with e-banking services was significantly influenced by website design, security or privacy, timeliness, and dependability. A sample of 138 respondents served as the basis for the investigation. Partial least squares and SPSS were used in the study to process the data.

Chiguvi (2023) observed a positive and profound relationship between ABSA Bank's tangibles,

responsiveness, assurance, empathy, and responsiveness with the quality of its bank services. The study used a sample of 180 ABSA Bank clients and was based on qualitative descriptive research.

Dongol and Khadka (2024) found that in Nepal's banking industry, tangibles, responsiveness, and empathy had a large and beneficial impact on customer satisfaction. Descriptive statistics, regression analysis, and Pearson correlation analysis served as the study's foundation. Twenty banks in the city of Kathmandu served as the study's sample. The study suggested that banks should increase the quality of their services in order to become more competitive.

According to Famiyeh *et al.* (2018), customer satisfaction for banks was significantly correlated with ambience, social elements, and dependability. Bank customer satisfaction was not significantly correlated with assurance or responsiveness. Additionally, the study found a direct and positive correlation between client loyalty and customer satisfaction. The study used partial least squared structural equation modeling (PLS-SEM) and was based on a survey of the banking industry in Ghana. According to Gonu *et al.* (2023), a significant predictor of customer happiness is customer orientation. A sample of 391 commercial bank clients from emerging nations served as the basis for the study. The study used a descriptive research approach and was quantitative in nature. Partial least squares structural equation modeling was used in the investigation.

According to Madhushani *et al.* (2023), customer satisfaction was substantially correlated with each of the five aspects of service quality—tangible, responsiveness, empathy, assurance, and reliability. The study used a deductive research methodology with a sample of 400 respondents drawn from Sri Lankan banks using simple random selection. During the pandemic,

Bala *et al.* (2021) found a correlation between the loyalty and customer satisfaction of various mobile banking user categories. The survey, which focused on Bangladeshi rural residents, involved 180 respondents. The study's conclusions showed that during the COVID-19 lockdown, consumer satisfaction was significantly impacted by the

mobile banking service's timeliness, efficiency, and dependability.

According to Mukelabai and Mulungu (2024), the two most significant aspects of quality that affected the perception of customer satisfaction at Stanbic Bank in Botswana were tangibility and assurance. The study came to the conclusion that the bank's level of service quality affected both client happiness and loyalty. To increase client happiness, it was suggested that banks concentrate on enhancing their responsiveness, empathy, and dependability. A sample of 340 respondents and 20 participants in in-depth interviews comprised the mixed-method research that served as the study's foundation.

According to Alall (2024), consumer satisfaction and the caliber of banking services are positively and significantly correlated. Based on a sample of 139 distinct banks, the study used STRATA to analyze its findings. Purposive selection of South Asian nations served as the study's foundation.

According to Feng *et al.* (2021), cloud services, security, e-learning, and service quality are the four elements that can influence a customer's satisfaction with online banking. According to the findings, there are four key elements that affect how satisfied customers are with Internet banking services: cloud services, security, e-learning, and service quality. The validity and reliability of the measurement model and the causal model were assessed in this study using the structural equation modeling method.

Muchimba and Sinkala (2024) discovered that whereas tangible features have little to no effect on customer satisfaction, banks' responsiveness, correctness, dependability, and empathy had a considerable impact. To boost client happiness, the survey advised banks to put more of an emphasis on responsiveness, security, empathy, and dependability. Based on a sample of 397 Zanaco Bank respondents, the study used a descriptive causal design and analyzed the data using Spearman's correlation.

Thao (2022) found that customer satisfaction and bank service quality were directly correlated. Furthermore, the study demonstrated a favorable correlation between customer satisfaction and the way in which customers perceived the service

product, the human element of service delivery, and the process element of service delivery. A survey with a random selection of Vietnibank employees in Vietnam served as the basis for the study. For the study, a quantitative research methodology was chosen. In the study, analysis of variance (ANOVA) was employed.

Tedjokusumo and Murhadi (2023) discovered that while the privacy and security variable had no discernible effect on customer satisfaction, the reliability, customer service and support, and responsiveness variables significantly increased customer satisfaction. Customer loyalty was also found to be significantly positively impacted by customer satisfaction. Purposive sampling was employed to pick the survey's 194 respondents, which served as the basis for the study.

For both Indian and Pakistani banks, Patel *et al.* (2023) found a generally substantial positive correlation between e-loyalty, e-satisfaction, and e-service quality. A sample of 400 Indian and Pakistani users of online banking services served as the basis for the study. Partial least square structural equation modeling was used to analyze the study.

According to Siregar and Kusumawati (2023), customer satisfaction was positively impacted by Bank Jago's service quality, which included responsiveness, efficiency, site organization, and user friendliness. Furthermore, the study found that among Bank Jago customers, customer loyalty was positively impacted by customer satisfaction. The study's methodology was quantitative, and its findings were analyzed using partial least square structural equation modeling and descriptive statistics. A sample of 318 respondents from the Bank of Jago served as the basis for the study, which used the purposive sampling approach to choose its participants.

The significance of system quality, interface design, service quality, and security assurance in relation to mobile banking loyalty intention was emphasized by Zhou *et al.* (2021). Structural equation modeling (SEM) was used to assess the study, which was based on a survey of 224 mobile bank customers.

Christanto and Santoso (2022) demonstrated that customer satisfaction was positively and significantly

impacted by the variables of service quality and business image. The study also showed that customer loyalty was positively and significantly impacted by customer satisfaction. A survey of 200 Indonesian bank clients served as the basis for the study.

Singh (2019) found that customer satisfaction with online banking was positively and significantly correlated with responsiveness, efficiency, and perceived credibility. A poll of 650 Indian respondents served as the basis for the study. Sampling appropriateness for the study was evaluated using exploratory and confirmatory factor analysis. The association between internet banking customer happiness and quality factors was examined using multi regression analysis.

Islam *et al.* (2021) discovered a strong and positive correlation between visibility, employee dedication, responsiveness, and customer satisfaction. The study also demonstrated a negligible association between reliability, access, and customer satisfaction in Bangladesh's private banking sector. Furthermore, the study uncovered a positive and profound association between customer satisfaction and customer loyalty. The study was based on quantitative research that used structural equation modelling to test the hypothesis. The study's sample size was 200 self-administered questionnaires from Bangladesh's private banking sector.

Suzan *et al.* (2021) stressed that the factors that determine a bank's performance are tangibles, assurance, responsiveness, and dependability. Descriptive research served as the foundation for the study, which also included hypothesis testing. Using SPSS, various regression tests were performed on 445 questionnaires given to Asian bank customers.

Monosimanegape *et al.* (2020) found a link between the quality service dimension of assurance, responsiveness, tangibles, responsiveness, empathy and service quality of the public sector of Botswana. Descriptive inferential statistics was deployed in processing the data of the research. The sample size of 135 was extracted for the study from Botswana's Tonota Sub Region.

According to Raza *et al.* (2020), customer satisfaction had a strong and positive correlation with customer

loyalty, and all quality characteristics had a strong and positive correlation with customer satisfaction. A sample of 500 bank clients in Pakistan were given standardized questionnaires as the basis for this quantitative investigation. Partial least squares structural equation modeling was used in the investigation.

According to Vinnarasi *et al.* (2022), there is a connection between customer satisfaction and service quality. The study also found that the dynamics of the banking business had changed as a result of consumer satisfaction. Mono qualitative secondary empirical data served as the study's foundation.

Das and Jannat (2018) discovered that state-owned commercial banks in Bangladesh do not provide satisfactory customer service. The survey also showed that customers' perceptions were significantly and favorably impacted by civility, staff appearance, transaction safety and correctness, and service reliability. The study also found that customer satisfaction was negatively impacted by rapid service and individualized attention to customers. The survey came to the conclusion that among the aspects of bank quality, clients place a higher value on the tangibles, assurance, and dependability of the bank's services.

Khan *et al.* (2018) discovered a strong and favorable correlation between the dimensions of assurance, tangibility, responsiveness, empathy, and dependability with customer satisfaction. Partial least square structured regression modeling was used in the study, which was based on a survey of 240 respondents. The study's respondents were chosen using a convenience sample technique.

In Botswana's banking industry, Chiguvi *et al.* (2017) confirmed a negative correlation between tangibles, assurance, responsiveness, dependability, and bank service quality. Descriptive statistics and qualitative research served as the study's foundation. Chiguvi (2016) confirmed that customer happiness and EbankQual characteristics have a high positive correlation. The research noted a low favourable association between the quality of bank services and customer loyalty. 200 FNB cell phone bank customers in Botswana were included in the descriptive study. The EBankQual model served as

the foundation for the study, which evaluated how well bank service quality was affected by mobile banking.

According to Gbadeyan *et al.* (2015), there is a substantial and favorable correlation between the financial services quality offered by Nigerian banks and the SERQUAL dimensions. The study was based on qualitative research using a sample of 385 clients selected from Nigeria's top five banks. A convenience and purposive sampling strategy was used to choose the sample.

A national service quality index was inverted by Abdullah *et al.* (2011) to appraise the quality of the banking industry. According to Abdullah *et al.* (2011), systemization, responsiveness, and trustworthy communication are the three factors that determine how well banks provide their services. An overall weighted BSQ index of 4.0 was considered a general signal that bank clients were satisfied with the service quality offered by financial institutions, and further systemization was considered the most significant service quality dimension in the banking industry (*ibid*). Multiple linear regressions and factorial analysis were employed in the investigation.

### Research and Methodology

Equation 1 below illustrates the regression equation, which served as the basis for the study's quantitative research technique. The study used Analysis of Moments Structures (AMOS) to perform Structural Equation Modelling (SEM) to evaluate hypotheses. This is in consistent with the research design that was applied in Zhou *et al.* (2021), Islam *et al.* (2021) and Abdullah *et al.* (2011). Structural equation modeling was used to create a new model, concept model A, which is displayed in Figure 4.1 below. The study used random sampling in selecting the respondents to the study. Eight hundred structured questionnaires were administered to the respondents. Karakaya-Ozyer and Aksu-Dunya (2018) alluded to choosing the right sample size as crucial SEM choice that needs to be carefully considered. For EFA, Surucu (2022) recommended a sample size of at least 400. Wolf *et.al* (2013) recommended a sample size of at least 100 to 200. In order to improve the validity and reliability of the findings and inferences to be made, the current study used a sample of 800.

The regression equation that represents this study is illustrated in Equation 1 below.

Equation 1: Determinants of Bank Service Quality

$$BSQ_{useit} = \alpha_i + \beta_1TAN_{it} + \beta_2REL_{it} + \beta_3RES_{it} + \beta_4EMP_{it} + \beta_5ASS_{it} + \epsilon_{it} \quad \dots(1)$$

### Rationale of using Structural Equation Modelling (SEM)

Hoyle (2015) asserted SEM is a set of analytical techniques required to represent the relationships between data items. Schumacher and Lomax (2016) acclaimed that SEM is used to statistically assess the study's proposed research hypotheses as well as the researcher's theoretical models, which often explain the relationships between latent and observable variables. Schumaker and Lomax (2016) asserted that SEM is only a tool for confirming the researcher's theoretical models. Ramsey and Schafer (2013) deduced that the variables used in SEM are linear combinations of several factors chosen to help with the study problem. SEM was therefore used in this study as it was thought to be a suitable method for dealing with the current research problem that included testing the hypothesis that bank service quality is not significantly correlated with the SERQUAL variables of tangibles, responsiveness, reliability, empathy and assurance.

### Results

The research results are presented in terms of the following subsections, demographic analysis, survey descriptive statistics, reliability analysis tests, Kaiser Meyers Olkins (KMO) sampling adequacy tests, and the results of structural equation modeling (SEM).

### Demographic Analysis for the Study

According to table 1 below, there were roughly 41% men and 59% women among the study's respondents. Table 2 below reveals that 41% of the study participants were between the ages of 21 and 23, 29% were between the ages of 18 and 20, 16% were between the ages of 24 and 26, and roughly 14% were between the ages of 27 and over. As indicated in Table 3 below, 61% of the respondents held a bachelor's degree, 19% a master's degree, 6% a doctorate, and the remaining 14% held a diploma, certificate, or other educational credentials

below a certificate. Table 4 below illustrated that 31% of respondents had been faithful to their bank for at least three years, 24% had been devoted for one to two years, and 45% had been loyal for up to one year. As indicated in table 5 below, 38% of

the clients had FNB bank accounts, 34% Standard Chartered Bank customers, 15% ABSA customers, 9% Stanbic customers, and 4% ACCESS and Bank of Gaborone customers.

**Table 1: Gender**

	Mode	%	% Valid	% Cumulative
Valid	Male	308	40.0	40.0
	Female	452	58.7	58.7
	3	8	1.0	99.7
	6	2	0.3	100.0
	Total	770	100.0	100.0

Source: Authors, 2024

**Table 2: Age**

	Mode	%	% Valid	% Cumulative
Valid	18-20 years	220	28.6	28.6
	21-23 years	318	41.3	69.9
	24-26 years	120	15.6	85.5
	27-29 years	42	5.5	90.9
	30-35 years	32	4.2	95.1
	36-40 years	18	2.3	97.4
	41-45 years	10	1.3	98.7
	46-50 years	2	0.3	99.0
	51 and above years	8	1.0	100.0
Total	770	100.0	100.0	

Source: Authors, 2024

**Table 3: Qualification**

	Mode	%	% Valid	% Cumulative
Valid	Doctorate	42	5.5	5.5
	Masters	144	18.7	24.2
	Bachelors	468	60.8	85.2
	Diploma	40	5.2	90.4
	Certificate	44	5.7	96.1
	Below certificate	28	3.6	99.7
	9	2	0.3	100.0
Total	768	99.7	100.0	
Total	770	100.0		

Source: Authors, 2024

**Table 4: Years of Service Loyalty**

		Mode	%	% Valid	% Cumulative
Valid	0-3 months	90	11.7	11.7	11.7
	4-6 months	90	11.7	11.7	23.4
	7-9 months	60	7.8	7.8	31.2
	10-12 months	108	14.0	14.0	45.2
	1-2years	182	23.6	23.6	68.8
	3 years and above	238	30.9	30.9	99.7
	7	2	0.3	0.3	100.0
	Total	770	100.0	100.0	

Source: Authors, 2024

**Table 5: Bank**

		Mode	%	% Valid	% Cumulative
Valid	FNB	296	38.4	38.4	38.4
	ABSA	116	15.1	15.1	53.5
	STANCHART	264	34.3	34.3	87.8
	STANBIC	70	9.1	9.1	96.9
	ACCESS	12	1.6	1.6	98.4
	BANK OF GABORONE	12	1.6	1.6	100.0
	Total	770	100.0	100.0	

Source: Authors, 2024

**Table 6: Tangibles**

		Mode	%	% Valid	% Cumulative
Valid	Strongly Disagree	132	17.1	17.1	17.1
	Disagree	170	22.1	22.1	39.2
	Neutral	220	28.6	28.6	67.8
	Agree	108	14.0	14.0	81.8
	Strongly Agree	126	16.4	16.4	98.2
	6	12	1.6	1.6	99.7
	7	2	0.3	0.3	100.0
	Total	770	100.0	100.0	

Source: Authors, 2024

**Descriptive Statistics for Bank Service Quality Survey**

On average at least 30% of the respondents agreed that specific bank services characteristics of the tangibles (A22-30%), reliability (A23-28%),

responsiveness (A24-32%), assurance (A25-30%) and empathy (A26-30%) were the determinants of bank service quality and whilst less 26% of the respondents on average strongly disagreed, as shown from table 6 to table 10 below.

**Table 7: Reliability**

		Mode	%	% Valid	% Cumulative
Valid	Strongly Disagree	176	22.9	22.9	22.9
	Disagree	184	23.9	23.9	46.8
	Neutral	184	23.9	23.9	70.6
	Agree	68	8.8	8.8	79.5
	Strongly Agree	148	19.2	19.2	98.7
	6	6	0.8	0.8	99.5
	7	4	0.5	0.5	100.0
	Total	770	100.0	100.0	

Source: Authors, 2024

**Table 8: Responsiveness**

		Mode	%	% Valid	% Cumulative
Valid	Strongly Disagree	194	25.2	25.2	25.2
	Disagree	176	22.9	22.9	48.1
	Neutral	142	18.4	18.4	66.5
	Agree	98	12.7	12.7	79.2
	Strongly Agree	152	19.7	19.7	99.0
	6	8	1.0	1.0	100.0
	7				
	Total	770	100.0	100.0	

Source: Authors, 2024

**Table 9: Assurance**

		Mode	%	% Valid	% Cumulative
Valid	Strongly Disagree	200	26.0	26.0	26.0
	Disagree	170	22.1	22.1	48.1
	Neutral	160	20.8	20.8	68.8
	Agree	86	11.2	11.2	80.0
	Strongly Agree	146	19.0	19.0	99.0
	6	2	0.3	0.3	99.2
	7	6	0.8	0.8	100.0
	Total	770	100.0	100.0	

Source: Authors, 2024

**Table 10: Empathy**

		Mode	%	% Valid	% Cumulative
Valid	Strongly Disagree	200	26.0	26.0	26.0
	Disagree	170	22.1	22.1	48.1
	Neutral	160	20.8	20.8	68.8
	Agree	86	11.2	11.2	80.0
	Strongly Agree	146	19.0	19.0	99.0
	6	2	0.3	0.3	99.2
	7	6	0.8	0.8	100.0
	Total	770	100.0	100.0	

Source: Authors, 2024

**Results of Reliability Analysis and Sampling Adequacy outcome for the Scale measurement Items**

As indicated in Table 11 below, the study's scale items passed reliability testing as well as the Kaiser Meyers Olkins (KMO) and Bartlett tests, receiving scores of at least 0.7 and 0.8, respectively. Therefore, confirmatory factor analysis was conducted before Structural Equation Modelling (SEM) was applied to each of the data sets evaluating the factors influencing the quality of bank services due to the reliability analysis and KMO test findings being

positive. Additionally, as seen in Table 11 below, each scale measurement item had appropriate communality values of roughly 0.7. Prior to using SEM, Surucu (2022) advised testing the data items for reliability and sample adequacy.

Although this study employed a cut off 0.5 of factor loadings to clean and ensure quality, Samuels (2016) advised a factor loading of at least 0.2 to ensure quality. As a result, the reliability and KMO test results show that the scale measurement items utilized in the study were of adequate quality.

**Table 11: Results of Reliability Analysis and Sampling Adequacy for Scale Items**

Scale Measurement Item	Tangible (F2)	Reliability (F3)	Responsiveness (F4)	Assurance (F5)	Empathy (F6)	Service Quality (F1)
Cronbach's Alpha for Reliability Analysis	0.874	0.895	0.885	0.891	0.851	0.915
Kaiser Meyers Olkins (KMO) test for Sampling Adequacy	0.832	0.859	0.819	0.821	0.801	0.862
Communalities	0.700	0.689	0.733	0.777	0.674	0.862

Source: Authors, 2024

**The Results of the Structural Equation Modelling (SEM) of the Study**

As may be seen below, the SEM results are displayed in Figure 1, Tables 12 through 14. The path diagram for structural equation concept model A, which was inverted for the investigation, is shown in Figure 1. As shown in Figure 12 below, the structural concept model A showed that tangibles (F2), responsiveness (F4), assurance (F5), and empathy (F6) had a substantial and positive correlation with bank service quality (F1). The results concurred with the findings of Zhou *et al.* (2021), Islam *et al.* (2021), Dongol and Khadka (2024), Thao (2022), Chiguvi (2023) and Neupane (2019). However, the findings are in contrast with the results of Chiguvi *et al.* (2017). Reliability (F3) and bank service quality have a negligible and inverse relationship, according to structural equation model A. This outcome is in alignment with the research findings of Islam *et al.* (2021) and contrasted with findings of Gbadeyan *et al.* (2015) and Suzan *et al.* (2021). This

inconclusive adverse negligible relationship between bank service quality and reliability could have been caused by mixed contrasting responses that were provided regarding reliability of bank service quality in Botswana.

**Model Fit Summaries**

The following Tables 12, 13, 14, and 15 depicted the fitness of the variables used in the creation of the new structural equation model A. The following measures were used in assessing the fitness of the new model A, Normed Fit Index (NFI), Comparative Fit Index (CFI), Relative Fit Index (RFI), Root Mean Square Error of Approximation (RMSEA), Incremental Fit Index (IFI), Chi-square degrees of freedom and Tucker Lewis Index (TLI).

**Discussions**

A new bank service concept model A, seen in Figure 2 above, was inverted by the SEM applied in the study. The findings of the SEM test of

the hypothesis showed that responsiveness, assurance, empathy, and tangible service features are all significantly and favourably correlated with the quality of bank services. This outcome concurs with general sentiments of Chiguvu *et al.* (2025), Alall (2024), Muchimba and Sinkala (2024), Madhushani *et al.* (2023), Lim *et al.* (2023), Wang *et al.* (2023), Neupane (2019) and Raza *et al.* (2020). This result led to the rejection of the null hypothesis. In contrast, the structural equation model A also showed that

the bank services quality is inversely and negligibly correlated with reliability service characteristic. This led to inconclusive evidence as reliability is inevitably expected empirically to correlate significantly and favourably with reliability (Gbadeyan *et al.*, 2015; Mukelabi and Mulungu, 2024; Dongol and Khadka, 2024 and Wang *et al.*, 2023). Nevertheless, this resulted in the study's null hypothesis about the reliability of the services being accepted.

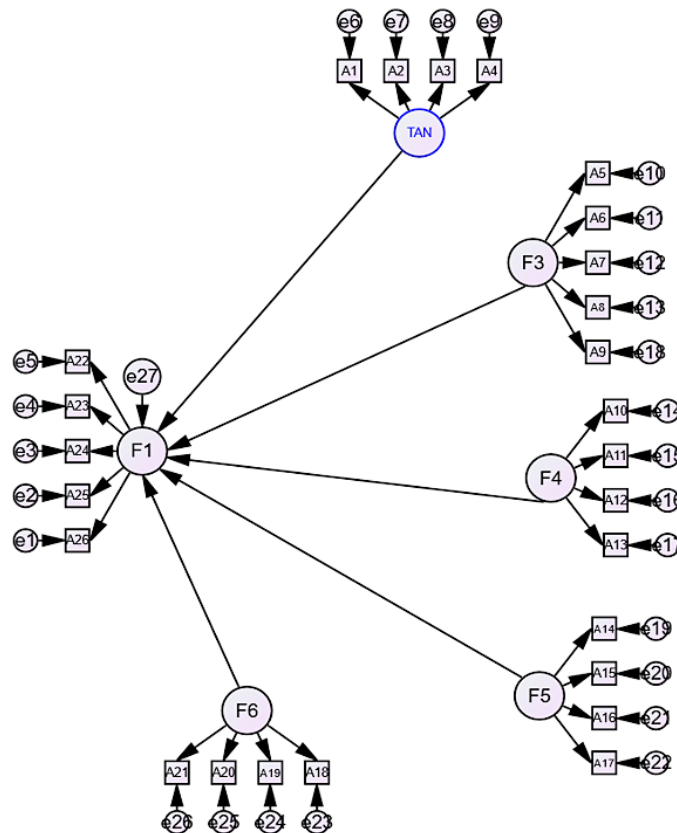


Fig. 1: Path Diagram for Bank Service Model A ; Source: Authors, 2024

Table 12: Model Fit Summary for Structural Equation Model A

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	83	4139.188	294	.000	14.079
Saturated model	377	.000	0		
Independence model	52	15660.398	325	.000	48.186

Source: Authors

**Table 13: Baseline Comparisons**

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.736	.708	.750	.723	.749
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Source: Authors

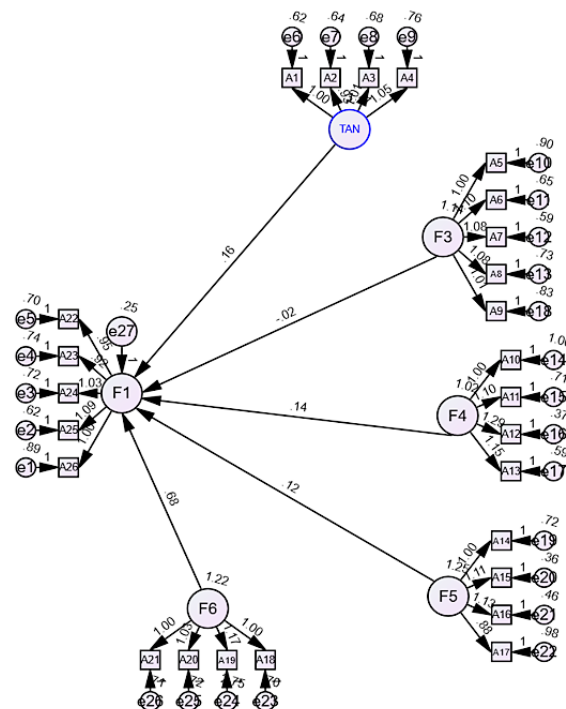
**Table 14: Results of the Root Mean Square Error Approximation (RMSEA)**

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.130	.127	.134	.000
Independence model	.248	.244	.251	.000

**Table 15: Model Fit Summary for the Bank Service Concept Model**

Model Fit Index	Required Result	Actual Result
NFI	≥ 0.900	0.736
RFI	0-1	0.708
IFI	≥ 0.900	0.750
TLI	≥ 0.900	0.726
CFI	≥ 0.900	0.749
RMSEA	<0.080	0.130
CMIN/DF	<3	14.0

Source: Authors



**Fig. 2: Structural Equation Model A for Bank Service Model; Source: Authors, 2024**

### Conclusion

It can be concluded that bank service quality is profoundly and positively correlated with responsiveness, assurance, empathy, and tangible service characteristics. It can also be affirmed that bank service quality is insignificantly and negatively associated with service characteristics of reliability.

Hence the inconsistency in the relationship between bank service quality and reliability raises eyebrows regarding important policy implications that need to be addressed regarding reliability issues within the banking sector of Botswana. Therefore, banks should make an effort to consistently apply reliability to all of their services, reduce needless waiting times (in lines), and get rid of some procedures and systems that don't add value towards the quality of their services. Furthermore, banks should replace manual bottleneck activities with self-service automated systems in the banking halls to expedite reliability and further reduce time spent on queuing in the banking halls.

It is advised that banks give priority to meeting the tangible service needs of responsiveness, assurance, empathy, and tangibles without sacrificing total customer reliability to enhance customer satisfaction. Legislators should also pass laws requiring banks to offer services that encourage green finance and refrain from contributing to green washing. Lastly the direction of future discourse should be focused on the relevance of human service reliability in the wake of application of artificial intelligence (AI) towards the fulfilment of banking customer satisfaction.

### Acknowledgement

The author is grateful to the Botswana Ministry of Finance for issuing us with a research permit to conduct the research in the financial markets of Botswana. No materials were reproduced but figures

and tables were the result of research data that were processed through SPSS and AMOS for structural equation modeling.

### Funding Sources

The authors received no financial support for the research, authorship, and/or publication of this article.

### Conflict of Interest

The authors do not have any conflict of interest.

### Data Availability Statement

The corresponding author can provide the data from this study upon request. Due to limitations, the data are not publicly accessible.

### Ethics Statement

Testing of any material, animal subjects which required ethical approval were not part of the research. However the researchers obtained a research permit to administer the questionnaires on human subjects in the financial markets of Botswana.

### Informed Consent Statement

Every participant in the study provided their informed consent.

### Permission to Reproduce Material from other Sources

Not Applicable.

### Author Contributions

- **Wilbert Kudakwashe Chidaushe:** Writing—Review and Editing, Conceptualization, Methodology, and Resources.
- **Stegi Shine:** Writing—Original Draft, Writing—Review and Editing, Validation, Formal Analysis.
- **Mini Sebastian:** Writing—Review and Editing, Methodology, Formal Analysis, Investigation.

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