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## DOES QUALITY OF BANK SERVICES LEAD TO CUSTOMER SATISFACTION IN THE NIGERIAN BANKING SECTOR?

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### ABSTRACT

This study examined a critical question from customers' perspective: Does quality of bank services lead to customer satisfaction in the Nigerian banking sector? The study is conducted using questionnaire survey administered in Nigeria using customers of some selected banks as sample. The paper uses primary data collected through scientifically developed questionnaires, which were administered on 174 bank customers selected on a convenient basis. The results, based on factor and regression analysis, identified four factors that impact customers' assessment of the quality of banking services including responsiveness, reliability, tangibility and empathy respectively. The implication of the finding is to enhance the understanding of bank managers and other relevant stakeholders of customers' perception of the quality of banking services and consequently reveal the path to developing strategies for improving their satisfaction. The study therefore, recommends that the Nigerian banks should make products and services available that best suits the peculiarity of each category of customers and improve the confidence Nigerians have in the banking sector.

**Keywords:** bank services, service quality, customer satisfaction, deposit money banks, **JEL Classification:** E21, G21, G41, J11, M31

### INTRODUCTION

All over the world, consumers have become more conscious of service quality, as their urge for better quality service has been on the rise (Saghier and Nathan, 2013). The service sector such as banking, transportation, insurance and others are obliged to

offer high quality services to their customers for them to have sustainable competitive advantage over their competitors. Despite the essentiality of service quality to businesses and professions, gauging the quality of services brings difficulties to service providers, as distinguished characteristics of ser-

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vices: heterogeneity, inseparability, perishability and intangibility (Douglas & Connor, 2003). Satisfying customers is critical to defining the success of any business organization. High performance rate coupled with seemingly satisfied customers will essentially promote the image of the organization, as it will ultimately support its standing on a strong footing and enable it to dominate the market and will equally boost its competitive advantage. The degree of customer satisfaction will largely determine the success of any service firm like the banks. Indeed, service quality has become an important part of customer satisfaction, which transforms itself to a better performance. By and large, service quality has been proven to be positively related to customer satisfaction (Robinson, 1999). Service providers must offer quality service with attributes that exceed customers' expectations for them to remain globally competitive. The quality of service offered by any entity, whether public or private, determines the success or failure rate of the entity. However, the varying economic and business environments under which each entity operates determines the quality of service provided by that entity.

Service quality differs from industry to industry; its measurement depends on each industry as that of the banking sector is different from the one in the real sector. Service quality is a function of customer expectation, quality process and output quality; that is, the service standard is explained by users who have enjoyed the service and have formed an opinion about its quality (Chen, Chen and Chen, 2001).

Financial institutions play vital roles in facilitating funds mobilisation and distribution by channelling different categories of attracted loanable funds into loans to the

public and private entities. Thus, the essential role of Nigerian banking institutions in the intermediation process cannot be ignored. Banks and other financial institutions, especially money deposit banks (MDBs), have always been subjected to strict regulation by government in form of reforms and deregulations because of their importance and contribution to the nation's economic growth and development. Those regulations involve moderating the capital base, influencing credit capacity, choosing what kinds of financial vehicles to trade in and many more. These make the industry to be very competitive and riskier, and consequently, make several institutions to adopt strategic policies for sustenance in the banking sector; hence, organisations that espouse strategies that give them opportunities to compete better and favourably in the sector succeed eventually.

Customer loyalty in the banking sector to services provided by financial institutions is one way of keeping banking business competitive, which can be achieved by offering quality services to the bank customers. In essence, strategic management decisions and efforts should take cognizance of factors that enhance and sustain customer satisfaction in bank services, which will, in turn, lead to customer loyalty, customer retention, increased market share and enhanced profitability; hence, ensuring strategic advantage for the firm. However, to achieve a high service quality in a business firm, employees' loyalty, commitment and management support is required. Thus, it is essential for service providers to closely monitor information on the wellbeing of their company regarding meeting the needs of its customers (Aigbedo and Parasuraman, 2004). Service-providing companies have always tried look out for methods of delivering improved and superior

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quality service to gratify users of their services, particularly, within the banking sector where competition is keen and very sharp. Gupta, Laughlin, & Gomes (2007) also posited that ensuring customer satisfaction is first and the last goal for every company, as survival of the company depends partly on the customers' judgment of the services provided. Therefore, the degree of customer satisfaction will be determined by the quality of financial services provided by a particular bank, which will improve its performance in the long-run.

Although, much is expected from the banks in servicing their customers, much less than seems to have been done by the banks in recent times. Bank customers are dissatisfied with service delivery mechanism of Nigerian banks. Congestion in the banking halls creates a long queue that even makes the queuing techniques adopted by the banks useless, which renders customers' precious time unproductive. More also, poor infrastructure like inefficient air conditioners in the banking halls makes the place stuffy, choking and untidy whenever there is congestion. Another problem the customers are facing is the inadequacy of internet network service; more often than not, bank employees regularly complain of having challenges with their network, thus making ease of business transaction a forlorn hope. One of the most irritating situations is the credit accessibility of bank customers; a long-standing customer may be denied access to bank loan or offered cut-throat interest rate that is killing and acidic; that is why some small business owners do not like operating bank accounts. The problem with Nigerian banks includes exorbitant charges on bank services, SMS alert charges, account maintenance charges, Debit card charges (although these are regulated by the

monetary authorities) and other hidden charges. These and many more are the problems with bank services that dissatisfy customers, which could scare them away from using bank services.

Although, banks are putting up measures to overcome some of these challenges; much seems to have been done, but far less appear to have been achieved. Therefore, the problem this study attempts to solve is determining whether the varieties of services and products offered by Nigerian banks actually meet with customers' expectation and provide expected level of satisfaction. In essence, the key thrust of this paper is to determine whether the quality of banks services in Nigeria leads to customer satisfaction.

### **Literature Review**

Services have continuously grown in dominance in Nigeria as well as in other parts of the world. Many studies conducted have found quality service to prominently and empirically impact customer satisfaction, retention, profitability, market share and survival of the business in any industry. Service-oriented companies like banking and other financial sectors (including audit firms, consultancy firms, insurance companies), transportation, hotels, entertainment, etc., should take advantage of wide-ranging approaches that make service quality, from the customers' perspective, one of the main drivers for the business' operations (Carlzon, 1987), as it enhances profitability (Ngobeni *et al*, 2015).

### **Service Quality**

Mohammad & Alhamadani (2011) defined quality concept as consistency with fixed specifications, which is in agreement with the description of Newman & Cowling (1996) as anything that possesses the features of a product that meets the needs of its con-

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sumers. Moreover, service and products differ in terms of tangibility, as product involves tangible items that can be felt while service is intangible offerings. For example, service is defined by the American Society for Marketing as activities or benefits that are offered for sale or that are offered for being related to a particular product. Kotler & Armstrong (2012) referred to service as a form of product that involve benefit and satisfaction offered for sale that are intangible and result in ownership of nothing. They also asserted that quality services that bring satisfaction come from creating customer experiences with their brand. It was stressed that, for core strategic position attainment, banks must care about the quality of services they offer their customers (Hossain & Leo, 2009). Parasuraman, Zeithaml & Berry (1985) argue that quality of service is the measure between expectation and performance. Arasli, Mehtap-Smadi & Turan (2005) believe that better understanding of the attributes and importance of service quality do contribute to success and maintaining international competitiveness of banks. From these definitions, it can be concluded that the quality of banking service forms an integral and core aspect of the whole banking operation, which needs to be monitored to ensure customer satisfaction, customer retention and retain competitive advantage.

### **Customer Satisfaction**

Research on satisfaction has continued to receive considerable attention as it deals with customer's feeling for consuming a product or service. Satisfaction connotes a feeling of happiness at a point when one accomplishes his/her goals, wants or motivation (Badara *et al*, 2013). An important factor in the formation of a customer's desire for future purchase of a product or ser-

vice is customer satisfaction (Mittal & Kamakura, 2001). Jayaraman, Shankar & Hor (2010) posited that customer satisfaction is more complex than mere expression of being happy as a customer. Customer satisfaction is a popular notion in business and trade industry. As a business notion, it explains and measures how products and services provided satisfy users or customers. It may well be regarded as a key performance indicator (KPI). Actually, satisfied customers with good experiences about the service will relay a goodwill message to others.

### **Service Quality and Customer Satisfaction Nexus**

The term service quality is related to customer satisfaction, but both are distinct concepts. For instance, Parasuraman *et al.* (1991) see satisfaction as a post-experience feeling while quality does not connote the same. The customer is said to derive higher satisfaction from higher quality service delivery. It is mostly agreed that in the service industry, like banking, there are no standardized means or scale of measuring perceived quality of services. Thus, surviving by ensuring competitive edge using quality service as weapon is eminent. The services' unique characteristics like heterogeneity, intangibility, perishability and inseparability seems to pose difficulties to service providers when measuring service quality (Bateson, 1985). Consequently, these complexities engendered the development of various perception measuring models of service quality (Gronroos, 1983; 1993; Parasuraman *et al.*, 1985, 1988, 1991, Ngobeni *et al.*, 2015). The popular SERVQUAL (an acronym for service quality) model suggests a five-dimensional paradigm of service quality perception including tangibility, responsiveness, reliability, empathy and assurance with these items showing customers' expectations and

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perceived performance (Parasuraman *et al.*, 1988; Ngobeni *et al.*, 2015). Jayaraman *et al.* (2010) noted that service quality is increasing in importance, as it relates to customer retention (Reichheld and Sasser, 1990), customer satisfaction (Bolton and Drew, 1991; Boulding *et al.*, 1993; Karim and Chowdhury, 2014), costs (Crosby and Free, 1979), profitability (Rust and Zahorik, 1993; Zahorik and Rust, 1992; Buzzell and Gale, 1987), and positive word of mouth.

### ***SERVQUAL and its Underlying Theories***

Prior to the inception of the SERVQUAL instrument, Parasuraman *et al.* (1985) presented their Gaps model aimed at stimulating study into service quality. Five gaps were identified; these can be used to beam light into understanding the services expected by customers and the perception of management of customers' expectation.

**Gap\_1** is the discrepancy between customers' expectation and what managers think they expect.

**Gap\_2** is the discrepancy between perceptions of management and actual specifications of the customers' experience.

**Gap\_3** is the distance from the service specification to the actual service delivered.

**Gap\_4** is the discrepancy between actual service delivered and what is communicated to customers.

**Gap\_5** is the distance between the customers' perception of the experience and the customers' expectation of the service.

The gaps model favourably compares with other service quality models proposed by other scholars. The research on service quality was further extended with the introduction of the SERVQUAL measurement instrument as a questionnaire model to

measure service quality through customer perceptions (Parasuraman *et al.*, 1998). The authors initially postulated ten dimensions of the quality of service and from which five unique features of quality service including tangibility, responsiveness, reliability, empathy and assurance were later developed. These dimensions are explained as follows:

- i. Tangibility refers to the physical appearance, and availability of necessary facility and equipment.
- ii. Responsiveness indicates the inclination to assist a customer and provide quick service.
- iii. Reliability denotes the capacity to confidently and accurately perform the promised service.
- iv. Empathy refers to intellectual identification of feelings and thoughts of customers including caring and personalized attention the firm provides its customers.
- v. Assurance indicates knowledge and civility of employees and their capacity to inspire trust and improve confidence.

### ***Empirical Review***

There are many extant empirical studies on the impact of service quality on customer satisfaction in the banking sector and other sectors of the economy including manufacturing, health and so on. Many of these used SERVQUAL model to evaluate and test their hypotheses (Cheserek, Kimwolo & Cherop, 2015). Quyet, Vinh, & Chang (2015) established a positive relationship between service quality and customer satisfaction. Quyet *et al.* (2015) and Saghier and Nathan, (2013) using SERVQUAL model confirmed that all the elements of the model lead to customer satisfaction. Among all the variables included in the study, responsiveness records the highest impact on customer

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satisfaction, followed by empathy, reliability and assurance respectively while tangibility has the weakest correlation, which was negative. There is positive relationship between service quality and customer satisfaction while reliability and empathy are proved to be significantly important dimensions of service quality, which impact the level of customer satisfaction in Kenya's commercial banks. According to Hamzah, Ishak and Nor (2015), what is significant to customer satisfaction of Islamic banks is a banks' service quality consisting of its personnel, banks' image, services offered, and banks' accessibility. Mohammad and Alhamadani (2011) also confirmed quality of service as antecedent to customer satisfaction.

The study of (Saghier and Nathan, 2013) found that reliability, empathy, assurance and responsiveness significantly affect customer satisfaction in the services provided by the banks, while tangibility dimension has no significant effect. It also shows that perception of customers is highest in reliability but lowest in assurance area. This is consistent with the study of Parasuraman et al. (1985, 1988) and Wang, Lo & Yang (2004).

From the foregoing, most past studies using different service quality models and dimensions have found a positive association between quality service and customer satisfaction. The variances in the studies include the service quality dimension that actually satisfy customers, ranging from reliability, empathy, responsiveness, tangibility, assurance, image of the firm, accessibility of the bank and so on. In essence, most studies confirmed that service quality impacts customer satisfaction of banks but differ in the method and model of measuring quality service and the service quality dimension

that impact customer satisfaction.

## **MATERIALS AND METHODS**

### ***Research Design***

This study obtained data on customer satisfaction from the banking sector through an investigation, which was conducted for a sample of the general consumer population. The survey form was designed and randomly circulated to target respondents who are the general public at the legal age that are capable of holding a current or savings accounts in any of the systematically important banks (SIBs) in Nigeria. This selection was made since these banks are expected to produce the most quality products because of their wider scale of operation.

To generate a realistic outcome for the research, the data collation was distributed over a large population across the south-west geo-political zone of Nigeria. Thus, the survey questionnaire was designed in a way that it was applicable to a diverse population, where target respondents come from different genders, marital status, age groups, education status, occupations and professions. Since societies possess different economic ideas, expectations, wants and needs, extracting data from respondents that spread across these diverse backgrounds will mostly generate a more consistent result on service quality by money deposit banks. The questionnaires were administered directly to respondents through face-to-face collation and other means deemed necessary to guarantee that the investigation covers a wider geographical area.

### ***Sources of Data and Collection***

The primary data used for this study were extracted using questionnaires. Service quality was measured via SERVQUAL's five-dimension instrument using 5-point Likert-

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scale for all responses in the following order: strongly agree (5), agree (4), neither agree nor disagree (3), disagree (2), and strongly disagree (1) respectively. The questionnaires were self-administered to the respondents to enable further clarification in case of inability of any respondent to understand the content of the questionnaire.

### ***Estimation Techniques***

This study's main objective is to examine whether the quality of services provided by banks in Nigeria satisfy customers. To test the strength of associations between the study variables, correlation and regression analysis were conducted on the collated data using SPSS 24 software. Also, Cronbach's alpha was used as benchmark to assess and ascertain the internal reliability of the instrument. Applying the specified test helps to establish the internal consistency of the items in each dimension and their appropriateness to measure the same construct or dimension of service quality. Explorative factor analysis, KMO, Bartlett's test, communalities, incremental fit test and parsimonious fit measure were also tests conducted to establish the nexus between service quality and customer satisfaction.

### ***Explorative Factor Analysis***

The full questionnaire is divided into two categories including demographic questions (QA) like sex, marital status, age, education background, religion, employment status and annual income of respondents respectively. The second category (QB) reports on indices that reflects the bank's reliability (B1-B4), tangibility (B5-B6), empathy (B7-B9), assurance (B10-B11) and responsiveness (B12-B14) respectively. All statements were structured according to a five-point Likert scale. Interviews were carried out on face-to-face basis.

With regard to the twenty-three statements contained in both QA and QB, the interviewer was instructed to hand over the questionnaire to the respondent and let him/her fill in the questions. A total of 174 questionnaires were received and complete without any missing value and found usable for analysis. Factor analysis was chosen in order to reduce the number of merging matrix variables into fewer principal component subsets (or factors). This is done with a view to retaining the important information content (explained variance) of the data set. Thus, with factor analysis, the variables of the data matrix are essentially categorized into some certain factors that share communal characteristics. Typically, there is no postulation about dependent-independent variable relationship. Therefore, there is no pre-specified conjecture about partitioning the data matrix into subjects of predictor and criterion variables. Rather, the research interest at this junction centres on the whole set of interdependence relationships among the variables, thus allowing the specific data under study to speak for themselves. This allows the model's parameters (coefficients) to be completely determined by the characteristics of the data set, which allows the explorative factor analysis to spot problematic variables much more easily.

This data-reduction technique is considered suitable and appropriate not only because the data matrix is  $n$  variables and  $m$  columns, but interval-scaled variables are involved, which are structured according to a five-point Likert scale. The aim is to analyse relations and interactions among the variables under study and structure the explained variance and present it in a format such that there is no redundancy or double-counting variance. IBM SPSS version 24 was employed in running the analysis.

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### **Factoring Methods**

Four common factors are extracted in the explorative factor analysis (EFA). The total variances explained by each factor (eigenvalues) are estimated in percentages to decide how many factors are needed to represent the variables. The estimated factors and their respective eigenvalues are shown in Table 3. Here variables are stated in standard form with zero mean and standard deviation of one. Fourteen (14) questions were used in category B (QB) of the questionnaire; with standardized variance of each ratio equal to 1 and the total variance equal to 14. Only those factors with a satisfactory record of variances greater than 1 (eigenvalue > 1) are included in the model. Hence, the model contains only the first four factors.

analysis (PCA) because the method is known to give consideration to all the available variances and it also seeks a linear combination of variables that extracts maximum variance. To ascertain the appropriateness (sampling adequacy) of the data, there is the need to test the hypothesis that correlation matrix is an identity matrix. To achieve this, two appropriate tests including the Bartlett's test of sphericity and Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy were used. The closer the measure to 1 the better. A significant result of less than 0.05 is required for Bartlett's test to show that there exists sufficient relationship among the variables to run a meaningful EFA (i.e. that the matrix is not an identity matrix). KMO is within 0 and 1 limit. A measure closer to 1 is desirable. This is shown in Table 1 below:

The extraction used principal component

**Table 1: KMO and Bartlett's Test**

<b>Table 1: KMO and Bartlett's Test</b>		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.808
Bartlett's Test of Sphericity	Approx. Chi-Square	537.847
	Df	91
	Sig.	.000

Source: Authors' computation, 2018

From Table 1, the KMO statistics of 0.808 is closer to 1.0 than 0.5, which is beyond the meritorious benchmark, a clear indication that the data is suitable and adequate for factor analysis; more so that the sample size for QB is more than one hundred. The Bartlett's test records a favourable value of 537.847 with a highly significant value well below the threshold (< 0.05). Thus, the decision to conduct a factor analysis based on

the data set is justified.

### **Communalities**

A communality describes the degree of correlation between an item and all other items. Higher communalities are better, as it may be difficult to significantly load a very low value (between 0 and 0.4) on any factor.

**Table 2: Communalities**

Code	Variable	Extraction
B1	B_Interest	.471
B2	Right_Service	.530
B3	Re_accuracy	.475
B4	Prompt_Ser	.474
B5	Attractive_Pre	.642
B6	Neat_App	.674
B7	Prompt_Info	.552
B8	Need_Id	.514
B9	Conv_Service	.508
B10	Safety_Sec	.419
B11	Fin_Advice	.660
B12	Pro_Response	.497
B13	Willingness	.719
B14	Efficiency	.613

Extraction Method: Principal Component Analysis.  
 Source: Authors' computation, 2018

The result in *Table 2* above shows that all the variables appropriately fit for the analysis because there is no variable with any value below 0.4 threshold.

#### Factor Structure

**Table 3: Factors and their Relative Importance**

Com- ponent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.218	30.127	30.127	4.218	30.127	30.127	2.451	17.507	17.507
2	1.273	9.090	39.217	1.273	9.090	39.217	2.346	16.757	34.264
3	1.172	8.374	47.591	1.172	8.374	47.591	1.489	10.639	44.903
4	1.085	7.752	55.344	1.085	7.752	55.344	1.462	10.441	55.344
5	.861	6.151	61.495						
6	.836	5.972	67.466						
7	.760	5.430	72.896						
8	.728	5.203	78.099						
9	.670	4.788	82.887						
10	.602	4.298	87.185						
11	.536	3.828	91.013						
12	.494	3.530	94.543						
13	.468	3.340	97.882						
14	.296	2.118	100.000						

Extraction Method: Principal Component Analysis.  
 Source: Authors' computation, 2018

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*Table 3* shows the total variance explained in the PCA. The variance shows the mean dispersion scores and is essentially the average error between the observations and the mean (Fields & Bisschhof, 2014). It is a confirmation of how well the actual data fits into the model. Thus, in this study, the variance explained was the instrument of comparison of the strengths of the factors in the model. The results show that up to 14 factors could be relied upon for interpretation of the results. However, output-like factors F5 to F14 explain smaller and smaller amounts of the total variance. Note that factors are sorted according to decreasing variance explained. On average, they explained less than 4.5% (44.65/10%). To further the analysis and based on the Kaiser criterion, as a statistical measure, which placed the minimum threshold value at 1.0, the factors above the dotted lines in *Table 3* are retained while those below it are disregarded and discarded.

Four factors were extracted from the analysis, hence necessitating a re-alignment of the 6 indices initially conceived. The results clearly show that responsiveness index is the most important factor with about one-third (30.1%) of the variance explained. Reliability index is the second most important factor accounting for about 9.1%, while the third factor is related to tangibility index accounting for about 8.3% and the fourth is related to empathy accounting for about 7.8% respectively. A combination of the four factors explains more than half (55.34%) of the variance. This is a fair result, as a cumulative variance of about 60%

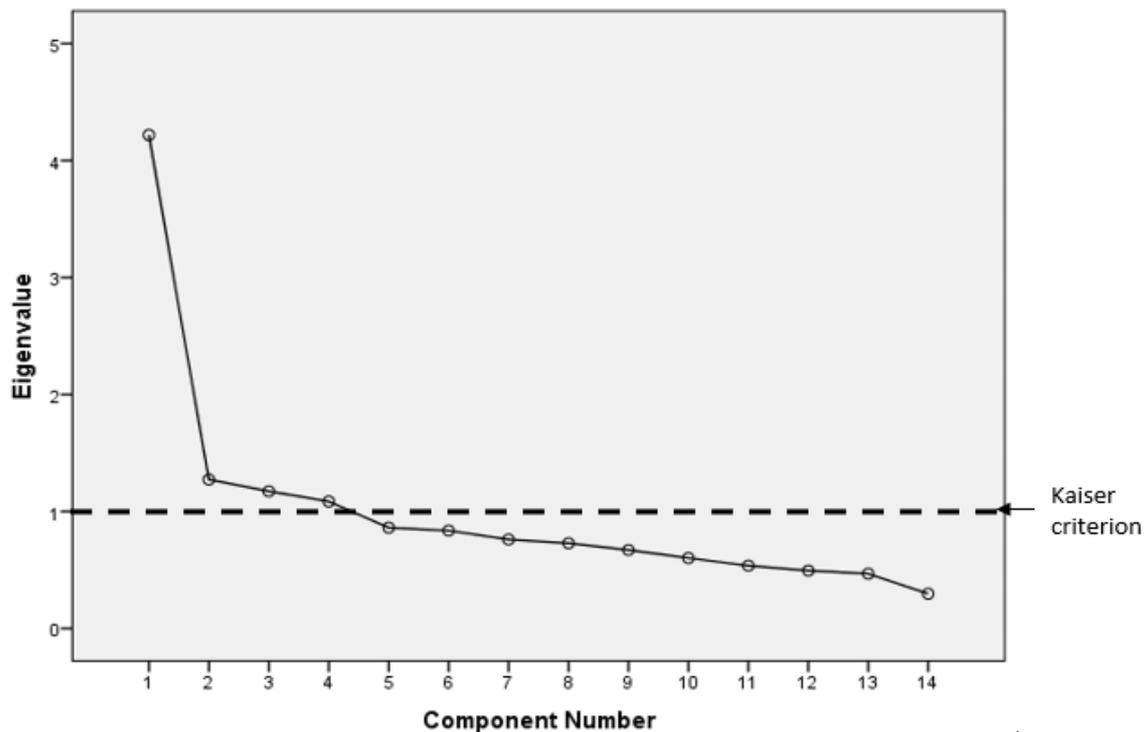
suggests a good fit (Fields, 2007, Hafiz & Shaari, 2013, Fields & Bisschhof, 2014).

#### **Cuttell's Scree Plot**

To further confirm the number of factors to extract and counter the arbitrary cut-off value used in Kaiser criterion (eigenvalues of at least 1.0), another method, Cuttell's scree plot, was used because it is less arbitrary, though the two approaches may not necessarily recommend extracting the same number of factors. The scree plot requires a visual observation of the variance explained via a sharp point (kink), an indication of a dramatic or at least a visually observable decline in importance, which means that factors beyond this point could be omitted from the analysis. Applying the scree plot (*Figure 1*) to the factor analysis confirms the four factors extracted earlier.

#### **Rotation Type**

Factor loadings to be more distinctly differentiated with rotation, which obviously enhances result interpretation. As suggested in some recent studies, the study adopts the Orthogonal Varimax factor rotation method with Kaiser Standardization in the PCA (Cambas *et al*, 2005, Adeyeye *et al*, 2012 and Adeyeye & Oloyede, 2014). Convergence was attained after 7 iterations. This method enhances identification of a variable with a factor and at the same time minimizes the number of variables that have high loadings on a factor. The results presented in *Table 4* has been edited and all factor loadings lower than 0.40 were suppressed and excluded.



**Figure 1: Scree Plot**

From *Table 4*, the cell values concerning columns F1 to F4 are metric and all values fall within the range of  $-1$  and  $1$ . The cell value of  $0.822$  concerning B13 in column F1 is the simple correlation of the variables B13 with the principal component, or most important dimension, F1, while the cell value of  $0.656$  concerning B2 in column F2 is the correlation of the variable B2 with the second most important component, F2. The same interpretation applies to all other variables with their respective factor loadings. All the cells show positive correlations with the four extracted factors indicating a positive correlation between respective variables and the corresponding factors. Note that these correlations are referred to as factor loadings.

Looking at the information provided by the factor loadings and the relationship between

them, *Table 4* shows 4 variables that have high loadings (higher than  $0.4$  threshold) on the first factor (F1), 6 variables spend most of its fixed loading amount on the second factor (F2), 2 variables each have high loadings on the third factor (F3) and fourth factor (F4) respectively. It is noted that the result indicates that the factor structure is very clean evidently supporting convergent and discriminant validity with high loadings within factors and no cross-loadings between the factors except variable B8 (Need\_Id), which cross-loaded on F1 and F4 and variable B9 (Convenient service), which cross-loaded on F2 and F4. The loadings with lesser values were simply ignored since they were not up to  $0.4$ . However, the observed cross-loading indicate the close relationships and existence of overlapping traits between them.

**Table 4: Rotated Component Matrix<sup>a</sup>**

Code	Variables	Component			
		1	2	3	4
B13	Willingness	.822			
B14	Efficiency	.749			
B12	Pro_Response	.582			
B7	Prompt_Info	.516			
B2	Right_Service		.656		
B10	Safety_Sec		.613		
B4	Prompt_Ser		.613		
B3	Re_accuracy		.609		
B1	B_Interest		.548		
B9	Conv_Service		.444		
B5	Attractive_Pre			.757	
B6	Neat_App			.641	
B11	Fin_Advice				.770
B8	Need_Id				.483
Name given to factor		Responsiveness	Reliability	Tangibility	Empathy
Variance explained (%)		30.13	9.09	8.37	7.75
Cumulative Variance contribution rate (%)		30.13	39.22	47.59	55.34
Cronbach's alpha		0.745	0.70	0.402	0.565

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Source: Authors' computation, 2018

### **Factors and their Relative Importance**

In assessing the key qualities (factors) of bank services that contribute to customer satisfaction in the Nigerian banking sector, there were four factors extracted on the basis of their reliability as valid instruments, internal consistency and contributions in terms of their respective factor loadings. The strength of the respective item factor

loadings on each factor informs the order in which the variables were arranged.

**Factor\_1: Responsiveness Index.** This is the most significant factor for consideration when assessing the quality of bank services that lead to customer satisfaction. About one-third (31.13%) of the variance are explained by this factor, which contains four elements

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that indicate the profound effect of responsiveness of banking services to meet customers' needs. The consequence of willingness of bank employees to help customers (B13), provision of fast and efficient counter services (B14), prompt response to customers' request (B13) and provision of prompt information to customers (B7), in that order, ranks highest among the qualities of bank services that lead to customer satisfaction. The Cronbach's alpha is 0.745 indicating an acceptable reliability coefficient.

**Factor\_2: Reliability Index.** This is the second most significant factor enhancing customer satisfaction from services provided by Nigerian banks. It explains a favourable variance of about 9.1% and contains six elements showing the importance of provision of right service at all times (B2), feeling a sense of safety and security in customers' transactions with the bank (B10), ability of employees to provide services at the promised time (B4), accurate record keeping of customers' transactions (B3), readiness to show sincere interest to solve customers' problems (B1) and provision of convenient service charges to customers respectively. The more these variables are disregarded and neglected, the higher will be the inclination to distrust the services of the banks. The Cronbach's alpha of 0.731 shows an acceptable reliability coefficient.

**Factor\_3: Tangibility Index.** This contains two elements that point specifically to the impact of physical appearance of both employees and building premises of Nigerian banks in providing satisfaction to customers. This factor explains 8.37% of the variance. Nigerian banks rank among the best decorated business premises in the country and, also, its employees are well

known for their corporate dressing and vogue appearance. This study affirms that a bank with modern-looking premises and equipment (B5) coupled with neat-appearing desk employees (B6) impacts positively on the bank customers and contributes to their satisfaction. However, the Cronbach's alpha of 0.402 is less than satisfactory reliability coefficient, showing that the index is a weak bank quality in providing customer satisfaction.

**Factor\_4: Empathy Index.** This factor explains about 7.75% of the variance and comprises of two variables pointing to the importance of ability of banks to provide needed financial advice (B11) and employees' ability to understand customers' specific needs (B8). The importance of these two qualities cannot be overemphasised, as they both enhance customer satisfaction and promote customer loyalty. However, the Cronbach's alpha of 0.57 shows a less than satisfactory but tolerable reliability coefficient.

#### *Confirmatory Factor Analysis*

Based on the outcomes of the EFA, the study employed *Amos 24* software to assess the model using confirmatory factor analysis (CFA) via structural equation modelling (SEM) technique. This is done with a view to confirming the factor structure that was extracted in the EFA. To run the CFA and get the model fit, some of the essential estimations include standardized moments, residual moments and modification indices. Two of the four factors (F3 and F4) suggested by EFA were excluded in the measurement model because their loadings and Cronbach's alpha were very low. Also, B9 in F2 was excluded for the same reason, but B8 was re-allocated to F1. The exclusion of the 2 factors and the re-arrangement had no negative

implications for the model, rather, the quality of the model was enhanced judging from the model fit indices. The model fit indices are presented in *Table 5*. Model 1 represents the original model based on the outcome of the EFA, while Model 2 represents

the new model under CFA. The Cronbach's alpha for the 2 resulting factors under CFA are: F1 (Responsiveness = 0.768) and F2 (Reliability = 0.7), both of which are satisfactory reliability coefficients.

Table 5: **Model Fit Summary**

<b>Model Fit Indices</b>	Model 1	Model 2	Threshold	Fa- vours
<b>Absolute fit measures</b>				
<b>CMIN</b>	136.288	72.124	The smaller the better	2
<b>DF</b>	94	51		
<b>P</b>	0.003	0.027	> 0.05	2
<b>CMIN/ DF</b>	1.45	1.414	< 3	2
<b>GFI</b>	0.915	0.938	> 0.95	2
<b>RMSEA</b>	0.051	0.049	< 0.1	2
<b>PCLOSE</b>	0.448	0.503	> 0.05	2
<b>Incremental fit measures</b>				
<b>IFI</b>	0.936	0.961	> 0.90	2
<b>AGFI</b>	0.877	0.905	> 0.90	2
<b>CFI</b>	0.934	0.96	> 0.90	2
<b>TLI</b>	0.915	0.948	> 0.90	2
<b>Parsimonious fit measures</b>				
<b>PGFI</b>	0.633	0.613	The higher the better	1
<b>PRATIO</b>	0.783	0.773	The higher the better	1
<b>PNFI</b>	0.642	0.679	Smaller than NFI. The higher the better	2
<b>PCFI</b>	0.731	0.742	Smaller than CFI. The higher the better	2
<b>AIC</b>	220.288	126.124	The smaller the better	2
<b>BIC</b>	352.968	211.418	Imposes higher penalty on model complexity than AIC. The smaller the better	2
<b>CAIC</b>	394.968	238.418	The smaller the better	2

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### ***Absolute Fit Measures (AFM)***

These measures only assess the overall model fit but do not express the quality of the model. The chi-square value, degree of freedom and the corresponding  $p$ -value were used to assess the overall fitness of the data to the proposed models. However, the normed-chi-square test (i.e. chi-square value divided by the degree of freedom) was used for large chi-square values and degree of freedoms. The normal standard is that the normed-chi-square value (CMIN/DF) indicating a very good threshold must be less than 3 but must not be greater than 5 and the corresponding  $p$ -value must be greater than 0.05. CMIN result shows a value of 72.124 for Model 2, which is less than 136.288 for Model 1. The smaller the better. Again, CMIN/DF result shows a value of 1.45 but with a corresponding  $p$ -value of 0.003 for Model 1 and a smaller value of 1.414 but with a corresponding  $p$ -value of 0.027 for Model 2. Notably, while the absolute values of CMIN/DF in both cases fall within the threshold, the corresponding  $p$ -values are far less than the standard threshold.

The value of Goodness of Fit Index (GFI) was reported in the study. This was used as another standard for determining the degree of variance that derives from the estimated population covariance. The GFI value ranged between 0 and 1 in which a satisfactory indicator of good fit ranges between 0.8 and 0.95, as cut-off point. The result shows a good fit at 0.915 for Model 1 and 0.938 for Model 2, which is an improvement, but both fall within an acceptable fit measure.

Another model fit index reported in the study under AFM is the Root Mean Square Error of Approximation (RMSEA). This is

another important criterion for assessing a model fitness. It shows the extent to which a model is fitted to the population covariance/correlation matrix. A value less than 0.05 suggest good fit approximation; values between 0.05 and 0.10 suggest a moderate fit while values greater than 0.10 is considered very bad fit measure. The result shows 0.051 for Model 1, suggesting a moderate fit and 0.049 for Model 2, suggesting a good fit.

PCLOSE was also reported, which tests the null hypothesis that RMSEA is less than 0.05. The value should be greater than 0.05. The result shows 0.448 for Model 1 and 0.503 for Model 2, both falling within acceptable threshold. Hence, the absolute model fit indices for both models suggest a tolerable good model fit.

### ***Incremental Fit Measures***

Four incremental fit indices were used to determine the overall fitness. They are Tucker-Lewis Index (TLI), Incremental Fit Index (IFI), Comparative Fit Index (CFI) and the Adjusted Goodness of Fit Index (AGFI). Each of the indices ranges between 0 and 1; an incremental value of 0.9 or more is a satisfactory indicator of good fit. A value equal to or greater than 0.95 is regarded as an indicator of perfect fit. The result in each of the cases for both models is well above 0.9 threshold except for AGFI, which is 0.877 for Model 1. AGFI is analogous to adjusted  $R$ -square.

### ***Parsimonious Fit Measures***

This is a group of measures that aim to adjust the fit measures and provide a comparison between models with different numbers of estimated coefficients of different complexity. Parsimonious statistics appreciate models where fewer parameters need to be estimated. Those used in this study include:

Parsimony Ratio (PRATIO), Parsimonious Comparative Fit Index (PCFI), Parsimony Goodness of Fit Index (PGFI), Parsimonious Normed Fit Index (PNFI), Consistent AIC (CAIC), Akaike Information Criterion (AIC) and Bayes Information Criterion (BIC). The higher the indices for the first four criteria, the better the fit while the smaller the indices for the last three measures the better for the model respectively.

In summary, Table 5 compares the two models with regards to the selected AMOS fit measures. All the selected absolute, incremental and parsimonious fit measures favour Model 2 except two of the parsimonious measures which support Model 1. So, the better choice would probably be Model 2.

## RESULTS AND DISCUSSIONS

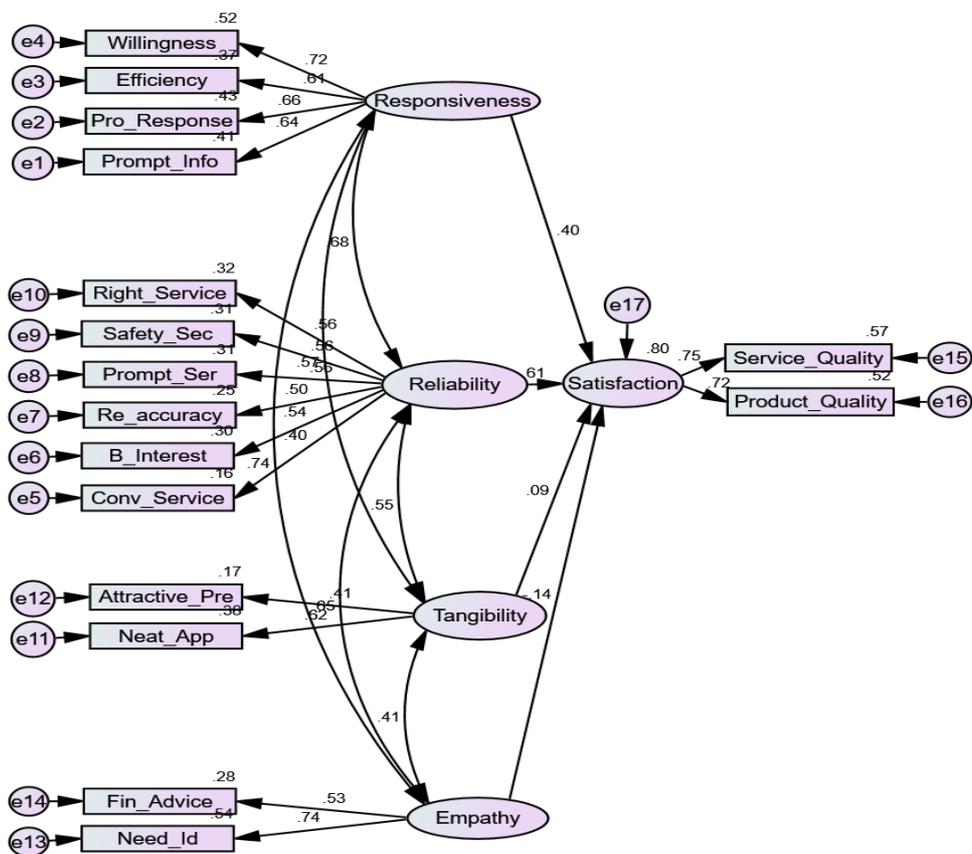
The result in Table 6 shows both the unstandardized and standardized estimates of

[Model 1](#) and also the result in Figure 2 presents the overparameterized measurement model based on the output of the exploratory factor analysis, which displayed loadings of the 14 items of bank services that lead to customers' satisfaction. According to the theory being tested, customers' satisfaction is being influenced by five constructs: responsiveness, reliability, tangibility and empathy. The results show the following:

- A strong causal relationship between Reliability and Satisfaction (0.61), which is highly significant at 5% level.
- Moderate causal link between Responsiveness and Satisfaction (0.40), which is only significant at 10% level.
- A weak link between Tangibility (0.09) and Satisfaction, which is not significant.
- A weak and negative causal relationship between Empathy (- 0.14) and Satisfaction, which is also not significant.

**Table 6: Maximum Likelihood Estimates (Regression Weights):**

			Estimate	Std Estimate	S.E.	C.R.	P
Satisfaction	<---	Reliability	1.038	0.613	0.347	2.993	0.003
Satisfaction	<---	Tangibility	0.176	0.093	0.309	0.568	0.57
Satisfaction	<---	Empathy	-0.142	-0.142	0.198	-0.72	0.472
Satisfaction	<---	Responsiveness	0.467	0.402	0.24	1.945	0.052
Prompt_Info	<---	Responsiveness	1	0.637			
Pro_Response	<---	Responsiveness	1.059	0.658	0.155	6.848	***
Efficiency	<---	Responsiveness	1.05	0.606	0.163	6.433	***
Willingness	<---	Responsiveness	1.086	0.72	0.149	7.287	***
Conv_Service	<---	Reliability	1	0.403			
B_Interest	<---	Reliability	1.146	0.544	0.274	4.19	***
Re_accuracy	<---	Reliability	1.08	0.498	0.268	4.027	***
Prompt_Ser	<---	Reliability	1.259	0.556	0.298	4.228	***
Safety_Sec	<---	Reliability	1.063	0.56	0.251	4.24	***
Right_Service	<---	Reliability	1.401	0.565	0.329	4.255	***
Neat_App	<---	Tangibility	1	0.616			
Attractive_Pre	<---	Tangibility	0.671	0.409	0.225	2.985	0.003
Need_Id	<---	Empathy	1	0.738			
Fin_Advice	<---	Empathy	0.754	0.534	0.151	4.992	***
Service_Quality	<---	Satisfaction	1	0.755			
Product_Quality	<---	Satisfaction	1.022	0.723	0.125	8.208	***



**Figure 2: Confirmatory Factor Analysis (Model 1)**

According to SEM theory, error variances that are either negative or close to zero and standardized coefficients very close to  $\pm 1.00$  are signs of offending estimate. From Figure 2, all the estimated coefficients are positive and smaller than 1.00 ranging from 0.40 to 0.74. Moreover, some of the error variances are very small with Conv\_Service (0.16) and Attractive\_Pre (0.17) having the smallest figures respectively than others (ranging from 0.25 to 0.54).

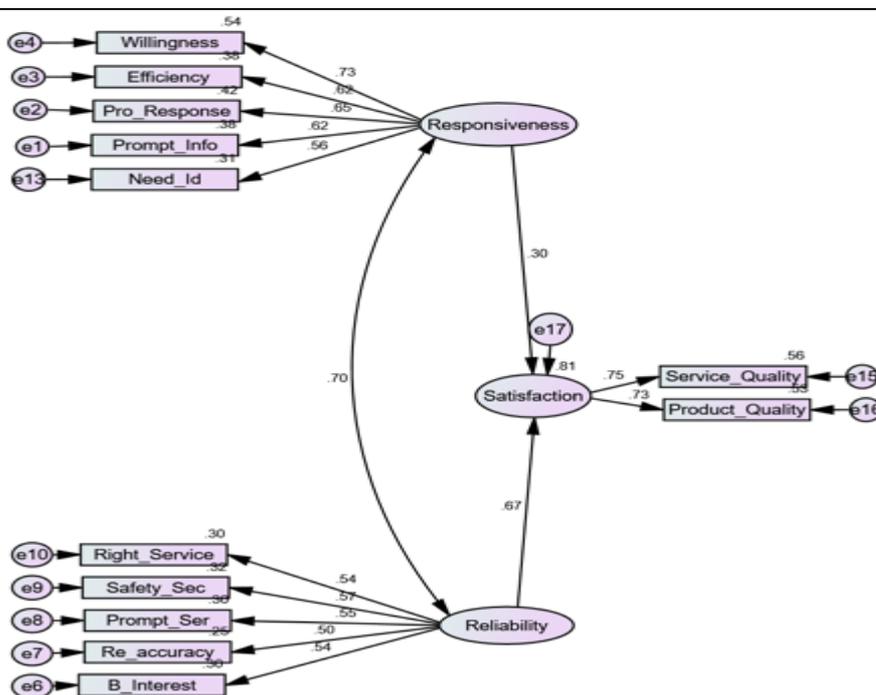
The possible remedy to the above not-too-good results was to remove Conv\_Service and Attractive\_Pre from Reliability and Tangibility constructs. The remaining variable in Tangibility construct (Neat\_App) was re-assigned to Responsiveness construct. A re-estimation of the model did not produce the desirable result. Hence, a repeat of removing a construct and reassigning the variables, which eventually proved to have a successful influence on the estimated parameters shown in Table 7 and Figure 3 respectively.

**Table 7: Maximum Likelihood Estimates (Parsimonious Model):**

			Estimate	Std Estimate	S.E.	C.R.	P
Satisfaction	<---	Reliability	0.98	0.666	0.263	3.723	***
Satisfaction	<---	Responsiveness	0.352	0.296	0.174	2.017	0.044
Prompt_Info	<---	Responsiveness	1	0.619			
Pro_Response	<---	Responsiveness	1.075	0.649	0.162	6.62	***
Efficiency	<---	Responsiveness	1.101	0.617	0.172	6.385	***
Willingness	<---	Responsiveness	1.135	0.731	0.159	7.154	***
B_Interest	<---	Reliability	1	0.544			
Re_accuracy	<---	Reliability	0.955	0.505	0.195	4.906	***
Prompt_Ser	<---	Reliability	1.078	0.545	0.209	5.168	***
Safety_Sec	<---	Reliability	0.939	0.567	0.177	5.297	***
Right_Service	<---	Reliability	1.181	0.545	0.229	5.164	***
Need_Id	<---	Responsiveness	0.905	0.559	0.153	5.92	***
Service_Quality	<---	Satisfaction	1	0.75			
Product_Quality	<---	Satisfaction	1.036	0.728	0.126	8.187	***

The parsimonious model results are shown in Table 7 and Figure 3. Generally, the statistical parameters and estimates look better in Model 2 compared to Model 1. The result shows the following:

- No very small error variances are present any longer (from 0.25 to 0.54).
- There is no coefficient close to 1; they range from 0.50 to 0.75
- There is a high positive covariance between the two remaining exogenous variables (Responsiveness and Reliability) at 0.70.
- All the parameter estimates are highly significant at 5% level.
- The first exogenous construct (Responsiveness) has five indicators. They include willingness, prompt response, efficiency, prompt information and need identification with their positive parameters weights ranging from 0.56 to 0.73. The second exogenous construct (Reliability) also has five indicators. They include right service, safety and security, prompt service, record accuracy and bank's sincere interest to solve customers' problems with their close but positive parameters ranging from 0.50 to 0.57.
- The exogenous construct (Satisfaction) has two indicators including service quality and product quality with positive parameters of 0.75 and 0.73 respectively.
- There is an improved strong causal relationship between Reliability and Satisfaction (0.67), which is highly significant at 5% level.
- There is a moderate causal link between Responsiveness and Satisfaction (0.30), which is highly significant at 5% level.



**Figure 3: Confirmatory Factor Analysis (Model 2)**

**Implications of Findings**

Perceived reliability of the bank exerts greater positive influence on customer satisfaction. Obviously, reliability engenders and enhances ability of customers to repose trust in the banks' services and hence, sustains customer loyalty. Thus, safety and security of customers' dealings with the bank ranks highest with a weight of 0.57. Close to it in rank is the perceived ability of bank employees to render desired services to customers at the promised time (0.55). The system ranks at par with the capacity of bank employees to show genuine sincerity in solving customers' problems with their ability to perform such services at all times (0.54). Ability of banks to keep accurate record of customers' transactions ranked last (0.50) among the five indicators of bank's reliability. This is not unexpected, as customers may not be able to measure with

exactitude the ability of the banks to keep error-free financial records.

Perceived responsiveness of the bank also exerts positive influence on customer satisfaction, though to a lesser degree. By implication, willingness of bank employees to help customers (with a weight of 0.73) ranks first in affecting the responsiveness of the bank towards satisfying their clients compared to other indicators. Prompt response of bank employees to customers' requests is next in rank in contributing to banks' responsiveness towards customer satisfaction with a weight of 0.65. Surprisingly, the system ranks at par with the provision of fast and efficient counter services with provision of prompt information to customers as indicators of banks' responsiveness. The two indicators work *pari passu* in practice, as one is a subset of the other. The ability of bank

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employees to understand the specific needs of each customer ranks least as indicators of banks' responsiveness in providing customer satisfaction.

### **Recommendations**

Customers of different banks were surveyed and examined some of which expressed their happiness and otherwise of the banks they transact with. Nigerian banks are required to make available to customers products and services that suit the peculiarity of each category of customer as many customers expressed their grievances in respect of some of the questions posed by the questionnaire. Small savers should have packages designed to satisfy their needs and the big fund savers too should be given proper attention. Banks in Nigeria are advised to design a measure to evaluate the level of satisfaction customers derive from patronizing them, the reason being that some customers claimed that they only operate bank account and use other financial services provided by the banks because such financial services are importantly compelling and a necessity to patronise them, that if other means is available they may not transact with the banks. Therefore, banks should look for a means of adding value to the customer. Although many customers complained about high and arbitrary charges of the financial institutions, this meant a lot to them especially the small savers. Notwithstanding, banks should be transparent as much as possible on the charges they levy customers and all hidden charges should be eliminated. Attention should be directed at reducing the level of congestion that eat up customers' precious time in the banking hall. Additionally, improving technologically will be an added advantage; although all the systematically important banks are having a well dependable online service, but the

complaints of failure is still much and mostly, at times, unbearable especially if it involves two banks.

Finally, attention should be shifted to customer welfare improvement by providing convenient and cost-effective services for customers to improve their confidence in the banks because, till today, many Nigerians still have reservations for using banks. In fact, this does not have limit as it involves people of different social and economic status.

### **Limitation and Suggestion for Further Study**

This paper measures the quality of bank services and customer satisfaction in Nigeria, but the number of respondents is considerably small compared to the population. More so, the geographical coverage is small as the respondents used in the study are customers patronizing the selected banks in the South-West zone of the country.

The study used questionnaires as a tool for primary data collection. Although, multiple choice questions were set for respondents to choose, respondents' biases or possible misunderstanding of the questions or their order might lead to wrong choices. This hampers flexibility of the questionnaires, which could limit respondents' ability to answer questions based on the given choices and not what they think might be the appropriate answer. Again, the respondents were drawn from several groups like age, ethnic and education, which could have produced a more exact and consistent finding should the sample size be bigger. However, this sample size had to be used for the study due to time and fund constraints, and availability of man power.

More generic proxies should be adopted for

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further studies. To further explain service quality, more attitudinal factors can be explored, which were not included in this study. The scope of future researches on this study should be broadened with a view to producing a more representative result than from one or few geographical areas only. Also, further studies are encouraged to find quantitative data to study variables of quality services and customer satisfaction.

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