



## EFFECT OF SERVICE QUALITY DIMENSIONS ON CUSTOMER SATISFACTION OF TELECOMMUNICATION COMPANIES IN FCT-ABUJA, NIGERIA

SUFIAN Jelili Babatunde<sup>1</sup>, ABDULLAHI Shehu Araga<sup>2</sup>, ADEGBOLA Eunice Abimbola<sup>3</sup>, OLUSANYA Samuel Olumuyiwa<sup>4</sup>, IBRAHIM Mohammed Gadaffi<sup>5</sup>

<sup>1,2&3</sup>Department of Business Administration, National Open University of Nigeria.

<sup>4</sup>Department of Economics, National Open University of Nigeria.

<sup>5</sup>Department of Entrepreneurial Studies, National Open University of Nigeria.

Correspondence author: [jelilibabatunde@gmail.com](mailto:jelilibabatunde@gmail.com); +2348023059640

### Abstract

*The study examined the effect of service quality (tangibility and assurance) dimensions on customer satisfaction of telecommunication companies in FCT-Abuja. The study adopted a descriptive survey research design. The population used for the study comprised adult telecommunication users in FCT, Abuja. A sample of 481 adult telecommunication was between users and determined using Cochran's (1963) sample sizes formula and convenience sampling technique was used for this study. The study utilized adapted questionnaire as the instrument for data collection. The data collected for the study was analyzed using Partial Least Square Structural Equation Modeling (PLS-SEM) in determining the measurement, structural models and hypotheses testing through SmartPLS 3.0 software. The study found that tangibility has positive and significant effect on customer satisfaction, while assurance has negative and significant effect on customer satisfaction of telecommunication companies in FCT-Abuja. The study recommended that the management of telecommunication companies in FCT-Abuja, Nigeria should keep improving the tangibility of their services to their customers by way of intermittent modernization of their communication facilities and other equipment at their outlets, for easy availability of cards and recharge services to the users. It also recommended that the management of telecommunication companies in FCT-Abuja, Nigeria should ensure that their staff improve their politeness in attending and solving customers' problems satisfactorily in order to cultivate confidence in customers.*

**Keywords:** Service Quality, Tangibility, Assurance, Customer Satisfaction, Telecom.

### Introduction

Customers are key to every organisation that targets success especially service industry, particularly the telecommunication industry. The service industry needs to prioritize its consumers by providing them with high-quality services in a way that benefits all of its clients. This is due to the fact that all corporate bodies face enormous challenges in terms of

quality, efficiency, production, growth, and survival. These growth and survival demands are further deepened by the need to attract and retain customers, as customers are the main focus of any successful business (Olatokun & Ojo, 2022).

Ananaba et al. (2021) viewed customer satisfaction as the end-state satisfaction resulting from the experience of consumption. Customers are always aiming to get maximum satisfaction from the products or services they buy. Winning in today's market place entails the need to build customer relationship, not just building the products. Building customer relationships means delivering superior value over competitors to the target customers (Olatokun & Ojo, 2022). Therefore, for organizations especially service providing firms to gain customers satisfaction such firms should be committed to offer quality service to their customers.

Parasuraman et al. (2018) defined service quality as the consumers' judgment about a firm's overall excellence or superiority.

Service quality has been identified as a key area of focus for businesses due to its influence on business performance and as a crucial component of customer satisfaction. Service quality evaluates how satisfied a customer is with a product or service in comparison to similar offerings (Francis & Azeez, 2020).

Service quality has become critical to efforts geared towards maintaining competitive advantage. It is the ability for service providers to match expected service with perceived service to achieve customer satisfaction.

One of the objectives of service industry specifically telecommunication companies is to continue to provide a quality service to the customers with hope to gain full customer satisfaction or to service the customers better to allow such customers to maintain or keep patronizing them. In other words, the intense competition among firms within telecommunication industry in Nigeria is rapidly increasing as one of the fundamental aims of every firm is to offer quality service which is capable of satisfying their clients in order to achieve long lasting customer satisfaction. This may be because of telecommunication Company's inability to fully and steadily satisfy the customers expectation (network strength, network coverage and prompt service) which may be as a result of low or ineffective service quality (reliability, responsiveness, assurance, empathy and tangibility) delivery to the customers (Francis & Azeez, 2020).

Firms struggle to gain customer satisfaction because they failed to improve service quality in the direction of customers' satisfaction, despite the fact that various scholars have made a

variety of submissions regarding the effect of service quality on customer satisfaction, for example, Vithya (2017).

Similar to this, Abdul-Qadir et al. (2021) draw the conclusion that businesses lost customer satisfaction as a result of poor service qualities like reliability and empathy. Additionally, the majority of studies in this field have used regression analysis and descriptive statistics to analyze their data (Awaji-Ima & Carr, 2022; Mawoli, 2022; Francis & Azeez, 2020).

There are some similar past studies on telecom services but none has been carried out in the Federal Capital Territory of Nigeria. This objective of the study therefore examined the effect of service quality, tangibility and assurance dimension on customer satisfaction of telecommunication companies in FCT-Abuja.

The specific objectives of the study are to:

- i. examine the effect of tangibility on customer's satisfaction of telecommunication companies in FCT-Abuja, Nigeria; and
- ii. determine the effect of assurance on customer's satisfaction of telecommunication companies in FCT-Abuja, Nigeria.

The study therefore formulated the following hypotheses in line with the objectives:

Ho1: Tangibility has no significant effect on customers' satisfaction of telecommunication companies in FCT-Abuja, Nigeria

Ho2: Assurance has no significant effect on customers' satisfaction of telecommunication companies in FCT-Abuja, Nigeria.

## **Literature Review**

### **Concept of Service Quality**

Mahfooz (2014) defines service quality as the difference between customer's expectations for the service encounter and the perception of the service received. In his own view, Palmer (2015) posits that refer to quality services and the extent to which a service meets customers' expectations. Parasuraman et al. (2018) defines service quality as the consumers' judgment about a firm's overall excellence or superiority. Parasuraman et al. (2018) further state that quality service represents a positive gap between customer perception and expectations of a service offer. Gronroos (2019) sees quality service as the outcome of an evaluation process, where the customers compare their expectations with the service they have received.

What is perceived by customers in the interaction process will obviously have critical impact on customers' evaluation of service quality (Gronroos, 2019). Due to the peculiar attributes of

service, the evaluation of service quality is a more important indicator to assess a service provider's performance. Offering high quality services is considered to be a visible way to create customers trust and satisfaction, as well as obtaining competitive advantages and building a long-term relationship with customers. Kumar (2019) suggests that the perceived quality of a given service is the result of an evaluation process since consumers make comparison between the services they expect with perceptions of the services they receive. Sequel to this, he concludes that the quality of service is dependent on two variables: expected service and perceived service.

According to Zalatar (2012), service quality is of fundamental importance to every service institution especially the banking industry. Service quality is an important component in the structure of any business. This is especially relevant to marketers as customers' evaluation of service quality and the resulting level of satisfaction are perceived to affect bottom line measures of business success (Iacobucci et al.,2015). Customer expectations are beliefs about a service that serve as standards against which service performance is judged (Zeithamal et al.,2019); which customer thinks a service provider should offer, rather than on what might be on offer (Parasuram et al., 2018). According to Gronroos (2019), perceived quality of a given service is the result of an evaluation process since consumers often make comparison between the services, they expect with perceptions of the services that they received. The generic dimensions that customers use to evaluate service quality are responsiveness, reliability, responsiveness, assurance, empathy and tangibility (Agyapong, 2021). Therefore, this study adopted the service quality dimensions offered by Agyapong (2021). This study focused on two (2) service quality dimension such as tangibility & assurance.

### **Tangibility**

Tangibility refers to the physical existence of a phenomenon and can be seen and touched. In the context of service quality, tangibility can be referred to as Information and Communications Technology (ICT) equipment, physical facilities and their appearance (ambience, lighting, air-conditioning, seating arrangement) and lastly but not least, the services providing personnel of the organization (Zalatar, 2012). These tangibles are deployed, in random integration, by any organization to render services to its customers who in turn assess the quality and usability of these tangibles.

## **Assurance**

Assurance is developed by the level of knowledge and courtesy displayed by the employees in rendering the services and their ability to instill trust and confidence (Murad & Ali, 2015). In other words, assurance is the knowledge and courtesy of employees and their ability to convey trust and confidence in dealing with customers.

According to Molaee et al. (2018) assurance is knowledge and courtesy of employees as well as their ability to convey trust and confidence. Service providers are expected to be experts. According to them, if a service provider is highly skilled, yet customers do not see that, their confidence in that provider will be lower and so will be their assessment of that provider's service quality. As the "human face" of the organization, customer contact staff needs to exude confidence and thus generate trust and satisfaction from customers (Gray & Boshoff, 2014).

## **Customer Satisfaction**

Customer satisfaction is a post purchase attitude formed through mental comparison of the quality a customer expects to receive from an exchange, and the level of quality the customer perceives actually receiving (Mohammad & Mohammad-Alhamadani, 2011).

Customer satisfaction is defined as a person's emotion of pleasure (or disappointment) as a result of comparing the perceived performance or outcome in relation to the expectation (Sambo et al., 2021).

Customer satisfaction results in behavioral outcomes such as customer retention, commitment, creation of a mutually rewarding bond between the user and the service provider, increased customer tolerance for services and products failures, positive word-of-mouth advertising about the organization, increased future customer spending, and it might result in more selling, attracting new customers, lowering costs, and greater profitability (Adeola & Adebisi, 2014). Customer satisfaction is actually a term most widely used in business and commerce. It is a business term explaining the measurement of the kind of products and services provided by a company to meet its customer's expectation (Agyapong, 2021). Customer satisfaction is seen as a key differentiator and increasingly has become a key element of business strategy. It is well established that satisfied customers are key to long-term business success (Zeithaml et al., 2016). Customer satisfaction is also defined as a global issue that affects all organizations, regardless of its size, whether profit or non-profit,

local or multi-national. Companies that satisfy their customer base also experience higher economic returns (Bolton & Drew, 2021). Therefore, greater customer satisfaction results in even greater customer satisfaction, which in turn results to higher future revenue (Bolton & Drew, 2021).

There are two general conceptualizations of satisfaction namely: the transaction specific satisfaction and the cumulative satisfaction. The transaction-specific satisfaction is the customer's very own evaluation of his/her experience and reaction towards a particular service encounter (Gray & Boshoff, 2014).

### **Telecommunication Industry**

Telecommunication industry is a subsector of Information and Communication Technology which is made up of all telecommunications/telephone companies and internet service providers. It plays a crucial role in the evolution of mobile communications and the information society (Agyapong, 2021). One important utility in an economy is telecommunication. The telecommunication industry's role in an economy cannot be overemphasized. This is because it is the means through which all daily transactions and activities are undertaken. It aids decision making, organizing, influencing, activating, instructing, providing feedback, promoting interpersonal and business relationships as well as exchange of information (Blery et al., 2019). All social, economic, political, cultural, trade and commercial activities are undertaken using telecommunication. The nature of a country's telecommunication industry affects its pace of commercial and domestic activities.

### **Empirical Review**

#### **Tangibility and Customer Satisfaction**

Christianto et al. (2020) looked at product quality, service quality and price effect on customer loyalty through customer satisfaction, in a study that focused on Honda Mobilio car users in Subrajaya region of Indonesia. The researchers gathered 175 responses with the data analysed using structural equation model. Findings from the study showed that product quality and service quality positively influences customer satisfaction. Price also has positive influence on customer satisfaction, with customer satisfaction yielding negative effect on customer loyalty. The elements of service quality employed include tangibility, reliability, assurance and responsiveness. Thus, the researchers concluded that in order to sustain

customer loyalty, Honda will need to take necessary steps to enhance its product and service qualities, as well as address issues related to pricing.

Lolo (2020) conducted another study in Indonesia which looked at the effect of corporate image, service quality, and price perception on the satisfaction of customers and loyalty. The study was conducted at the Pertamina Office in South Sulawesi Province with 227 responses gathered and analysed using structural equation modelling. Findings from the study show that corporate image, service quality, and price perceptions have positive and significant effect on the satisfaction of customers. On the same note, they positively influence customer loyalty.

### **Assurance and Customer Satisfaction**

Selelo and Lekobane (2017) conducted a study on the effect of service quality on customer satisfaction on Botswana mobile telecommunication industry. Using regression analysis to analyze the data collected, the regression results showed that, across all mobile operators; Assurance, Credibility, Security and Tangibles are the major dimensions that are significantly and positively related to customer satisfaction.

Mamoun et al. (2015) conducted a study on service quality, customer satisfaction and loyalty in the Yemeni mobile service market. Using a structured questionnaire, 1400 copies of questionnaire were distributed to customers out of which 999 were completed and returned. Using structural equation modelling, the study reported that, reliability, empathy and assurance have positively and significantly affected customer satisfaction. Also, customer satisfaction positively and significantly affected customer loyalty.

Temba (2013) assessed customer satisfaction and service quality using SERVQUAL model within Tanzania Telecommunications Company Limited working environment. The study adopted a case study design. The study covered mobile communication users in Tanzania and questionnaire was designed and distributed to respondents using a convenience sampling technique for TTCL customers. The data generated for the study was analyzed using descriptive statistics and charts. The study found that assurance has no significant effect on customer satisfaction. The study also found that the overall service quality perceived by customers was not satisfactory; means customer expectations exceeded perceptions. The analysis revealed that TTCL Customer Care, Network Coverage, Voucher availability, handsets flexibility and air time charges are the critical factors that hinder satisfaction.

## **Theoretical Review**

### **Expectancy Disconfirmation Theory (EDT)**

This study is anchored on expectancy disconfirmation (EDT) theory, which was developed by Oliver (1980). It appears to be the most widely accepted conceptualization of the customer satisfaction concept (Barsky, 1992). Oliver (1980) proposed that satisfaction level is a result of the difference between expected and perceived performance. Satisfaction (positive disconfirmation) occurs when product or service is better than expected. On the other hand, a performance worse than expected results to dissatisfaction (negative disconfirmation). EDT is a substantial theory that can measure customer satisfaction from perceived quality of products or services in order to measure the customer's satisfaction. EDT has two famous variables; expectation or desire and experience or perceived performance (Oliver, 1980). These variables are defined in two distinct time periods (Patterson & Johnson, 1997).

Expectation or desire is related to the pre purchase time period that a customer has initial expectation or desire about a specific performance such as quality of products or services. Experience or perceived performance is related to after purchase time period that the customer gets the experience after perceiving a real performance such as quality of a specific product or service (Spreng & Junior, 2003). The difference between initial expectation or desire and perceived experience or performance is known as disinformation of expectation or desire. It means that disconfirmation of expectation or desire can be positive or negative. When customer's perceived performance over the quality of specific product or service is higher than the customer's expectation or desire, the positive disconfirmation will occur. In the same way, when customers perceive the performance is worse than what they expected or desired about the quality of specific product or service, the negative disconfirmation will happen (Bhattacharjee & Premkumar, 2004). According to Yi (1990) positive disconfirmation leads to the customer's satisfaction and negative disconfirmation means perceived performance of products or services couldn't attract the customer satisfaction. Therefore, this study adopted expectancy disconfirmation theory because it captured the variables (particularly the dependent variable) used this study.

## **Methodology**

The research design for this study is the descriptive survey research approach based on administration of questionnaire instrument.



The objective of this study was to examine the effect of service quality dimensions on customers satisfaction of telecommunication companies in FCT-Abuja, Nigeria. The population of this study comprised adult telecommunication users in the six (6) area councils in FCT-Abuja, Nigeria. The six (6) area councils in FCT-Abuja, Nigeria are Abaji, Abuja Municipal, Bwari, Gwagwada, Kuje and Kwali area councils. The justification for choosing this location was based on the high competition of network service providers therein. The study focused on adult telecommunication users in FCT-Abuja.

Therefore, the population of this study was infinite as there is no any official published document to obtain the comprehensive list of all telecommunication users in the six (6) area councils in FCT-Abuja, Nigeria. Therefore, to determine the sample size for this study, Cochran's (1963) sample size determination formula for calculating infinite or unknown population was adopted. Cochran (1963) developed the equation for a population that is infinite or too large or unknown, to yield a representative sample for proportions. The Cochran (1963) sample size formula is given as:  $n = \frac{Z^2 pq}{e^2}$ ,  $q$  is  $(1 - P)$   $n = \frac{Z^2}{e^2} \times P(1 - P)$ , Where  $n$  is the sample size,  $Z^2$  is the abscissa of the normal curve that cuts off an area  $\alpha$  at the tails ( $1 - \alpha$  equals the desired confidence level, e.g., 95%),  $e$  is the desired level of precision,  $p$  is the estimated proportion of an attribute that is present in the population, and  $q$  is  $1-p$ . The value for  $Z$  is found in statistical tables which contain the area under the normal curve.

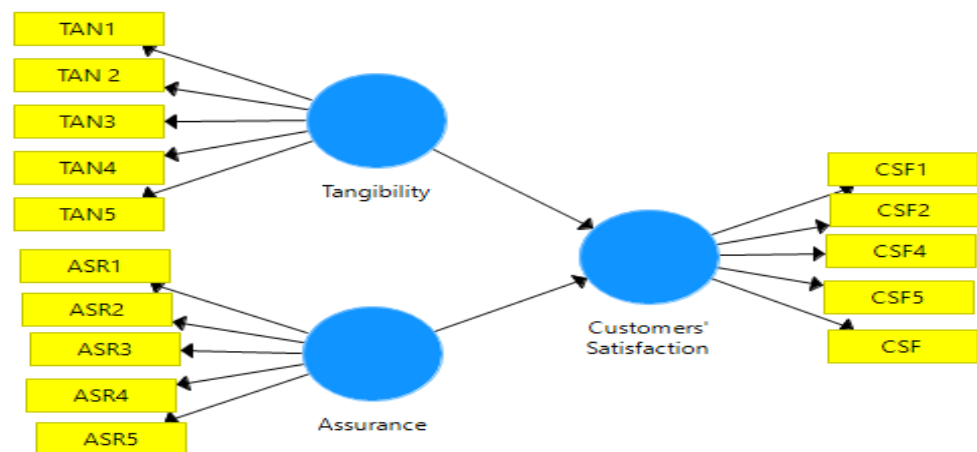
For the purpose of this study,  $Z^2$  is the  $Z$  value at 95% confidence interval,  $e = 5\%$ ,  $P$  is the proportion of the population 0.6 and  $q = 1-p = 1-0.6=0.4$ . Therefore, the sample size for this study comprised of four hundred and eighty-one (481) plus the attrition rate of 30% as suggested by Singh and Masuku (2014), and convenience sampling technique was used to select the respondents for the study. The study utilized adapted questionnaire as the instrument for data collection.

The questionnaire used was adapted from the works of Temba (2013), Agyapong (2021); Olatokun & Ojo (2022). The reliability of the instrument used was based on Cronbach alpha. Cronbach alpha value of greater than 0.7 is appropriate (Hair, et al., 2014). Out of 440 copies of questionnaire administered, 226 copies (56% of total questionnaire administered) were properly filled and useful for the analysis. The data was analyzed using Partial Least Square Structural Equation Modeling (PLS-SEM) in determining the measurement, structural models and hypotheses testing through SmartPLS 3.0 software (Hair, et al., 2016). Validity and

reliability of the measures were first of all ascertained before testing the hypothesized relationships using algorithm and bootstrapping techniques (Hair, et al., 2019).

### Model Specification

The model for the PLS-SEM is shown below:



**Fig. 1: Model Specification**  
Source: Smart PLS Output, 2023

#### Measurement of Variables

**Independent variable:** Tangibility and Assurance SERVIQUAL Dimensions.

**Tangibility:** The scale of tangibility was adapted from the works of Temba (2013), Agyapong (2021); Olatokun & Ojo (2022) Employees of service provider are well dressed and materials and information associated with the service (e.g. promotional pamphlets) are visually appealing at the customer service counter Customer service counter of my service provider is well equipped with up-to-date facilities. Physical facilities are virtually appealing. Physical environment of service provider is clean.

**Assurance:** The scale of assurance was adapted from the works of Temba (2013), Agyapong (2021); Olatokun and Ojo (2022). I feel safe when conducting business with my service provider's staff. I can trust my service provider's staff. The behavior of my service provider's staff instills confidence in me. My service provider's staff are always able to solve my

problem satisfactorily. Employees of my service providers have knowledge to answer customers' questions. Employees of my service providers are polite to customers

**Dependent variable:** Customer Satisfaction measured to switch, customer service, fewer complaints, first choice, pricing plan and access to service provider. Adapted from the work of Agyapong (2021).

## Results and Discussion

**Table 1 Descriptive Statistics of Dependent and Independent Variables**

	Mean	Standard Deviation
Tangibility	0.749	0.029
Assurance	0.081	0.036
Customers' Satisfaction	0.062	0.054

**Source: Author's computation Smart PLS Output, 2023**

Table 1 above is a descriptive statistic of dependent and independent variables. The table shows the behaviour of dependent and independent variables and provided the statistical description of the variables as expressed in the data collected in terms of the mean and standard deviation. The mean values of all variables used with their respective standard deviation values are all below 1, also the interval between the mean values and the standard deviation values in all the respective cases are not width, this shows the normality and distribution of the data for the variables. Although the normality of data is the issue of concern when applying the ordinary least square (OLS), however, while applying the PLS-SEM, this assumption is overridden and not an issue that could prevent any further analysis or produce a form of bias in the result, (Hair, et al., 2019).

## Discriminate Validity

The discriminate validity of the variables for this study was assessed using Heterotrait-monotrait ratio as presented in the table below:

**Table 2 Heterotrait-Monotrait Ratio (HTMT)**

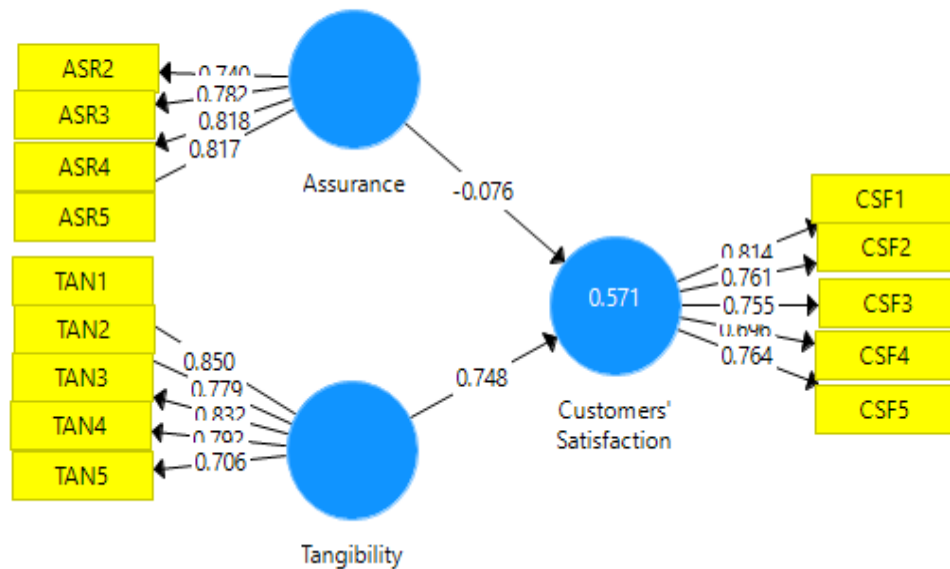
	Customers' Satisfaction	Tangibility	Assurance
Customers' Satisfaction			
Tangibility	0.066		
Assurance	0.143	0.871	

**Source: Smart PLS Output, 2023**

The table above shows the results of Heterotrait-Monotrait (HTMT) ratio for the variables used in this research. From the table, the result in all the respective cases values are less than 0.9, this therefore indicated that there is discriminate validity problems. That is, the result revealed that there is no problem of discriminate validity in all respective cases as suggested by Henseler, et al. (2015). Discriminate validity problems are present when HTMT values are higher than 0.90 for structural models (Henseler, et al., 2015).

**Measurement Model Evaluation**

The convergent validity was used to evaluate the measurement model using convergent validity. Convergent validity is determined by examining the factor loadings, composite reliability and average variance extracted (AVE) (Gholami, et al, 2013). All the constructs used in this study achieved the acceptable loadings of above 0.6 except construct number one of assurance which recorded low factor loading, as a result the construct number one of assurance was deleted from the analysis as can be seen from fig. 2 and the table 3 below; composite reliability (CR) of all the constructs were all above 0.7 and Average variance extracted (AVE) were all above 0.5 as recommended by Hair et al. (2019). The above is depicted in the fig. 2 and the table 3 below:



**Fig. 2: Measurement model of the study constructs and indicators.**  
**Source: Smart PLS Output, 2023**

**Table 3: Convergent Validity**

Variables	Indicators	Loadings	Cronbach's alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Tangibility	TAN1	0.850	0.852	0.859	0.894	0.630
	TAN2	0.779				
	TAN3	0.832				
	TAN4	0.792				
	TAN5	0.706				
Assurance	ASR2	0.740	0.798	0.802	0.869	0.630
	ASR3	0.782				
	ASR4	0.818				
	ASR5	0.817				
Customers' Satisfaction	CSF1	0.814	0.817	0.829	0.871	0.576
	CSF2	0.761				
	CSF3	0.755				
	CSF4	0.696				
	CSF5	0.764				

**Source: Smart PLS Output, 2023**

### Collinearity Test

A collinearity test was conducted to ensure the absence of multicollinearity which could lead to bias in the results. This was assessed through the variance inflation factors (VIF). As a rule, VIF values shouldn't exceed 5 to indicate the absence of multicollinearity, (Hair, et al., 2019). The result of the collinearity test is shown in the table below:

**Table 4: Collinearity Statistics (Variance Inflation Factor (VIF))**

Variables	VIF
Tangibility	1.540
Assurance	1.404

**Source: SmartPLS Output, 2023**

From the table 4 above, the Variance Inflation Factor (VIF) values of 1,540 and 1.404 for all the variables show that the explanatory variables are not highly correlated. This result therefore, shows the absence of multicollinearity among the independent variables used since multicollinearity exists only when the VIF Value is above 5. And this case, all the VIF values are below 5 indicating the absence of critical collinearity issues among the indicators of formatively measured constructs, (Hair, et al., 2019; Ringle et al., 2019).

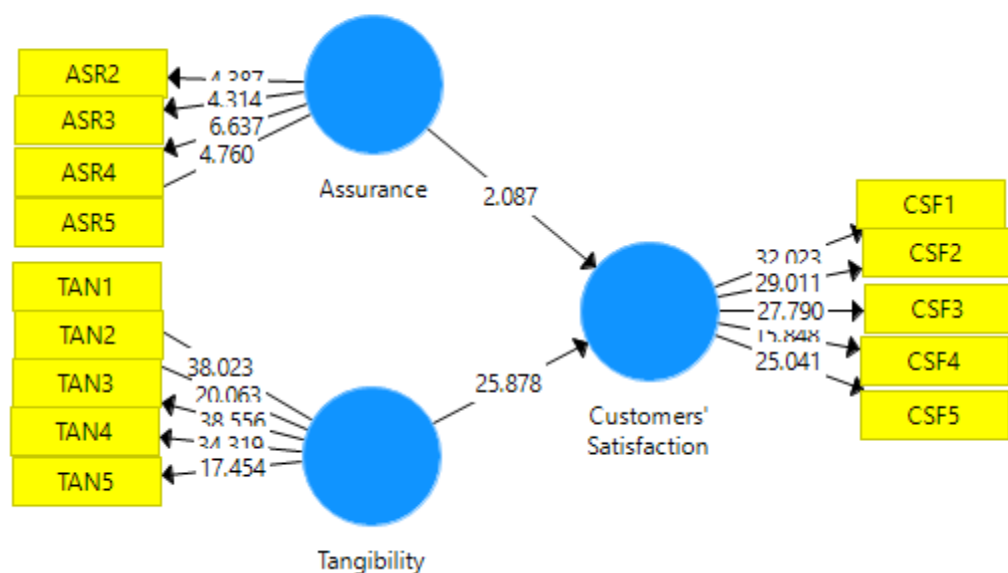
**Table 5: Model Goodness of Fit (GoF) Summary**

	Saturated Model	Estimated Model
SRMR	0.062	0.062
d_ ULS	0.502	0.502
d_ G	0.324	0.324
Chi-Square	590.743	590.743
NFI	0.746	0.746

**Source: Smart PLS Output, 2023**

Table 5 above shows the result of the model goodness of fit. Sequel to the need to validate the PLS model, there is a need to assess the goodness of fit of the model as suggested by Hair, et al., (2017). This study used the standardised root mean square residuals (SRMR). The choice of this index was based on the fact that the SRMR provides the absolute fit measure where a value of zero indicates a perfect fit. The study adopted Hu and Bentler's (1998) suggestion that a value of less than 0.08 represents a good fit while applying SRMR for model goodness of fit. The study result indicates an SRMR value of 0.062 which is less than 0.08, therefore indicating the fitness of the model of this study as suggested by Hu and Bentler (1998); Ringle, et al. (2019).

**Structural Model and Hypotheses Testing**



**Fig. 3: Structural Model and Hypotheses Testing**  
**Source: SmartPLS Output, 2023**

**Table 6 Results of the Structural Model Analysis (Hypotheses Testing)**

Hypotheses	Relationship	Beta ( $\beta$ )	Standard Error	T Statistics	P value	Decision	R <sup>2</sup>	Adj. R <sup>2</sup>
HO1	TAN->CSF	0.748	0.029	25.878	0.000	Rejected	0.571	0.568
HO2	ASR-> CSF	-0.076	0.036	2.087	0.037	Accepted		

**Source: SmartPLS Output, 2023**

The Figure 3 and table 6 above depicted the result of the study. The standard beta and the corresponding t-values were used in assessing the structural model in this study. This was done through the bootstrapping procedure. The bootstrapping result from the Smart PLS reveals that path coefficient of tangibility and customer satisfaction (TAN->CSF) is positive and statistically significant with beta ( $\beta$ ) value of 0.748 (75%), t-value of 25.878 and the p-value of 0.000 ( $\beta$ -value = 0.748, t-value = 25.878 & p-value = 0.000). This result has provided sufficient ground for rejecting the null hypothesis which states that tangibility has no significant effect on customer satisfaction of telecommunication companies in FCT-Abuja, Nigeria. Therefore, this null hypothesis is rejected. In addition, this result has proved that the relationship between TAN and CSF is positive and significant at 0.05 significant levels.

The hypothesis with respect to the assurance and customer satisfaction (ASR->CSF), the bootstrapping result from the Smart PLS reveals that path coefficient of assurance and customer satisfaction is negative and significant with a beta ( $\beta$ ) value of -0.076 (8%), t-value of 2.087 and p-value of 0.037 ( $\beta$ - value = -0.076, t-value = 2.089 & p-value = 0.037). This result has provide the sufficient ground for accepting this null hypothesis which states that assurance has no significant effect on customer satisfaction of telecommunication companies in FCT-Abuja, Nigeria. Therefore, the null hypothesis is accepted. This result shows that the relationship between ASR and CSF is negative and significant at 0.05 significant levels.

The R<sup>2</sup> shows the predictive relevance of the model. The R<sup>2</sup> shows the variance in the dependent variable as explained by the independent variables. The result shows R<sup>2</sup> value of 0.571 (57%) accounted by the predictive variables on the criterion variable of the model.

From the result of the analysis above, the study found that tangibility has a positive and significant effect on customer satisfaction of telecommunication companies in FCT-Abuja, Nigeria. This implies that customers are satisfied with the tangibility of telecommunication companies in FCT-Abuja, Nigeria. The study found that tangibility has positive but

significant effect on customers' satisfaction, while assurance have negative and significant effect on customers satisfaction.

### Conclusion and Recommendations

This study examined the effect of tangibility and assurance of service quality dimensions on customer satisfaction of telecommunication companies in FCT-Abuja, Nigeria. From the findings of this study, quality tangibility has significant positive effect whereas quality assurance has significant negative effect on customer satisfaction in FCT-Abuja, Nigeria. Based on the findings and conclusion drawn from this study, the study recommends that:

- i. The management of telecommunication companies in FCT-Abuja, Nigeria should keep improving their services to their customers by way of continuing improving their communication facilities and other equipment at these outlets to be modern and up-to-date, and easy availability of cards and recharge services to the users.
- ii. The management of telecommunication companies in FCT-Abuja, Nigeria should ensure that their staff improves the politeness and their ability to solve customers' problems satisfactorily often in order to instils confidence in customers

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