

To What Extent Does Service Quality Influence Loyalty of Business Partners in the Nigerian Telecommunication Sector?

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Abstract

The essence of service quality, as a predictor of customer loyalty, cannot be overemphasized. This is because higher service quality improves customer loyalty and increases brand loyalty. This study investigated the influence of service quality on the loyalty of business partners in the Nigerian telecommunication sector. To attain this objective, a quantitative study was conducted across the South-South region of the country, featuring the top four (MTN, Airtel, Glo, and 9mobile) providers of mobile network services. A total of 325 responses were gathered and analyzed using IBM's SPSS and SmartPLS software. The analysis revealed the strength of the relationships between the latent constructs, with assurance ($= 0.443$; $t = 7.3$; $p 0.05$) being the strongest predictor, followed by reliability ($= 0.414$; $t = 7.3$; $p 0.05$), tangibility ($= 0.398$; $t = 2.7$; $p 0.05$), empathy ($= 0.379$; $t = 3.8$; $p 0.05$), and responsiveness ($= 0.314$; $t = 2.9$; All the antecedents of service quality were found to be related to customer loyalty. The study concluded by stating that service quality is a strong predictor of customer loyalty in the Nigerian telecommunication sector.

Keywords: Assurance, Empathy, Customer Loyalty, Reliability, Responsiveness, Service Quality, Tangibility

1. Introduction

Prior to the establishment of the Nigerian Telecommunication Limited, Nigeria had the burden of sourcing for an effective and efficient means of communication, and it predominantly depended on landlines. However, even the landline services were ruined by high corruption and visible inefficiencies (Nkordeh et al., 2017). The GSM networks took over the responsibility of addressing the situation, and the first to enter the market was ECONET (which is known as "Airtel" today), formally launched on the 6th of August 2001. The Mobile Telephone Networks (MTN) joined the race almost immediately. These operators were awarded renewable GSM licenses with a five-year duration, and they were allowed to operate within the spectrum bands of 850 MHz and 1900 MHz. The NCC also set specific targets for these operations, with some of the targets being that they need to maintain a minimum of 100,000 subscribers each at the beginning of the year of operations and 1.5 million subscribers by the next five years, together with the capacity to cover at least 5% of the country's geographical states. The NCC further highlighted its main objective of attaining a comprehensively efficient and secure mobile network (Nkordeh et al., 2017).

It has been documented in studies, such as Nkordeh et al. (2017), that the concurrent launching of four service providers (Airtel, MTN, Globacom, and 9Mobile) in the Nigerian GSM market resulted in growth opportunities similar to those experienced in many of the individual markets. These growth opportunities also created intense competition, resulting in the expansion of

packages that these network providers offer, reduced pricing, and the introduction of value-added services to boost their competition by attracting and retaining customers.

Currently, the Nigerian telecommunication industry is very competitive due to its established network operators (MTN, Airtel, Globacom, and 9mobile) and the mature status of the market. With teledensity paralleling 91% (Okafor, 2014), Nigeria's telecommunications are nearly saturated (Ford, 2013), just like its Korean (Huret *et al.*, 2010), Chinese (Lai *et al.*, 2009), and Taiwanese (Chen & Chen, 2012) counterparts. In markets with such an enormous rate of development, organizations are expected to stay competitive by executing customer loyalty programs that prevent their customers from switching to other brands, but the reverse may seem to be the case between network operators and their business partners in Nigeria. Because of insufficient research, network operators may be under-informed about potential ways to drive customer loyalty in their businesses.

Service quality has become a focus in service research following the global competitiveness of the business environment. A business organization can't survive without building customer satisfaction and loyalty (Panda, 2003). This implies that for a sustainable and profitable business in today's world, organizations must ensure that their products and services are driven towards customer loyalty. Many scientific types of research have empirically shown that service quality significantly influences the performance of firms

(Portela&Thanassoulis, 2005), improves profit margin (Kish, 2000; Duncan & Elliot, 2002), and market share (Fisher, 2001), boosts brand image (Caruana, 2002; Ehigie, 2006), and promotes customer loyalty (Qadri& Khan, 2014).

Service quality has been widely discussed since the 20th century, and its idea is still relevant for today's organizations to differentiate and gain competitive advantage in an era of a borderless world and globalization (Ali et al. 2016; Fotaki, 2015; Karatepe, 2016). In quality management literature, service quality is often seen as a multi-dimensional construct. For instance, the Nordic school of thought suggests that technique and quality are two important dimensions of effective service quality; that is, technically, service quality is what customers receive from service provided by the organization, and how an organization delivers service to their customers describes the quality dimension of service quality (Brady & Cronin, 2001; Gronroos, 1984). The service quality construct was later modified by the US School of Thought, and it was proposed that effective service quality should have five specific dimensions. The five dimensions are; a) tangible-physical facilities, equipment, and appearance of workers; b) reliable-ability to perform the promised service dependably and accurately; c) responsive-the willingness to help customers and provide prompt services; d) assurance-explains the knowledge and courtesy of workers and their ability to inspire trust and confidence; and e) empathy-the caring, individualized attention that the organization provides its customers.

Baldwin &Sohal (2003), Parasuraman et al., 1994, Wan Edura&Jusoff (2009).

In view of the above discussion, this paper has been developed to determine to what extent service quality influences the loyalty of business partners in the Nigerian telecommunication sector. To attain this objective, the study is divided into four main sections. The first section clearly defines the objective of the study, followed by a review of relevant literature. The third section comprehensively reviews methods employed in the primary study, while analysis and discussion of findings are presented in the final sections.

2. A literature review

2.1. Conceptualization of Service Quality

Service quality is the customer's aggregate evaluation of a given service (Eshghi et al., 2008), and it has been conceptualized by other researchers as the extent to which the service meets the needs or expectations of the customer. Also, service quality has also been defined as the difference between the normative expectations of customers about a given service and their actual perception of the performance of the service (Parasuraman et al., 1994). Furthermore, this definition reflects a customer's overall evaluation of a service firm based on comparing the performance of the firm against the performance of other firms within the same industry (Chidambaram &Ramachandvan, 2012). To be specific, to develop a marketing strategy, service marketers need to develop a comprehensive understanding of the attributes of services that influence consumers' decisions.

2.2. Elements of Service Quality

In the case of this study, five dimensions of service quality are considered: tangibility, reliability, responsiveness, assurance, and empathy.

2.2.1. Tangibility

Tangibility refers to the physical features of a service or the physical factors that influence service delivery, such as facilities and equipment being used by the company and the appearance of their employees (Alhkami&Alarussi, 2016). Al-Azzam (2015) stated that the tangibles involve the representatives, physical facilities, materials, and equipment being used by a firm to deliver its services, as well as its communication tools. Based on the view of Davis et al. (2003), tangibles can be summarized in the form of physical confirmation for services. Aspects of the tangible factors include the need for the equipment to be up-to-date; the physical appearance; and the need for materials used by the company to be visually appealing. Tangibles were more specifically defined by Parasuraman et al. (1985) as the appearance of physical facilities, personnel, equipment, and written materials. Tangibles are used to represent the physical cues that are also part of the delivery process (Zeithaml, 2000; O'Neill & Palmer, 2003). These elements give the customers some unique feelings about the service being delivered, in terms of what they should expect from the performance of the service.

2.2.2. Assurance

Assurance represents the skills and capabilities of the employees in terms of competence and the ability to gain the trust and confidence of the customers. In cases

where the customers are comfortable with the employees of a given company, they tend to repurchase. After all, these features demonstrate the expected performance of the product (Alhkami&Alarussi, 2016). Assurance encompasses features like politeness, effective communication, competence, and the overall attitude of the employees that influence effective and efficient service to the customers. For customers, the behavior of staff gives them confidence in the company, and it creates a feeling of safety when employees are respectful toward them and possess the right knowledge to address questions raised by customers. Similarly, the SEQUAL assurance dimension addresses the company's overall competence, courtesy to customers, and the security customers should expect from the company's performance of services rendered. Competence implies the skills and knowledge of the company when it comes to performing designated services. The knowledge of the employees, as well as the manner in which they attend to the customers, does inspire confidence from the customers toward the organization (Gao & Wei, 2004).

Assurance is the knowledge and courtesy of the employees, as well as the ability of the service providers to ensure confidence and trust. Andaleeb and Conway (2006) stated that assurance might not be important in industries with higher rights and those where uncertainties surround the outcomes of services. As such, the personnel linking the customer to the company will be able to present trust and confidence. There have been numerous attempts by numerous

writers and authors to describe the essence of assurance as a critical criterion in the service dimension. The dimension is featured more among service providers that deliver courtesy, confidence, and knowledge in the course of handling their daily activities.

2.2.3. Reliability

In the service quality dimension, the reliability of the service is the extent to which the company performs and executes its promised quality and accuracy as defined by the requirements between the company and its customers (Alhkami&Alarussi, 2016). Simply put, when a service is considered reliable, it implies that the firm can offer its services at the right time to their customers without errors, and that they can deliver promises within the expected time. Reliability is the most critical dimension of service quality (Zeithaml, 2000), and it determines the overall perceived performance of the service as well as the potential intention of the customer to repeat the purchase.

Essentially, reliability depends on how customers' issues are handled; making sure that the services are undertaken at the right time; offering the right quality and quantity; and maintaining records free of error (Al-Azzam, 2015). As defined by Mari et al. (2015), reliability is the ability of a firm to accurately render services to its customers. That is to say, the service should be as per the promises the company made during its promotional activities. Therefore, a high level of service consistency is crucial for service reliability. Essentially, the service provider takes the responsibility of ensuring that issues faced by the customers are

resolved efficiently and rapidly. Companies can deliver reliability through knowledge and courtesy, making themselves available to attend to the needs of the consumers through an individualized approach (Alghamdi, 2014).

2.2.4. Responsiveness

Responsiveness is the company's willingness to help the customer by offering them quality, reliable, and efficient services. This is also critical because it is used to complete the reliability dimension, and customers will develop a sense of value for companies offering the best quality service (Alhkami&Alarussi, 2016). It goes to show that the employees of the company are ready to attend to their needs, respond to their demands, notify them when services will be provided, and deliver the services efficiently. If the service fails to occur, the company's ability to attend to the customers quickly and professionally with the overall intention of enhancing the service performance can lead to a positive perception of quality (Hernon&Nitecki, 2001).

Service responsiveness is the willingness to help customers and offer them prompt service (Zeithaml et al., 2006). This dimension is focused on how the requests of customers are handled, ensuring that complaints and questions are attentively and promptly addressed. A company is considered to be responsive when it communicates to its customers the extent of time required to get answers to their questions. To be successful, companies will need to consider responsiveness from the perspective of their customers and not from

their own view (Zeithaml et al., 2006). The responsiveness of firms is normally judged by the customer as the time required to attend to them and how attentive the firm is in responding to their issues, requests, and questions. Bear in mind that at this point, the sales representatives are the firm from the customers' point of view, and how they attend to customers' needs is how the customers view the entire corporate system.

2.2.5. **Empathy**

Empathy is how the company cares about customers through personalized attention to their needs, making the consumers feel extremely valued by the company. It encompasses assessing, understanding, and showing concern about the needs of the customer. The main concern is to offer individualized attention and care to the customers. The company understands the problems being faced by the customer and acts in their favor, while at the same time providing personalized care and attention. The emphatic organizations are the ones that don't lose touch with what it feels like to be their customer. As such, they have developed a comprehensive understanding of the needs of the customers and always ensure that their services are accessible to them. Parasuraman et al. (1985) defined empathy as the care and personalized attention that a firm accords its customers. It is all about giving the customers individualized attention, attaching employees that understand customers' needs, and making the business hours convenient for their customers.

That is to say, each customer is treated as special and unique, and there are numerous ways through which the company can be

empathic to the customer, such as knowing their names, preferences, and needs (Andaleeb et al., 2016). It is also common for companies in the service sector to provide customized services as a competitive edge over competitors. This dimension is also critical in the telecommunication sector, where there is a great need to build relationships with customers to ensure sustainable performance for brands as opposed to what is obtainable in the transactional sectors (Andaleeb et al., 2016). It is common for customers to also feel that the company is prioritizing them in their service delivery. Therefore, empathy has been conceptualized as the act of caring, giving personalized attention, and providing services to the customer, with the core element of empathy being that the company should convey the feelings of each customer as special and unique. Parasuraman et al. (1985) went further on this by stating that quantitative studies have identified numerous dimensions of service quality and employed crediting, access, and security to measure empathy.

2.2.6. **Customer Loyalty**

In their comprehensive review of customer loyalty, Wu & Lin (2016) showed that the marketing domain has significantly increased interest in the concept (Wu & Lin, 2016), as its implications cannot be underestimated in the contemporary business setting. Customer loyalty is a long-term asset (Kandampully et al., 2015) and a pivotal determinant of business outcome (Ali et al., 2016; Kim et al., 2016). This is because loyal customers are a prerequisite for measuring performance in numerous

companies due to the crucial role they play in the ability of the company to create a sustainable competitive edge (Wu & Lin, 2016). In the marketing world, marketers are highly motivated towards creating customer loyalty because it plays a central role in their success (Kandampully et al., 2015). The importance of customer loyalty is more pronounced in saturated markets where a company's performance depends on repurchases (Kim et al., 2016). For service providers, the loyalty of consumers is critical because of high competition (Ali et al., 2016; El-Adly & Eid, 2016; Wu & Lin, 2016), and these loyal customers would normally recommend their preferred services to other customers in the market (Kim et al., 2016), resulting in positive performance for companies. Numerous economic benefits come with customer loyalty (Murali et al., 2016), and they include premium pricing (Kim et al., 2016), cost advantage (Murali et al., 2016), and enhanced revenue from sales.

For many companies, customer loyalty is an important intangible asset (Jiang & Zhang, 2016). Numerous scholars have offered varied conceptualizations of customer loyalty (Ali et al., 2016). As a result, different definitions of customer loyalty have emerged from marketing research based on the contexts and objectives of such research. A good example is the work of Casidy and Wymer (2016), where customer loyalty was conceptualized as "one having a feeling that is devotedly attached to a given object, one that is not ignited by repeated commercial transactions." On the other hand, attitudinal loyalty was conceptualized by Thakur (2016) as "the intention of a

customer to remain committed to a certain brand within a given market by repeating their purchase experience with the said brand." Oliver (1999) defined customers' loyalty as "a commitment to re-buy or repurchase a given (preferred) brand that is deeply held by a customer, which the person consistently repeats in the future, thus, resulting in repeatedly purchasing the same brand or same brand-set, irrespective of the situational influences or marketing efforts that have the power to potentially bring about a switch in their behavior. This definition by Oliver has been adopted by numerous other researchers (e.g., Haryanto et al. 2016) and is also used in this study.

2.3. Theoretical review

2.3.1. Apostle model

This study is anchored on the apostle model, as it relates to how business partners in the Nigerian telecommunication sector can be made apostles by players in this sector. The apostle model was developed by Jones and Sasser (1995), and it is a hypothesized arrangement of the link between customer satisfaction and customer loyalty. In this arrangement, there are four sets of categories into which customers have been placed:

- Kumar and Fernandez (2019) described this group of customers as those that are satisfied or completely satisfied. They are known to repeatedly purchase the same product while staying loyal to the brand. They are one of the most valuable assets any company can have as they guarantee regular revenues and spread positive words about the brand. When a customer is an apostle to any brand, that person is known to exhibit a high degree of loyalty and satisfaction to a product or brand. The near-apostolic customers are

those that are satisfied and loyal like the apostle, but they need something more. On the other hand, the apostles are the height of loyalists.

- **Mercenaries:** This group of customers is satisfied, but they also switch between brands. As Kumar and Fernandez (2019) stated, they are not loyal, and they are normally price-sensitive, seeking to bargain and access the best offers. They are known to make impulse purchases, going after trends. This particular group of customers does not feel any form of attachment to a given brand.
- **Hostages** are best described as dissatisfied customers that continue to repurchase from the company. Kumar and Fernandez (2019) stated that these types of customers are normally stuck with a particular brand because of monopolistic situations in the market, and they easily become defectors once they see another opportunity.
- **Defectors/terrorists:** Kumar and Fernandez (2019) described this group of customers as having the lowest level of loyalty and satisfaction in the matrix. They are not satisfied and not loyal, and they normally spread negative word-of-mouth about the brand, bringing about a negative image and reputation for the said brand. The terrorists are in the segment of defectors, and they are the lowest of the low. They are customers that have had a bad experience with a given brand, and they publicly complain about this experience.

Under this arrangement, customer satisfaction was employed as a measure of customer loyalty. The links between customer satisfaction, quality of service, and customer loyalty are neither straightforward

nor linear. On the same note, customer satisfaction isn't necessarily certain to bring about customer loyalty or some sort of positive outcome in the marketplace, and this is based on the understanding that there are different factors necessary to bring about customer loyalty, such as expectations, convenience, customer service, rewards, personal relationships, community outreach, reputation, and switching costs.

From another angle, the high switching cost can be the factor hindering customers' decisions to abandon loyalty, notwithstanding being dissatisfied with the service. Based on the findings by Saeed and Siddiqui (2016), the loyalists and hostages seem to be within the more profitable segment, with findings showing that they have a low inclination to switch over, both in the highly competitive and less competitive markets. So, first thing first, the switching cost seems to moderate the relationship between customer satisfaction and loyalty.

3. Research method

A cross-sectional research method was employed. The study was conducted in the 5 states of South-South Nigeria (Akwa Ibom, Bayelsa, Cross River, Delta, Edo, and Rivers) due to the ease of access to data and convenience for the researchers. Before data gathering, the original questionnaire was subjected to a pilot study with 35 potential respondents. Issues highlighted from the pilot study were addressed before formal data gathering. The population is infinite. Considering the significant population size, Meyer's (1979) and Fox et al.'s (2007) suggested range of population was used to

determine the sampling size of 384 responses. Convenience-based sampling was used for this study, with questionnaires administered via a face-to-face approach. Data was gathered using a structured questionnaire, based on a 5-point Likert rating scale. The instrument was validated using face and content validation. For face validation, marketing experts screened the test instrument. Content validity was achieved by adopting items from past studies (Saunders & Lewis, 2012). The Cronbach Alpha test was used to assess the reliability of the research instrument. The overall reliability index obtained for the instrument was greater than the minimum acceptable limit of 0.7 (Nunnally & Bernstein, 1994). All data was entered and cleaned using SPSS. Respondents' demographic data was presented using tables, frequencies, and percentages. Perimeter Partial Least Squares Structural Equation Modelling (PLS-SEM) was used to conduct exploratory factor analysis, convergent and discriminant validity, and reliability tests on the indicators. Additionally, analyses like variable summary, a test of normality, estimates, modification index, model fit, and path analyses were conducted. The purpose was to establish a relationship between variables based on the stated hypothesis and the overall purpose of the research. The following hypothesis was adopted for this study:

- **Hypothesis 1 (H1).** Service tangibility does not significantly predict customer loyalty among telecommunication companies' business partners in Nigeria.

- **Hypothesis 2 (H2)** Does service reliability not significantly predict customer loyalty among telecommunication companies' business partners in Nigeria?
- **Hypothesis 3 (H3).** Service assurance does not significantly predict customer loyalty among telecommunication companies' business partners in Nigeria.
- **Hypothesis 4 (H4).** Does service responsiveness not significantly predict customer loyalty among telecommunication companies' business partners in Nigeria?
- **5th Hypothesis (H5):** Does the employee empathy not significantly predict customer loyalty among telecommunication companies' business partners in Nigeria?

4. Data analysis:

4.1. Response Rate and Demographic Variables

A total of 384 business partners of telecommunications service providers were sampled. Copies of the questionnaire were distributed to this defined segment and, of the total questionnaire distributed, a total of 325 were returned. Additionally, 59 responses were eliminated from the returned questionnaire due to serious omissions in response to some of the scale items. Overall, the usable questionnaire returned a valid response rate of 81.8%. This response rate is similar to samples that were obtained from previous related studies (Christianto et al., 2020; Lolo, 2020; Zhong & Moon, 2020; Fida et al., 2020; Rantyanti & Halim, 2020). Going further, the demographic variables of the respondents are documented in Table (1). It is shown in this table that the majority of the respondents are males (65.5%), followed by their female counterparts

(34.5%). Most of the respondents are aged between 31 and 40 years old (36.9%), followed by those aged 41 to 50 years old (33.8%), 20 to 30 years old (20.9%), above 50 years of age (4.4%), and finally below 20 years of age (4%). The researcher also sought to understand whether the respondents had faced issues in the past that forced them to contact the telecommunication companies they distribute products for, and the majority said "yes" (90.2%) while the outstanding (9.8%) said "no". Finally, they were asked how often they contact these telecommunications

service providers per annum, and the majority of the respondents echoed "very often" (42.8%), followed by "often" (30.2%), "seldom" (24.6%), and finally "never" (2.4%). In essence, the implication is that the population is well represented in terms of gender, age, and another variable necessary for accessing their perception of service quality in the telecommunications sector. Therefore, findings from the study can be applied to the entire population, irrespective of the demographic features under consideration.

Table 1: Demographic Variables of Respondents

		Frequency	Percent %	Cumulative percent %
Gender	Male	213	65.5	65.5
	Female	112	34.5	100
Age	Below 20 years	13	4.0	4.0
	20-30 years	68	20.9	24.9
	31-40 years	120	36.9	61.8
	41-50 years	110	33.8	95.6
	Above 50 years	14	4.4	100
Have you contacted your service provider in the past?	Yes	293	90.2	90.2
	No	32	9.8	100
How often to you contact them per annum?	Very often	139	42.8	42.8
	Often	98	30.2	73.0
	Seldom	80	24.6	97.6
	Never	8	2.4	100

4.2. Factor Analysis, Construct Reliability and Validity

The two-step approach as proposed by Hair et al. (2014) was used to assess the reliability and validity of the indicators. In

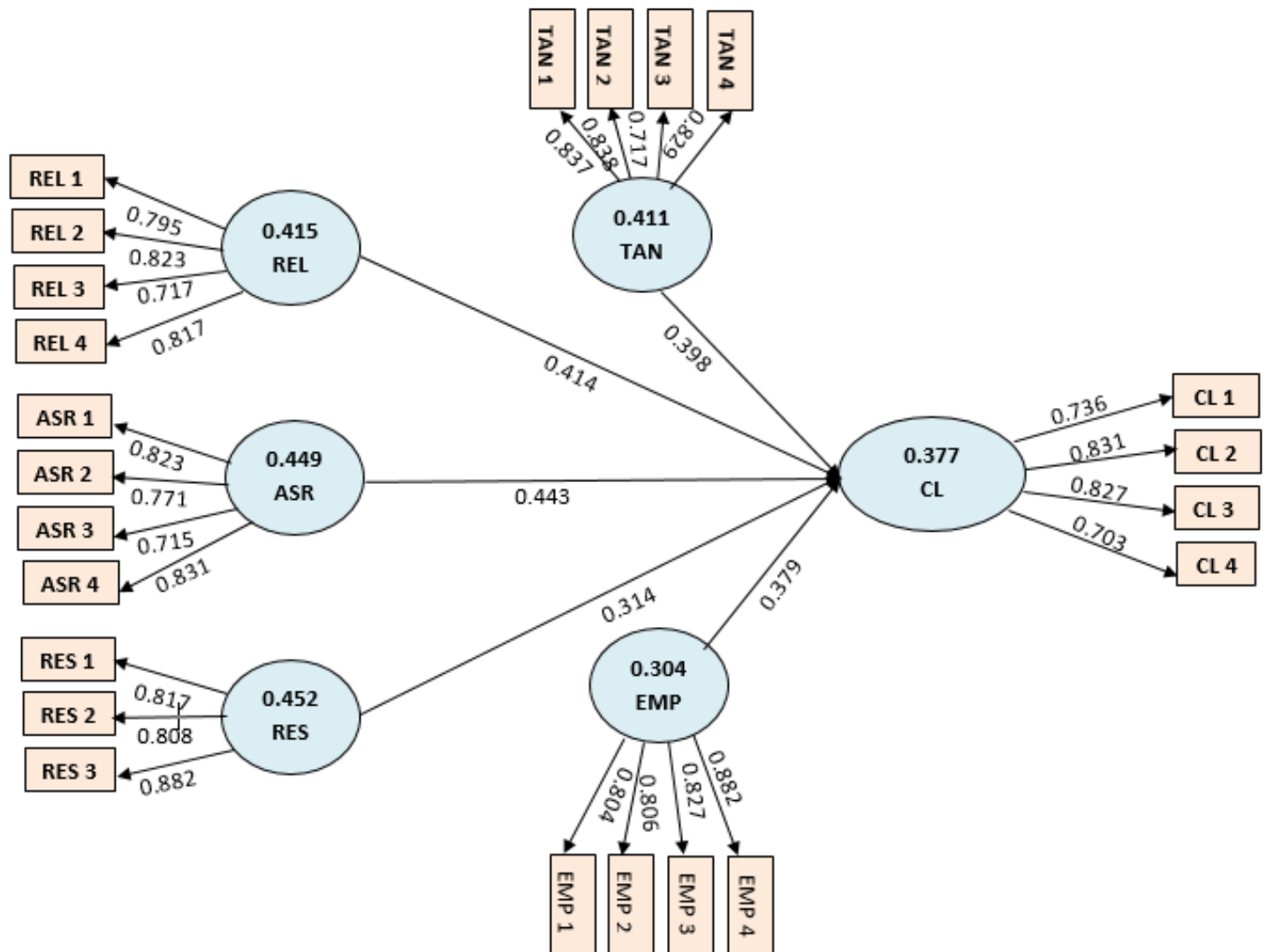
terms of reliability, the instrument was first assessed based on factor analysis, after which construct validity was established. Two methods of measures were adopted to assess the reliability of the instrument:

Cronbach's alpha and composite reliability. While it is believed that the former is the more conservative measure for such analysis, the implication is that there is a need to pay attention to composite reliability (Hair et al., 2014).

Based on the discussions above, the 24 scale items of the latent constructs were simultaneously factorized with the use of SEM-SmartPLS Software. From the initial factor loadings, an item was eliminated (an item that represented a component of the RESPONSIVENESS) as it loaded below the acceptable limit (see Figure 1). Once done, the outstanding 23 items were factored. The obtained factor loadings are documented in Table (2) and they ranged from 0.52-0.84, which are all above the acceptable limit of 0.5 (Hair, et al., 2010).

Except for one of the constructs (responsiveness), which had a slightly lower

loading (0.57), other constructs had Cronbach's alpha value that was well above the 0.6 acceptable limits (Hair et al., 2011); as tangibility returned a value of 0.74, reliability with 0.81, assurance with 0.71, empathy with 0.78, and customer loyalty with 0.75. On the same note, the composite reliability scores obtained showed that the output is above the 0.7 minimum benchmark as recommended by Bagozzi and Yi (1988), with a tangibility score of 0.83, reliability at 0.88, assurance at 0.84, responsiveness with a value of 0.75, empathy at 0.86, and customer loyalty with a value of 0.86. What is shown in these outputs is that the scale of items of each latent construct has internal consistency, as instruments that measure over 0.7 composite reliability are considered to be reliable (Bagozzi and Yi, 1988). Therefore, the research instrument is said to meet the required criterion for reliability.

Figure 4.1: Returned Loadings from Structural Model**Table 2: Item's Factor Loadings, *t*-statistics, Reliability and Validity (AVE)**

Construct	Indicators	Factor Loading	<i>t</i> -value	Cronbach alpha (α)	Composite reliability	AVE
Tangibility	TAN1	0.772	26.078	0.7426	0.828	0.4947
	TAN2	0.522	7.211			
	TAN3	0.700	10.23			
	TAN4	0.759	19.229			
Reliability	REL1	0.734	19.006	0.813	0.8767	0.64
	REL2	0.796	27.269			
	REL3	0.814	32.6			

	REL4	0.777	22.81			
Assurance	ASR1	0.812	28.577	0.7171	0.8407	0.6387
	ASR2	0.722	16.703			
	ASR3	0.835	22.889			
	ASR4	0.836	24.687			
Responsiveness	RES1	0.688	10.786	0.5749	0.7535	0.4378
	RES2	0.589	9.698			
	RES3	0.788	25.16			
	RES4	0.411				
Empathy	EMP1	0.806	28.842	0.7894	0.8638	0.6139
	EMP2	0.718	16.695			
	EMP3	0.838	40.142			
	EMP4	0.768	22.342			
Customer Loyalty	CL1	0.821	36.242	0.7563	0.8586	0.6695
	CL2	0.793	22.562			
	CL3	0.788	20.346			
	CL4	0.840	37.776			

Note: Significant levels are denoted as * $p < 0.05$; the shaded is the initiate result which was eliminated

Obtaining construct validity requires that both the convergent and discriminant validity tally (Hair et al., 2014; Fornell&Larcker, 1981). It is only possible for an instrument to attain construct validity "if the average variance extracted (AVE) has a score of 50 percent or above" (Hair et al., 2014; Fornell&Larcker, 1981), and the reflective indicators have significant loadings (Gefen & Straub, 2005), which implies that the t -value should be equal to or above 1.96). As shown in Table (2), with the exception of one construct that loaded slightly lower (responsiveness – 0.44), the latent constructs have an AVE value ranging

from 0.43 to 0.67 and are all significant at the $p > 0.05$ level. On the same note, the t -value was generated through bootstrapping resample techniques of 5000 sub-samples based on the suggestions made by Hair et al. (2011). The implication is that the output of the analysis is in support of convergent validity. Thus, it points to the fact that more than one-half of the variations that were observed in the reflective indicators were accounted for by the factors theorized as against the measuring error (Fornell&Larcker, 1981), and as it stands, it is typical evidence to suggest that the convergent validity was met (Bagozzi& Yi, 1988).

Table 3: Construct Correlations and Discriminant Validity

	TAN	REL	ASR	RES	EMP	CL
TAN	0.7834					
REL	0.5585	0.6616				
ASR	0.3946	0.4902	0.7991			
RES	0.4694	0.5154	0.4937	0.7032		
EMP	0.4932	0.6033	0.4070	0.5826	0.8000	
CL	0.5200	0.5548	0.4504	0.4388	0.3641	0.8181

Note: Square roots AVE are in bold italic print in the diagonal; all correlations are significant at 0.05 levels.

In order to further establish the validity of the instrument, the discriminant validity of the research model was assessed. The criterion for assessing the discriminant validity is that each construct will have to share more variance with its indicators than they would with other constructs (Fornell&Larckers, 1981). That is to say, the square roots of the AVE should be higher than the latent construct (Hair et al., 2014). As documented in Table (2), the AVEs obtained for the latent constructs ranged from 0.44 to 0.67. Going further, Table (3) documents the squared output of the AVEs for each latent construct with a higher correlation shown among the latent variables (i.e., 0.7835 is greater than 0.5586, 0.3947, 0.4695, 0.4933, 0.5201, just as 0.6617 is greater than 0.4903, 0.5155, 0.6034, 0.5549, and so on) and they are all returned at a significant value of $p < 0.05$. The implication is that it shows non-violation of discriminant validity, and based on the presented analysis, it does range from **0.6617 to 0.8182**. Thus, the measurement model shows evidence of both discriminant and convergent validity, and this offers a solid foundation for assessing the structural

relationships necessary to estimate and resolve the relationships hypothesized.

4.3. Test of Hypotheses

The original research model as proposed is depicted in the structural model in Figure (1). Captured in the output of the model are the path coefficient (β), the t -values, and the coefficient of the determination (i.e. total variance explained) (R^2). The figures in the arrows that run across different latent constructs do show the factor loadings of the respective reflective indicators, while the figures represented in the arrows show the relationship with the latent constructs within the inner path coefficient of the model. This is also captured in Table (4), showing the total effects that each path exhibits as well as the support for or against the different parameters measured.

In order to determine the degree/strength of the relationships with the hypothesized variables, the path significance was tested (Ringle et al., 2005), based on 5000 sub-samples of bootstrapping procedures as recommended in extant literature (Hair et al., 2011). All the hypothesized relationships, at their null states, were not supported at 0.05 levels of significance. That is to say, all the proposed antecedents are in contradiction with the null state of the research hypothesis. What this shows is that

tangibility, reliability, assurance, responsiveness, and empathy significantly influence customer loyalty in the Nigerian telecommunications industry as it relates to the relationship between the telecom companies and their business partners. On the same note, the strength of the relationships between the latent constructs does show that the strongest predictor is assurance ($\beta = 0.443$; $t = 7.3$; $p < 0.05$), followed by reliability ($\beta = 0.414$; $t = 7.3$;

$p < 0.05$), tangibility ($\beta = 0.398$; $t = 2.7$; $p < 0.05$), empathy ($\beta = 0.379$; $t = 3.8$; $p < 0.05$), and responsiveness ($\beta = 0.314$; $t = 2.9$; $p < 0.05$). Therefore, all the antecedents of service quality were found to be related to customer loyalty through all the hypothesized relationships within the research model, and their respective outcomes are reported in Table (4).

Table 4: Estimated results of the structural model and hypotheses test outputs

Hypothesized relationships		Path coefficient	Standard error	t-value	Result
H ₁	TAN → CL	0.398	0.0563	2.702***	Supported
H ₂	REL → CL	0.414	0.0562	7.305***	Supported
H ₃	ASR → CL	0.443	0.0593	7.251***	Supported
H ₄	RES → CL	0.314	0.0721	2.852***	Supported
H ₅	EMP → CL	0.379	0.0779	3.828***	Supported

Note: Significance level is denoted as *** $p > 0.05$; TAN = Tangibility; REL = Reliability; ASR = Assurance, RES = Responsiveness; EMP = Empathy; CL = Customer Loyalty.

On the same note, the variance explained (R^2) in the inside circles within the model is a representation of the amount of variance explained that is contributed by a host of other latent constructs. Based on Figure (1), 41.1 percent of the total variance in customer loyalty is attributed to the contributory power of tangibility; 41.5 percent of the variance is explained by reliability; 44.9 percent of the variance is explained by assurance; 45.2 percent of the variance is explained by responsiveness; and 30.4 percent of the variance is explained by empathy.

5. Discussion of findings and contribution to knowledge

This study was developed to assess the influence of service quality on customer loyalty of business partners in the Nigerian telecommunication sector, hence, contributing to the understanding of customer loyalty by identifying the underlying antecedents and consequences of service quality. Unlike the majority of similar studies that were focused on developed countries and final consumers at large (Durvasula et al., 1993; Netemeyer et al., 1991; Blut, 2016; Collier & Bienstock, 2006; Gong & Yi, 2017), this present study was conducted in a developing economy (Nigeria) and focused on business partners (not the direct customers). Therefore, this study contributes to more of a business partner-centric and systemic view as it

focuses on the experience of the business partners and the outcome of service quality in the industry. The research model proposed for this study was based on five antecedents of service quality: tangibility, reliability, assurance, responsiveness, and empathy. Findings from the study and the contribution of this research are discussed below.

- **Tangibility**

The outcome of the data analysis provided support for the alternate hypothesis (*H1*), an indication that there is a significant and positive relationship between service tangibility and business partners' loyalty. Therefore, it confirms that service tangibility is an important antecedent of customer loyalty in the Nigerian telecommunications sector. This is similar to findings from the works of Christianto et al. (2020), Lolo (2020), Zhong and Moon (2020), and Monferrer et al. (2019), where it was also found that tangibility is a vital antecedent of service quality and it significantly influences customers' loyalty towards a brand. The implication is that the higher the experience of tangibility, the higher the loyalty of business partners in the Nigerian telecommunication sector. Therefore, players in this sector should seek to incorporate visible levels of tangibility into their services and service delivery processes.

- **Reliability**

Reliability was found to positively and significantly influence the loyalty of business partners in the Nigerian telecommunication sector. This finding is in

contradiction with the null research hypothesis (*H2*). The implication is that when consumers experience a high level of reliability, it positively and significantly influences their loyalty. This finding is similar to the works of Fida et al. (2020), Rantianti and Halim (2020), Octabriyantiningty et al. (2019), and Salah and Abou-Shouk (2019), where reliability was found to be a strong predictor of loyalty among customers. Essentially, companies seeking to sustain customers' positive attitudes and increase the overall level of satisfaction will need to improve the reliability of their services and service delivery process.

- **Assurance**

Assurance was found to be positively and significantly related to the loyalty of business partners in the Nigerian telecommunication sector. This finding contradicts the null hypothesis (*H3*) and it is similar to findings from the works of Gogoi (2020), Kempa et al. (2020), Gong and Yi (2017), and Alhkami and Alarussi (2016), where assurance is a vital predictor of customer loyalty. Therefore, an improved level of assurance, would mean improved loyalty from the customers.

- **Responsiveness**

Responsiveness was also found to be positively and significantly related to customer loyalty. This finding contradicts the null hypothesis (*H4*). Similar findings were obtained in the works of Bengtsson et al. (2020), Candra et al. (2020), Vilkaite-Vaitone and Skackauskiene (2020), and Rather and Sharma (2016), supporting the

alternative hypothesis that there exists a relationship between the responsiveness of the service provider and the loyalty of customers. Essentially, service providers that emphasize responsiveness are known to increase customer loyalty towards their brands.

• Empathy

Finally, empathy significantly and positively influences consumers' experience of quality and their overall loyalty towards brands. This outcome indicates a contradiction with the null hypothesis (*H5*) and it is similar to existing findings in the works of Agyei et al. (2020), Simanjuntak et al. (2020), Raza et al. (2020), Minh and Huu (2016); an indication that empathy is a significant predictor of customer loyalty. Therefore, the overall level of empathy experienced by customers can influence their loyalty towards the service provider.

• Contribution to Knowledge

The main highlight of this study is that it has been able to cover existing gaps identified in the literature review, by assessing the influence of service quality on the loyalty of business partners in the Nigerian telecommunication sector. On the same note, it has been shown that tangibility, reliability, assurance, responsiveness, and empathy have significant and positive influences on the loyalty of business partners in the Nigerian telecommunication sector. While most of the existing studies have been on direct (final) consumers and in developed nations, this study, which centers on the business partners in developing economies, does expand the applicability of elements of

service quality. Therefore, it is concluded that elements of service quality can be applied to both direct and indirect customers, and further assessments should cover its application among the business partners in other economic sectors of Nigeria.

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