Article

Payment/Security Systems and Customer Satisfaction of Telecommunication Services in North-Central, Nigeria

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Abstract: There are a lot of issues affecting telecommunication services in North-Central of Nigeria, which include; poor internet connectivity/accessibility, communication breaks, service delivery challenges, service speed, perceived value problems, brand commitment problems, and strong brand preference which has led to customer commitment issue, poor customer value, delay of service, lack of information backup, lack of interconnectivity, networks failure and negative word of mouth. Customer satisfaction is the end result of a customer's evaluation of the service or product's quality to their initial expectations. Customers also want to feel like they got their money's worth and have access to the greatest product or service available. Among the tactics for keeping consumers' trust include prompt and comprehensive responses to customer concerns and frequent one-on-one meetings, phone calls, letters, faxes, and emails. The importance of the services industry and the telecom sector in Nigeria's economy necessitates further research into how to boost the sector's ongoing expansion and, by extension, the country's economic performance. This study focused on determining the empirical relationship between payment/security systems and customer satisfaction of Telecommunication Services in North-Central, Nigeria. The aim was to examine relationship between payment/security systems and customer satisfaction of Telecommunication Services in North-Central, Nigeria. This study employed cross-sectional survey research design and quantitative methodological strand to gathered data with a population of forty three million six hundred and nine thousand and seventy four (43,609,074) and through Taro Yamane formula, the sample size was 400 customers simple randomly selected. The primary data were collected through well-structured questionnaire and Pilot study, confirmatory factor analysis and Cronbach Alpha were conducted to validate the instruments used in this study. The Structural Equation Model tool was adopted using SMARTPLS software package. With a beta value (β) of 0.740, a P-value of $0.00 < 0.05$, and a T-Value of $5.773 > 1.96$, the first structural path, which reflected the third hypothesis of the study, demonstrated an affirmative correlation between Privacy/Security and customer value of telecommunication companies in North-Central, Nigeria. The study's second hypothesis, which involved the second structural path, confirmed the existence of an affirmative correlation between privacy/security and word of mouth regarding telecommunication companies in North Central Nigeria. The beta value (β) was 0.718, with a p-value of $0.00 < 0.05$ and a T-value of $4.692 > 1.96$. From the findings, the study concluded that payment/security systems are substantially related to the measures of customer satisfaction. Based on the findings, the study recommended among others, management **of Telecommunication Firms in North-Central, Nigeria should increase the use of privacy/security as a means of increasing** word of mouth**.**

Keywords: : Privacy and Security, Customer Satisfaction, Customer Value, Word of Mouth

1. Introduction

The basic premise is that any business should exist to serve its clientele. The success and continued existence of the business depends on its ability to meet the demands and expectations of its consumers. A company's success is highly dependent on its customers, hence it stands to reason that they are among the most important stakeholders. A good customer attitude towards businesses can be fostered by an understanding of customer satisfaction, which in turn leads to effective service policies that cater to consumers' interests. Efficient electronic service quality (e-service quality) allows businesses to meet the modern customer's demands for strength, convenience, and personalisation in a way that conventional methods of doing business just can't match (Osagie & Ugwuonah, 2020). According to Iliachenko (2020), safeguarding consumers' personal information and preventing fraud are two aspects of privacy. In contrast, Blut (2016) ties confidentiality to safeguarding financial transactions and personal data. It alludes to the safety of the website when dealing with clients, handling payments and credit, and encrypting any data that is exchanged. Building e-trust relies heavily on assuring privacy and security, as this allays customers' fears of data abuse in any form. Customers' happiness with their online shopping experience may be impacted by a website's privacy policies. According to Parasuraman et al. (2005), the level of privacy can be defined as the extent to which a website is secure and capable of protecting the information of its customers. In addition, the authors elaborated on how this aspect, which they call "the protection of customer's personal information," interacts with the perceived danger that arises during online transactions. It alludes to the safety of the website when dealing with clients, handling payments and credit, and encrypting any data that is exchanged. Building e-trust relies heavily on assuring privacy and security, as this allays customers' fears of data abuse in any form. Fraudulent activities are on the rise in Nigeria's telecom sector, with perpetrators often taking advantage of customers' trust by hacking their accounts and posing as legitimate businesses. Features that do not disclose the privacy of client information given at the start and finish of a transaction are also part of privacy (Akin, 2017). In today's rapidly developing digital landscape, issues of personal data privacy are among the most pressing. Information privacy is among major topics to be taken into consideration in today's evolving electronic world. It is clear enough that nowadays customers' data can easily be shared with other companies without asking for their permission. Moreover their more crucial personal data such as usernames and passwords are not immune from hackers (Lantos, 2021). Arguably one of the objectives of telecommunication services in Nigeria is to build a strong brand that appeal to customers' emotions and/or psychology resulting to customer satisfaction.

In this sense, customer satisfaction remains essential in realizing competitive advantage of telecommunication services. Evidently, there are lot of issues affecting telecommunication services in North-Central of Nigeria, which include; poor internet connectivity/accessibility, communication break, service delivery challenges, service speed, perceived value problems, brand commitment problems, and strong brand preference which has led to customer commitment issue, poor customer value, delay of service, lack of information backup, lack of interconnectivity, networks failure and negative word of mouth. Furthermore, consumers struggle to distinguish between brands based on practical characteristics. On the contrary, consumers are on the lookout for brands that evoke feelings of wonder, emotion, and originality in them. Brands employ experiential appeals to differentiate themselves and increase consumer preference for their products. As a result, telecommunications companies encounter challenges while trying to compete in these markets, as staying ahead of the competition necessitates providing exceptional client satisfaction. That is why it is essential for telecom companies to incorporate payment and security measures into their operational procedures if they want to thrive in today's competitive market. The purpose of this research was to look at the

connection between privacy and security and how satisfied telecommunications service users are in North Central, Nigeria.

Specific objectives are to:

i. Evaluate the relationship between privacy/security and customer value in Telecommunication Services in North-Central, Nigeria.
ii. Examine the relationship between privacy/security and word of mouth in Telecommunication Services in North-Central, Nigeria.

2. Materials and Methods

Privacy and Security

"The right to be let alone" is a common definition of privacy, which is associated with independence, confidentiality, and being alone. The potential for unauthorised use of personal and financial data is a major concern for customers in the eservice virtual environment. According to the research of Wang et al. (2023), there are primarily two forms of personally identifiable information that are at risk when it comes to breaches of privacy. One of the most important aspects of e-service quality is the level of privacy it provides, which gives customers the peace of mind they need to buy things online (Zeithaml et al., 2002). Among the most pressing issues confronting modern deposit money institutions is customer privacy. Customers' personal information, such their email addresses, phone numbers, and credit card details, must be protected in order to ensure their privacy when shopping online. How well the e-banking services safeguard client data is what we mean when we talk about privacy. It indicates how secure the site is in terms of keeping user data private. Having faith in the site and a sense of security is what it boils down to (Parasuraman et al., 2005). According to Iliachenko (2020), safeguarding consumers' personal information and preventing fraud are two aspects of privacy. In contrast, Blut (2016) ties confidentiality to safeguarding financial transactions and personal data. It alludes to the safety of the website when dealing with clients, handling payments and credit, and encrypting any data that is exchanged. Building e-trust relies heavily on assuring privacy and security, as this allays customers' fears of data abuse in any form. Customers' happiness with their online shopping experience may be impacted by a website's privacy policies.

Data security, often known as information security, is the practice of keeping data and related systems safe from prying eyes by preventing their misuse, loss, alteration, disruption, or destruction while maintaining data's authenticity, integrity, and availability. Mathew (2017) maintains that safeguarding data in the digital realm is an ongoing effort, not a discrete event; hence, security of data is not a static concept, but rather an ongoing activity. Complex system and information security measures have been established by devoted experts in the industry to help both large and small organisations, as well as individual users (such consumers), keep delicate data secure and confidential. Protecting the privacy, authenticity, and accessibility of data for authorised users is the overarching objective of information security (Raw & Nayak, 2021). For a company's long-term health and prosperity, it is crucial. The claim that information security will always be a lifesaver for businesses lends credence to this (Monammed & Alexander, 2017). One of the most important and fascinating fields to work in today is information security. The goal of information security, or InfoSec for short, is to prevent unauthorised individuals from gaining access to, using, leaking, interfering with, altering, viewing, inspecting, recording, or destroying data. This term applies to any kind of data, whether it's electronic or physical. When we understand information security, we can rest assured that our data is contained, safe, and will help our organisations retain their value (Mohammed & Alexander, 2017).

Customer Satisfaction

As a result of contrasting their expectations with the product's observed performance, customers' joy or disappointment is characterised as customer satisfaction (Kotler, 2000). Oliver (2014) provided an explanation of consumer perspective satisfaction as the desire to achieve something through the use of things and services, or it might be seen as an individual's quest. According to Vesel and Zabkar (2019), customer satisfaction in the retail industry may be described as an evaluation of the product's performance after usage, as well as an evaluation of the store's or product's ability to meet or surpass the customer's expectations. Additionally, Cao et al. (2018) shown that customer satisfaction substantially influenced online shoppers and might help predict customers' future purchase intentions. Also, most buyers are looking for the most value for their money when purchasing a product or service. The marketing efforts of every organisation are now centred upon ensuring customer pleasure. When consumers are happy with the service they receive and the way their demands are met in each transaction, it adds up to a affirmative evaluation of the service overall (Anderson and Srinivasan in Prisanti, Suyadi and Arifin, 2017).The happiness of the company's customers will, in fact, have a noteworthy impact on the bottom line. If a business can increase customer happiness, it will increase the likelihood that it will produce more goods and services to meet the demands of its clientele (Homburg in Kumar, 2017). A company's ability to attract and retain consumers depends on its ability to provide outstanding service. In the banking sector, competition is fierce not just over interest rates, suitable products, and branch count, but also over the quality of service that consumers receive, which in turn helps the company to form strong rapports with those customers. Customers' affirmative behavioural intentions are strongly impacted by their satisfaction, which in turn is related to their attitudes and intentions (Holloway et al., 2018). Prior experiences of service encounters have long been seen as foundational to customer happiness (Agbor, 2021). According to Beard (2023), customer satisfaction is a measure of how well a company's products or services meet or exceed consumer expectations. Ultimately, it is the best predictor of future purchases and client loyalty. The importance of happy customers cannot be overstated in today's cutthroat business environment.

Customer Value

The ability to communicate directly with the firm, meeting customer expectations, gaining good knowledge about the customer, improving experiences with the company, and developing an emotional bond with the customer are all necessary for a firm to create superior customer value (Wang et al., 2014). An organization's capacity to keep and cultivate strong rapports with customers is crucial, asserts Day (2023). The more the company learns about its clients, the better it can cater to their needs and wants. As a result, businesses may cater their wares to each individual consumer. According to study by Wanjau (2021), the majority of businesses do not put enough money into studies to figure out how to properly acknowledge and elevate their clients. Companies gain from knowing their consumers' preferences whether or not they reveal that information (Shy & Stenbacka, 2021), but customers would rather keep their data to themselves, and enterprises lose out when they do. How consumer recognition affects a company's bottom line was the main focus of their research. Research by Esteves (2018) demonstrated the impact of price discrimination based on consumer recognition on competition, and the authors found that knowledge increases the intensity of competition. According to Perreault and McCarthy (2022), a company can enhance its marketing efforts to offer value for customers, build strong rapports with them, and ultimately boost profits by collecting and analysing extensive information. Customer preferences might be better understood with some background about your buyers (Vyas & Sina, 2018).

Word of Mouth

"Word of mouth" refers, in its most basic sense, to an oral exchange between a communicator and a receiver, whether that exchange takes place in a business setting or amongst friends and family. An individual's contribution to a service provider's objective

by the referral of a product or service to other potential consumers, most often members of the customer's immediate social circle, is referred to as "word of mouth". An affirmative word of mouth may seem to have greater impact than a well-researched printed source of product formulation, and word of mouth is defined as an exchange of passing oral or spoken message between a contagious source and recipient talking directly in real life (Sterm, 2019).

Similarly, academics have acknowledged that affirmative word of mouth has a more noteworthy and beneficial impact on behaviour than other forms of marketing communication (Headley & Millier, 2019). This, in turn, helps customers get the information they need to meet their specific needs. Word of mouth, according to Gelb & Johnson (2019), helps build recognition of a brand and encourages consumers to give the product a try. Word of mouth from current clients helps the company's sales team break into previously unreachable regions (Ama, 2019). The author went on to say that neither organisations nor academics have paid much attention to the strategic commercial possibilities of word of mouth. Additionally, she stressed the need of maintaining high-quality rapports with clients, as this appears to increase their willingness to provide word of mouth. Consequently, the goal of a retained rapport is attained.

Privacy/Security and Customer Value

Global consumer concerns about online privacy have been fuelled by the lack of regulation and the fact that the internet knows no borders (Wu et al., 2022). Consumers are taking precautions to lessen the likelihood of information disclosure because they care about the privacy of their personal data when they shop online (Li, 2019; Taylor et al., 2015). To avoid having their personal information collected and used by third parties, customers are adopting steps such as not submitting any information at all, giving out false or misleading information, or requesting that websites delete their data (Li, 2019). Marketers today face a delicate balancing act between satisfying customers' demands for customisation and addressing their legitimate privacy concerns when they voluntarily provide personal information online. Marketers may now gather and exploit consumer data in new and exciting ways, all while keeping costs down, thanks to digital media. They can also personalise content based on user behaviours and sensitive data (Sundar & Marathe, 2020).Many people are wary about buying things online because they don't want their personal information made public after utilising the site. Wong et al. (2020) demonstrated that customers' low process satisfaction and perceived risk of privacy impact their purchase intention. On the other hand, some studies have found no noteworthy influence of privacy on customers' satisfaction with using websites (Kim & Stoel, 2004 in Wong et al., 2020). From a technical standpoint, Radziszewska (2018) found that privacy substantially affects e-commerce quality and the buying experience. Privacy is also vital for evaluating the quality of online services and has the greatest impact on consumer happiness. In Wong et al. (2020), Giovanis and Athanasopoulou (2014) demonstrated that customer satisfaction and trust are directly impacted by privacy. Also, customers are more tech-savvy and aware of how their data is collected and used; this has led to major questions about how much data marketers should be able to collect and use about customers (Nill & Aalberts, 2014). Consequently, this hypothesis is formulated:

H_{01}: There is no relationship between privacy/security and word of mouth to Telecommunication Services in North-Central, Nigeria.

Privacy and Security, Word of Mouth

The benefits/tradeoffs consumers will accept for the disclosure of their personal information include increased information, financial rewards or additional/improved services (Olivero & Lunt, 2019). From a technical standpoint, Radziszewska (2018) found that customers' privacy greatly affects their e-commerce experiences and the quality of those experiences. Customers' privacy is particularly noteworthy when evaluating the quality of e-services, and it has the greatest impact on customer satisfaction. An rising

amount of fraudulent actions are being perpetrated in the Nigerian banking sector. These crimes often involve hacking clients' online information and impersonating them to steal their money. Customers' higher-order evaluations of websites are heavily influenced by concerns about privacy, according to Parasuraman et al. (2005). Clients count on having their personal data and financial transactions safeguarded. Two recent studies, one by Sakhaei et al. (2023) and the other by Shirzad and Beikzad (2021), have shown a strong correlation between data privacy and happy customers. According to Kalakcta and Whinston (1996), security refers to any situation that could lead to financial loss due to data or network infrastructure loss, theft, alteration, denial of service, fraud, waste, or abuse. However, internet users continue to be greatly concerned about it. Customers place a high value on e-commerce platforms that incorporate and display security features, according to research by Belanger et al. (2002). The impact of privacy and security details on Malaysian internet users' trust, reliability, and loyalty was studied by Hamed et al. (2020). The sample size was 104 people, including native-born Malaysians and foreigners living in the country who are literate and comfortable with technology. The study's results show a strong correlation between security and privacy data, trustworthiness, and trust. Anadla (2019) discovered that security, information management, reliability, and trustworthiness have a direct and substantial impact on customer happiness, and that a trustworthy website with a low social level helps consumers feel more confident and happy. Consequently, this hypothesis is formulated:

H_{02}: There is no relationship between privacy/security and word of mouth to Telecommunication Services in North-Central, Nigeria.

Theoretical Framework

According to Expectancy Disconfirmation Theory, customers are happy when their expectations are met and their perceptions match up with the actual performance of the service. The opposite is true when service delivery falls short of client expectations; this leads to discontent due to a negative disconfirmation between expectations and perceptions. In order to better understand and serve their customers, businesses can refer to the IT alignment model, which lays out in detail how IT has been or could be utilised to enhance various aspects of service quality. Ojobor (2022) cites research by Katz et al. (1963) that illustrates how ideas and information can move through society through various routes and social systems. According to the theory, there are five steps necessary for a novel concept to spread: awareness, interest, evaluation, trial, and adoption. According to McQuail (2021), the model of information transmission proposed by Rogers (1962) and Rogers & Shoe Marker (1973) identifies four steps: persuasion, judgement or adoption, and confirmation. Since social media is still in its early stages of development, various users will employ them to varying degrees, which is why this idea is relevant to the work at hand (Nyekwere et al., 2023). In contrast, TAM facilitates technology adoption by influencing customers' readiness to be early adopters or late adopters based on how helpful and easy the technology is to use.

Empirical Review

The study conducted by Omofowa, Omofowa, Nwachukwu, and Le (2021) investigated the correlation between customer satisfaction and the quality of electronic banking services. The study's methodology was based on survey research. The study included 344 participants who were chosen at random. Customers are more likely to be satisfied when E-banking services are high in innovation, technological competence, reliability, and tangibility, according to data from 302 respondents. Additionally, there was a affirmative and statistically noteworthy rapport between consumer satisfaction and innovation, technological competence, reliability, and tangibility. The results confirmed all four predictions. Saraswati and Indriani (2021) investigated the void in knowledge regarding the connection between the quality of an online service, the level of happiness its users report feeling, and the likelihood that those users would make a repeat purchase. A total

of 197 Semarang-based Lazada shoppers participated in the study, which used the structural equation modelling (SEM) method of analysis. Using the goodness-of-fit criteria, we find that: RMSEA=0.066; NFI & NNFI= 0.96 & 0.94; IFI=0.92; and RFI= 0.93. The results show that the model fits well and may be used effectively. According to the findings, four hypotheses—web design, responsiveness, customisation, and customer satisfaction—have a favourable and noteworthy impact on the propensity to purchase again. On the other hand, two arguments were thrown out: the convenience of the product and the promise of future purchases.Research by Ebire and Onmonya (2020) examined how the global banking business has been impacted by the widespread adoption of ICT. Nigerian banks have followed global trends in prioritising the quality of their online banking services to their customers. A structured questionnaire was utilised to collect primary data from 450 bank clients in Makurdi, Benue state, Nigeria, who were selected at random. Using multiple regression analysis, we found that four factors substantially affect customer satisfaction: efficiency, fulfilment, privacy, and system availability. According to the study's findings, the level of customer satisfaction in the Nigerian banking business is greatly affected by the quality of e-banking services. The study conducted by Mahyunnisa et al. (2022) examined the rapport between e-service quality, customer satisfaction, and repurchase intention using Shopee as a marketplace and an online consumer reviews platform as an intervening variable. A total of 190 women in Medan City, Indonesia, who were in the age bracket of 20–35 and had made at least two purchases through the app Shopee, made up the group studied. In this investigation, a non-probability sampling design was used to take the sample. In this case, accidental sampling was employed as the non-probability sampling method. According to the findings, online consumer reviews on the marketplace Shopee are affirmatively and substantially impacted by E-service quality. On the marketplace Shopee, customer happiness substantially impacts online consumer reviews. In the Shopee marketplace, repurchase intention is affirmatively and insubstantially impacted by e-service quality. Repurchase intention in the Shopee marketplace is affirmatively and substantially impacted by customer happiness. In the Shopee marketplace, customer reviews have a favourable and substantial impact on the likelihood of repurchase.

A cross-sectional research design, applicable to both quantitative and qualitative survey research, was selected for this study. This study's methodology is well-suited to our research goals since it allows us to look for trends in the quality of e-services and the correlations between the variables.

The population of this study is the customers of MTN, GLOBACOM, AIRTEL and 9MOBILE companies in North-Central States (Benue, Plateau, Kogi, Kwara, Nassawa and Niger), Nigeria. According to the National Bureau Statistics Telecoms Data – Q1 2023, there are forty-three million six hundred and nine thousand and seventy-four (43,609,074) and thirty million three hundred and fifty-four thousand three twenty-one (30,354,321) active voice and internet subscriptions per zone respectively.

Table 1: Population of Internet Subscribers in North-Central, Nigeria

State/Telecoms	MTN	GLOBACOM	AIRTEL	9MOBILE	Total
Benue	1,684,924	2,064,601	1,364,423	657,106	**5,761,043**
Kogi	1,029,441	2,164,361	889,911	575,579	**4,659,292**
Kwara	1,985,373	1,424,467	1,286,129	602,424	**5,298,393**
Nassarawa	1,356,530	1,454,702	1,205,682	663,663	**4,680,577**
Niger	1,242,814	1,721,550	1,577,677	684,313	**5,226,354**

Plateau	1,739,263	1,263,106	1,121,092	605,191	**4,728,652**
Total	**9,038,334**	**10,092,787**	**7,444,914**	**3,788,276**	**30,354,231**

Source: National Bureau of Statistics (2023)

In this study there are thirty million three hundred and fifty four thousand three twenty one (30,354,321) active internet subscribers North-Central, Nigeria, which implies that the population of the study is known, therefore, simple random sampling is appropriate and therefore adopted. In the same vein, Taro Yemane's technique was adopted to determine the sample size and we had 400. 400 copies of questionnaire were distributed to the customers of telecoms in North-Central, Nigeria. This assessment is based on quantitative analysis of observed data using statistical techniques such as Average Variance Extracted (AVE). Thus, the validity of the instrument in this regard will be tested using Average Variance Extracted (AVE) based on 0.50 threshold while Cronbach Alpha test was used to determine the reliability of the instruments aided by Statistical Package for Social Sciences (SPSS, 23.0).

DATA PRESENTATION, ANALYSIS AND INTERPRETION

Constructs	Item Scale	Mean	S.D	Factor Loadings	Cronbach Alpha	CR	AVE	Sq. Root of AVE
Privacy/ Security	Firms' websites check online customers' identity for security purposes.	4.00	.936	0.849	**0.908**	0.958	0.852	0.922
	Firm's websites ensure that information about e-service is protected from being altered or destroyed.	4.60	.887	0.921				
	I feel like my privacy is protected at this telecommunication.	4.41	.983	0.985				
	Customer's financial investment is encrypted against hackers.	4.32	.665	0.933				
Customer Value	The customers don't feel regret because of not putting enough thought in purchase decision.	4.30	1.044	0.898	**0.892**	0.933	0.775	0.881
	Our customers are satisfied with product characteristics (quality, packaging, design, usefulness etc.) after making purchase.	4.11	.799	0.779				
	This telecommunication keeps its customers' best	4.01	.670	0.904				

Construct	Item	Mean	SD	Loading	CR			AVE
	interests in mind during most transactions.							
	The management of this telecommunication regards customers as important.	3.80	.941	0.934				
Word of Mouth	Telecommunications that engage in customer-firm collaboration are the ones they will patronize.	3.90	.969	0.882	**0.953**	0.944	0.803	0.896
	I am willing to recommend others	3.81	.884	0.790				
	I regularly tell people about their brand	3.90	.817	0.986				
	I speak of the firm and their brands	3.80	.695	0.915				
CFA Model Fit:	$\chi^2 (201) = 421.39$ at P = 0.001; RMSEA = 0.05; SRMR = 0.05							

This study made use of descriptive and univariate analysis using mean and standard deviation aided by excel and SPSS. Inferential statistics was conducted using the Partial Least Square Structural Equation Modeling aided by SMART PLS version 4.

Table 2: The Results of the Measurement Model Assessment with descriptive analysis and factor loadings
Source: Researchers' Computation, 2024 (Aided by SMARTPLS Version 4.0.9.9).

From the result on the table, it can also be observed that the composite reliability (CR) for each of the constructs; privacy/security, customer value, and word of mouth exhibit high values of 0.958, 0.933 and 0.944 respectively.

Table 3: Correlation Matrix Showing the Discriminant Validity of latent constructs

	P/S	CV	WOM
Privacy/Security	0.922		
Customer Value	0.652	0.881	
Word of Mouth	0.654	0.681	0.898

Source: Researchers' Computation, 2024 (Aided by SMARTPLS Version 4.0.9.9).

Note:
P/S= Privacy/Security
CV= Customer Value
WOM= Word of Mouth
Objective one and two: Assessing the rapport between Privacy/Security and Customer
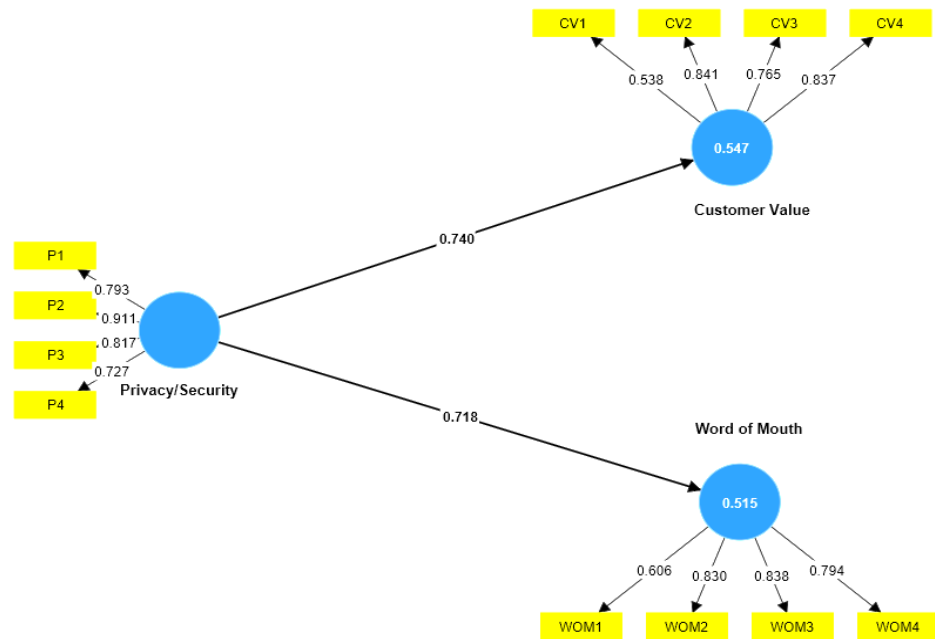
Satisfaction.

Figure 1 Structural Path Model for Privacy/Security and Customer Satisfaction
Source: Researchers' Conceptualization 2024; (Aided by Smart Pls Version 4.0.9).
Table 4: Structural Path Model and Hypotheses Results

S/n	Hypothesized Path	Path Coefficient (β)	P-Value	Standard Error	T Value	Decisions	f-Squared	Effect size
1.	P/S->CV	0.740***	0.000	0.032	5.773	Not Supported	1.144	Large
2.	P/S-> WOM	0.718***	0.000	0.058	4.692	Not Supported	2.067	Large

***P<0.001   **P<0.01   *P<0.05

Source: With the Help of SMARTPLS 4.0.9.9, the researcher computed the result of the path analysis in 2024. With a beta value (β) of 0.740, a P-value of 0.00 < 0.05, and a T-Value of 5.773 > 1.96, the first structural path, which reflected the third hypothesis of the study, demonstrated a affirmative correlation between Privacy/Security and customer value of telecommunication companies in North-Central, Nigeria. So, we can say that the null hypothesis is not true. The study's second hypothesis, which involved the second structural path, confirmed the existence of a affirmative correlation between privacy/security and word of mouth regarding telecommunication companies in North Central Nigeria. The beta value (β) was 0.718, with a p-value of 0.00 < 0.05 and a T-Value of 4.692 > 1.96. So, we can say that the null hypothesis is not true. Further insight derived from this result showed that privacy/security of telecommunication firms in North-Central, Nigeria can substantially improve customers' satisfaction. This is portrayed by the R^2 Values depicted the result. First the result showed R^2 Value of 0.547 for privacy/security and customers' values. This implied that service availability of telecommunication companies in North-Central, Nigeria can affirmatively engender notable improvement in their customers' values up to the tune of 54.7%. Similarly the result also showed R^2 Value of 0.515 for privacy/security and word of mouth which also implied that Privacy/Security of telecommunication companies in North-Central, Nigeria can affirmatively engender affirmative word of mouth up to the tune of 51.5%.

Discussion

Privacy and Security,Customer Satisfaction

An affirmative correlation between privacy/security as an E-service quality metric and customer satisfaction as shown by customer value and word of mouth was found in the second part of this study. In particular, the results demonstrated that privacy/security measures are affirmatively correlated with customer satisfaction metrics for telecommunications companies in North-Central, Nigeria. Moreover, the beta value (γ) for this correlation was 0.740, with a p-value of 0.00 < 0.05 and a T-Value of 5.773 > 1.96. With a beta value (β) of 0.718, a P-value of 0.00 < 0.05, and a T-Value of 4.692 > 1.96, it was also discovered that telecommunication companies in North-Central, Nigeria experience a favourable correlation between privacy/security and word of mouth.

Further insight derived from this result showed that privacy/security of telecommunication firms in North-Central, Nigeria can substantially improve customers' satisfaction. This is portrayed by the R^2 Values depicted the result. First the result showed R^2 Value of 0.547 for privacy/security and customers' values. This implied that service availability of telecommunication companies in North-Central, Nigeria can affirmatively engender notable improvement in their customers' values up to the tune of 54.7%. Similarly the result also showed R^2 Value of 0.515 for privacy/security and word of mouth which also implied that Privacy/Security of telecommunication companies in North-Central, Nigeria can affirmatively engender affirmative word of mouth up to the tune of 51.5%.The findings of this study corroborate those of other writers, such as Sulieman and Warda (2021), who investigated the effect of technological service quality on the happiness of Islamic bank customers in Jordan. The results showed that the quality of electronic services (in terms of responsiveness, privacy, website design, and simplicity of use) had a statistically noteworthy effect on the happiness of Islamic bank customers in Fordham. While dependability and efficacy have little bearing on customer satisfaction, they play a substantial role in generating and maintaining consumer conflict. The impact of high-quality electronic services on online shoppers' happiness and loyalty was studied by Kusdibyo and Februadi (2019). The researchers found that good electronic services substantially increased customers' happiness. In addition, the study discovered that customer satisfaction is greatly impacted by the quality of electronic services, with a stronger indirect effect than a direct one. Evidence from Indonesian internet banking customers on the effect of service quality and satisfaction on customer loyalty was studied by Sasono et al. (2021). We found that e-service equality influences e-satisfaction affirmatively and substantially, that e-satisfaction affirmatively influences e-loyalty, that e-service affirmatively influences e-loyalty, and that e-satisfaction substantially machinates the influence of electronic service quality on e-loyalty. In Zimbabwe's banking sector, Maune (2022) used a structural equation modelling (SEM) approach to study customer loyalty to brands and the quality of self-service technology services. Their findings disproved hypotheses 5 and 6, while providing more evidence for hypotheses 1, 2, 3, 4, and 7. When it comes to banking, self-service technology have been a game-changer for customer loyalty. With worldwide limitations nearly paralysing a number of sectors due to the COVID-19 epidemic, the 'FinTech' industry has been put to the test.

Conclusion

Overall, the study provides valuable practical insights for of telecommunication services **to leverage e-service quality effectively and improve their customer satisfaction. Additionally, it contributes to the theoretical understanding of e-service quality and its impact on organizational outcomes. Privacy/security** contributes modestly to word of mouth but seems less relevant for customer value in this context. Telecommunication services should focus on utilizing e-service quality strategically to connect with customers and improve operational processes.

Recommendations

The following recommendations are hereby made b**ased on the study's findings:**

i. Management **of Telecommunication Firms in North-Central, Nigeria should increase the use of privacy/security as a means of increasing** word of mouth**. This can be achieved by** developing new methods of solving a question if the answer is not clear.

ii. **Managers of telecommunication Firms in North-Central, Nigeria should utilize electronic service quality strategically by** going beyond simply having a e-commerce presence and focusing on utilizing platforms strategically to connect with customers, in order to build customer value.

iii. Managers of **Telecommunication Firms in North-Central, Nigeria should enhance the adoption of privacy/security mechanism as a means of improving** word of mouth.

iv. **Managers of Telecommunication Firms in North-Central, Nigeria should invest in continuous learning by** focusing on ongoing learning initiatives that address specific business challenges and operational inefficiencies.

v. Managers of **Telecommunication Firms in North-Central, Nigeria should enhance internet connectivity by re**gularly monitoring and evaluating the effectiveness of the electronic service quality and technology investments to ensure optimal performance and continuous improvement.

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