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Customer Perceived Online Security, Trust and Acceptance of Point of Sales Internet Banking Service

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Abstract

Purpose: The study investigates the effect of customer perceived online security and trust on acceptance of Point of Sales (POS) internet banking services.

Materials and methods: This analysis is based on survey field data collected from 423 POS customers in North-East Nigeria. PLS-SEM approach was used to analyze the data of the using smart-PLS 4.0.7.8 software.

Results: Perceived online security (credit reliability, privacy) affects acceptance of internet banking (computability, ease of perceived usage and usefulness of perceived usage) by POS customers and trust (competency, benevolence). Competence, benevolence and honesty affect computability, ease of perceived usage, and usefulness of perceived usage. Credit and reliability have no effect on honesty, ease of perceived usage, usefulness of perceived use as well as privacy on computability. Privacy has no effect on honesty and competence. Competence, benevolence and honesty also have no effect on computability and usefulness of perceived usage. More importantly, competence, benevolence and honesty have mediating effect. Benevolence has no mediating effect.
Research limitations/implications: The study is limited to POS customers in North East-Nigeria.
Practical implications: This study contributes to both practicing agents of POS and the literature on acceptance of internet banking. The study suggests that agents POS need to focus on ensuring security and earning customers' trust to encourage them adopt internet banking service through POS.
Originality/Value: This study provides new insights into the complex relationships among study variables. It further present model that integrates the important variables required for an analysis of perceived security, internet banking acceptance trust as mediating variable. The study also contributes methodologically through the introduction of PLS-SEM approach.
Keywords: **Online security, Trust, Acceptance of POS internet banking service.**

Introduction

The business environment and human existence have undergone significant changes as a result of the intensification of information technology. Financial institutions have seen significant changes in their management techniques, operational procedures, and system- and information-based business models. Rural customers, particularly those in Nigeria, are hesitant to use online banking services due to security and other difficulties with trust and other factors. Similar to this, Nigerian society still values in-person communication over internet banking platforms. Culture has the greatest influence on how people accept technology.

In Nigeria pandemic and insurgency has currently made a seriously bad impact on society, economy, culture and some other fields of our life. In opposition to these concepts according to Harun and Shannak, current technology can help achieve greater efficiency and operational management during pandemics, particularly those involving the Corona Virus (COVID-19) and insurgency pose by book haram and kidnapping in North-East Nigeria which cause lot destruction to bank branches and restriction of movement from one place to another. Governments around the world have implemented mitigation measures such as national quarantines, social segregation, and the complete shutdown of non-essential companies as a result of the innovative COVID-19 in the year 2020. As result, customer accepting the trend in new technology such as point of sales is now necessary to handle daily transactions.

POS had to temporarily down branches due to the pandemic and insurgency, but they still had to play a crucial part in absorbing this shock and providing their customers with quick service who used POS online banking. One of the most difficult problems in information system research is figuring out why clients embrace or reject POS services. Security issue is still intimidating the users from accepting POS internet banking due to inadequate of safety measures against hackers, decline transaction among others.

Although, there are many works on the factors affecting the acceptance of POS online banking have been studied in the USA, UK, Spain and Malaysia yet there is still little study on internet security which truly affect the acceptance of internet banking among rural bank customers in Nigeria [1]. As a result of mixed findings recorded by the previous studies, this present study introduces mediating variable trust to be measured by competency, benevolence and honesty.

Moreover, prior study were conducted mostly on the perception of bank customers with little emphases on POS customers perception. Predisposition to technology, literacy level, infrastructural base, culture, and use behaviour that may affects POS internet banking by customers differs. In view of the issues highlighted, this study seeks to examine effect of customer perceived online security (credit, reliability and privacy) on acceptance of POS internet banking services (compatibility, ease of perceived usage and usefulness of perceived usage), through the mediating variables of trust (competency, benevolence and honesty).

This study will contribute to the existing literature in terms of many aspects including the internet security, trust and POS internet banking acceptance. The findings of this study will provide the POS customers and POS operators with an opportunity to focus on the key attributes of internet security that will generate customers trust toward internet banking service. Finally, the attention on internet banking security will help customers understand and accept POS internet banking services which is still in its initial phases in among Nigerian POS customers as compare to POS customers in the developed countries.

The present paper consists of five sections. In the first section, the research literatures related to the study are described. In the second section, the methodology and data analysis processes are expressed. In the third section, the results of the research hypotheses are presented. In the fourth section, the practical advices as well as administrative and academic applications are given [2]. Finally, in the fifth section, the limitations and suggestions for future research are presented, and the study ends with the conclusion.

The usage of the internet, which is the product of the convergence of many different technologies, has significantly impacted the performance of numerous enterprises, particularly. The ability for customers of a financial organization to make financial transactions *via* a secure website run by the institution is known as internet banking. The ability to conduct bank-related transactions through the Internet is a service offered by banking and financial institutions.

This study uses compatibility, perceived ease of use, and perceived utility to assess the acceptance of internet banking during COVID-19 pandemic. The extent to which people believe utilizing a certain technology enhances their ability to accomplish their jobs is known as perceived usefulness. The perception of a system's perceived ease of use measures how much people think utilizing it won't take much work [3]. The degree to which an innovation is compatible with the principles, prior experiments, and present requirements of potential adoptors is known as perceived compatibility.

Perceived online security and acceptance of internet banking

Online security is the technical protection of the network against malicious activity or hackers, according to Cox and Dale. In e-retailing, it refers to e-vendors not disclosing consumer information to outside parties absent express authorization from the

customer. Hammoud, et al. have reported that security remains a crucial issue even after e-services. According to researchers, users of e-facilities should be particularly concerned about increasing the security of online transactions. Additionally, it was discovered that inside an online domain, trust is closely related to system integrity and security. According to Flavian and Guinaliu, trust is influenced by how online customers view the protection of their personal data kept by e-retailers [4]. By lowering perceived environmental risk and boosting security, internet users can increase perceived usefulness and trust among consumers.

Flavian and Guinaliu have found that perceived security by online consumers regarding their personal data held with e-retailer influences trust. Internet users can increase perceived usefulness and trust among consumers by reducing perceived environmental risk and increasing security. Online security is how a client feels they are protected from security concerns. Protection of data and systems from unauthorized invasions is referred to as security. According to Rahi, Ghani, and Ngah, perceived technological security refers to the belief that financial information cannot or will not be protected. Security is the capacity to safeguard data from potential dangers. In the current study, three factors-credit, reliability and privacy are used to gauge perceived security.

Credit is the cornerstone of high-quality goods and services. It speaks of the level of precision and promptness of services. Schneider defined credit as a system's capacity to consistently and accurately performs as intended. Protection from danger, risk, threat, or injury to people or their property-either intentionally or unintentionally is included in the concept of reliability. Consumers' concerns regarding the dependability of the electronic banking channel are viewed as reliability. Privacy is a crucial factor that could influence users' decision to employ e-based transaction systems. The degree to which a person believes that a technical and organizational infrastructure exists to violate their privacy is known as their level of privacy.

Using data from numerous studies in the literature, it was discovered that the biggest barrier to client adoption of online banking is security. Similarly, research has indicated that users' intentions to use internet banking are positively influenced by their perception of technology security. Similar to this, Hossein, et al. confirmed that the acceptance of online banking was considerably influenced positively by the perception of security in Internet banking [5]. Customers feel more secure while using internet banking to conduct transactions when the level of certainty in the integrity of such online banking is higher. So, it is proposed that:

H1a: Credit, reliability and privacy positively affects compatibility among rural bank customers.

H1b: Credit, reliability and privacy positively affects ease of perceived usage among rural bank customers.

H1c: Credit, reliability and privacy positively affects usefulness of perceived usage among rural bank customers.

Perceived online security and trust

Numerous studies have discovered an important and favorable association between perceived security and in various disciplines. According to Kumar, et al., user perceptions of the security of internet banking have a considerable beneficial impact on institutional trust in the service. Vejaka and Tofa assert that customers' trust in

electronic banking is significantly boosted by perceived security. According to Hossein, et al., trust was strongly influenced favorably by the perception of security in POS online banking.

Although security was conceptualized as a multifaceted entity, Hartono, et al. discovered that this was at odds with how empirical investigations operationalized measures of perceived security. As a result, the multidimensionality of felt security is disregarded and instead, most researches only look at one facet of perceived security. This study proposed that:

H2a: Credit, reliability and privacy positively affects competency among rural bank customers.

H2b: Credit, reliability and privacy positively affects benevolence among rural bank customers.

H2c: Credit, reliability and privacy positively affects honesty among rural bank customers.

Trust and internet banking acceptance

According to Davis, Gnanasekar and Parayitam, Ha and Stoel, Muh, et al., Sanchez-Torres, et al., Wang, Ngamsiriudom and Hsieh, Wen and Yu, Balaji and Khong, trust is the degree to which a person feels a new technology is valid and reliable. In the current work, three criteria such as benevolence, honesty and competency are used to quantify trust.

According to Yiga and Jin and Nooteboom, Berger and Noorderhaven, competence is the capacity to carry out relationships' objectives and expectations or the capability of the one who has the trust of another to respond to their demands. The ability, skill, and competency of banks to manage clients' needs is referred to as their level of competence. Competency was described by Lin by Muh, et al. as the capacity of a dependable individual to meet demands based on those needs. It comes from a number of sources, including a solid reputation, strong customer support, and an effective website [6]. Benevolence is the eagerness and concern of the one who is trusted to act in the trusting person's best interests.

Benevolence must enjoy promoting the welfare of others without producing any negative effects. Benevolence boosts the seller's reputation, and a well-known company's beneficent actions might inspire customers to trust the seller on an emotional level. According to Mayer, et al., Suh and Han, Muh, et al., Yiga and Jin, honesty or integrity is the bailment and promise based on keeping properly by the trusted person. Similar to honesty, integrity refers to the conviction that a trustee enters into agreements in good faith, tells the truth, behaves morally and keeps their word.

Researchers examined the effect of trust on the acceptability of internet banking and discovered that trust has a substantial impact on the acceptance of online banking. The acceptability of internet banking was confirmed to be strongly influenced favorably by trust in Internet banking by Hossein, et al. and Yiga and Jin among others. According to Md Nor and Pearson and Sanchez-Torres, et al., one of the biggest barriers preventing people from adopting internet banking technology is a lack of trust. According to Akhlaq and Ahmed, acceptance of internet banking is negatively impacted by a lack of confidence [7]. Increased client views of privacy and security would favorably impact trust, which would boost customer adoption of online banking. The outcomes also

showed how important trustworthiness, esteem, and dependability are to online shoppers. Taking into account the findings of earlier research, this study proposed the following theories.

H3a: Competency, benevolence and honesty positively affects compatibility among rural bank customers.

H3b: Competency, benevolence and honesty positively affects ease of perceived usage among rural bank customers.

H3c: Competency, benevolence and honesty positively affects usefulness of perceived usage among rural bank customers.

Mediating effect of trust between security and internet banking acceptance

Trust mediates a strong association between perceived ease of use and intention to use. Customers' perceptions of convenience in mobile banking services boost trust, which increases their intention to utilize the service, according to Mustika and Puspita. On the subject of online purchase intentions, Shahid Iqbal, Hassan, and Habibah discovered that trust considerably and favorably mediates the impact of perceived usefulness. According to Rahmayanti and Rahyuda, trust acts as a mediator between a technology's perceived utility and users' intentions to use it. Similar to this, Singh and Sinha's empirical investigation confirmed that trust can mediate between perceived usefulness and intention to utilize in a positive and significant way. Trust was confirmed to be a mediator between service quality and behavioral intentions to use internet banking by Namahoot and Laohavichien. Therefore, based on the findings of earlier research, the following research hypotheses were developed:

H4a: Competency, benevolence and honesty positively mediates positively between credit and compatibility.

H4b: Competency, benevolence and honesty mediates positively between reliability and ease of perceived usage.

H4c: Competency, benevolence and honesty mediates positively between privacy and usefulness of perceived usage.

Materials and Methods

The population considered for the study were POS customers aged 18 years and above, who are having at who have being using POS for transaction are sampled randomly. The primary data are collected, using five (5) points Likert scales structured questionnaire ranging from 1 “strongly disagree” to 5 “strongly agree, from 543 POS customers. To have the representative sample of POS customers for data collection, a survey is used [8]. The total number of questionnaires distributed was 480 to POS agents in North-East Nigeria in which 436 questionnaire were returned with a response rate of 90.8%. Among the 436 responses, 13 were discarded based on two criteria: the respondents did not fill all the questions and the questionnaire contained non-serious. Thus, finally 423 valid questionnaires with a response rate of 88.13% were used for further data analysis. The respondents engaged in this study were sampled by convenience sampling as suggested by Rahi and Rowley. The descriptive statistical was used to analyse the demographic characteristics of respondents with help of IBM SPSS version 26.0. Partial Least Squares Structural Equation Modelling (PLS-SEM) was used to analysis technique using the Smart-PLS 4.0.8.7 software unlike the

previous study Hameed, et al.; Khan, et al.; Saeed and Ghani Azmi that used AMOS with different feature. First, the researchers tested the measurement model (validity and reliability of the measure) followed by the structural model (testing the hypothesized relationships). PLS is a variance-based structural equation modeling and suitable for this study as the purpose of this study is to predict user's acceptance with internet banking instead of testing.

Measurement instruments

All measurement instruments present in Table 1 were adapted from the literature, with a slight modification. Perceived security is measured with credit developed from Chellappa and Yousafzai, et al., reliability developed from Nayanajith, privacy developed from Chellappa and Yousafzai, et al., Trust is measured with competency developed from Chellappa and Yousafzai, et al., benevolence developed from McKnight et al. and Yousafzai, et al. and honesty developed from McKnight et al. and Yousafzai, Pallister and Foxall. Finally, internet banking acceptance measured with compatibility developed from Moore and Benbasat and Rahi and Ghani, ease of perceived usage developed from Cheng, et al.; Giovanis, et al.; Irfan; Manzano, et al. and Nor, et al. and usefulness of perceived usage developed from Cheng, et al.; Giovanis, et al., Irfan; Manzano, et al. and Nor, et al.

Code	Items
Credit	
PSC1	I believe my Internet banking transaction information will not be lost during an online session
PSC2	I believe my Internet banking transaction information will only reach the target bank account
PSC3	I believe that the security system will confirm my identity before disclosing account information
PSC4	I believe that the security system will confirm my identity before processing transactions
PSC5	I believe that I know exactly what information is collected
Reliability	
PSR1	My bank's customer internet services are easily accessible
PSR2	My bank's website has the services of customer service representatives who are available online
PSR3	My bank offers prompt responses to customer banking internet requests
PSR4	My bank quickly resolves online transaction problems
Privacy	
PSP1	I believe my Internet banking transaction information will only be used for the purpose of the original transaction
PSP2	I believe my Internet banking transaction information will be shared with others with my consent
PSP3	While using Internet banking, I believe that I have full knowledge of the parties that can access my online account information
PSP4	While using Internet banking, I believe that I control the use of my information
Trust competency	

TC1	I believe that my bank provides an excellent Internet banking service
TC2	I believe that my bank is processing my transactions accurately and on time
TC3	I believe that my bank provides 24 hour access to Internet banking
TC4	My bank upholds the principles of a highly respected bank
Benevolence	
TB1	My bank will repay the money if it is taken from my account through unauthorized transactions
TB2	My bank is acting in my best interest
TB3	MY bank is more interested in my wellbeing than theirs.
TB4	MY bank provides all the help I need whenever I need it
TB5	The bank considers customers' profits as the top priority.
TB6	The decisions of this bank are trustworthy
Honesty	
TH1	My bank is good at maintaining its commitments
TH2	my bank has consistent online practices and policies
TH3	My bank promptly informs me whenever anything goes wrong with any of my transactions
TH4	My transaction through Internet banking will always be transparent because of the regulator
TH5	My bank is generally an honest bank
Internet banking acceptance compatibility	
IBAC1	Using internet banking is compatible with all aspects of my life style
IBAC2	Using internet banking is completely compatible with my current situation
IBAC3	I think that using internet banking fits well with the way I like to use
IBAC4	Using internet banking fits into my life style
Ease of perceived usage	
IBAEPU1	Using Internet banking improves functioning of my banking activities
IBAEPU2	Internet banking allows me to manage my banking activities more efficiently
IBAEPU3	Internet banking enables me to complete my banking activities more quickly
IBAEPU4	I find Internet banking very useful for carrying out my banking activities
IBAEPU5	I find using Internet banking advantageous than branch banking
Usefulness of perceived usage	
IBAUPU1	It is easy to use Internet banking
IBAUPU2	Learning to use Internet banking is easy
IBAUPU3	The instructions provided on my Internet baking website are clear and understandable
IBAUPU4	I find it easy to remember how to use Internet banking
IBAUPU5	I find the use of the Internet Banking services easy

Table 1: Measurement scale for the study.

Results

Respondent's profile

Demographic data presented on Table 2 shows 64.8% of the respondents were male and 35.2% were female. The majority of the participants were young with age of 28-37 years with frequency of 197 which constitute 46.6% while the respondents who had age less than 48 years and above were at lowest numbers frequency of 25197 which constitute 46.6%, 5.9%.

Respondents were asked that how long they have been used the internet banking services. Results indicated that, the highest number of respondents were those who had used internet banking service from two years and above with frequency of 236 which constitute 55.8% [8]. These findings showed that most of the respondents were active internet banking users as they were using internet banking from more than two years the lowest internet users are those who use internet facilities for less than one year with frequency of 69197 which constitute 16.3%. Finally, the result of education levels of the respondents shows that 41.4% of the respondents were those with ND/NCE and the least were those with primary/secondary certificate with 11.3%.

Variables	Frequency	Percentage (%)
Gender		
Male	274	64.8
Female	149	35.2
Total	423	100
Age		
18-27 years old	64	15.1
28-37 years old	197	46.6
38-47 years old	137	32.4
48 years and above	25	5.9
Total	423	100
How long have been using the internet banking services		
less than 1 year	69	16.3
1 year	118	27.9
2 years and above	236	55.8
Total	423	100
Educational level		
Primary/Secondary certificate	48	11.3
ND/NCE	175	41.4
HND/Bsc	137	32.4
Masters/Ph.D	63	14.9
Total	423	100

Table 2: Respondent's profile.

Common method bias

As recommended by Podsakoff, et al., Harman's single factor test was used to evaluate non-response bias. If a single latent factor accounts for the majority of the variance explained, common method bias is problematic. Consequently, no discernible common approach bias was discovered in our data set. Only 32.32% of the covariance could be

explained by a single factor, which is less than 50%, indicating that common method bias is not likely to be a problem in this study [9-11].

Measurement model

The standard procedure for SEM analysis is to warrant the scale validity and reliability of the model. However, the measurement model used in this study is measured with measured indicators (Figure 1).

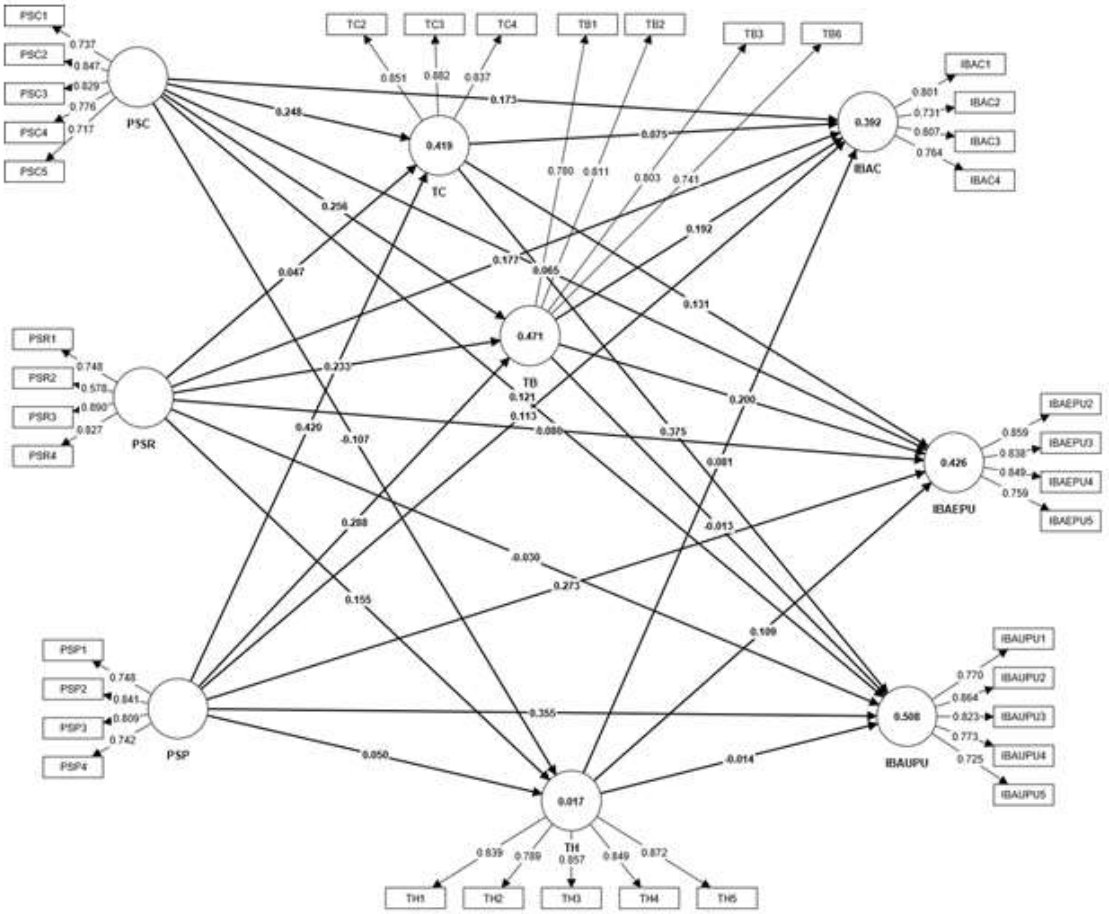

Figure 1: Graphical representative of measurement model.

The adequacy of the measurement model and structural model is done by gauging the fitness index and coefficient of determination. Standardized Root Mean Residual (SRMR) represents the fitness index to assess the suitability of the model with data at hand. The lower the value of SRMR the better the adequacy of model will be and with data which usually recommended below 0.08. Therefore, the value of SRMR produced is 0.06 for saturated model and 0.077 for estimated model which is significantly lower than of recommended value of 0.085. Similarly, the value of d_ULS is 3.235 saturated model and 4.392 for estimated model. Finally, the value of d_G is 0.939 saturated model and 1.062 for estimated model.

The reliability of the model was tested with the composite reliability coefficients above the threshold value of 0.70 see Table 3. The items within each construct therefore produces high internal consistency as all items remaining are above 0.70 of composite loading. For the convergent validity, the Average Variance Extracted (AVE) was employed in confirmatory composite analysis which is part of an analysis to PLS-PM. The findings show that most item have a standardized composite loading that significantly exceeds the minimum requirement of 0.70 after exclude one items from behavioural intention. Subsequently, after eliminated the two items from the model, none of the construct AVE were experiences below the cut-off of 0.50 [12]. It confirms

that the values of the convergent validity of the measurement model falls between the range of 0.592 and 0.734 as presented in Table 3. Thus, the amount of variance captured from their item is higher than the amount of error variance for these constructs.

Variables	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average Variance Extracted (AVE)
IBAC	0.781	0.79	0.858	0.602
IBAEPU	0.845	0.847	0.896	0.684
IBAUPU	0.851	0.857	0.894	0.628
PSC	0.841	0.846	0.887	0.613
PSP	0.794	0.799	0.866	0.618
PSR	0.762	0.795	0.85	0.592
TB	0.791	0.79	0.864	0.615
TC	0.819	0.819	0.892	0.734
TH	0.897	0.909	0.924	0.708

Table 3: Construct reliability and convergent validity.

Discriminant validity was estimated with the and Fornell and Larcker and Heterotait-monotrait Ratio of Correlations (HTMT) approach. Though, Fornell and Larcker approach has always been subject debatable due to lack of discriminant validity when employed with PLS-PM. The Heterotrait-Monotrait (HTMT) ratio of correlations is recommended for PLS-PM as also applied in this study. HTMT values above 0.8 would indicate a violation of discriminate validity (Table 4). Since this was not the case, this assumption was met. Based on the sufficient results of the measurement model, hypotheses testing can be executed by assessing the structural model. The results computed for each pair of the models' two constructs indicate that the HTMT values of all construct does not reach the maximum threshold of 0.85. In additions, the HTMT interface was also employed to estimate the bootstrap confidence interval with 5000 of re-sampling procedure in smart-PLS 4.0.8.7.

Variables	IBAC	IBAEPU	IBAUPU	PSC	PSP	PSR	TB	TC	TH
IBAC									
IBAEPU	0.799								
IBAUPU	0.487	0.718							
PSC	0.647	0.585	0.613						
PSP	0.626	0.692	0.764	0.79					
PSR	0.67	0.607	0.553	0.889	0.819				
TB	0.663	0.668	0.613	0.746	0.752	0.776			
TC	0.565	0.616	0.665	0.665	0.748	0.618	0.837		
TH	0.176	0.195	0.071	0.071	0.091	0.147	0.133	0.077	

Table 4: Heterotrait-Monotrait ratio of correlations (HTMT).

As shown in Table 5 Fornell and Larcker criterion, in all cases the square root of AVE on the diagonal (bold values) larger than the construct correlation coefficients. Further, in order to examine the multicollinearity problems, the absolute correlation between the constructs should be lower than of 0.85, as suggested by Afthanorhan, et al. Therefore, conclusion can be made that all measurement model is presumed to have discriminant to each other. It implies that all items from each latent variable in the research model is unique and differ significantly from other latent variable items [13]. The findings obtained for perceived security trust and internet banking acceptance indicate that correlation

value is below than 1.0. Therefore, the results obtained from these three criteria (Fornell-Larcker, HTMT 0.85 and HTMT interface) confirm the discriminant validity of the constructs.

Variables	IBAC	IBAEPU	IBAUPU	PSC	PSP	PSR	TB	TC	TH
IBAC	0.776								
IBAEPU	0.662	0.827							
IBAUPU	0.407	0.609	0.792						
PSC	0.535	0.5	0.533	0.783					
PSP	0.507	0.576	0.636	0.655	0.786				
PSR	0.533	0.496	0.457	0.715	0.635	0.77			
TB	0.532	0.553	0.508	0.612	0.604	0.599	0.784		
TC	0.46	0.513	0.636	0.557	0.613	0.491	0.673	0.857	
TH	0.142	0.171	0.031	0.037	0.078	0.11	0.119	0.047	0.842

Table 5: Fornell-larcker criterion.

Structural model

First, the coefficient of determination, R^2 is utilized to explain the total variance of the model. Considering the R^2 values, of TB 0.471, TC 0.419 and TH 0.017 trusts dimensions variance has been explained by dimensions of perceived security. Internet banking acceptance dimensions variance has been explained by dimensions of perceived security and trusts dimensions together with R_2 values, of IBAC 0.392, IBAEPU 0.426, and IBAUPU0.508, These values lie at the satisfactory levels since it is larger than 0.10 as suggested.

Path coefficients

The significant effects were evaluated with the bootstrapping method. The method is able to draw a large number of re-samples from the original population and calculates the model parameters for each re-sample that has been bootstrapped [14]. The bootstrapping method makes it is possible to determine the confidence intervals of the path coefficients and to make statistical inferences (Table 6).

Variables	Original sample (O)	Sample mean (M)	Standard deviation (St dev)	T statistics (O/St dev)	P values	Remark
PSC -> IBAC	0.173	0.173	0.072	2.388	0.017	Supported
PSC -> IBAEPU	0.065	0.064	0.066	0.983	0.326	Not supported
PSC -> IBAUPU	0.121	0.118	0.067	1.812	0.07	Not supported
PSR -> IBAC	0.177	0.178	0.063	2.826	0.005	Supported
PSR -> IBAEPU	0.08	0.08	0.061	1.325	0.185	Not supported
PSR -> IBAUPU	-0.03	-0.029	0.064	0.469	0.639	Not supported
PSP -> IBAC	0.113	0.108	0.068	1.661	0.097	Not supported
PSP -> IBAEPU	0.273	0.269	0.064	4.258	0	Supported
PSP -> IBAUPU	0.355	0.355	0.054	6.595	0	Supported
PSC -> TC	0.248	0.248	0.06	4.157	0	Supported
PSC -> TB	0.256	0.258	0.063	4.068	0	Supported
PSC -> TH	-0.107	-0.108	0.081	1.313	0.189	Not supported

PSR -> TC	0.047	0.048	0.055	0.855	0.393	Not supported
PSR -> TB	0.233	0.235	0.057	4.086	0	Supported
PSR -> TH	0.155	0.158	0.081	1.911	0.056	Not supported
PSP -> TC	0.42	0.422	0.051	8.292	0	Supported
PSP -> TB	0.288	0.286	0.056	5.162	0	Supported
PSP -> TH	0.05	0.052	0.07	0.714	0.476	Not supported
TC -> IBAC	0.075	0.079	0.059	1.264	0.206	Not supported
TC -> IBAEPU	0.131	0.137	0.067	1.948	0.051	Supported
TC -> IBAUPU	0.375	0.376	0.055	6.844	0	Supported
TB -> IBAC	0.192	0.19	0.06	3.21	0.001	Supported
TB -> IBAEPU	0.2	0.197	0.062	3.221	0.001	Supported
TB -> IBAUPU	-0.013	-0.012	0.063	0.206	0.837	Not supported
TH -> IBAC	0.081	0.083	0.044	1.86	0.063	Not supported
TH -> IBAEPU	0.109	0.11	0.038	2.87	0.004	Supported
TH -> IBAUPU	-0.014	-0.014	0.036	0.402	0.688	Not supported
PSC-> TC -> IBAC	0.059	0.06	0.022	2.668	0.008	Supported
PSC -> TC -> IBAEPU	0.072	0.073	0.026	2.793	0.005	Supported
PSC -> TC -> IBAUPU	0.091	0.091	0.029	3.139	0.002	Supported
PSR -> TB -> IBAC	0.061	0.061	0.021	2.919	0.004	Supported
PSR -> TB -> IBAEPU	0.07	0.071	0.024	2.862	0.004	Supported
PSR -> TB -> IBAUPU	0.012	0.013	0.027	0.462	0.644	Not supported
PSP -> TH -> IBAC	0.091	0.093	0.028	3.286	0.001	Supported
PSP -> TH -> IBAEPU	0.118	0.12	0.12	4.142	0	Supported
PSP -> TH -> IBAUPU	0.153	0.155	0.031	4.909	0	Supported

Table 6: Effects Inference.

The results of the main effect model provided for H1a to H4c are presented in Table 6. H1a to H1c shows that PSC, PSR have positive significant effect on IBAC (β=0.173, 0.177, P=0.017, 0.005). PSP, has a have positive significant effect on IBAEPU, IBAUPU (β=0.273, P=0.000; β=0.355, P=0.000). However, PSC, PSR has no significant effect on IBAEPU, IBAUPU and PSP also indicate no significant effect on IBAC.

H2a to H2c presented in Table 6 indicates that PSC has positive significant effect on TC, TB (β=0.248; 0.256, P=0.000) while PSC has negative and no significant effect on TH effect. PSR has positive significant effect on TB (β=0.233, P=0.000), while PSR has

no significant effect on TC, TH. Similarly, PSP has positive significant effect on TC, TB (β=0.420, 0.288; P=0.000). However, PSP has no significant effect on TH. H3a to H3c in Table 6 indicates TC has positive and significant effect on IBAEPU, IBAUPU (β=0.131, 0.375, P=0.051; 0.000), while, TC has no significant effect on IBAC as presented in Table 6. Similarly, TB has positive significant effect on IBAC, IBAEPU (β=0.192, 0.200, P=0.001; 0.001). However, TB has negative and no significant effect on IBAUPU. TH has positive significant effect on IBAEPU (β=0.109, P=0.004).

Result of mediating effect presented in Table 6, H4a to H4c indicates that PSC -> TC -> IBAC has partial mediation since the direct effect and indirect effect are all significant effect. While PSC -> TC -> IBAEPU, PSC -> TC -> IBAUPU indicate full mediating effect since direct effect is not significant while indirect effect shows significant effect. PSR -> TB -> IBAC indicates partial mediation, while, PSR -> TB -> IBAEPU indicates full mediation. PSR -> TB -> IBAUPU indicates no mediating effect of TB between PSR and IBAUPU since both direct and indirect effect is not significant. Finally, TH mediates between PSP and IBAC, IBAEPU and IBAUPU.

Discussion

The current study examined effect of perceived security on internet banking acceptance; mediating effect of trust. The study contributes to the literature by considering dimensions of perceived security, trust and internet banking acceptance separately and by exploring different ways through which different types of dimensions of perceived security and trust give confidence to POS customers.

As indicated in the present study, perceived security dimensions PSC, PSR, PSP have significant effect are effective factors for internet banking acceptance (IBAC, IBAUPU, IBAEPU) by POS customers. While doing bank transactions, rural bank customers are anxious about factors such as hackers' access to their personal information, lack of required accuracy, having old security systems and so on. Therefore, the higher the perceived security by POS customers, the more POS customers' tendency for applying internet bank services. The results of the present research were consistent with those of Cheng, et al; Hossein, et al.

Positive effect of PSC, PSR and PSP on TC, TB, and PSR was proved in the present study along with previous Adesina and Ayo; Al-Sharafi, et al.; Barkhordari, et al.,; Yusafzai, et al.,. Therefore, if POS customers think that banks have necessary experience, knowledge and skill to do bank operations and consider what is the best for customers in bank exchanges and give priority to bailment, customers' trust will increase. On the other side, the more the banks adhere to commitments and ethics and perform accordingly, the more the customers' trust would be.

In the present study, the effect of TC, TB and TH dimensions of trust on IBAC, IBAEPU and IBAUPU dimensions of internet banking acceptance was examined. The results showed that TC has significant effect on IBAC, IBAEPU, TB has positive significant effect on IBAC, IBAEPU and TH has positive significant effect on IBAEPU which was in line to the results by Hossein, et al., and Yiga and Jin. It is important that in the society of the present study, POS customers considered trust positively, which means that POS customers rebuke by their family about using internet banking, but they are considered to be traditional and alien to the modern world if they do not use it. Finally, PSC -> TC -> IBAC has partial mediation, PSC -> TC -> IBAEPU, PSC -> TC -> IBAUPU indicate full mediating effect. PSR -> TB -> IBAC indicates partial mediation; PSR -> TB -> IBAEPU indicates full mediation. PSR -> TB -> IBAUPU indicates no mediating effect of TB between PSR and IBAUPU since both direct and indirect effect is not significant. Finally,

TH mediates between PSP and IBAC, IBAEPU and IBAUPU. The result of this present study is consistent with the studies Shahid-Iqbal, Hassan and Habibah; Rahmayanti and Rahyuda; Singh and Sinha.

Conclusion

This study can serve as a reminder to bank managers of the significance of the previously mentioned variables, such as perceived security (credit, reliability, privacy) and trust (competence, in the acceptance of internet banking services, and the need to give these considerations particular attention when formulating strategic programs. According to this study's findings, perceptions of security have a significant effect in people's willingness to accept online banking [15]. Therefore, POS managers must set up the required infrastructures and inform rural bank customers of these benefits. POS customers can feel secure due of the banks' strong security measures and the fact that few customers are aware of such problems. The reflection and impact of the perceived security of internet banking acceptance through the determinants of POS Internet banking trust is another important point in this study. The indirect hypothesis of this study is supported by the finding that POS customers can gauge security through other variables, and other variables can indicate security-related attention or inattention. Because of this, bank administrators must have a comprehensive understanding of all the variables because placing too much attention on one could blindside them to the others.

Limitations and Recommendations for Future Research

When extrapolating the findings of the current study to other nations with various cultures, it is important to keep in mind that it was conducted among Nigeria's POS clients. Although there are many factors that could influence the adoption of online banking, only the variable effect of perceived security and trust was examined in this study. Future studies are urged to examine the conceptual model of the most recent research by include additional driving forces behind the acceptability of online banking. Additionally, examining the effect of demographics on the research's hypotheses can enhance future research findings.

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