# "Mediating role of perceived service quality between behavioral characteristics, security risk and internet banking usage"

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## MEDIATING ROLE OF PERCEIVED SERVICE QUALITY BETWEEN BEHAVIORAL CHARACTERISTICS, SECURITY RISK AND INTERNET BANKING USAGE

#### **Abstract**

Internet banking is an essential component of banking. However, most bank customers in Nigeria do not make optimal use of the service. The paper investigates the influence of behavioral characteristics, security risk and perceived service quality on internet banking usage. A research model was developed by incorporating security risk to the antecedent variables of the Theory of Planned Behavior with perceived service quality serving as a mediator. A questionnaire was utilized to gather information from 333 bank customers who had signed up for internet banking. According to the results of structural equation modeling, internet banking usage is positively correlated with subjective norm, perceived behavioral control, and perceived service quality. Security risk, on the other hand, has a negative correlation. The use of internet banking is unaffected by one's attitude. Regarding the relationship with perceived service quality, attitude and subjective norm were insignificant, while perceived behavioral control and security risk were significant. The mediating effect indicates that perceived service quality did not mediate the association between attitude and internet banking usage. However, subjective norm, perceived behavioral control and security risk partially mediate the relationship. Thus, aside from attitude, the study confirms the Theory of Planned Behavior. The findings provide essential insights into internet banking usage behavior, which is relevant to bank managers and industry regulators.

**Keywords** attitude, security, service quality, subjective norm,

internet banking, Nigeria

JEL Classification G21, O33

### INTRODUCTION

The banking sector offers internet banking to provide customers with convenient, low-cost and quick access to banking. Despite these benefits and the various services that customers can use internet banking for, the adoption and usage have been relatively low (Gholami et al., 2010; Izogo et al., 2012; Amin, 2016). Some authors (Ali Saleh & Khalil, 2013; Tarhini et al., 2015) have noted that some of the customers who have registered for internet banking do not use the service optimally. The influence of behavioral characteristics such as customer attitude, subjective norm and perceived behavioral control on internet banking has been investigated extensively. However, the focus of the studies has been on adoption and behavioral intention (Gholami et al., 2010; Nasri, 2011; Yaghoubi & Bahmani, 2011; Al-Smadi, 2012; Ali Saleh & Khalil, 2013; Chang et al., 2020). There has not been enough research on the impact of behavioral characteristics on usage.

Furthermore, bank customers' experiences with internet banking may impact their future behavior. According to Sakhaei et al. (2014, p. 33), "the growth of internet banking is dependent on several factors, including internet access, new online banking features, growth



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of household internet usage and dependable services to the customers for which they may be relatively satisfied than the manual system of banking." This means that the perceived service quality of internet

banking may influence its usage. As noted by Amin (2016) and Chang et al. (2020), customers' usage of internet banking is still below the predicted level, and poor service quality is one of the issues that has been raised. In the view of Nguyen and Nguyen (2017, p. 1903), "Internet banking is not widely used because users are afraid of the risks of online transactions." As a result, there is no clear picture of the factors influencing internet banking usage.

## 1. LITERATURE REVIEW, CONCEPTUAL MODEL AND HYPOTHESES

The use of technology to deliver services to customers has come to stay in the banking industry (Akinyele & Olorunleke, 2010; Teka, 2020). Internet banking is one of the leading technologies that enable bank customers to perform transactions on their accounts via a bank website rather than visiting the bank in person (Ramavhona & Mokwena, 2016). Banks spend a lot to maintain the service, but its use, especially in Nigeria, has not been encouraging. Despite the fact that several theories have been proposed to describe individual usage of information technology, the Theory of Planned Behavior was selected as the guiding theory for this study. The theory proposed by Ajzen (1991) incorporated the concept of perceived behavioral control to the Theory of Reasoned Action. Ajzen and Fishbein (2004, p. 432) emphasized that "the value of the three variables in predicting intention or behavior could alter due to differences in behavior and demographic groupings." As such, all three antecedents may play a role in the prediction depending on the situation. The theory addressed the Theory of Reasoned Action's shortcomings in handling behavior where the person has only partial volitional control. That is, if the person can choose whether or not to engage in the behavior. Thus, it refers to one's assessment of the ability to perform a specified course of action in a given situation. To some extent, the resources and opportunities accessible to a person impact the possibility of behavioral performance (Ajzen, 2020). In comparison to the Theory of Reasoned Action, it has a higher diagnostic value and a better explanation of behavior for technology (Zhang, 2018). However, there is a need to include users' experience as determinants of usage behavior for

internet banking. As depicted in Figure 1, in addition to the three predictors of attitude, subjective norm and perceived behavioral control, the study investigated the influence of security risk and perceived service quality as a mediator.

Figure 1 indicates the link between the concepts in the study. The dependent variable is internet banking usage. As noted by Dillon and Morris (1996, p. 6), "usage is the demonstrable willingness within a user group to continuously employ information technology for the tasks it is designed to support." The concept, according to Dillon and Morris (1996); DeLone and McLean (2003), is distinct from intention to use. It does not apply to cases where users promise they will use it without evidence of use or when users utilize the technology for reasons the designers or providers did not expect. This study anticipates that attitude, subjective norm, perceived behavioral control, security risk and perceived service quality will influence internet banking usage behavior.

The classification of customers into segments based on their attitude, understanding, use or response to a product is known as behavioral characteristic (Odugbesan, 2000). Attitude, subjective norm and perceived behavioral control are among the behavioral factors examined in this study as independent factors. When executing a given behavior, the favorable or negative feelings are referred to as attitude (Fishbein & Ajzen, 1975; Ali Saleh & Khalil, 2013; Zhang, 2018). According to Chang et al. (2020), customers' attitudes are based on one's beliefs about the behavior. The term attitude is used in this study to describe bank customers' feelings towards using internet banking for their financial transactions. Individuals will have a favorable attitude towards a particular behavior if they believe it will result in positive outcomes (Teka, 2020). Customers are more inclined to use

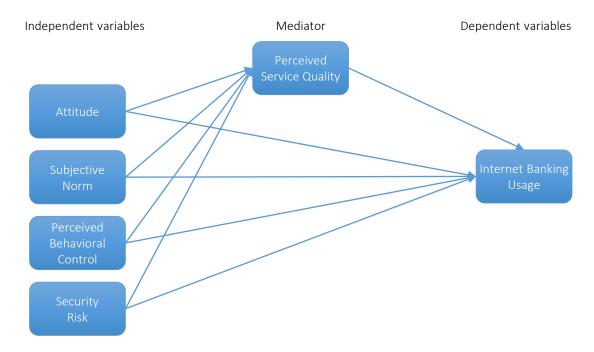


Figure 1. Conceptual model of the determinants of Internet Banking Usage

internet banking if they have a favorable attitude towards it. It has been found that customers' attitudes have a strong favorable impact on their willingness to use technology (Al-Majali & Mat, 2010; Musiime & Ramadhan, 2011; Ali Saleh & Khalil, 2013; Teka, 2020; Chang et al., 2020).

Choi and Park (2020:5) defined subjective norm as "the perceived pressure of an individual with the idea that most people should or should not carry out a particular act." As noted by Alhassany and Faisal (2018), other people's opinions and thoughts about a service might impact users' perspectives on how valuable the service will be if they utilize it. The difference in attitude's ability to anticipate usage compared to subjective norm is context-dependent. For example, when self-influence is greater than subjective norm, attitude will be the most important predictor of actual usage, while subjective norm would be the most significant predictor of actual usage for behavior with strong normative implications. Customers' decisions to use internet banking may be impacted by the opinions and ideas of others, such as bank staff, peers, friends and family members. The impact of subjective norm on behavior has yielded conflicting results. Zhang (2018) found that subjective norm has less impact on intention. In the study by Chang et al. (2020), subjective norm was not substantial. However, in some studies (Al-Majali & Mat, 2010; Maditinos

et al., 2011; Ali Saleh & Khalil, 2013; Alhassany & Faisal, 2018; Teka, 2020), subjective norm significantly influenced adoption and usage.

Ajzen (2020, p. 316) defined perceived behavioral control as "the perception of how easy or difficult it is to perform a particular behavior." Self-efficacy and facilitative situations are used to describe perceived behavioral control. Self-efficacy is linked to one's perception of abilities. It is the ability to solve problems without much challenge in an unforeseen scenario (Choi & Park, 2020). Individuals who are confident in their skills and have the necessary resources are more likely to accept new technologies. Although some bank customers have a positive attitude towards technology, they may not consider themselves technologically savvy. On the other hand, facilitative conditions refer to elements that influence an individual's willingness to complete a task, such as access to software and hardware and the time and money required to use the technology (Venkatesh et al., 2003). Several scholars have revealed that perceived behavioral control satisfactorily explains behavior (Maditinos et al., 2011; Ali Saleh & Khalil, 2013; Zhang, 2018; Teka, 2020; Chang et al., 2020).

Security risk is the likelihood of economic loss from online banking (T. Nguyen & C. Nguyen, 2017). Most bank customers think that their on-

line data may be visible, stored or used by non-authorized users. Hence, security has been listed as one of the elements that influence the acceptance and use of internet banking (Raza & Hanif, 2013; Ramavhona & Mokwena, 2016). Customers perceive considerable dangers online because of the prevalence of internet fraud. Some studies (Ofuonyebuzor et al., 2016) indicated that perceived risk has a considerable positive impact on technology adoption, while others (Quan & Nam, 2017; Teka, 2020) found that perceived risk has a negative influence on e-banking acceptability.

Zeithaml et al. (2000, p. 5) described service quality as "a comparison of what customers feel a company should offer with the company's actual service performance". Therefore, bank customers' experiences with internet banking may influence their willingness to utilize it in the future (Tarhini et al., 2015; Alhassany & Faisal, 2018; Namahoot & Laohavichien, 2018; Chang et al., 2020). Some of the difficulties of online banking customers have been attributed to reliability and the failure to complete internet banking transactions. Ayo et al. (2016) found that perceived service quality significantly impacts internet banking usage.

The aim of the study is to integrate security risk and perceived service quality with behavioral characteristics as factors influencing internet banking usage. Adding these variables to the conceptual model is essential because it contributes to existing knowledge in internet banking and the theory of Planned Behavior. Moreover, security risk and perceived service quality are critical in building customer trust and achieving a competitive advantage. The addition of a mediator (perceived service quality) in the conceptual model is important because it helps understand the effects of underlying constructs on internet banking usage. Consequently, the following hypotheses were formulated:

- H1: Attitude has a significant positive impact on internet banking usage.
- H2: Attitude has a significant positive impact on perceived service quality.
- H3: Subjective norm has a significant positive influence on internet banking usage.

- H4: Subjective norm has a significant positive influence on perceived service quality.
- H5: Perceived behavioral control has a significant positive effect on internet banking usage.
- H6: Perceived behavioral control has a significant positive effect on perceived service quality.
- H7: Security risk has a significant negative impact on internet banking usage.
- H8: Security risk has a significant negative impact on perceived service quality.
- H9: Perceived service quality has a significant positive influence on internet banking usage.
- H10: Perceived service quality mediates between attitude and internet banking usage.
- H11: Perceived service quality mediates between subjective norm and internet banking usage.
- H12: Perceived service quality mediates between perceived behavioral control and internet banking usage.
- H13: Perceived service quality mediates between security risk and internet banking usage.

### 2. METHODS

The study population comprises individual bank customers who have registered for internet banking in commercial banks operating in Lagos State, Nigeria. A purposive sampling technique was used to select the respondents for the study. Only bank customers who have signed up for internet banking were selected. Due to the banks' unwillingness to provide a list of customers who have signed up for internet banking, the sample size was estimated using Krejcie and Morgan's (1970) guideline that a sample of 384 is suitable for a target population which exceeds 1,000,000. The sample size was set at 400 due to the possibility of non-response. Four trained research assistants collected the data for the study.

362 copies of the questionnaire were returned out of the 400 administered. However, 333 questionnaires representing a response rate of 83.2 percent were valid.

The study's main constructs were rated from Strongly Agree to Strongly Disagree. Gender, age, level of education, marital status, monthly income and nature of employment are among the demographic characteristics. The respondents were also questioned how long they used internet banking and how frequently they used it. Section B focused on the respondents' behavioral characteristics conceptualized in terms of attitude, subjective norm and perceived behavioral control. Sections C, D and E comprise items on security risk, perceived service quality and internet banking usage respectively.

### 2.1. Customer attitude scale

This scale has a total of five items adapted from Venkatesh et al. (2003). The items include: "I feel using internet banking is a wise idea, I feel using internet banking is a good thing to do, internet banking is beneficial to me, internet banking saves time and internet banking is convenient." The authors reported a KMO value of 0.811, a principal component eigenvalue of 3.981 and a variance of 90.25%.

## 2.2. Customer subjective norm scale

This scale was derived from Maditinos et al. (2011) and has five items. The items include: "My family thinks I should use internet banking, my friends think I should use internet banking, my reference group motivates me to use internet banking, my bank branch/staff encourages me to use internet banking and people that are important to me agree that I should use internet banking." The authors reported a KMO value of 0.809, a principal component eigenvalue of 2.989 and a variance of 87.72%.

## 2.3. Customer perceived behavioral control

This scale was adapted from Choi and Park (2020) and has five items. The items are: "I am confident using internet banking, I can use internet banking with a computer or smartphone, I have the information I need to use internet banking, I have the re-

sources to use internet banking and I can complete any internet banking transaction." The authors reported a KMO value of 0.755, a principal component eigenvalue of 2.555 and a variance of 85.17%.

### 2.4. Security risk scale

This scale was developed and validated by Nguyen and Nguyen (2017) and has five items. The items include: "The internet is not safe for financial transactions, Hackers can easily overtake bank systems, financial and user information are not secure, I can lose money due to internet banking and the internet banking website can share my personal information with other websites." The authors reported a KMO value of 0.808, a principal component eigenvalue of 3.105 and a variance of 79.87%.

### 2.5. Perceived service quality scale

This scale was adapted from the work of Narteh (2013) and has a total of five items and the items include: "Using internet banking is usually a pleasant experience, I am happy with the performance of internet banking, internet banking meets my expectations, internet banking satisfies most of my banking needs and overall, I am pleased with internet banking services." The author reported a KMO value of 0.798, a principal component eigenvalue of 2.981 and a variance of 69.97%.

## 2.6. Internet banking usage scale

This scale was adapted from the study of Talukder et al. (2014) and has five items. The items include: "I like to use internet banking, I use internet banking when banks are not opened, I will always use internet banking services, I cannot do without internet banking and I expect my use of internet banking to continue in the future." The authors reported a KMO value of 0.782, a principal component eigenvalue of 2.994 and a variance of 81.15%.

## 3. RESULTS

As depicted in Table 1, the respondents' demographic profile indicates that over half of the respondents were males (217, 65.2%). For age, the bulk of the responses are between 25 and 35 years old (172, 51.7%). A higher percentage of the re-

spondents (129, 38.7%) had BSc/HND and were mainly single (145, 43.5%). The majority (130, 39.0%) earn less than N100,000 a month and work in the private sector (142, 42.6%). When asked how long they have been using internet banking, most responded 4 to 6 years (120, 36.0%). The majority of them use internet banking sometimes (165, 49.5%). Only 31.8% (106) of the respondents use internet banking regularly.

**Table 1.** Demographics of the respondents

Characteristics	Dimension	Frequency	Percent
Gender	Male	217	65.2
Gender	Female	116	34.8
	Below 25 years	96	28.8
	25-35 years	172	51.7
Age (in years)	36-45 years	36	10.8
	46-55 years	18	5.4
	56 years and above	11	3.3
	SSCE	89	26.7
	NCE/ND	78	23.4
Level of Education	BSc/HND	129	38.7
	Masters	21	6.3
	Ph.D.	16	4.8
	Single	145	43.5
Marital Status	Married	121	36.3
	Others	67	20.1
	Less than N100,000	130	39.0
Monthly Income/ Allowance	N100,000 - N300,000	111	33.3
	N300,001 - N500,001	77	23.1
	N500,001 and above	15	4.5
•	Employee in Public Sector	103	30.9
Nature of Employment	Employee in Private Sector	142	42.6
	Self-Employed	52	15.6
	Others	36	10.8
	Less than 1 year	53	15.9
Number of Years of using Internet	1-3 years	119	35.7
Banking	4-6 years	120	36.0
	7 years and above	41	12.3
	Always	106	31.8
Regularity of internet banking	Sometimes	165	49.5
usage	Seldom	53	15.9
	Never	9	2.7

The data's dependability is depicted in Table 2. Cronbach's Alpha was used to determine the reliability of the instrument. The findings varied from 0.736 to 0.840, much over the permissible minimum of 0.7. This indicates that the responses to the questionnaire were reliable.

**Table 2.** Cronbach's Alpha coefficient

Constructs	Number of items	Mean	Standard deviation	Cronbach's Alpha coefficient
Attitude	5	3.721	0.683	0.737
Subjective Norm	5	4.088	0.577	0.822
Perceived Behavioral Control	5	3.988	0.674	0.814
Security Risk	5	3.917	0.620	0.840
Perceived Service Quality	5	3.722	0.599	0.743
Internet Banking Usage	5	3.854	0.573	0.736

Table 2 also depicts the descriptive statistics for the construct variables. The mean values for attitude, subjective norm, perceived behavioral control and perceived service quality were above 3 point indicating respondents' positive response. On the other hand, the mean which is above 3 point for security risk means that the respondents have a high-risk perception of internet banking. Internet banking usage is also above 3 point but less than 4 point. This means that the respondents are not adequately utilizing the service.

Multicollinearity among independent variables was examined using three criteria, as shown in Table 3. The first step was to use correlation to determine the degree and type of the link between the variables. Tolerance was also used to see how one independent variable influenced the other independent variables. Finally, the Variance Inflation Factor (VIF) was utilized to determine how much each coefficient's variance rises when compared to that of uncorrelated independent variables. The findings show that the independent variables have correlations of less than 0.7, meaning that there is no strong relationship between them. When a construct has a strong linear relationship with other constructs, the associated Variance Inflation Factor (VIF) is high and is evidence of multicollinearity. The rule of thumb for a large VIF value is ten (O'brien, 2007). With VIF higher than 10, there is an indication of multicollinearity. Therefore, low values for Tolerance (0.1 and below) and large VIF values (above 10) show the presence of multicollinearity. The results in Table 3 show that the tolerance values are greater than 0.1 and VIF values are fewer than 10. Thus, there is no multicollinearity.

Constructs	Attitude	Subjective Norm	Perceived Behavioral Control	Security Risk	Perceived Service Quality	Collinearity Statistics	
Attitude	1	-	-	-	-	Tolerance	VIF
Subjective Norm	0.052	1	-	-	-	0.660	1.516
Perceived Behavioral Control	0.369	0.069	1	-	-	0.988	1.012
Security Risk	0.583	0.094	0.601	1	-	0.513	1.950
Perceived Service Quality	0.337	0.097	0.677	0.539	1	0.463	2.160

Figure 2 shows the structural equation model of the links and relationship among the variables in the study.

**Table 4.** Structural equation model without mediation

Path	Coefficient	Std. Err.	Z	P-value
$AT \rightarrow PSQ$	.0173938	.0423548	0.41	0.681
AT→IBU	.0586466	.0325946	1.80	0.072
SN→PSQ	.0412883	.0409083	1.01	0.313
SN→IBU	.2431747	.0315216	7.71	0.000
PBC→PSQ	.489623	.0436891	11.21	0.000
PBC→IBU	.27704	.0394457	7.71	0.000
SR→PSQ	.1863275	.0544031	3.42	0.001
SR→IBU	114780	.0425868	-2.70	0.007
PSQ→IBU	.5220136	.0421611	12.38	0.000

A structural equation model was adopted to investigate the direct influence of the independent factors on the dependent variables using STATA software version 15. The results in Table 4 show that customer attitude positively correlates with perceived service quality ( $\beta = 0.017$ ; z = 0.41). A

p-value of 0.681 shows that customer attitude has no significant influence on perceived service quality. Customer attitude also has a positive but insignificant effect on the use of internet banking ( $\beta$  = 0.058; z = 1.80; p > 0.05). This study is inconsistent with previous studies that attitudes positively and significantly impact intention to use internet banking (Al-Majali & Mat, 2010; Musiime & Ramadhan, 2011; Ali Saleh & Khalil, 2013; Teka, 2020; Chang et al., 2020). This finding could be due to the unwavering fraud in the banking industry. This scenario has resulted in negative customer attitudes towards using internet banking in Nigeria. Thus, H1 and H2 are not confirmed.

Evidence also shows that a customer's subjective norm has a positive but insignificant impact on perceived service quality ( $\beta=0.041;\ z=1.01;\ p>0.05$ ), but has a positive and significant impact on internet banking usage ( $\beta=0.243;\ z=7.71;\ p<0.05$ ). This means that the subjective norm of bank customers influences their internet banking

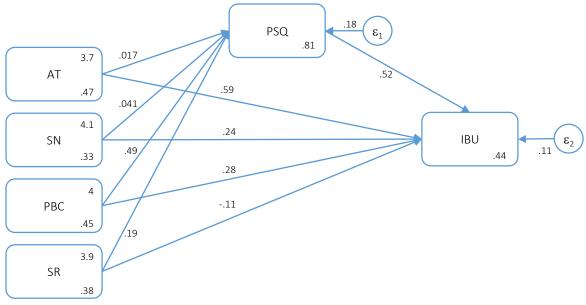


Figure 2. Structural equation model

usage behavior. This study agrees with previous studies that subjective norm significantly influences the adoption and usage of internet banking (Al-Majali & Mat, 2010; Maditinos et al., 2011; Ali Saleh & Khalil, 2013; Alhassany & Faisal, 2018; Teka, 2020). However, the finding contradicts the conclusion of Zhang (2018) that subjective norm has less significant influence. The finding did not also support the study by Chang et al. (2020) in which subjective norm was not significant. Hence, H3 is confirmed but H4 is not supported. The findings also indicate that perceived behavioral control has a cogent influence on perceived service quality ( $\beta = 0.489$ ; z = 11.21; p < 0.05) and internet banking usage ( $\beta = 0.277$ ; z = 7.71; p < 0.05). This study is consistent with Ajzen's (2020) assertion that the degree of customer control over the use of a technology determines the amount of use. Some researchers have also found that perceived behavioral control satisfactorily explains internet banking behavior (Maditinos et al., 2011; Ali Saleh & Khalil, 2013; Teka, 2020; Chang et al., 2020). Therefore, *H5* and *H6* are supported.

In this study, security risk was positively and significantly associated with perceived quality of service ( $\beta = 0.186$ ; z = 3.42; p < 0.05), but there was a significant adverse impact on internet banking usage ( $\beta = -0.114$ , z = -2.70, p < 0.05). The results support that of Quan and Nam (2017) and Teka (2020). However, this current study contradicts the findings of Ofuonyebuzor et al. (2016) that risk perception has a substantial positive impact on technology adoption. Therefore, H7 is supported, while H8 is partially confirmed. The study revealed that the perceived quality of a service predicts the

use of internet banking ( $\beta$  = 0.522; z = 12.38; p < 0.05). The study aligns with the findings of Tarhini et al. (2015), Ayo et al. (2016) and Alhassany and Faisal (2018) that perceived service quality has a cogent influence on e-banking usage. This implies that better service quality can enhance internet banking utilization. Hence, H9 is confirmed. The mediation effect of perceived service quality was tested according to the rules proposed by Baron and Kenny (1986).

Using perceived service quality to mediate the relationship between customer attitude and internet banking usage, the indirect effect is 0.681 and the 95% confidence interval is -0.034278 to 0.05243. This connotes that the mediating effect is not statistically significant. Thus, perceived service quality does not mediate between customer attitude and internet banking usage effectively. Although perceived service quality influences internet banking usage, it is not a mediator between customer attitude and internet banking usage. Thus, *H10* is not supported.

The evidence in Table 5 showcases that the indirect effect of 0.000 and the 95% confidence interval of –.020444 to 0.063546 indicates that perceived service quality partially mediates between subjective norm and internet banking usage. Hence, *H11* is partially confirmed. The finding evidence that perceived service quality partially mediates between perceived behavioral control and internet banking usage with the p-value of 0.000 and the 95% confidence interval of 0.195298 to 0.315881. Therefore, *H12* is partially supported. Also, the p-value of 0.001 and the 95% confidence interval

**Table 5.** Structural equation model with mediation

Pathways	Coefficient	T-value	P-value	95% Conf. Interval	
AT→PSQ→IBU	.009079	0.41	0.681	034278	.05243
SN →PSQ→IBU	.021553	1.01	0.000	020444	.063546
PBC→PSQ→IBU	.255589	8.31	0.000	.195298	.315881
SR →PSQ→IBU	.0972655	3.30	0.001	.03951	.155017

Table 6. Equation-level goodness of fit

Dependent variables	Variance		Docidual	D			
variables	fitted	predicted	Residual	R-squared	Mc	mc2	
Observed							
PSQ	.3583216	.1745888	.1837328	.4872405	.6980261	.4872405	
IBU	.3279438	.2191876	.1087561	.6683696	.8175387	.6683696	
Overall	.6159628						

of 0.03951 to 0.155017 indicate that perceived service quality partially mediates between security risk and internet banking usage. Thus, *H13* is partially accepted.

Table 6 depicts the equation-level goodness-of-fit test, and the test shows that the fitted and predicted variance in perceived service quality is 0. 3583 and 0. 1745, resulting in a computed R-square value of 0.4872. This reveals that 48.72% of the variation in the dependent variable in this particular

model (perceived service quality) is accounted for by variations in the explanatory variables (customer attitude, customer subjective norm, and perceived behavioral control). Furthermore, the fitted predicted variance in internet banking usage is 0. 3279 and 0. 2191. The R-square value of 0.6683 indicates that 66.83% of the variation in internet banking usage is described by customer attitude, customer subjective norm, and perceived behavioral control with perceived service quality as a mediator.

### CONCLUSION

As technology has redefined how customers interact with banks, a need arises to provide a profound understanding of the determinants of internet banking usage. Hence, the study was conducted to identify the factors influencing internet banking usage by applying the Theory of Planned Behavior. Based on the findings, the study concludes that subjective norm, perceived behavioral control, security risk and perceived service quality significantly influence internet banking usage in Lagos State, Nigeria. The study provides empirical evidence on the factors influencing internet banking usage behavior. The study has practical implications for bank executives to help boost internet banking usage. Based on the findings, the decision to use internet banking is determined by the opinions and suggestions of other people such as bank staff, peers, friends and family members who are vital to them. Therefore, if banks can persuade their customers to use internet banking, it will assist in alleviating the current long queues found in almost all the banks in Nigeria. The findings also imply that bank customers' belief of their abilities to carry out actions needed to perform internet banking, the level of security risk and service quality are important. Moreover, banks should use various influencers to increase customers' knowledge of the benefits of internet banking. In addition, banks should put in place communication platforms involving physical and online systems on the use of internet banking. Finally, banks should consistently improve the service quality and security architecture to reduce customers' frustration concerning internet banking.

### **AUTHOR CONTRIBUTIONS**

Conceptualization: Salome O. Ighomereho. Data curation: Ademola S. Sajuyigbe. Formal analysis: Ademola S. Sajuyigbe. Investigation: Salome O. Ighomereho. Methodology: Salome O. Ighomereho.

Project administration: Salome O. Ighomereho.

Resources: Salome O. Ighomereho, Ademola S. Sajuyigbe.

Software: Ademola S. Sajuyigbe. Validation: Ademola S. Sajuyigbe. Visualization: Salome O. Ighomereho.

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