

Post COVID-19 and Naira Redesign in Nigeria: Implications for E-banking Service Quality Attributes and Outcomes

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Abstract: *The COVID-19 pandemic of 2020 and the recent naira redesign policy in Nigeria have brought about several challenges to banks. One of the challenges is the quality of e-banking services, which has been critical for bank customers. The purpose of the study is to ascertain the e-service quality attributes that affect perceived e-banking quality and examine the relationships between e-banking perceived quality, perceived e-value, e-satisfaction and e-loyalty from e-banking users perspectives. The study adopted a cross-sectional research design and a quantitative approach. The researchers collected the data using a standardized questionnaire. A total of 384 questionnaires were administered via Google Form to e-banking users in Osun State, Nigeria, however, 171 responded to the survey. The data were analyzed using Structural Equation Modeling. The findings revealed that convenience, security, personalization and responsiveness best explain perceived e-banking quality. The results further indicated that the outcome categories (perceived e-value, e-satisfaction and e-loyalty) have strong associations with perceived e-banking quality. The route coefficient between perceived e-value and e-satisfaction, as well as e-satisfaction and e-loyalty, were significant. The study's findings will provide a framework for bank executives to evaluate their e-banking performance and identify areas of e-service delivery that they need to work on to improve customer perceptions of e-banking quality, e-value, e-satisfaction, and e-loyalty.*

Keywords: E-banking quality; post COVID-19; naira redesign; e-satisfaction; Nigeria

Introduction

The COVID-19 pandemic of 2020 led to alterations in the operations of banks and the way banks render services to their customers across the world (Naveon & Anders, 2020; KPMG, 2020). During the lockdown period to combat the spread of the Corona Virus, banks moved their services from the bank's four walls to online platforms. With restrictions on the movement of people, there was a disruption in normal operating conditions. Bank employees worked from home, and customers received services online to reduce physical contact in the delivery of services. Similarly, the 2022 naira redesign policy of the Central Bank of Nigeria (CBN) which resulted in the scarcity of cash moved most transactions online. As noted by Emefiele (2022) the naira redesign policy will help deepen the drive to entrench a cashless economy. These experiences confirm the assertion of Yousif (2015) that all businesses compete in two worlds, the physical or tangible world and the electronic world. Banks have been operating in these two environments, but with the emergence of COVID-19, there was more emphasis on the use of e-channels (Vatolkina, Gorbashko, Kamylnina & Fedotkina, 2020). To further emphasize the usage of e-banking, in October 2021, the Nigerian government launched the eNaira. These fundamental changes raised several e-service quality issues, which if resolved would have ameliorated the recent challenges with the naira redesign policy of 2022. Aaker (2011) asserts that higher levels of service quality have an impact on the perception of a service's superiority over competing offerings. High-quality service from banks improves the effectiveness and efficiency of service delivery, which boosts performance (Iham, Ahmad, Low & Hamid, 2013). According to Poon and Lee (2012), the convenience of receiving the service at one's comfort and having access to it whenever one wants is the main driver for customers to choose e-service over traditional service.

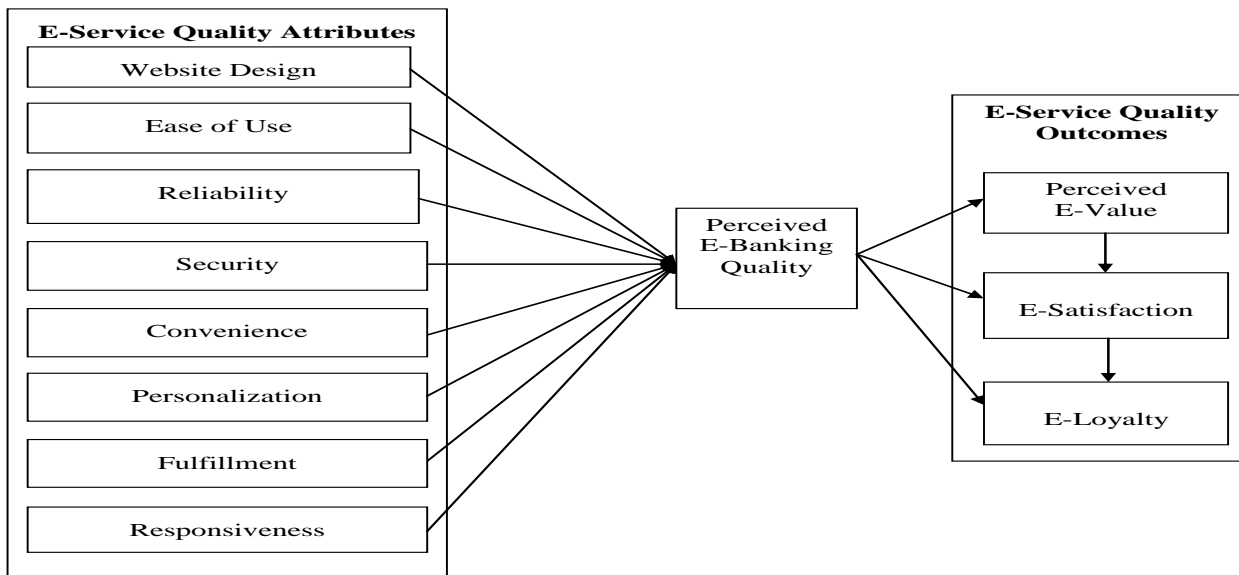
As noted by Mohammad, Rushami, Rabiul, and Abdullah (2013) managers must understand customers' opinions of service quality and how they measure them online to provide high-quality services. Mohammad, Mohsen, and Roza (2013) also mentioned that assessing the degree of service quality is vital to ensure good perceived service quality in electronic markets. Due to the cash scarcity associated with the naira redesign policy, more customers are opting for e-banking. If banks are aware of the quality attributes they can use to measure the quality of their e-banking service, it will be appropriate for them to implement the necessary measures to improve overall service delivery. Furthermore, it is critical to understand how this impacts on e-value perception, e-satisfaction, and e-loyalty. The relationships between the notions are made clearer by this investigation. Hence, the study aims to identify the essential e-service quality attributes that banks may concentrate on to enhance the perception of e-banking quality and to determine the correlation between perceived e-banking quality and perceived e-value, e-satisfaction, and e-loyalty.

Literature Review

The popularity of the internet and its usage in business gave rise to the concept of e-service. E-service practices have grown and e-service quality models have been developing since 2000. Several meanings have been provided by various authors. According to Zeithaml, Parasuraman, and Malhotra (2000) e-service quality is the extent to which a website facilitates efficient and effective shopping, buying, and delivery of services. In the view of Parasuraman, Zeithaml, and Malhotra (2005) e-service quality covers all phases of a customer's interactions with a website, including the extent to which a website facilitates efficient and effective shopping, purchase, and delivery. The definitions of "e-service quality" offered by Zeithaml et al. (2000, 2002) and Parasuraman et al. (2005) tend to limit "e-service quality" to web-based services; as a result, they might not be completely compatible with other "e-services" including ATMs, POS, and USSD. A widely defined automated service quality, according to Al-Hawari, Hartley, and Ward (2005), is the most appropriate. Some authors have attempted to define the notion by including all electronic channels. For instance, Santos (2003) defined e-service quality as the excellence of electronic service offers in the virtual marketplace. All electronic services fall under this description.

Zeithaml et al. (2000), Santos (2003), Parasuraman et al. (2005), Sadaf & Rahela (2019), and Shankar & Datta (2020) are a few research that have focused on conceptualizing and assessing e-service quality, and looking into its implications in the electronic market. It was discovered that customer views of service quality are influenced by pre-service expectations. The perceptions that a customer has about a service are utilized as standards for evaluating the quality of the provided services. Thus, customer feedback is one of the primary focus of perceived service quality. Using a set of dimensions or attributes is the conventional procedure for evaluating service quality. The characteristics of high-quality e-services have been defined in several academic studies. These characteristics describe the quality of an e-service using attributes linked to a particular service. According to Raman, Stephaus, Alam, and Kuppusamy (2008), further e-service quality dimensions will always be needed to fully represent the concept of e-service quality. As a result, the study suggested a conceptual model to accomplish its goals.

Figure 1: Conceptual Model of E-Service Quality Attributes and Outcomes



Source: Authors (2023)

The conceptual model in Figure 1 seeks to pinpoint the key e-service quality attributes that could affect how well customers perceive e-banking. It also highlights the connection between perceived e-banking quality, perceived e-value, perceived e-satisfaction, and perceived e-loyalty. The identified e-service quality attributes are anticipated to influence perceived e-banking quality, which in turn is anticipated to have an impact on the outcomes (perceived e-value, e-satisfaction and e-loyalty). Moreover, it is anticipated that perceived e-value will affect e-satisfaction, which will then affect e-loyalty.

Perceived E-banking Quality

Perceived e-banking quality is a bank client's total appraisal of e-banking based on their opinions of what they expected and received (Zeithaml et al., 2000). It occurs when customers compare their assessment of the service delivery process to the actual service

outcome. Service quality attributes are frequently used to determine perceived e-banking quality. However, as noted by Yang, Jun and Peterson (2004) not all quality features may affect perceived e-service quality since some attributes may not boost e-service quality in specific contexts. Despite this observation, the identified e-service quality attributes (website design, ease of use, reliability, security, convenience, personalization, fulfilment and responsiveness) are expected to influence perceived e-banking quality.

Website Design

Website design is the organization of a website's material and aesthetic qualities. It refers to how visually beautiful and well-designed the website interface is (Swaid & Wigand, 2009). When a customer wants to use e-services, the initial point of contact is the website. The fact that e-services are offered via electronic channels presents some difficulties for the service provider. Customers of e-banking interact with the user interface because there is no physical interaction with service providers. According to previous research, the quality of an e-service depends significantly on the design of the website (Lee & Lin, 2005; Zhengwei & Jinkun, 2012; Askari, kazempoo & Milad lajevardi, 2016; Shankar & Datta, 2020). As a result, the following hypothesis was put forth:

H₁: Website design has a positive influence on perceived e-banking quality.

Ease of Use

Ease of use is how well an e-channel ensures that clients can do simple transactions. It relates to how easily and clearly the e-channel may be understood and used. Ease of use is a key feature during the acceptance of e-service and its use (Vatolkina et al., 2020). The instructions for various actions can be confusing for some e-banking users. Users' chance of using a technology increases their assessment of the quality of the service if they think it to be user-friendly. The development of user-friendly websites and screen displays that do not require a high level of ability on the part of customers is an important step in the service delivery process. Consumers should be able to use e-channels to complete all tasks without assistance. Ease of use has been recognized as a crucial component of excellent e-services (Shirshendu & Sanjit, 2011; Kumbhar, 2011; Narteh, 2013). Consequently, the following hypothesis was proposed:

H₂: Ease of use has a positive influence on perceived e-banking quality.

Reliability

Reliability means that the technology can deliver the promised service consistently and accurately (Askari *et al.*, 2016). It has to do with a service's accuracy, quickness, and availability. It is a measure of how well the e-channel follows through on its service claims. Reliability implies that the e-channel should be available at all times and deliver on its promises. It entails the site's technical functionality, such as ensuring that the information presented is accurate and the site is available and functional. For instance, one of the key functions of ATMs is to dispense cash, however, majority of ATMs appear to be empty, indicating that ATMs do not provide the alleged 24-hour service. It has been discovered that reliability is a crucial factor of the quality of an e-service (Khan, 2010; Narteh, 2013; Akinmayowa & Ogbeide, 2014; Askari et al., 2016; Al-Hawary & Al-Smeran, 2017). Thus, it is assumed that:

H₃: Reliability has a positive influence on perceived e-banking quality.

Security

Protection of consumer data, fraud avoidance, and money loss prevention are all aspects of security. It is a guarantee that transaction histories, credit card numbers, and account information will not be available to outside parties. Due to the rise in internet fraud, clients perceive considerable danger in the online world. Thus, this aspect is critical for e-services (Zhengwei & Jinkun, 2012). Customers may find security to be a desirable characteristic that makes them prefer online transactions. Security has been found to be a significant factor of e-service quality in certain studies (Khan, 2010; Kumbhar, 2011; Akinmayowa & Ogbeide, 2014; Askari et al., 2016), however, it was not pertinent in some other studies (Narteh, 2013). Hence, the following hypothesis was put forth:

H₄: Security has a positive influence on perceived e-banking quality.

Convenience

Convenience is how users perceive the amount of time it takes and the efforts required in using a service (Jiang, Yang & Jun, 2013). It is the ability to use the electronic channel whenever, wherever, and without encountering any delays. It is the ability to guarantee that the service facility's location or the hours of operation for e-banking are convenient. Customers will save time and effort by always having access to the e-channel. Convenience has been noted by certain authors (Khan, 2010; Kumbhar, 2011; Poon & Lee, 2012; Narteh, 2013; Akinmayowa and Ogbeide, 2014) as an important factor influencing the assessment of e-service quality. Thus, it is assumed that:

H₅: Convenience has a positive influence on perceived e-banking quality.

Personalization

Individualized care and distinctive services tailored to each customer's needs and preferences are known as personalization (Swaid & Wigand, 2009). Through e-banking, a bank may identify each customer and collect and store personal information about them. If the client database and the e-channel are connected, the bank can welcome customers with customized offers whenever they access the e-channel. The bank can improve its profile as more clients use online banking. Personalization impresses clients, according to Kabadayi and Gupta (2011), which encourages them to use the site continuously. It has been identified as a crucial component of the quality of e-services (Lee & Lin, 2005; Ojasalo, 2010; Askari et al., 2016). As a result, the following assertion was made:

H₆: Personalization has a positive influence on perceived e-banking quality.

Fulfillment

Fulfillment refers to how well an e-channel meets a customer's expectations in terms of results (Narteh, 2013). It describes the effectiveness of service delivery while emphasizing what customers need and want. In the case of utilizing USSD to pay, the transaction is presumed to be successful; however, if the customer's account is debited and the transaction failed, there is no fulfillment. One crucial component of excellent customer service has been recognized as fulfillment (Parasuraman et al., 2005; Farnaz, Mohd, Ahmad, Norhayati, Ahamad & Mohsen, 2012). It is anticipated that fulfillment will have an impact on how well people perceive e-banking. Hence, it is assumed that:

H₇: Fulfillment has a positive influence on perceived e-banking quality.

Responsiveness

Being responsive means that the service provider responds quickly to help clients who are having issues with the technology. Additionally, it requires paying close attention to consumer requests, inquiries, and complaints regarding the e-channel and responding promptly to them, as well as compensating clients who incur losses. According to some research, responsiveness is one of the predictors of e-services quality (Khan, 2010; Kumbhar, 2011; Madu & Madu, 2002; Lee & Lin, 2005; Akinmayowa & Ogebeide, 2014; Shankar & Datta, 2020). As a result, the following hypothesis was formulated:

H₈: Responsiveness has a positive influence on perceived e-banking quality.

Perceived E-value

Perceived e-value is the evaluated value that a customer perceives to acquire by receiving a service online. It is the discrepancy between the actual benefits a customer thinks he got and the price (money, time, and effort) he had to pay for those benefits (Pushkar & Satish, 2019). According to Tran and Le (2020), a service's perceived quality impacts its value in large part. Hence, it is hypothesized that:

H₉: Perceived e-banking quality positively influences perceived e-value.

E-satisfaction

E-satisfaction is a client's happiness with their previous online experience with a certain e-channel (Sindhu, 2019). Several authors (Khan, 2010; Kumbhar, 2011; Akinmayowa & Ogebeide, 2014; Sundaram, Ramkumar & Shankar, 2017; Al-dweeri, et al., 2017) noted that the quality of digital services is becoming a measure of client happiness. Customer happiness is directly impacted by perceived e-value, according to Tran and Le (2020). Ryu, Lee, and Kim (2012) opined that consumer satisfaction is significantly influenced by perceived value. Consequently, the following hypotheses were developed:

H₁₀: Perceived e-banking quality positively influences e-satisfaction.

H₁₁: Perceived e-value positively influences e-satisfaction.

Customer E-loyalty

Customer e-loyalty refers to the attitude and behaviour of preferring e-channel service over direct service (Al-dweeri *et al.*, 2017). Behavioural loyalty is a consumer's behaviour in terms of repurchase because of a preference for a selected provider. In contrast, attitudinal loyalty refers to the customer's emotional and mental state as mediated in preference to repurchase and endorsement of the product to others (Amin, 2016). Su, Swanson, and Chen (2016); Al-dweeri *et al.* (2017) found an affiliation between perceived service quality and customer e-loyalty. Similarly, satisfaction has been described as a critical determinant of loyalty (Kassim & Abdullah, 2010; Ting, Ariff, Zakuan, Sulieman & Zameri, 2016; Sundaram *et al.*, 2017; Al-dweeri *et al.*, 2017). Hence, the following hypotheses were formulated:

H₁₂: Perceived e-banking quality positively influences e-loyalty.

H₁₃: E-satisfaction positively influences e-loyalty.

Based on the aforementioned, the study intends to identify the essential attributes of e-service quality that banks may concentrate on to enhance the service quality of e-banking and ascertain the connection between perceived e-banking quality and perceived e-value, e-satisfaction, and e-loyalty.

Methodology

The study employed a cross-sectional research design. E-banking users in Osun State, Nigeria, were the target population. The sample size was estimated using the table given by Krejcie and Morgan (1970). The authors advised that a sample size of 384 can be used for a population with more than 1,000,000 target groups. The data for the Pilot Study was collected using a standardized questionnaire with 70 items. The study variables were assessed using scales adapted from previous studies, including e-service quality attributes and perceived e-banking quality (Narteh, 2013; Mohammad *et al.* 2013); perceived e-value (Tran & Le, 2020); e-satisfaction and e-loyalty (Ong, Mohd, Norhayati, Zuraidah & Muhamad, 2016; Amin, 2016). There are six sections to the questionnaire. Section A measured respondents' demographic information. Section B measured the attributes of e-service quality; Section C measured perceived e-banking service quality. Sections D, E and F measured the outcomes of service quality; perceived e-value, e-satisfaction, and e-loyalty, respectively.

A pre-test of the instrument to ascertain the instrument's clarity and to test for reliability was undertaken before administering the final questionnaire. The researchers administered the instrument to 50 e-banking users. Cronbach's alpha was computed for each variable in the study to test the instrument's dependability. This test was undertaken to ensure that the items used to estimate the constructs were consistent. The study constructs had a Cronbach's Alpha coefficient of more than 0.7, with perceived e-value (0.878) having the most outstanding value and responsiveness having the lowest (0.737). This, according to Pallant (2010), indicates good internal consistency. As a result, the research instrument was considered sufficiently reliable. However, based on the respondents' feedback, the questionnaire was revised and reduced from 70 items to 60 items.

The final questionnaire was created in Google form and administered to 384 e-banking users in Osun State, Nigeria. An invitation soliciting participation in the study was sent to emails and WhatsApp of identified e-banking users. A filter question was put in place to ensure that only e-banking users participated in the survey. At the end of the survey, 171 responses were received. The study employed Structural Equation Modeling (SEM). Wong (2013) noted that a sample size between 100 and 300 is sufficient for path modeling. Thus, the response of 171, representing 44.5%, was considered sufficient for the analyses.

Results

The demography of the respondents in Table 1 implies that majority of the respondents (96) 56.1 per cent were males while (67) 39.2 per cent were below 25 years. For the respondents' level of education, majority (155) 90.6 per cent had tertiary education while (64) 37.4 per cent were students. With respect to monthly income/allowance, (101) 59.1 per cent earned less than N100,000. The analysis revealed that all the categories of respondents were captured except for level of education, where there was no response for primary education.

Table 1: Demographic Characteristics of the Respondents

	Variable	Frequency	Percent (%)
Gender	Male	96	56.1
	Female	75	43.9
Age	Below 25	67	39.2
	25-35	22	12.9
	36-45	35	20.5
	46-65	43	25.1
	65 and above	4	2.3
Level of Education	Primary	NIL	0.0
	Secondary	16	9.4
	Tertiary	155	90.6
Employment Status	Student	64	37.4
	Self-employed	35	20.5
	Public Employee	26	15.2
	Private Employee	35	20.5
	Others	11	6.4

Monthly Income/Allowance	Less than N100,000	101	59.1
	N100,000 to N300,000	51	29.8
	N300,001 to N500,000	15	8.8
	N500,001 and more	4	2.3

Source: Survey (2023)

Measurement and Structural Models

Both measurement and structural models were used to examine the data. According to Hair, Black, Babin, and Anderson (2010) a two-step method is more effective than a single-step approach. The study used Confirmatory Factor Analysis (CFA) to demonstrate the dimension model. In line with Hussain, Fangwei, Siddiqi, Ali, and Shabbir (2018), all elements in the measurement model should be reflective, and the least factor loading value should be 0.70. As demonstrated in Table 2, the constructions (i.e. factor loadings) have values more than 0.70. Composite Reliability, Cronbach's Alpha, and Average Variance Extracted (AVE) were employed to evaluate the construct validity and homogeneity of the items. Hair et al. (2010) noted that the threshold for all scales and measuring items should be dependable. As a result, the Composite Reliability has to be at least 0.80. When the Cronbach's Alpha is equal to or greater than 0.70, it is considered dependable. Finally, the AVE estimate (Average Variance Extracted estimate) must be greater than 0.50.

Table 2: Analysis of Measurement Model

Indicators	Factor Loading ≥0.7	Composite Reliability ≥0.8	Cronbach's Alpha ≥0.7	Average Variance Extracted (AVE) ≥0.5	No of Items
E-Service Quality Attributes		0.835	0.772	0.602	34
Website Design	0.802				
Ease of Use	0.908				
Reliability	0.776				
Security	0.895				
Convenience	0.867				
Personalization	0.814				
Fulfilment	0.893				
Responsiveness	0.725				
Perceived E-Banking Quality		0.811	0.753	0.635	5
Outcome of E-Service Quality		0.912	0.841	0.700	13
Perceived E-Value	0.918				
E-Satisfaction	0.921				
E-Loyalty	0.896				

Source: Survey (2023)

Table 2 demonstrates that the item factor loadings exceeded the minimal requirement of 0.70, as indicated by Hussain et al. (2018). The construct-specific measures' factor loadings ranged from 0.725 to 0.921. Also, according to Table 2, every construct has values greater than 0.80 and 0.70, respectively, guaranteeing composite internal consistency and Cronbach's Alpha reliability. Moreover, the Average Variance Extracted estimate (AVE) which ranged from 0.602 to 0.700 was above the 0.50 threshold. The device is therefore considered reliable.

The structural model which determined the route coefficients' important values in structural equation modelling was also assessed.

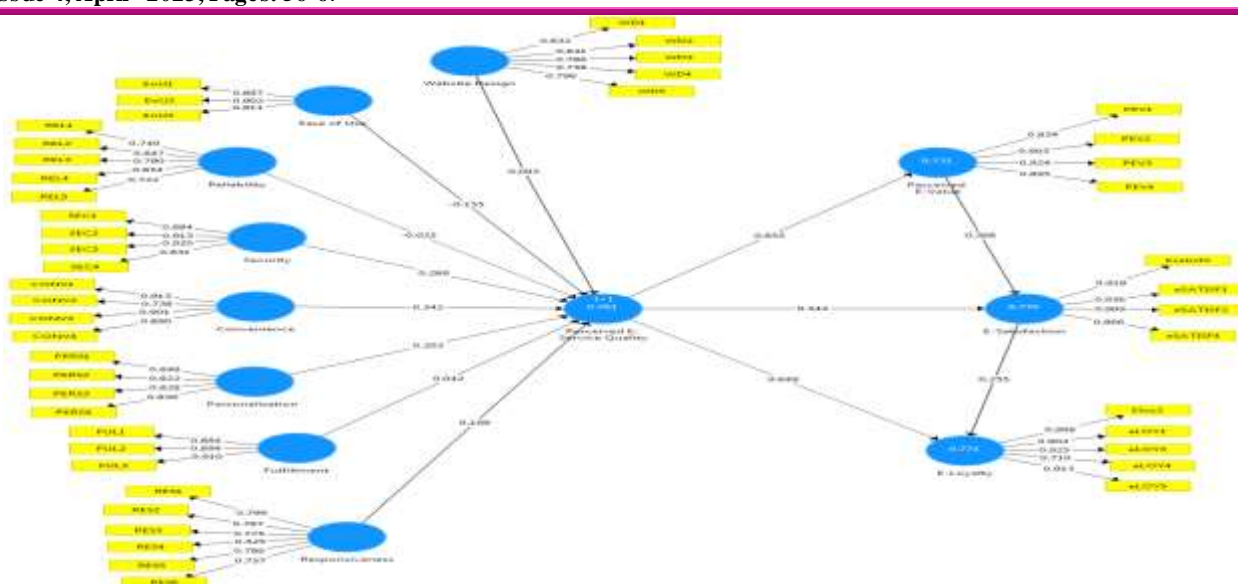


Figure 1: Outer Loading, Path Algorithm and R-Square

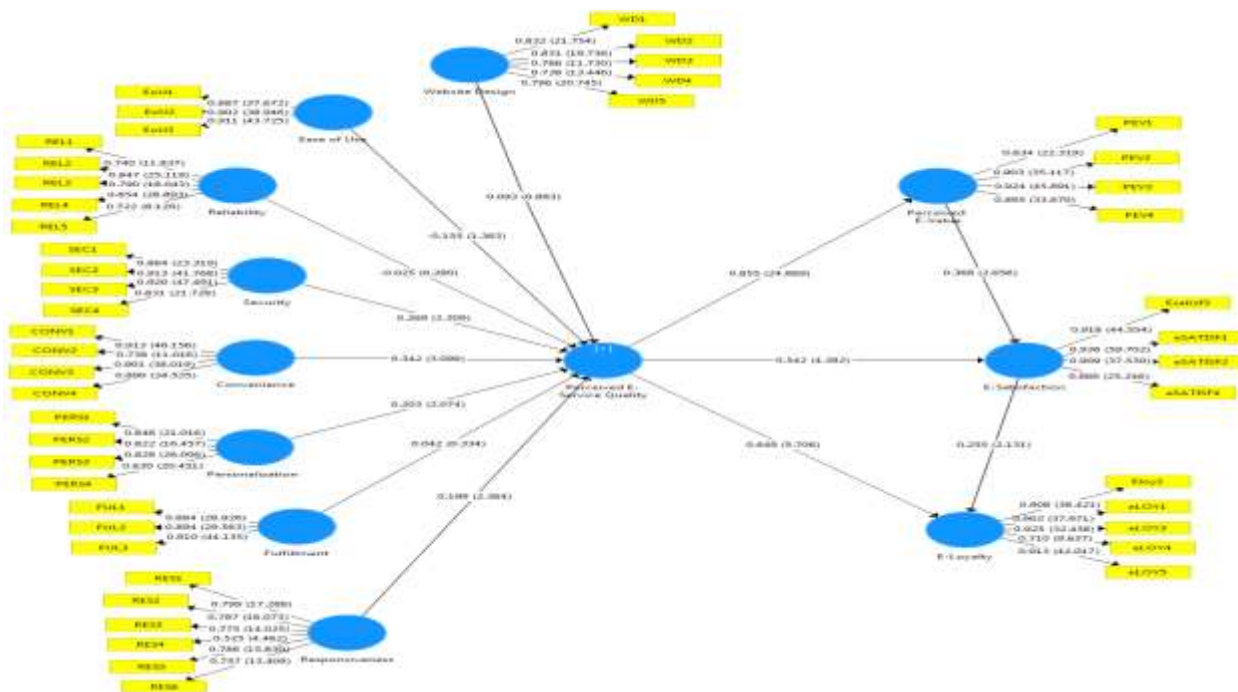


Figure 2: Path Coefficients and T-values

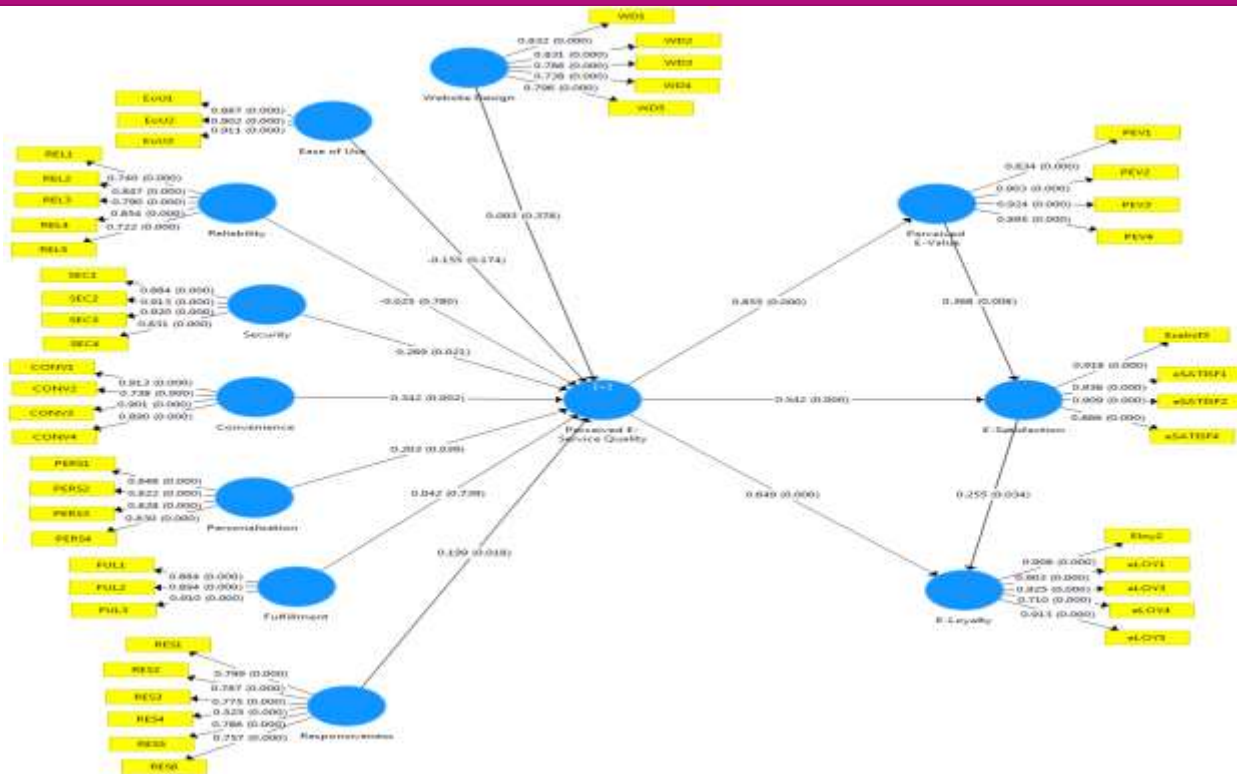


Figure 3: Path Coefficients and P-values

Table 3: Path Coefficients

	Path	Beta (β)	T	P	Decision
H ₁	Website design → e-banking perceived quality.	0.093	0.883	0.378	NS
H ₂	Ease of use → e-banking perceived quality.	-0.155	1.363	0.174	NS
H ₃	Reliability → e-banking perceived quality.	-0.025	0.280	0.780	NS
H ₄	Security → e-banking perceived quality.	0.269	2.309	0.021	Sig.
H ₅	Convenience → e-banking perceived quality	0.342	3.099	0.002	Sig.
H ₆	Personalisation → e-banking perceived quality	0.203	2.074	0.039	Sig.
H ₇	Fulfillment → e-banking perceived quality	0.042	0.334	0.739	NS
H ₈	Responsiveness → e-banking perceived quality	0.199	2.364	0.018	Sig.
H ₉	Perceived E-banking quality →perceived e-value.	0.855	24.869	0.000	Sig.
H ₁₀	Perceived E-banking quality →e-satisfaction.	0.542	4.382	0.000	Sig.
H ₁₁	Perceived E-banking quality →e-loyalty.	0.649	5.706	0.000	Sig.
H ₁₂	Perceived e-value →e-satisfaction.	0.368	2.656	0.008	Sig.
H ₁₃	E-satisfaction → e-loyalty.	0.255	2.131	0.034	Sig.
Independent Variables			Dependent Variables		R-Square (R²)
E-service quality attributes		➡	Perceived E-banking quality		0.761
Perceived E-banking quality		➡	Perceived e-value		0.731
Perceived E-banking quality and e-value		➡	e-satisfaction		0.770
Perceived E-banking quality and e-satisfaction		➡	e-loyalty		0.771

Note: NS = Not significant; S= Significant

Source: Survey (2023)

In PLS-SEM, bootstrapping is required to determine the significance level (Hair *et al.*, 2010; Hussain *et al.*, 2018). The coefficient

of determination, often known as the R Square (R^2), was employed to determine the study model power variance. According to Byrne (2010), R^2 value of 0.71 - 0.90 is seen as excellent; 0.51 – 0.70 is regarded as good; 0.31 – 0.50 is regarded as fair and 0.10 - 0.30 is seen as weak. Therefore, the path model for this study can be considered excellent.

The Partial Least Squares approach was used to evaluate the Path Coefficients. The value evaluated the significance of the hypotheses. The value increases with the size of the substantial impact on the endogenous latent component. The results of the Path Coefficients and T-values are displayed in Figure 2 and Table 3. The correlation between perceived e-banking quality and e-service quality results has P-values that are less than 0.05. The findings show that e-banking quality greatly affects the outcomes of e-service quality. Apart from website design, ease of use, reliability, and fulfillment, the results in Figure 3 and Table 3 show that the identified e-service quality criteria have a significant impact on perceived e-banking quality.

Table 3 further indicates that e-service quality attributes accounted for 76.1% of the variation in perceived e-banking quality while perceived e-banking quality effectively described 73.1% of perceived e-value. The perceived quality and value of e-banking also provided excellent explanations for 77% of the variances in e-satisfaction. Moreover, 77.1% of the changes in perceived e-loyalty were very well explained by perceived e-banking quality and e-satisfaction. Overall, it was proven that there is a relationship between the perceived quality of e-banking and the outcomes of e-service quality (i.e., perceived e-value, e-satisfaction, and e-loyalty). The findings suggest that e-service quality outcomes of e-banking are predicted by the perceived quality of e-banking. The outcomes showed the structural models' strong ability to predict and explain outcomes for perceived e-banking quality and e-service quality, as well as their ability to analyze paths.

Table 3 also shows the factors that positively affect the quality of e-banking services which include convenience ($\beta = .342, t = 3.099, p = .002 < 0.05$), security ($\beta = .269, t = 2.309, p = .021 < 0.05$), personalization ($\beta = .203, t = 2.074, p = .039 < 0.05$), and responsiveness ($\beta = .199, t = 2.364, p = .018 < 0.05$). Due to the findings, H4, H5, H6, and H8 had empirical support. The findings support Poon and Lee's (2012) claim that convenience is the main benefit of adopting e-banking. Following COVID-19, virtually every bank has seen long lines. There have been queues at the bank and crowds outside the gates of the banks as a result of the current naira redesign policy. Bank customers now spend several hours in the bank to receive service. So, most bank customers have resorted to e-banking for convenience. It implies that if the customers cannot use e-banking in their comfort anytime, anywhere, and at convenient locations, their perception of e-banking quality will be affected. The finding that security has a notable impact on perceived quality of e-banking are consistent with those of (Khan, 2010; Kumbhar, 2011; Akinmayowa & Ogbeide, 2014; Askari *et al.*, 2016) but do not support the finding of Narteh (2013) and Yang *et al.* (2004). In Nigeria, there has been a report of bank customers losing their money to third parties. To prevent illegal withdrawals from customers' accounts, banks always advise their clients to report the loss of ATM cards, disclosure of PINs, and other information right away. There are codes available to dial to protect the customer. The results also indicate that personalization significantly influences perceived e-banking quality. This supports the finding of (Lee & Lin, 2005; Ojasalo, 2010; Askari *et al.*, 2016). Furthermore, responsiveness was found to be significant. E-banking has brought some challenges to customers. Therefore, how the issues are resolved substantially affects e-banking quality.

The model showed a statistically significant path coefficient between perceived e-banking and perceived e-value ($\beta = .855, t = 24.869, p = .0000 < 0.05$), e-satisfaction ($\beta = .542, t = 4.382, p = .0000 < 0.05$), and e-loyalty ($\beta = .649, t = 5.706, p = .0000 < 0.05$). According to past findings, perceived quality influences perceived e-value in a positive way (Tran & Le, 2020). Also, in keeping with prior findings, it was discovered that the quality of an e-service favourably increases the e-satisfaction of users (Sindhu, 2019; Al-dweeri *et al.*, 2017). Moreover, e-loyalty is significantly impacted by perceived e-service quality (Su *et al.*, 2016; Amin, 2016). As a result, H9, H10, and H11 are verified.

The findings also show a significant and favourable correlation between perceived e-value and e-satisfaction ($r = .368, t = 2.656, p = .008 < 0.05$), as well as between e-satisfaction and e-loyalty ($r = .255, t = 2.131, p = .034 < 0.05$). H12 and H13 were supported by these findings. This suggests that people's perceptions of e-satisfaction affect their perceptions of e-value. This supports the conclusion reached by Ryu *et al.* (2012). Lastly, the finding that e-satisfaction increases e-loyalty favourably validates earlier findings (Kassim & Abdullah, 2010; Ting *et al.*, 2016; Sundaram *et al.*, 2017). The implication is that customer' perceptions of value, satisfaction, and loyalty will all increase as e-banking quality is seen to be high.

Conclusion

Evaluating e-banking quality is a strategic option for banks that would like to survive in an increasingly changing business environment and competitive market space. As a result, bank executives must conduct ongoing assessments of customers' preferences and expectations and continuously monitor and enhance e-banking quality. The study's goals were to identify the e-service quality attributes that influence e-banking quality perception the most and to ascertain the effects of e-banking perceived quality on e-service quality outcomes. The findings showed that four key e-service quality attributes—convenience, security, personalisation, and responsiveness—influence how well customers perceive the quality of e-banking. The perceived quality of e-banking was found to

be significantly correlated with e-value, e-satisfaction, and e-loyalty. It was also demonstrated that perceived e-value, which influences e-loyalty, has a significant impact on e-satisfaction. The results indicate that banks should pay closer attention to convenience, security, personalisation, and responsiveness to improve the perception of e-banking quality within the current system in Nigeria. Bank executives should continuously assess how well e-banking channels work in terms of the four attributes to spot issues as soon as possible and make improvements.

E-banking just like any other technology is prone to error at any time. Therefore, banks ought to respond quickly to e-banking-related issues. If a customer has challenges completing an online transaction and the bank is not willing to render assistance, the customer may discontinue e-banking. Providing quality service necessitates considering the relevance of e-service quality features and assuring satisfaction. It also entails improving the services' quality to ensure that clients continue to utilise the e-channel. The e-service quality attributes examined in this study will help bank executives to understand how customers rate e-banking quality. They will be able to get feedback on how well they are performing in terms of e-banking quality, which can be used to improve e-banking quality delivery.

The study's limitations are restricted to the use of the quantitative research methodology. It might also be necessary to conduct a qualitative study to gain additional insight on the crucial aspects of e-banking.

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References

- Aaker, D. (2011). *Perceived quality*. New York: The Free Press.
- Akinmayowa, J.T. & Ogbeide, D.O. (2014). Automated Teller Machine *service quality* and customer satisfaction in the Nigeria banking sector. *Covenant Journal of Business and Social Sciences (CJBSS)*, 65(1), 62-72.
- Al-dweeri, R.M., Obeidat, Z.M., Al-dwiry, M.A., Alshurideh, M.T. & Alhorani, A.M. (2017). The impact of e-service quality and e-loyalty on online shopping: moderating effect of e-satisfaction and e-trust. *International Journal of Marketing Studies*, 9(2), 92-103.
- Al-Hawari, M., Hartley, N. & Ward, T. (2005). Measuring banks' automated service quality: a confirmatory factor analysis approach. *Marketing Bulletin*, 16(1), 1-19.
- Al-Hawary, S.I. & Al-Smeran, W.F. (2017). Impact of electronic service quality on customers satisfaction of Islamic Banks in Jordan. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 7(1), 170-188.
- Amin, M. (2016). Internet banking service quality and its implication on e-customer satisfaction and e-customer loyalty. *International Journal of Bank Marketing*, 34 (3), 280-306.
- Askari, M., kazempoo, M. & Milad lajevardi, H. A. (2016). Measuring e-service quality from the customers' perspective: an empirical study on banking services. *Journal of Marketing and Consumer Research*, 24, 57-68.
- Byrne, B. M. (2010). Multivariate applications series. *Structural Equation Modelling with AMOS basic concepts, Applications and Programming* (2nd ed.). New York: Routledge
- Emefiele, G.I. (2022). Press remarks on issuance of new naira banknotes. Retrieved from <https://www.cbn.gov.ng/Out/2022/CCD/Press%20Remarks%20on%20New%20Naira%20BanknotesOct2022%20Final.pdf>
- Farnaz, B.Z, Mohd S.M, Ahmad J., Norhayati Z, Ahamad Z.B & Mohsen A. (2012). E-service quality dimensions and their effects on e-customer satisfaction in Internet Banking services. *Procedia - Social and Behavioral Sciences*, 40, 441-445.
- Hair, J.F, Black, W.C., Babin, B.J & Anderson, R.E. (2010). *Multivariate data analysis* (7th ed.). New Jersey: Pearson Prentice Hall.
- Hussain, S., Fangwei, Z., Siddiqi, A. F., Ali, Z., & Shabbir, M. S. (2018). Structural equation model for evaluating factors affecting quality of social infrastructure projects. *Sustainability*, 10(5), 1415.
- Iham T.I, Ahmad K.B., Low T.J & Hamid H.J (2013). A review of e-service quality dimensions in user satisfaction. *3rd International Conference on Research and Innovation in Information Systems, (ICRIIS)*, 186-191.
- Jiang, L.A., Yang, Z. & Jun, M. (2013). Measuring consumer perceptions of online shopping convenience. *Journal of Service Management*, 24(2), 191-214.
- Kabadayi, S. & Gupta, R. (2011). Managing motives and design to influence website revisits. *Journal of Research in Interactive*, 5(2), 153-169.
- Kassim, N. M. & Abdullah, N. A. (2010). The effect of perceived service quality dimensions on customer satisfaction, trust, and loyalty in e-commerce settings: A cross-cultural analysis. *Asia Pacific Journal of Marketing and Logistics*, 22(3), 351-371.
- Khan, M.A. (2010). An empirical study of Automated Teller Machine service quality and customer satisfaction in Pakistani banks. *European Journal of Social Sciences*, 13(3), 333-344.
-

- KPMG (2020). COVID-19: A business impact series. *Issue 2*, 1-3.
- Krejcie, R., & Morgan, D. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607–610.
- Kumbhar, V.M. (2011). Customers' satisfaction in ATM service: An empirical evidence from public and private sector banks in India. *Management Research and Practice*, 3(2), 24- 35.
- Lee, G-G. & Lin, H-F. (2005). Customer perceptions of e-service quality in online shopping. *International Journal of Retail & Distribution Management*, 33(2), 161-176.
- Madu, C.N. & Madu, A.A. (2002). Dimensions of e-quality. *International Journal of Quality and Reliability Management*, 19(3), 246-258.
- Mohammad, A., Rushami, Z.Y., Rabiul, I. & Abdullah, A. (2013). E-service quality and its effect on consumers' perceptions of trust. *American Journal of Economics and Business Administration*, 5(2), 47-55.
- Mohammad, D., Mohsen, A. & Roza, A. (2013). Impact of demographic characteristics on relationship between customers' perceived service quality and websites' services in electronic markets. *International Research Journal of Applied and Basic Sciences*, 5(5), 530-537.
- Narteh, B. (2013). Service quality in Automated Teller Machines: an empirical investigation. *Managing Service Quality*, 23(1), 62-89.
- Naveon, D. & Anders G. (2020). Effect of Covid-19 on business and research. *Journal of Business Research*, 117(20), 284-289.
- Ojasalo, J. (2010). E-service quality: a conceptual model. *International Journal of Arts and Sciences*, 3(7), 127-143.
- Ong, S. T., Mohd, S. M., Norhayati, Z., Zuraidah, S. & Muhamad, Z. M. (2016). E-service quality, e-satisfaction and e-loyalty of online shoppers in business to consumer market; evidence from Malaysia. *Materials Science and Engineering*, 131, 1-10
- Pallant, J. (2010). *SPSS survival manual. a step by step guide to data analysis using SPSS* (4thed). Berkshire: McGraw-Hill Companies.
- Parasuraman, A., Zeithaml, V. & Malhotra, A. (2005). E-S-Qual: a multiple-item scale for assessing electronic service quality. *Journal of Service Research*, 7 (3), 213-233.
- Poon, W.C. & Lee, C.K. (2012): E-service quality: an empirical investigation. *Journal of Asia-Pacific Business*, (13)3, 229-262.
- Pushkar, D & Satish, K.S. (2019). Effect of service quality on perceived value, satisfaction and loyalty of customers: a study on selected hospitals of Chhattisgarh. *International Journal of Computer Sciences and Engineering*, 7(3), 55-62.
- Raman, M., Stephenaus, R., Alam, N. & Kuppusamy, M. (2008). Information technology in Malaysia: e-service quality and uptake of Internet Banking. *Journal of Internet Banking and Commerce*, 13(2), 1-18.
- Ryu, K., Lee, H. R., & Kim, W. G. (2012). The influence of the quality of the physical environment, food, and service on restaurant image, customer perceived value, customer satisfaction, and behavioral intentions. *International Journal of Contemporary Hospitality Management*, 24(2), 200-223.
- Sadaf, F. & Rahela, F. (2019). Service quality to e-service quality: A paradigm shift. *Proceedings of the International Conference on Industrial Engineering and Operations Management Bangkok, Thailand, March 5-7, 1656-1666*.
- Santos, J. (2003). E-service quality: a model of virtual service quality dimensions. *Management Service Quality*, 13(3), 233-246.
- Shankar, A. & Datta, B. (2020). Measuring e-service quality: a review of literature. *International Journal of Services Technology and Management*, 26(1), 77-100.
- Shirshendu, G. & Sanjit, K.R. (2011). Generic technology-based service quality dimensions in banking: impact on customer satisfaction and loyalty. *International Journal of Bank Marketing*, 29(2), 168-189.
- Sindhu, S. (2019). Measuring e-service quality and customer satisfaction with Internet banking in India. *Theoretical Economics Letters*, 9 (2), 308-326.
- Su, L., Swanson, S. R., & Chen, X. (2016). The effects of perceived service quality on repurchase intentions and subjective well-being of Chinese tourists: The mediating role of relationship quality. *Tourism Management*, 52, 82–96.
- Sundaram, V., Ramkumar, D. & Shankar, P. (2017). Impact of e-service quality on customer satisfaction and loyalty: an empirical study in India online business. *KINERJA* 21(1), 48- 69.
- Swaid, S.I. & Wigand, R.T. (2009). Measuring the quality of e-service: scale development and initial validation. *Journal of Electronic Commerce Research*, 10(1), 13-28.
- Ting, O.S., Ariff, M.S., Zakuan, N., Suliaman, Z., & Zameri, M.S. (2016). E-service quality, e-satisfaction and e-loyalty of online shoppers in business to consumer market: evidence from Malaysia. *Materials Science and Engineering*, 131, 1-10.
- Tran, V.D. & Le, N.M. (2020). Impact of service quality and perceived value on customer satisfaction and behavioral intentions: Evidence from convenience stores in Vietnam. *The Journal of Asian Finance, Economics and Business*, 7(9), 517-526.
- Vatolkina, N., Gorbashko, E., Kamynina, N., & Fedotkina, O. (2020). E-service quality from attributes to outcomes: The similarity and difference between digital and hybrid services. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(4), 143.
-

- Wong, K.K. (2013) Partial least squares structural equation modeling (PLS-SEM) techniques using SmartPLS. *Marketing Bulletin*, 24(1), 1-32.
- Yang, Z., Jun, M. & Peterson, R.T. (2004). Measuring customer perceived online service quality: Scale development and managerial implications. *International Journal of Operations and Production Management*, 24(11), 1149-1174.
- Yousif, A.S. (2015). E-service quality: A multi-dimension perspective. *International Journal of Economics, Commerce and Management*, III (11), 873-888.
- Zeithaml, V.A., Parasuraman, A. & Malhotra, A. (2000). *A conceptual framework for understanding e-service quality: Implications for future research and managerial practice*. Cambridge, MA: Marketing Science Institute.
- Zeithaml V.A., Parasuraman, A. & Malhotra, A. (2002). Service quality delivery through websites: A critical review of extant knowledge. *Journal of the Academy of Marketing Science*, 30(4), 358-371.
- Zhengwei, M. & Jinkun Z. (2012). Evidence on e-banking customer satisfaction in the China commercial bank sector. *Journal of Software*, 7(4), 927-933.