

# EFFECT OF E-COMMERCE ON CONSUMERS BUYING BEHAVIOUR OF MOBILE PHONES IN PLATEAU STATE, NIGERIA

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## ABSTRACT

*Global technology keeps advancing at a fast rate around the world and in Nigeria in particular, and quite a few numbers of people appear to be embracing such advancements in which e-commerce is one of such technological advancements. The objective of this study was to examine the effect of e-commerce on consumers buying behaviour of mobile phone in Plateau state, Nigeria. This study adopted a survey research design with a sample size of 321 which was determined using Cochran sample size formula and purposive sampling technique was used to select the respondents. The study employed questionnaire as the instrument for data collection. Partial least square structural equation modeling was employed to analyze the data obtained. The study found that online perceived risk has positive and significant effect on consumers buying behaviour of mobile phone in Plateau state, Nigeria while online trust has negative and significant effect on consumers buying behaviour of mobile phone in Plateau state, Nigeria. The study concluded that online perceived risk and trust has significant effect on consumers buying behaviour of mobile phone in Plateau state, Nigeria. The study therefore recommends E-commerce business should establish clear and flexible return and exchange policies as well as ensure transparency around product features by providing clear and honest information about product to build consumer confidence.*

**Keywords:** E-commerce, Online Perceived Risk, Trust and Consumers Buying Behaviour

## INTRODUCTION

Every individual's consumer behavior varies from another, depending on their buying choices. These choices are influenced by their buying habits which are affected by psychological and social factors which have an effect on the purchase decision process (Brassington & Pettitt, 2000). Just as in any business, the customers are the backbone on which the business is based; without customers, the business has no basis on which they operate. Various customers in online shopping have various reasons for participating and therefore, their expectations would differ from each other and would be measured differently. Olasanmi (2019) added that customers would be interested in different things from the owners of online shops. Their perspectives on performances of online retailers would be on the basis of the level of satisfaction they feel they derived from the provision or use of products from the business.

E-commerce is where the customer buys products or services from a seller through the internet (Qureshi et al., 2014). With advent of internet, consumers have changed dramatically and new shopping habits have evolved gradually during the last one decade or more. Lubis (2018), states that due to stable and faster presence of internet, human behavior has changed dramatically at a much rapid rate. This change however, has provided several businesses opportunities to have an edge to reach a high number of people through the internet such that the businesses can advertise and even sell goods online. In fact, it is one of the cheapest ways entrepreneurs could create an avenue in getting in contact with the huge customer base in a short span of time (Doherty & Ellis, 2010).

E-commerce trend in Nigeria is not as advanced as it is in other countries of the world. E-commerce is gradually gaining prominence also in developing countries such as Nigeria as the country is ranked 1<sup>st</sup> in Africa and 7<sup>th</sup> in the world with a total of 123, 486,615 internet users (Internet World Statistics, 2023). Many retailers in Nigeria are now using online retailing to attract the customers, which gives consumers the opportunity of having various online options from which to choose and buy from. In addition, with more people becoming computer literate and open to adopting ICT usage, and the proliferation of smart phones, e-commerce is gradually gaining popularity among many Nigerians (Omotayo & Adeyemi, 2018). The most popular online shopping websites in Nigeria include Jumia, Konga, OLX and Jiji.

Perceived risk is considered a function of the uncertainty about the potential outcomes of a behaviour and the possible unpleasantness of these outcomes (Forsythe and Shi, 2003). Perceived risk reduces the willingness of consumers to buy goods over the internet (Barnes et al., 2007). Moreover, Reichheld and Scheffer (2000) pointed that the single most important factor for customers choosing an online supplier is trust. It is because in the online business with the absence of face-to-face contact, people need a lot of reassurance. Online retailers recognize that online consumers decide to shop online because they trust that the retailer has ability to secure their transaction and information (Singh, 2002). It is however based on this background that the study is carried out to examine effect of e-commerce on consumers buying behaviour of mobile phones in Plateau State, Nigeria.

Global technology keeps advancing at a fast rate around the world and in Nigeria in particular, and quite a few numbers of people appear to be embracing such advancements in which e-commerce is one of such technological advancements. The few people that do e-commerce have skeptical minds and believe no good can come out of it because of the rate of satisfaction derived. In a country such as Nigeria where there is an evidently high rate of fraudulent activities over the internet, many people could be skeptical about conducting business over the internet despite the benefit associated to online shops such as product variety, easy access, convenience, house delivery, easy price comparison, after sale service. Consumers of the online shops in Nigeria may still not feel satisfied with online shops.

Specifically, the fear of identity theft especially of credit card makes customers reluctant to frequently purchase products online. The fact that some pictures of the products displayed online may not refer to the exact products delivered to customers also motivates some customers to patronize the physical store for their purchase rather than online shops. Recently the online shops in Nigeria have started to suspend the payment on delivery option on their website due to the increasing risk and security challenges posed by this payment option and also to reduce the amount of cash carried from one location to another by their delivery agents. This payment on delivery option is one of the reason many people currently shop online because Nigerians have upfront payment trust issues.

Online shopping and consumers behaviour has been one of the most important research areas giving recognition in the past decades. Previous studies including Muhammad, Muhammad and Chauduary (2015), Rekha, et.al (2014), Ahmed and Sany (2016), Osio and Orubu (2018), Abdullahi et.al (2017), Nwankwo et.al (2019) have studied online shopping but none of them focused on e-commerce and consumers buying behaviour of mobile phones. Based on the above statement of the problem, the study therefore examines effect of consumer e-commerce attributes on buying behaviour of mobile phones in Plateau State, Nigeria.

The main objective of the study is to examine effect of e-commerce on consumer buying behaviour of mobile phones in Plateau State, Nigeria. The specific objectives are to;

- i. Explore the effect of online perceived risk on consumers buying behaviour of mobile phones in Plateau State, Nigeria;
- ii. Assess the effect of online trust on consumers buying behaviour of mobile phones in Plateau State, Nigeria;

## **LITERATURE REVIEW**

### **E-Commerce**

E-commerce is an innovative form of trade that takes place on the internet, where customers visit various websites offering different products for sale, select the product, order the products, make payments via credit cards (Olasanmi, 2019). E-commerce is buying through electronic medium where one can make purchases over the internet at any point of time. An e-commerce was buying of products and services takes place directly with consumers is known as Business to Consumer (B2C) e-commerce where business buys from another business is called business to business (B2B) e-commerce ping. E-commerce belongs to the general family of electronic commerce (Gabriel et al., 2016).

Shim and Siegel (2000) defined e-commerce as the process where consumers can go to buy products/services through the internet. Gabriel et al., (2016) defined e-commerce as the shopping behaviour of consumers in an online store or website used for online purchasing purposes. It is a form of electronic commerce which allows consumers to directly buy goods or services from the seller over the internet using a web browser. E-commerce refers to the process of purchasing goods and services from merchants who sell over the internet (MasterCard Worldwide Insight, 2008). In other words, it is the act of purchasing products and services over the internet. Kotler and Armstrong (2010) opined that e-commerce is purchasing through electronic connection between buyers and sellers. Ozuru et al., (2015) sees e-commerce as the process whereby consumers directly buy goods and services from a seller in real-time, without an intermediary service over the internet.

E-commerce is seen as the process where online customers buy goods and services directly from a seller in real times without the use of a traditional or physical intermediary service. It involves the purchase of goods and services from a seller over the Internet. It refers to the process of researching and purchasing products or services over the internet (Varma & Agarwal, 2014). In the view of Yulihastri et al., (2011), e-commerce is business transaction that takes place through the internet and then finally the goods are delivered physically or electronically to the shoppers. For Laudon and Laudon (2006), e-commerce is a process of buying and selling of goods and services electronically with computerized business transactions using internet networks. E-commerce is an act of buying and selling of goods or services via the internet.

### **Online Perceived Risk**

Risk plays an essential role in consumer behavior, and it makes a valuable contribution towards explaining information-searching behavior and consumer purchase decision making. Perceived risk has central importance for online buyers (Doolin et al., 2007). Generally, buyers do not know who the seller is (Finch, 2007). Perceived risk is a fundamental concept in consumer behavior that implies that consumers experience pre-purchase uncertainty as to the type and degree of expected loss resulting from the purchase and use of a product (Al- Maghrabi et.al, 2011).

Perceived risk is defined as the degree to which a person expresses uncertainty about a service or good (Bauer, 2000). Perceived risk refers to the nature and amount of risk perceived by a consumer in contemplating a particular purchase decision (Cox & Rich, 2004). Taylor (2004) suggests that the uncertainty or risk perception can create anxiety affects consumers' decision-making process. Murphy and Enis (2006) defines risk perceptions are subjective evaluations by customers for shopping consequences of mistakes.

### **Online Trust**

Trust is commonly described as the willingness to rely on an exchange partner in whom one has confidence in a situation of vulnerability (Moorman et al., 2002). Whereas trust in the online store defined as a consumer's willingness to rely on the seller and take action in circumstances where such action makes the consumer vulnerable to the seller (Mayer et al., 2005). Another definition of online trust is the belief that allows consumers to willingly become vulnerable to website merchant, based on the expectation that the Internet merchant will act in the customer's interest and behave in certain honest and reliable ways as promised, irrespective of the ability of the consumer to monitor or control the online purchase process (Hou, 2005).

Baier (2006), defines trust as accepted vulnerability to another's possible but not expected ill will (or lack of good will) towards one. According to Luhmann (2009) trust is a mechanism which helps to lessen the anxiety of human beings in the situation in which people faces ambiguity. In this way trust plays vital role for customers involve in transactions. Trust is simply defined as a one party expecting that the other one will cooperate with him and would not take unnecessary advantage in the transaction.

## **Consumer Buying Behaviour**

Consumer behavior is described as the dynamic interaction of affect and cognition, behavior, and the environment through which humans exchange components of their life (Hollebeek & Macky, 2019). Consumer buying behavior refers to all the thought, feelings, decisions and actions that an individual embarks upon before or while buying any product, service or idea (Singh, 2020). Consumer buying behavior refers to individual reactions before and after the buying and consumption of a product (Stoner, 2019). Consumer buying behavior involves the psychological processes that consumers go through in recognizing needs, finding ways to solve these needs and making a purchase decision on whether to buy or not. (Silverman, 2019).

Consumer behavior can be described as the study of individuals, groups, or organizations and the processes they use to select, secure, and dispose of products, services, experiences, or ideas to satisfy needs and the impacts that these processes have on the consumer and society (Kuester, 2012).

## **Empirical Review**

### *Online Perceived Risk and Consumer Buying Behaviour*

Hsu and Luan (2017) examined perceived risk on consumer' attitude and purchase intention in online shopping. The survey samples were consumers who shopped online in Hanoi, Vietnam. The study used questionnaires to collect data and SPSS18 to test data. The study was used SPSS18 to test and analysis data, and used random and convenient sampling approach to collect data. There are 225 valid data collected in this study. The research uses factor analysis and regression analysis to analyze the data collected. In this study, the reliability analysis for variables, the Cronbach's alpha coefficient was 0.78. Besides, the finding asserted the relationship between general perception risk and attitude toward online that was negative. The relationship between general perception risk and attitude toward online shopping was positive. The study helps to better understand that the factors effect on consumers using intention of the online service. The shortcoming from the findings of Hsu and Luan (2017) was that other variables such as: health risk, quality risk, after-sale risk, performance, psychological, website design style and characteristics, and trust in the web site were not discussed.

Similarly, Masoud (2013) examined the effect of perceived risks on online shopping behavior in Jordan. Data was collected from online shopping users; a survey was conducted with a sample size of 395 online shoppers among consumers who previously purchased online and mainly from the main popular online stores in Jordan, methodology was done using SPSS 17 and Amos 18. The study revealed that financial risk, product risk, delivery risk, and information security risk negatively affect online shopping behavior. The results also showed that the other two dimensions, perceived time risk, and perceived social risk have no effect on online shopping. The study has an important managerial implication; it provides marketers with the importance of consumers risk perception in order to adopt adequate risk-reduction strategies in the internet shopping environment. The study conducted by Masoud (2013) didn't examine the moderating effect of buyer traits and experience in the relationship between perceived risks and online shopping.

Ariff et.al (2014) examined consumer perceived risk, attitude and online shopping behaviour; empirical evidence from Malaysia. The population of the research is the online shopping consumers of a Malaysia's largest online marketplace for online shoppers. A web-based survey was employed, and a total of 300 online shoppers of a Malaysia largest online marketplace participated in this study. The data collected was kept automatically in Google spreadsheet and finally exported to Statistical Package for Social Science (SPSS) for the process of analysis. The findings indicated that product risk, financial and non-delivery risks are hazardous and negatively affect the attitude of online shoppers. The findings provide useful model for measuring and managing consumers' perceived risk in internet-based transaction to increase their involvement in online shopping and to reduce their cognitive dissonance in the e-commerce setting. The researcher does not consider the inclusion of other dimensions of perceived risk, such as psychological, privacy and social risks as these will help to examine whether or not they can influence attitude and online shopping behaviour of consumers.

Recent contribution by Panwar (2018) examined consumer perceived risk in online shopping environment via facebook as medium. The study used universally accepted determinants of consumers' perceived risk namely financial risk, product risk, delivery risk, time risk and privacy risk. The multi-pronged perceived risk has significant impact on the online shopping behavior of the customer and adversely affects their purchase behavior. The total number of 180 respondent has been selected for the primary study. The convenient sampling method of non-probability sampling has been used for selection of respondents. The study found that the demographics have a major role to play on consumers' perception towards online shopping. Income and gender are the two important factors identified that may have considerable impact on consumers' perception towards online shopping. T-test, ANOVA and regression analysis has been used for data analysis purpose. The research carried out by Panwar (2018) didn't employ the appropriate method of data analysis since the study is not looking at the difference among the variables.

#### *Online Trust and Consumer Buying Behaviour*

Khan et.al (2014) evaluated trust level of customers in Pakistan online shopping. Government College University Faisalabad and University of Agriculture Faisalabad from Faisalabad, Pakistan were selected for data collection. Students and teachers of both universities are randomly selected who have online shopping experience. The sample included 50 respondents, correlation and regression used to analyze the respondents' response. The results proposed that trust is not affected by product/service quality, but information and person's ability affected trust level of consumer. The shortcoming of the study by Khan et.al (2014) is that the sample size of the study was too small. The study used qualitative methods of research to test the trust level in online shopping. However, the results are according to the hypothesis, but are limited in nature. The area of research which was Faisalabad was small, but there is a need to conduct it on large area population. If it is conducted on the large area population then fruitful results can be obtained from research.

Hidayat et.al (2016) investigated the antecedents of online customer satisfaction and online customer trust in Indonesia toward a particular e-commerce website. A quantitative approach was employed. The gathered data obtained using online questionnaire with itemized rating scale resulting in 443 respondents. For the purpose of data analysis, Structured Equation Model (SEM) method has been adopted. This study found that user interface quality, information quality, customer service, and security and privacy have a positive significant impact on online customer satisfaction and online customer trust. This study also found that online customer satisfaction and online customer satisfaction influencing online customer loyalty significantly in Indonesia. This study suggests that Indonesian online merchant can win the loyalty of online customer by focusing their strategies on the satisfaction and trust of Indonesian online customers. The shortcoming of the study is that the data gathered in the study mostly came from male respondents, which is 88.71 percent or about 393 respondents from the total 443 respondents. It may not be representative of general Indonesian e-commerce customers.

Choi (2018) examined the impact of customer trust and customer satisfaction. The questionnaire was measured on a 5-point Likert scale. In the study, 173 out of 205 questionnaires were analyzed except 32 questionnaires which had no experience or insufficient experience. Factor analysis and structural equation analysis were performed using SPSS and AMOS. From the result of the analysis, order quality, delivery quality, and return quality were all supported by customer trust. It is analyzed that customer trust are supported by customer satisfaction. The logistics service quality used in home shopping was derived by dividing the delivery quality, order quality, and return quality. The study concluded that the degree of trust that consumers perceive has an effect on the satisfaction of home shopping companies. The weakness of the study is that the questionnaire survey was conducted on the 20 to 30 generation in the metropolitan area by convenience extraction method. For this reason, there are limitations that local residents can have different results.

Falahat et al. (2019) examined the antecedents of trust in e-commerce among Malaysian online consumers. Data was collected from 300 respondents who had recently made online purchases.

Structural equation modelling-partial least squares (SEM-PLS) was used to analyse the data. Findings reveal that brand recognition, service quality, security, and word-of-mouth (WOM) lead to higher levels of consumer trust, whereas customer satisfaction has an insignificant relation to consumer trust. In conclusion, the findings indicate that consumers have better trust on e-commerce sites that fulfill their criteria, and e-commerce vendors should not ignore these actions if they intend to encourage purchase behaviours. The study recommended that e-commerce vendors should set their strategies right to enhance consumer trust and attract more consumers for online purchases. Falahat, Lee, Foo and Chia (2019) shortcoming was that the data was limited to samples from a single country, i.e., Malaysia. A review of this model in a different country context might help to validate the findings.

### **Technology Acceptance Model (TAM)**

This study underpinned the theory of Technology Acceptance Model (TAM) which was developed by Davis (1989) is one of the most popular research models to predict use and acceptance of information systems and technology by individual users. In TAM model, there are two factors perceived usefulness and perceived ease of use. Perceived usefulness is the prospective user's subjective probability that using a specific application system will enhance his or her job or life performance. Perceived ease of use (EOU) is the degree to which the prospective user expects the target system to be free of effort. According to TAM, ease of use and perceived usefulness are the most important determinants of actual system use.

Technology acceptance mode (TAM) has been based on theory of reasoned action (TRA) and has been used to explain individual's acceptance behavior. Technology Acceptance Model (TAM) was developed by Davis (1989) to explain and predict computer-usage behaviour. In 1989, Davis presented the Technology Acceptance Model (TAM) to explain the intention of the behavior of consumers with the ability to use innovative technology (such as online shopping). The goal of TAM was to provide an explanation of the determinants of computer acceptance that in general was capable of explaining user behavior across a broad range of end-user computing technologies. The Technology Acceptance Model (TAM), which was developed by Davis (1989), assumes that when users perceive that a type of technology is useful and also easy to use, they will be willing to use it. Consequently, the more consumers recognize that the systems will make their tasks easier to perform; the higher is the probability that they will use it and accept the new technology as being useful (Dillon & Morris, 1996).

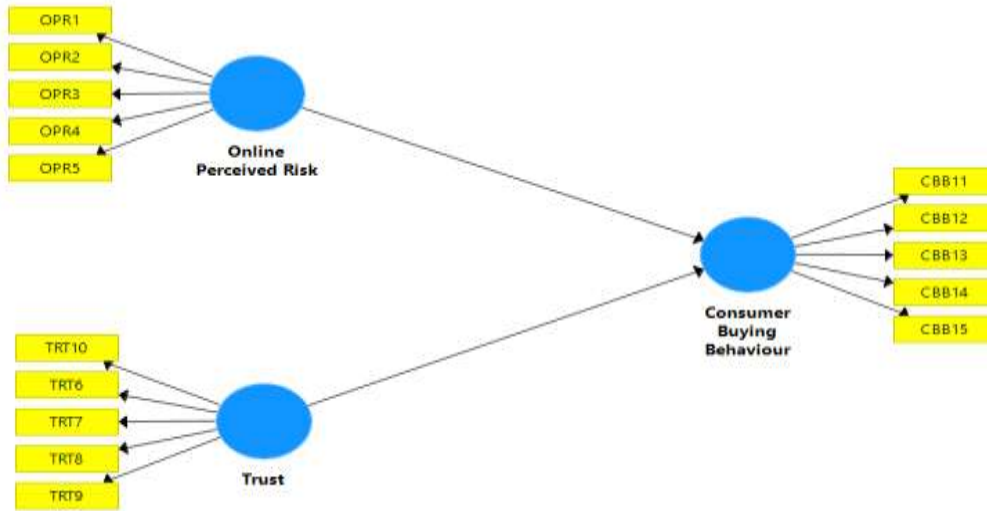
The theory is relevant to the study because it enables a consumer who wants to buy an item online to find the website useful if the sites are easy to use and accessible.

### **METHODOLOGY**

The research employed survey research design. Survey research design was adopted for the study through a structured questionnaire which was used to elicit information from the target respondents who are customers of mobile phones in Plateau State, Nigeria. The population of the study consisted of mobile phones customers who have bought phones online once or more in Plateau State, Nigeria. Since the population is infinite as there is no accurate recorded data on the number of people that visit online shops in Plateau State, Nigeria, the researcher therefore used Cochran Sample size Formula to get a sample size of 321. The study looked at areas like Jos North, Jos South, Jos East, Shendam, Langtang South and North. Convenience sampling was used based on the fact that consumers are available and have bought phones online once or more. The questionnaire was adapted. The researcher employed the use of a questionnaire to collect necessary data for the study. The Partial Least Squares Structural Equation Model (PLS-SEM) statistics was used to test the hypotheses formulated with the aid of SmartPls3.

**Model specification**

The model of the regression analysis is specified thus:



structural model for direct relationship between e-commerce and consumer buying behaviour

**RESULT AND DISCUSSION**

*Table 1: Descriptive Statistics*

|     | Mean | Median | Min | Max | Standard Deviation | Excess Kurtosis | Skewness |
|-----|------|--------|-----|-----|--------------------|-----------------|----------|
| OPR | 4.53 | 5      | 1   | 5   | 0.64               | 0.53            | -1.14    |
| TRT | 4.17 | 4.6    | 1   | 5   | 0.88               | 2.34            | -1.31    |
| CBB | 4.26 | 4.8    | 1   | 5   | 0.82               | 2.11            | -1.26    |

Source: SMART PLS Output, 2024

Table1 provided statistical description of the variables as expressed in the data collected in terms of the mean, minimum, maximum, standard deviation, skewness and kurtosis values, online perceived risk (OPR) showed minimum and maximum values of 1 and 5 respectively with an average value of 4.5 and a standard deviation value of 0.64. Trust (TRT) had minimum and maximum values of 1 and 5 respectively however, it showed an average of 4.1 along with a standard deviation of 0.88. Consumer Buying Behavior (CBB) had a mean value of 4.2 along with a standard deviation value 0.82. The minimum and maximum values recorded for CBB were 4.2 and 5 respectively.

**Measurement Model**

**Indicator Reliability**

In assessing the measurement model, we begin by assessing the item outer loadings. As a rule, loadings above 0.708 are recommended, as they indicate that the construct explains more than 50 percent of the indicator’s variance, thus providing acceptable item reliability (Hair, et al., 2019). However, Hair, et al., (2019) also posited that low but significant indicator loading (less than 0.50) can be included. Also, outer loadings less than 0.4 should be deleted and in exploratory research, loadings more than 0.4 and less than 0.7 can be retained if the average variance extracted in satisfied (Hair, et al., 2014) hence justifying why indicators with loadings less than 0.70 and above 0.40 were not deleted from the model.

**Table 2: Factor Loadings of the Constructs**

|      | Online Perceived Risk | Trust | Consumer Buying Behavior |
|------|-----------------------|-------|--------------------------|
| OPR1 | 0.882                 |       |                          |
| OPR2 | 0.812                 |       |                          |
| OPR3 | 0.744                 |       |                          |
| OPR4 | 0.915                 |       |                          |
| TRT1 |                       | 0.876 |                          |
| TRT2 |                       | 0.711 |                          |
| TRT3 |                       | 0.871 |                          |
| TRT4 |                       | 0.880 |                          |
| TRT5 |                       | 0.880 |                          |
| CBB1 |                       |       | 0.813                    |
| CBB2 |                       |       | 0.819                    |
| CBB3 |                       |       | 0.734                    |
| CBB4 |                       |       | 0.782                    |
| CBB5 |                       |       | 0.762                    |

*Source: SMARP-PLS Output, 2024*

**Construct Reliability**

To establish internal consistency reliability of the construct, Cronbach’s alpha and composite reliability (CR) should be higher than the threshold of 0.7. It is clear from the table 4.4, that all the latent indicators are reliable since their values are higher than the threshold value of 0.7. As an alternative to Cronbach’s alpha and composite reliability, Dijkstra and Henseler (2015) proposed rho A as an approximately exact measure of construct reliability, which usually lies between Cronbach’s alpha and the composite reliability. Hence, rho A may represent a good compromise if one assumes that the factor model is correct.

**Convergent Validity**

Convergent validity gauges the degree to which a construct converges to elucidate the variance within its items. To evaluate convergent validity, the average variance extracted (AVE) should exceed 0.5. As depicted in Table 3, the AVE values for all constructs surpass 0.5, affirming that our constructs meet the criteria for convergent validity. This observation suggests that the entire construct accounts for 50 percent or more of the variance present in the items comprising the construct.

**Table 3: Construct Reliability and Convergent Validity of the Indicators**

|                                 | Cronbach's Alpha | Composite Reliability | Average Variance Extracted (AVE) |
|---------------------------------|------------------|-----------------------|----------------------------------|
| <b>Online Perceived Risk</b>    | 0.844            | 0.887                 | 0.612                            |
| <b>Trust</b>                    | 0.861            | 0.907                 | 0.709                            |
| <b>Consumer Buying Behavior</b> | 0.899            | 0.926                 | 0.716                            |

*Source: SMART PLS Output, 2024*

**Discriminant Validity**

Discriminant validity is the extent to which a construct is empirically distinct from other constructs in the structural model. There are many traditional methods for discriminant validity assessment, such as cross loadings and the Fornell-Larcker criterion (Fornell & Larcker, 1981), but researchers are advised to apply the Heterotrait-Monotrait (HTMT) criterion (Henseler et al., 2014). This is because traditional methods fail to indicate a lack of discriminant validity, even when two constructs are perfectly correlated, rendering this criterion’s use ineffective for empirical research. For this thesis, table 4.4 shows the HTMT criterion for all the latent constructs. The discriminant validity of the construct is valid if the upper bound of the 95% confidence interval of HTMT is lower than 0.9. From table 4.4, this condition is satisfied.



**Table 4: Heterotrait-Monotrait Ratio (HTMT)**

|                          | Online Perceived Risk | Trust | Consumer Buying Behavior |
|--------------------------|-----------------------|-------|--------------------------|
| Online Perceived Risk    | 1.00                  |       |                          |
| Trust                    | 0.790                 | 1.00  |                          |
| Consumer Buying Behavior | 0.576                 | 0.854 | 1.00                     |

Source: SMART-PLS Output, 2024

**Assessing Coefficient of Determination (R<sup>2</sup>)**

The R-Square value on table 5 show 0.826, meaning that 82.6% of consumer buying behaviour were influenced by e-commerce variables. Meanwhile, the remaining 17.4% was affected by other factors not mentioned in the study. Also the R<sup>2</sup> of the present study can be recognized as substantial.

**Table 5: Coefficient of Determination (R<sup>2</sup>)**

|                          | R Square | R Square Adjusted |
|--------------------------|----------|-------------------|
| Consumer Buying Behavior | 0.826    | 0.825             |

Source: SMART-PLS Output, 2024

**Model Goodness of Fit (GoF)**

To validate the PLS model, it is essential to evaluate its goodness of fit, as recommended by Hair et al. (2017). In this study, the standardized root mean square residual (SRMR) was employed for this purpose. The selection of this index was based on the fact that SRMR provides an absolute fit measure, where a value of zero signifies a perfect fit. Following Hu and Bentler's (1998) suggestion that a value below 0.08 represents a good fit when using SRMR for model assessment, the study's result revealed an SRMR value of 0.033. This indicates that the model fits well. Besides the chi-square, other measures corroborate the goodness of fit in the study's model.

**Table 6: Model of Goodness of fit Summary**

|            | Saturated Model | Estimated Model |
|------------|-----------------|-----------------|
| SRMR       | 0.033           | 0.033           |
| d_ULS      | 3.903           | 3.903           |
| d_G        | 3.730           | 3.730           |
| Chi-Square | 5075.122        | 5075.122        |

Source: SMART-PLS Output, 2024

**Test of Hypotheses**

The table below show the path coefficients, t-values and p-values used to test the hypotheses of the study:

**Table 7: Path Coefficient of the Model**

| Variables  | Beta   | T Statistics ( O/STDEV ) | f <sup>2</sup> Values | P Values | Decision |
|--|--------|--------------------------|-----------------------|----------|----------|
| Online Perceived Risk -> Consumer buying Behaviour | 0.129  | 3.894                    | 0.049                 | 0.000    | Rejected |
| Trust -> Consumer buying Behaviour                 | -0.814 | 27.365                   | 1.944                 | 0.000    | Rejected |

Source: SMART-PLS Output, 2024

**Hypothesis One**

H<sub>01</sub>: Online perceive risk has no significant effect on consumers buying behaviour of mobile phones in Plateau State, Nigeria

The result of the test as shown in table 7 revealed that online perceive risk has positive and significantly effect on consumers buying behaviour of mobile phones in Plateau State, Nigeria, with  $\beta = 0.129$  and  $p = 0.000$ . Thus, hypothesis one was not supported and therefore rejected at 5% level of significance. There is adequate evidence to reject the null hypothesis and the study therefore conclude that online

perceived risk has positive and significant effect on consumers buying behaviour of mobile phones in Plateau State, Nigeria

### **Hypothesis Two**

**H<sub>02</sub>:** Trust has no significant effect on consumers buying behaviour of mobile phones in Plateau State, Nigeria

The result from table 7 shows that trust has negative but significant effects on consumers buying behaviour of mobile phones in Plateau State, Nigeria, with  $\beta = -0.814$  and  $p = 0.000$ . Thus, hypothesis two was not supported and therefore rejected at 5% level of significance. There is adequate evidence to reject the null hypothesis and the study therefore conclude that trust has negative and significant effects on consumers buying behaviour of mobile phones in Plateau State, Nigeria

### *Discussion of Findings*

The first finding revealed that online perceived risk has a positive and significant effect on consumers buying behaviour of mobile phones in Plateau State, Nigeria, this implies that increased perceived risk prompts consumers to engage in more thorough evaluation and deliberation before making an online purchase. The finding is in agreement with that of Ariff et.al (2014) who found positive and significant effect on consumers buying behaviour. However, the finding disagrees with the finding of Hsu and Luan (2017) who found negative and insignificant effect of online perceive risk.

Secondly, findings revealed that trust negative effect on consumers buying behaviour of mobile phones in Plateau State, Nigeria. This implies that market saturation and dominance of trusted options can contribute to a decline in overall buying behavior among consumers. This finding agrees with the findings of Hidayat et.al (2016) who found negative but significant effect on consumers buying behaviour of mobile phones Nigeria. But the finding however, disagreed with that of Khan et.al (2014) who found positive and significant effect on the on consumers buying behaviour.

## **CONCLUSION AND RECOMMENDATIONS**

This study examined the effect of e-commerce on consumers buying behaviour of mobile phones in plateau state, Nigeria. The findings concluded that, trust exhibited by consumers buying behaviour of mobile phones in Plateau State, Nigeria is a significant factor undermining their consumer buying behaviour. This finding underscores the importance of carefully considering trust and consumer buying behaviour. Based on the finding that online perceived risk has positive and significant effect on consumers buying behaviour of mobile phones in Plateau State, Nigeria, it is a crucial factor contributing to their consumer buying behaviour. The strong positive relationship indicates that fostering an ease online navigate is essential for the viability and growth of these e-commerce business in the region.

Based on the findings and conclusions above, the study recommends thus:

- i. E-commerce business, should establish clear, flexible, and customer-friendly return and exchange policies for online mobile phone purchases. This can help reassure consumers that they can safely try out and evaluate the product before committing to the purchase.
- ii. E-commerce business should enhance transparency around product features, specifications, and company practices. Provide clear and honest information about product features to build consumer confidence.

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|          | Variables  | Responses |   |    |   |    |
|----------|--|-----------|---|----|---|----|
|          |  | SA        | A | UN | D | SD |
| <b>A</b> | <b>Perceived Risk</b>  |           |   |    |   |    |
| 1        | I feel that my personal details will be misuse if I buy phones online                    |           |   |    |   |    |
| 2        | It is hard to judge the quality of phones over the internet                              |           |   |    |   |    |
| 3        | I might not get what I ordered through online mobile phones shopping                     |           |   |    |   |    |
| 4        | I might not receive the phones ordered online as at when due and famished.               |           |   |    |   |    |
| 5        | It would be difficult in returning the phones if I shop online                           |           |   |    |   |    |
| <b>B</b> | <b>Trust</b>   |           |   |    |   |    |
| 6        | I am certain of the online mobile phones shops is trustworthy                            |           |   |    |   |    |
| 7        | I believe that the online mobile phones shops provide reliable information               |           |   |    |   |    |
| 8        | I trust the online mobile phones shops as they keep promises and commitments             |           |   |    |   |    |
| 9        | I have faith in the online mobile phones shops that they keep my best interests in mind. |           |   |    |   |    |
| 10       | I have confidence in the online mobile phones shops as they meet my expectations.        |           |   |    |   |    |
| <b>C</b> | <b>Consumer buying behaviour</b>   |           |   |    |   |    |
| 11       | Overall, I am satisfied with the services provided by the online mobile phone’s shops    |           |   |    |   |    |
| 12       | In my opinion, the online mobile phones shop provides satisfactory services              |           |   |    |   |    |
| 13       | The online mobile phones shops create a shopping experience that is pleasurable          |           |   |    |   |    |
| 14       | I feel pleasant about my decision to buy from online mobile phones shops                 |           |   |    |   |    |
| 15       | I am satisfied with my previous online mobile phones shopping experience.                |           |   |    |   |    |