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EFFECT OF PERCEIVED RISK ON ONLINE BUYING BEHAVIOUR AMONG UNDERGRADUATE STUDENTS IN AHMADU BELLO (ABU) UNIVERSITY ZARIA

WASILATU, Garba Abdullahi[1] , BABANGIDA, Salau Zailani, [2], FATIMA, Abdullahi Mahdi[3], ZINATU, Abubakar[4],AHMAD, Auwal Yahaya[5]
Department of Marketing, ABU Business School, Ahmadu Bello University, Zaria.[1,2,3,4&5]
wasilagabdullahi@gmail.com

ABSTRACT
The electronic commerce (e-commerce) has shown an upward trend in Nigeria, providing online transaction platform for both domestic and global markets which benefits businesses and consumers. A comprehensive understanding of how perceived risk influence online buying behaviour is essential for e-commerce marketers to gain a competitive advantage. Therefore, this study examines the effect of the perceived risk dimension on online buying behaviour among undergraduate students in ABU Zaria. The study used the partial least square structural equation modeling (PLS-SEM) as a technique to run and analyse the data collected from 400-level undergraduate students using a sample of 246 students. The findings of the study showed that financial risk and privacy risk in online buying behaviour were found to be negative and significant. However, Product performance risk was found to be a positive and insignificant relationship in online buying behaviour. The study concludes that financial risk and privacy risk are critical factors that prevent students from engaging in online buying behavior. Thus, the study recommends that online vendors should focus on enhancing students' confidence in their ability to restore or reduce the level of perceived risks in online buying behaviour.
Keywords: *Perceived risk, financial risk, privacy risk, product performance risk, online buying behaviour*

1.0 Introduction

The internet has grown to a great deal in both its applications and number of users. There is a lot of adaptation, together with its relatively unique characteristics of interactivity and personalization which increases the chance of new business strategies (Ko, Jung, Kim, & Shim, 2004). The major change brought by the internet was the online shopping which is becoming a treat to the traditional shopping channels like the retail stores. With the advancement of the of internet which has made a recognition of online shopping increased by thousands or millions of people all over the world, using their various gadgets to shop has made a transformation from the traditional way of shopping to the modern online way of shopping. Online shopping becomes the third most favorite internet activity following the e-mail using or instant messaging and web browsing (Li & Zhang, 2002).

Nigerian e-commerce has been growing immensely, this makes Africa's growth in development to be 25.8% when compared to other countries growth of 15.8% with Nigeria's growth rate which was credited to be 25% per annum (Chinedu & Obot, 2019). The Nigerian internet users in 2018 had 92.3 million internet users. This figure is projected to grow to 187.8 million internet users in 2023. The internet penetration amounted to 47.1 percent of the population in 2018 and is set to reach 84.5 percent in 2023 (Usman & Kumar, 2019).

Electronic commerce (e-commerce) is the buying and selling of goods and services online through the use of internet (Nazir, Tayyab, Sajid, Rashid, & Javed, 2012). Online shopping is a form of e-commerce which permits consumers to directly purchase goods or services from a seller by using the internet (Singh, 2013). Industries are responding to innovative order in the technological world, the internet world to meet the needs of their dynamic customers (Olise, Moses, Stephen, Happiness, & Oby, 2019). Internet usage in Nigeria is rapidly growing due to increase in internet penetration (Usmna & Kumar, 2019; Olise et al., 2019). Therefore, the trend of internet shopping is becoming a drone that is spreading through every marketing activity.

Internet shopping is fast becoming increasingly popular in Nigeria as a result of the conveniences consumers see and also the reasonable prices of products and services available online (Ogbuji, 2018). Nevertheless, it has been observed that there are some new problems and challenges that the foremost internet users' concern comprises security of payment, data protection, the validity and enforceability of e-contract, insufficient information disclosure, product quality and enforcement of rights (Paynter and Lim, 2001). Ariffin, Mohan, and Goh, (2018) asserted that method of online shopping conducted is different compared to traditional transactions, whereby it has developed to be more sophisticated, thus exposing and increasing the vulnerability of consumer perception to imbalance online shopping. A consumer may face numerous problems, for example, in placing an order where the wrong product is delivered or no delivery at all in spite of the fact that payment was made to the supplier through the consumer's credit or debit card.

Therefore upon the presence of the practical problem that necessitates the need for research on online buying behaviour, there were no studies found on perceived risk and online buying behaviour in Nigerian context. Even though, there is generally lack of or little studies on dimensions of perceived risk the few ones available have paid more attention to determinants of online buying (Inegbedion, Obadiaru, & Bello, 2016;George, Olufemi, Jubril, & Lucas, 2015;Nwankwo, Kanyangale, & Abugu, 2019).

In view of the foregoing literature gap, the current study seeks to examine the effect of dimension of perceived risk as determinants of consumer online buying behaviour in Nigeria.

Research Questions

I. To what extent does financial risk affect consumer online buying behaviour among undergraduate students in ABU Business School?
II. To what extent does performance risk affect consumer online buying behaviour among undergraduate students in ABU Business School?
III. To what extent does privacy risk affect consumer online buying behaviour among undergraduate students in ABU Business School?

Objectives of the Study

The major objective of this paper is to determine the effect of perceived risk on consumer online buying behaviour. Other specific objectives are:

I. To investigate the effect of financial risk on consumer online buying behaviour among undergraduate students in ABU Business School.
II. To assess the effect of performance risk on consumer online buying behaviour among undergraduate students in ABU Business School.
III. To determine the effect of privacy risk on consumer online buying behaviour among undergraduate students in ABU Business School.

Hypotheses of the Study

In line with the research objectives of the study, the following hypotheses are formulated.

I. $H0_1$: Financial risk has significant effect on consumer online buying behaviour among undergraduate students in ABU Business School.
II. $H0_2$: Performance risk has significant effect on consumer online buying behaviour among undergraduate students in ABU Business School.
III. $H0_3$: Privacy risk has significant effect on consumer online buying behaviour among undergraduate students in ABU Business School.

Scope of the study

The study was carried out among undergraduate students in Ahmadu Bello University Business School (ABUBS) which is made up of six (6) departments, which cover the study population. The effect of financial risk, performance risk and privacy risk on consumer online buying behavior was assessed.

Significance of the study

The study will be significant to academia and practitioners. It will help online vendors to understand risk associated with online buying behaviour, and academically it will open new doors for a further research on the use of other dimensions of perceived risk.

2.0 Literature Review and Theoretical Framework

2.1 Concept of Consumer Behaviour

Consumer Behaviour has been the subject for increasing interest to marketers globally with absolute volume of research on the subject. Marketers that understand the consumer usually makes the difference between companies that succeed and those that fail. In a related study, Bhatti, (2018) investigated the impact of consumer behavior in online shopping using convenient and non probability sampling of 150 questionnaires to assess consumer behavior in online buying. In his analysis, he portrays consumer purchase intention and attitude as having a positive significant impact on consumer online buying behavior. The finding was in line with the study of Lim, Osman, Salahuddin, Romle, & Abdullah, S. (2016) where they stated that consumer intention and attitude are the factors that make people to engage in online buying bahaviour. Leyiaro, (2015) assessed the factors influencing consumer online buying behavior. The factors constitutes of perceived benefit, perceived risks, psychological factors and website design. In today's market place, consumers have become dynamic due to them being more informed and sophisticated than before. Background knowledge therefore about consumer needs, characteristics,

perceptions, preferences and behaviours will enable marketers develop effective strategies to promote products and services through taking advantage of the underpinning drivers to know about their behaviour.

2.2 Online Buying/ Shopping Behaviour

As a result of internet, many organizations have found a profitable channel for conducting business and a basic form to gain competitive advantage in a more technological oriented market. Online buying or online shopping is the process of buying goods through the internet. These processes consist of five steps similar to those associated with the traditional mode of buying (Liang & Lai, 2000). The process of online shopping behavior begins with the recognition of a certain need, which determines consumers to search for information on web sites. In the next stage, they will evaluate different buying possibilities by a set of personal criteria and will chose the product which best fit their expectation. After taking the purchasing decision, the consumer becomes the customer of a specific organization, due to a transaction and a series of eventual post-sales services (Onete, Constantinescu, & Filip, 2008). Lakshmi, (2016) determined the dimensions that affect consumer behavior in online buying such as personal characteristics, psychological characteristics, social characteristics, cultural characteristics, customer loyalty and trust. The study stated that convenience, and trust are the most important variables, the next which are important for them are prices and quality of products. Those variables are the most essential ones for consumers when they decide to shop online.

2.3 Financial Risks

Online shopping experience is negatively related to perceptions of financial risks associated with online shopping regardless of product category (Dai, Forsythe, & Kwon, 2014). The likelihood of suffering monetary loss as a result of buying a product or service is termed as financial risk. Egeln Joseph, (2012) opined that financial risk refers to probability of not getting the lowest possible price for the selected product from a particular online store. Crespo, Bosque and Sanchez, (2009), they viewed financial risk as the potential monetary

outlay associated with the initial purchase price as well as the subsequent maintenance cost of the product and the potential financial loss due to fraud. Abrar, Naveed and Ramay, (2017) averted that online consumers are concerned about their credit card information getting leaked out or they might get over charged by the vendors. Shoki, Sylvester, Ismail and Ali Mat, (2014) categories perceived risks experienced by consumers into levels and they stated that financial risk being the highest level of fear of respondents is the chances of suffering a financial loss due to fraud of credit card. They also stated that sometimes, consumers also fear that certain online websites are not secured enough and need constant reassurance. George, Olufemi, Jubril and Lucas, (2015) asserted that financial risk stems from paying more for a product than being necessary or not getting enough value for the money spent.

2.4 Performance Risk

Crespo, Bosque and Sanchez, (2009) averted that performance or functional risk

is the possibility of the product malfunctioning and not performing as it was designed and advertised and therefore failing to deliver the desired benefit. Furthermore, performance risk is the ability of the product to perform its basic function and deliver the value as per the promise made. Sharma and Kurien, (2017) stated that customers that buy from online site, they always have the dilemma whether they are going to get a genuine product or a duplicate one, and whether it is a standard product without any defects. Perceived performance risk may be higher in the online shopping environment due to inability to physically examine the product before purchase. Hubert, Blut, Brock, Backhaus and Eberhardt, (2017) argued that performance risk, refers to the likelihood that the application is flawed and does not work in the way it was originally intended.

2.5 Privacy Risk

Featherman and Pavlou, (2003) asserted that privacy risk is when there is a potential loss of control over personal information, such as when information about you is used without your knowledge or permission. Drennan, Mort, and Previte, (2006) averted that consumers may feel less control over their personal information which might be revealed as a result of online transaction, which makes them hesitant to provide such information required to make an online transaction. Inegbedion, Obadiaru and Bello, (2016) argued that internet users, including internet shoppers, are often required to reveal their personal information, such as name, address, email, telephone number and credit card number. Such information which they are required to reveal in order to shop online is perceived to be consumers' private information, as a result many consumers refuse to purchase online due to some privacy matters. Chen and Barnes, (2007) argued that perceived privacy is the consumers' ability to control the presence of other people in the environment during a market transaction or consumption behaviour.

2.6 Empirical Review on Dimensions Perceived Risk and Online Buying Behaviour

Most of the studies came from Asian countries such as Malaysia, India and Pakistan (Tham, Dastane, Johari, & Ismail, 2019: Hong, Zulkiffli, Wan Farha, & Hamsani, 2016: Ariffin, Mohan, & Goh, 2018:Tandon, Kiran, & Sah, 2016: Shweta & Deepak, 2018:Zeba & Ganguli, 2016) and very little studies were conducted in Nigeria.

Tham et al., (2019) examines the impact of financial risk, convenience risk, non delivery risk, return policy risk and product risk on consumer online shopping behaviour. 245 copies of questionnaire were administered to online shoppers through convenience sampling. Confirmatory factor analysis was used for model test and then structural equation modeling was used to test the study hypotheses. The result indicates that product, convenience and return policy risks have a significant and positive impact on consumer online buying behavior. Financial risk was found to have an insignificant and negative effect on consumer behavior. In addition, non delivery risk also has significant and negative impact on online shopping behaviour. However, the study was not able to cover the other various forms of

perceived risk and the study sample size is not a well representative of Malaysian's population which will hinder the work to be generalized.

Hong et al., (2016) investigated the impact of perceived risk and customers' attitude towards online shopping intention. The study variables were financial risk, product risk, non delivery risk and psychological in online shopping intention. 200 copies of questionnaires were issued to the respondents through convenience sampling method. The study was analysed using Pearson correlation analysis and regression analysis to see the relationship between the independent and the dependent variables. The study revealed that product, financial and non delivery risks have a positive and significant relationship between consumer's attitude to shop online, while psychological risk has a negative significant relationship between consumer's attitude to shop online. However, the study could have used probability sampling method which could have make the study in a more scientific approach.

Ariffin et al., (2018) examined the relationship between six factors of consumer's perceived risk and consumers online purchase intention. The variables of the study are financial risk, product risk, security risk, time risk, social risk and psychological risk and online purchase intention. 350 copies of questionnaires were distributed to online shoppers through electronic mail. The study used Pearson Correlation to see how the variables correlate and multiple regression analysis to analyse the direct relationship of the variables. The result indicates that financial risk, product risk, security risk, time risk, and psychological risk have a significant negative influence on consumer online purchase intention, while social risk was insignificant. Security risk was the main contributor for consumers to deter from purchasing online. However, the study could have use trust as a moderator of the factors of perceived risk to see whether if it will strengthen the relationship between the variables.

Marriott and Williams, (2018) explored consumers perceived risk and trust for mobile shopping. Perceived risk, financial risk, psychological risk, performance risk, time risk, trust (as a mediator) and online purchase intention were the variables used for the study. 500 copies of questionnaires were issued to online shoppers through social media, email and face to face surveys were distributed by the researcher. The study used structural equation modeling (SEM) to see the relationship between the variables. The result of the study indicates that the three antecedents of risk, being financial, performance and psychological risks, significantly contribute to overall risk development, overall risk is found an insignificant predictor of m-shopping in the study. However, the study could have extended the model to include other antecedents of perceived risk. Also, the study used two theoretically grounded model of trust and risk that shows low explanations into variance which implies further research to combine these research findings against other well established technology acceptance models.

Sharma and Kurien, (2017) analysed the impact of demographic profile of respondents on perceived risk. The study variables are performance risk, financial risk, time risk, psychological risk, social

risk, privacy risk and system risk. The study used both qualitative and quantitative approach for data gathering to understand the impact of demographic variables which are gender, income, education, age and occupation on perceived risk. The qualitative approach was based on focus group discussion while the quantitative approach was based on 1,350 copies of questionnaires sent to respondents both online and personal method. The study used Chi square to analyse the data. The study found that Indian consumers are more concerned about financial risk and performance risk as compared to other risk associated with online transactions. Also, from the bases of demographic variables, on gender, it was found that females perceived more risk in online transactions as compared to males. From the chi square analysis, it was found that of the demographic variables, gender and income levels have a significant relationship with perceived risk. It was also found that approximately all risks are perceived equally by different occupation/professional group segments. However, the study was not grounded on any theory which could have underpinned the study.

Emamdin, Singh, and Fah, (2020) examined the role of e-trust, e-loyalty, and e-satisfaction on online buying behaviour among millennials in Kuala Lumpur, Malaysia. The study used convenience sampling to distribute 100 copies of questionnaires to respondents through the internet. The study used multiple regression analysis and correlation analysis to analyse the relationship between the variables. Results of the study reveals that only e-loyalty and e-satisfaction were significant predictors of online purchasing behaviour by millennials. However, the study was not based on any theoretical model.

George, Olufemi, Jubril, and Lucas, (2015) examined and investigated perceived risk and trust among online shoppers and online vendors in Nigeria. The study variables on perceived risks are financial, product performance, social, psychological and time/ convenience loss. The study used questionnaires to 100 respondents. Data was analysed using Pearson product-moment correlation coefficient. The study found that the presence of perceived risk negatively affects trust in online shopping and that perceived usefulness of online shopping has a positive effect on actual usage of online shopping. However, the study focused its attention to only two states and the federal capital territory without specifying weather the respondents are students from a tertiary institution or they are business people.

Abrar, Naveed, and Ramay, (2017) investigated the influence of perceived risk (financial risk, product risk, convenience risk and non-delivery risk) on online impulse buying tendency. 200 copies of questionnaires were distributed online to respondents through facebook and google groups. The study used correlation and regression for data analysis. The study found that overall perceived risk, financial risk and product risk were found to have a moderately negative association with online impulse buying tendency whereas convenience risk and non-delivery risk had negative but weaker association with online impulse buying tendency. However, the sample size of the study respondents was too small to make generalization about the online buying behaviour of the people of Pakistan.

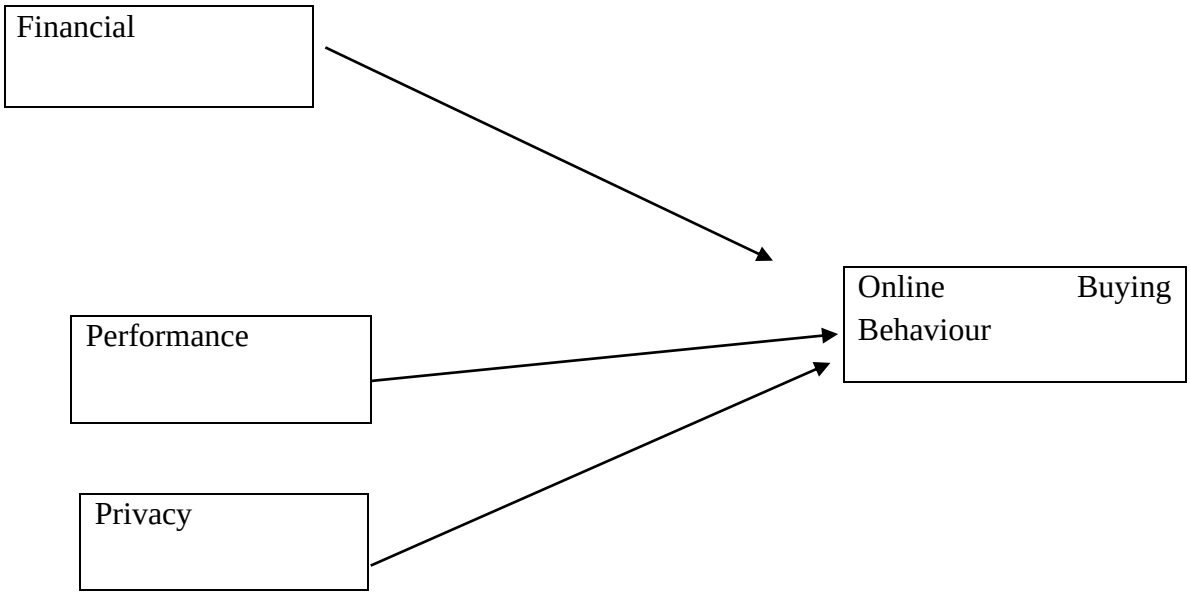
Kumar, (2017) analysed trust and perceived risk on online shopping. The study variables are the eight factors of perceived risk (Financial risk, Product performance risk, Physical risk, Psychological risk, Social risk, Time/ convenience risk, Source Risk and Privacy Risk) and trust (Integrity, Benevolence, Familiarity, Predictability and Competency). 208 copies of questionnaires were distributed through simple random sampling method. The study employed factor analysis to see the variance of respondents shopping behaviour. The study found that six factors, three types each of perceived risks and trusts respectively, impacts the shopping behaviour while shopping online. However, the study was restricted for using factor analysis alone. It could have used correlation and regression analysis. The study was not based on any theory.

2.7 Theoretical Framework

The study has adopted the theory of Reason Action developed by Fishbein and Ajzen (1975). The reason for the adoption is that the theory is one of the most frequently used frameworks to explain consumer behaviour (Frankowski & Leskovec 2016) and to clarify the determinants of human behavior (Nwankwo et al., 2019). The theory provides a behavioural clarification of the essentiality of attitudes on potential buyer's decision-making process (Fishbein and Ajzen 1975). The main principle in the theory of reasoned action is that people behave in rational manner while trying to achieve positive outcomes and meeting the expectations of others. In this way, the theory of reasoned action clarifies how attitudes are shaped and why such attitudes influence the way human-being behave

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2.8 Conceptual Framework



3.0 Methodology

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3.1 Population and Sample size

The population of this study constitutes undergraduate students of ABUBS. The number of departments in ABUBS is (six) 6 they are Accounting, Business Administration, Banking and Finance, Economics, Insurance and Actuarial Science and Marketing. ABUBS is having 400 level students in only three departments out of the ones mentioned. They are Accounting, Business Administration and Economics department. However, the study intends to use the three departments as the population of the study.

Table 1: Current Population of ABUBS

S/N	Department	No. of students
1.	Accounting	141
2.	Business Administration	250
3.	Economics	120
	Total	511

Source: Exam officers ABUBS

From table 3.1, the three departments above will be used as the study population of 511 students in which sample will be drawn from it.

3.2 Sample Size and Sampling Technique

The sample size of this study was determined using Yamane (1973) formula with 95% confidential level at 5% level of precision from three departments. Therefore, the calculation of sample size will be given in the following equation.

$$n = N / 1+N (e)^2$$

Where n = sample size

N = population

e = error of the sampling or level of significant

Thus,

N = 511, e = 0.05 and n =?

$$n= 511/1+511(0.05)^2$$

$$n= 511/2.2775$$

$$n=224$$

Furthermore, 10% (22) will be added to the above minimum sample size given by the formula to make it 246. As this will take care of other errors such as incorrect filling and failure of some respondents to return questionnaire (Israel, 2013).

In this study, simple random sampling was employed because it's a method in which each element of the population has an equal chance of been selected in the sample. The reason for selecting this method is because

simple random sampling can be used in a homogenous population and has the least bias and has the most generalizability as each and every element can fall within the sample (Sekaran & Bougie, 2013).

3.3 Sources of Data

The source of data for the study is primary source. Primary source was used through the use of survey questionnaire to collect data from respondents.

3.4 Method of Data collection

Date was collected through self administered questionnaire. The copies of questionnaires were distributed to the eligible respondents in each department. Only those students that have ever used online medium to buy a product were considered. The questionnaire is divided into two sections and all questions are in close ended form. Section one ask questions on the bio data of the respondent and in section two, questions were asked on perceived risks dimensions which are financial, performance and privacy risks.

3.5 Measurements of Variables

The dependent variable, consumer online buying behaviour was measured on the attributes of online shopping based on 7 items. Respondents will be asked to indicate why they prefer to shop online instead of purchasing through the traditional method. The questionnaire will be adapted from (Moshrefjavadi, Dolatabadi, Nourbakhsh, Poursaeedi, & Asadollahi, 2012). The adapted measuring scale used seven point likert scale ranging from "Strongly Disagree" (1) to "Strongly Agree" (7). But for this study, it intends to use the five point likert scale for measuring consumer online behavior ranging from “Strongly Disagree” (1) to “Strongly Agree” (5). This will enable the researcher to have precise, clear and straight forward answers from the respondents.

The independent variables are the dimensions of perceived risk which are financial, performance and privacy risks. Financial risks will be measured on 3 items adapted from (Moshrefjavadi et al., 2012). This study employs a 5 point likert scale ranging from “Strongly Disagree” (1) to “Strongly Agree” (5) in order to measure the variable. The measures of the construct have satisfied the validity and reliability assessment as stated by the authors.

Product performance risk will be measured on 3 items adapted from (Moshrefjavadi et al., 2012) on 5 point likert scale. Privacy risk will be measured on 3 items adapted from (Faqih, 2016) also on 5 point likert scale.

3.6 Technique of Data Analysis and Justification

This study employs the use of Statistical Package for the Social Sciences (SPSS) version 21 for data coding, data screening, and other preliminary analyses. However, for the major analysis, the study employs the use of Partial Least Squares Structural Equation Modeling (PLS- SEM) path modeling using the smartPLS3.2.7 statistical software.

4.0 Results and Discussions

4.1 Analytical procedure

Prior to the main analysis, this study ensured assumptions about outlier check, normality and multicollinearity (Hair, Hult,

Ringle & Sarstedt, 2017). After successfully satisfying all assumptions, we adopted the partial least squares (PLS) path modeling method. The method is used because the study is aimed at predicting the dependent variable (Duarte & Raposo, 2010) and PLS is also a non-parametric technique (Ruiz, Mujica, Berjaga, & Rodellar, 2013). In order to validate and evaluate the research model, Hair, Sarstedt, Ringle, and Gudergan (2017) suggested using two stages of evaluation. They are measurement models (also called external models in PLS-SEM) and structural models (also called internal models in PLS-SEM).

4.1.1 Measurement Model

In order to evaluate the measurement model of this study, the researchers evaluated the reliability of the individual items measuring each potential structure, the internal consistency reliability (i.e, the composite reliability), the discriminant validity, and the convergence validity of each reflective construct (Hair et al., 2017). Although, Hair et al. (2017) recommends using an outer loading of 0.70 as reliable and acceptable, they argued that an indicator should be deleted only if deleting the item increases the constructs AVE or Composite reliability. Hence, all the items where maintained because the AVE was already sufficient and no improvement is expected after deleting any item.

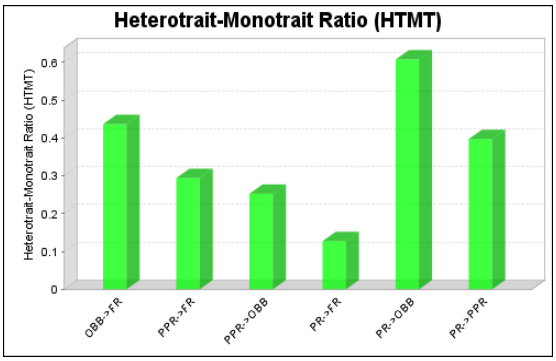
Table 1: Measurement Model

Constructs	**Indicators**	**Loadings**	**Cronbach's Alpha**	**Composite Reliability**	**Average Variance Extracted (AVE)**
Financial Risk	FR1	0.85	0.81	0.88	0.72
	FR2	0.82			
	FR3	0.86			
Online Buying Behaviour	OBB 2	0.79	0.86	0.89	0.54
	OBB1	0.74			
	OBB3	0.83			
	OBB4	0.71			
	OBB5	0.53			
	OBB6	0.78			
	OBB7	0.71			
Product Performance Risk	PPR1	0.57	0.65	0.75	0.52
	PPR2	0.96			
	PPR3	0.56			
Privacy Risk	PR1	0.96	0.94	0.96	0.89

PR2	0.93
PR3	0.95

In addition, the composite reliability and Cronbach's alpha value were evaluated to determine the internal consistency of the reflective structure (between 0 and 1), the higher values represent higher reliabilities. In conclusion, all of these constructs are reliable because their respective composite reliability and Cronbach alpha values are above the threshold of 0.70. Again, the convergent validity was also met as all the AVE values were all above 0.50.

Furthermore, to ascertain the discriminant validity, Duarte and Amaro (2018) proposed the use of multitrait-multimethod (HTMT) matrix as a more adequate and sensitive approach to detecting discriminant validity.



As can be seen from the figure above, the HTMT statistics are given based on the correlation between their reflective construction items. Since the HTMT value is lower than the 0.85 threshold proposed by (Hair et al., 2017), the reflective latent variable of this study has discriminant validity.

4.1.2 Structural Model

After all the requirements of the measurement model are met, the structural model is evaluated. The first part of the structural model evaluation involves the testing of theoretical relationships.

Table 2: Structural Model

R/Ship	Beta Values	Standard Deviation	T Statistics	P Values
FR -> OBB	-0.34	0.11	2.97	0.00
PPR -> OBB	0.06	0.15	0.45	0.65
PR -> OBB	-0.51	0.12	4.32	0.00

The bootstrapping result presented in table 2 shows that FR has significant negative relationship with OBB (Beta= -0.34, P=0.00). Similarly, PR was found to have negative and significant effect on OBB

(Beta=-0.51, P=0.00). On the other hand, PPR was found to have positive and insignificant relationship with OBB (Beta=0.06, P=0.65). All the hypotheses were assessed at 5% level of significance.

4.1.3 Effect size and Predictive Relevance

The effect size outlines the potential effects of specific exogenous latent variables on endogenous variables. The general criteria for evaluating $f2$ include the values of 0.02(small), 0.15(medium), and 0.35(large) (Cohen, 1988).

Table 3: *f-Square, R-Square and Q-square*

Constructs	**OBB**	**Effect Size**
FR	0.197	Medium
PPR	0.007	None
PR	0.421	Large
R-Square		
Construct	**R Square**	**R Square Adjusted**
OBB	0.442	0.413
Q-Square		
Construct	**SSO**	**SSE**	**Q^2 (=1-SSE/SSO)**
OBB	434	355.222	0.182

As can be seen from table 3 above, based on the standards highlighted by Cohen (1988), it can be seen that PR has a large effect, FR has a medium effect size, while PPR has no effect on OBB. It also shows that all the variables accounted for 44% variance in online buying behaviour which is considered moderate according to Chin (1998). Consequently, since the Q^2 is greater than zero, it is assumed to have predictive relevance because higher Q^2

represents greater predictive relevance (Duarte & Roposo, 2010).

4.2 Discussion of the findings

The major objective of this study is to examine the effect perceived risk dimensions in online buying behaviour among undergraduate students in ABU Zaria. Results from the collected data signified that FR has significant negative relationship with OBB. These findings are in agreement with the study of (Hubert et al., 2017; Abrar et al., 2017; Ariffin et al., 2018; Tham et al., 2019) which found a negative and insignificant effect between FR and online buying behavior, and contradicts the findings of (Hong et al., 2016; Sharma & Kurien, 2017; Nepomuceno, Laroche, & Richard, 2013). Similarly PR was found to have negative and significant effect on OBB. This finding is in line with the study of (Inegbedion et al., 2016; Faqih, 2016; Fortes & Rita, 2016). On the other hand, PPR was found to have positive and insignificant relationship with OBB. The finding contradicts the findings of (Abrar et al., 2017; Almousa, 2011). This implies that the lower the financial risk and privacy risk the more students will engage in online buying and vise versa. Thus, financial risk and privacy risk are very critical in online buying behavior of university students which could lead to disengagement in online buying behaviour. While product performance risk is not significant since it can also be found in the traditional buying.

5.0 CONCLUSION AND RECOMMENDATIONS

The study concludes that financial risk and privacy risk are critical factors in enhancing students to engage in online buying behavior of undergraduate students of ABU Zaria. The less the financial risk and privacy risks, the more students will engage in online buying behaviour. Therefore, the study recommends that online vendors and policy makers should try to restore confidence in the fear of exchange in online buying behavior by improving digital payment infrastructure, product exchange, guarantees of the products, and money refunded in case of faulty products ought to be addressed vigorously. Campaigns should also be done to educate consumers on online shopping to lure in more shoppers. This is because consumers are more likely to make online purchases if they feel their security and privacy provided by online vendors are adequate.

Lastly, this study contributes to online buying behavior literature by documenting the effect of perceived risks dimensions in online buying behaviour of undergraduate students.

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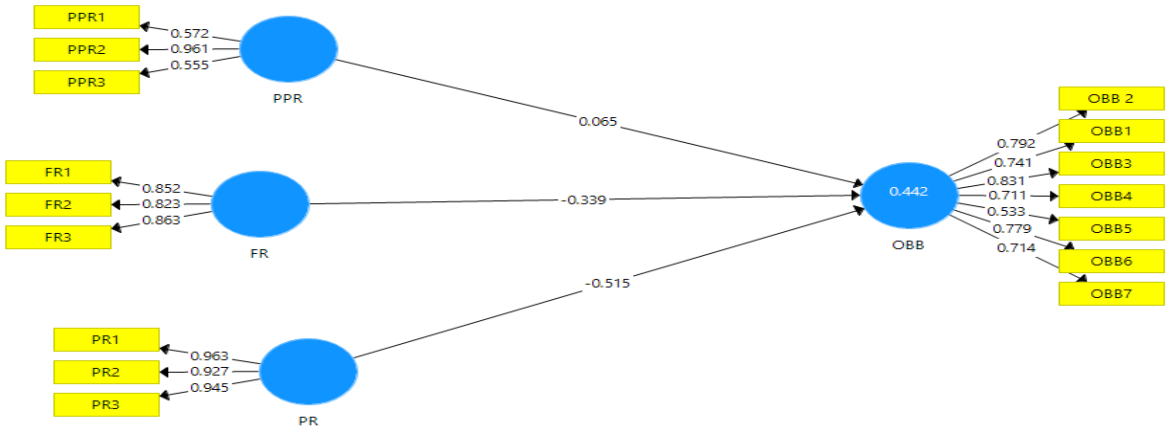
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APPENDICES **PLS ALGORISM**



STRUCTURAL MODEL

