

EFFECT OF PERCEIVED RISK ON CONSUMER ONLINE PURCHASE INTENTIONS IN THE E-COMMERCE INDUSTRY IN FEDERAL CAPITAL TERRITORY, NIGERIA

¹Dr. Ahmed Abdullahi Ibrahim, ²Dr. Abdul Adamu & ³AJIBADE, Patricia Ajoke

^{1,2&3}Department of Business Administration, Nasarawa State University, Keffi
email: ibrahimahmedabdullahi@nsuk.edu.ng, ajibade.patricia2015@gmail.com

Abstract

This study examines the effect perceived risk on consumer online purchase intentions in the e-commerce industry in Abuja FCT. The study's specific objectives were to assess the influence of financial risk, social risk, and psychological risk on consumer online purchase intentions in the e-commerce industry in Abuja FCT. A sample size of 425 individuals residing in the Federal Capital Territory (FCT) Abuja who have access to the internet and have either made online purchases or have shown interest in online shopping within the past year were selected using the Cochran (1963) formula for sample size determination. Purposive and convenience sampling methods were employed in selecting the respondents. Data was collected through primary sources using a structured questionnaire on a five-point Likert scale. Structural equation modeling with partial least squares (PLS-SEM) was employed to analyse the data and test hypotheses. The results show that financial risk has a positive but insignificant effect on consumer online purchase intentions in the e-commerce industry in Abuja FCT, Social risk showed a negative insignificant effect on consumer online purchase intentions in the e-commerce industry in Abuja FCT, while psychological risk revealed a positive significant effect on consumer online purchase intentions in the e-commerce industry in Abuja FCT. The study concludes that perceived risk has a significant effect on consumer online purchase intentions in the e-commerce industry in Abuja FCT. The study recommends that businesses implement a multi-layered payment security system that includes secure payment gateways, encryption protocols, and clear money-back guarantees. This will help maintain the current level of consumer confidence while preparing for potential future changes in financial risk perceptions. Businesses should implement an integrated review and rating system, featuring verified customer reviews, product ratings, and user-generated content.

Keywords: Perceived Risk, Financial Risk, Social Risk, Psychological Risk, E-Commerce Industry

INTRODUCTION

The rapid growth of e-commerce has transformed the way consumers make purchasing decisions. Online purchase intentions, defined as a consumer's willingness to engage in online transactions, have become a key area of study in the field of digital marketing (Javadi et al., 2012). As more consumers shift their spending to online platforms, understanding the factors that influence their intentions to purchase products and services electronically has significant implications for businesses operating in the e-commerce industry.

Globally, the e-commerce market has experienced remarkable expansion in recent years. According to a report by eMarketer, worldwide e-commerce sales are expected to reach \$5.5 trillion by 2023, accounting for nearly a quarter of total retail sales (eMarketer, 2019). This growth is driven by the increasing accessibility of the internet, the proliferation of mobile devices, and the convenience and variety of products and services available through online platforms.

In the context of Nigeria's Federal Capital Territory (FCT) Abuja, the e-commerce industry has also seen significant growth and consumer adoption. Abuja, as the political and administrative capital of Nigeria, is home to a diverse population with growing disposable incomes and a strong appetite for online shopping (Osakwe & Okeke, 2016). A study by the Nigeria Internet Registration Association (NiRA) found that the number of internet users in Nigeria, including those in the FCT, has been increasing steadily, reaching over 100 million in 2019 (NiRA, 2019).

The rise of e-commerce platforms, such as Jumia and Konga, has further driven the adoption of online shopping among consumers in the FCT. These platforms offer a wide range of products, from

electronics and fashion to groceries and household items, catering to the diverse needs of Abuja's residents (Nwosu & Ugwu, 2021). However, the growth of the e-commerce industry in the FCT has also been accompanied by concerns related to perceived risks, which can influence consumer online purchase intentions.

Financial risk, the fear of monetary loss or fraud, is one of the most frequently cited barriers to online purchasing, especially in markets with low trust in online payment systems. In countries with high cybercrime rates, such as Nigeria, security concerns further intensify this perceived risk, deterring many consumers from making online purchases (Ajiboye et al., 2019). Social risk, or the fear of social judgment based on a purchase, also plays a role, as consumers may hesitate to make purchases they perceive as potentially socially unfavorable or judgmental in their networks (Chen et al., 2021). Psychological risk involves emotional discomfort or regret from making an incorrect decision and is often exacerbated by a lack of in-person verification of products, a critical factor in online environments (Kesharwani & Bisht, 2012). Concerned by this trend, this study seeks to investigate the effect of perceived risk on consumer online purchase intentions in the e-commerce industry in FCT Abuja.

Statement of the Problem

Despite numerous efforts by the e-commerce sector to enhance consumer trust and convenience, challenges related to perceived risks continue to hinder online purchase intentions. E-commerce platforms have implemented measures such as secure payment systems, product guarantees, flexible return policies, and rigorous data protection to build consumer confidence and encourage online purchases (Gefen & Straub, 2024). For example, platforms like Jumia and Konga in Nigeria have adopted strategies like user reviews, cash-on-delivery options, and improved logistics to address consumer concerns about product quality, financial security, and timely delivery.

However, these efforts have not fully mitigated consumers' perceived risks, particularly in regions like the Federal Capital Territory (FCT) Abuja. Consumers express concerns about product authenticity, payment security, and delivery reliability, which directly impact their purchase intentions. Financial risk, characterized by fears of fraud and potential monetary loss, remains a significant concern. Similarly, social and psychological risks, contribute to low consumer confidence in the digital marketplace. As a result, many consumers hesitate to make online purchases, reducing the effectiveness of the e-commerce sector's efforts and impeding its growth.

Recent studies have examined the role of perceived risk in consumer online purchase intentions, especially within emerging markets where trust and risk perceptions significantly affect e-commerce growth. For instance, Park et al. (2021) investigated how perceived financial and security risks impact online purchase intentions in Southeast Asian markets, finding that consumers are particularly wary of financial fraud and data breaches, which limits their willingness to buy online. Similarly, Hassan and Ali (2022) explored the effects of product risk and security concerns on e-commerce adoption in South Africa, demonstrating that uncertainties about product authenticity and data privacy were major deterrents to online shopping. Further, Singh et al. (2023) analyzed social and psychological risks in India, identifying that these dimensions affect consumers' online engagement by creating anxiety and distrust. While previous studies have provided valuable insights into specific risk types affecting online purchases, the majority focus on a single or limited range of risks without encompassing a comprehensive view. Chen and Widjaja (2022) found that addressing only financial and security concerns was insufficient to reduce overall perceived risk, as social and product risks also played significant roles. Additionally, Li and Zhang (2023) explored the impact of psychological risks in the U.S. e-commerce market but noted a gap in understanding how these risks impact less mature e-commerce markets, especially in Sub-Saharan Africa.

Given this context, there is a research gap in examining a broader set of perceived risks—financial, social, and psychological, risks—together, particularly within the Nigerian market, and more specifically, in the Federal Capital Territory (FCT) Abuja.

The main objective of this study is to access the effect of perceived risk on consumer online purchase intentions in the e-commerce industry in Abuja FCT while the specific objectives are to:

- i. examine the effect of financial risk on consumer online purchase intentions in the e-commerce industry in Abuja FCT;
- ii. evaluate the effect of social risk on consumer online purchase intentions in the e-commerce industry in Abuja FCT; and
- iii. examine the effect of psychological risk on consumer online purchase intentions in the e-commerce industry in Abuja FCT.

LITERATURE REVIEW

Perceived Risk

Wang et al. (2018) conceptualize perceived risk as the subjective expectation of loss associated with decisions under uncertainty, shaped by personal, social, and cultural factors. Thompson and Brown (2022) focus on the gap between objective and subjective risk assessments, noting how perceived risk represents the difference between objective risk assessments and subjective risk interpretations, influenced by heuristics, biases, and individual risk tolerance levels. Anderson et al. (2023) contributes to this understanding by highlighting both cognitive and affective components, where individuals process information about potential hazards while simultaneously experiencing emotional reactions to these threats. The dynamic nature of perceived risk is emphasized by Lee and Park (2021), who describe it as an assessment process where individuals evaluate potential negative outcomes based on their knowledge, experience, and social context, leading to risk-mitigating behaviors.

Financial Risk

Financial risk refers to the loss in the monetary term associated with buying. It is a loss of money in a bad purchasing experience. Financial risk is the first major and big risk during buying online (Sinha & Singh, 2017). In addition, it is also the strongest predictor of online shopping behavior. Financial risk plays a major role in consumer decision making for buying online (Haider & Nasir, 2016). Researchers reveal that financial risk is a money loss that possibly the fraud of credit card and discloses card information that's why people avoid buying online (Masoud, 2013). It is also considered that the product price is not the lowest in comparison (Egeln & Joseph, 2012). Furthermore, the risk is problematic online buying process. Consumer faces financial risk in the early stage of shopping when they place an order. But its level depends on the nature of the product, all products' risk level is different and there is no specific standard (Egeln & Joseph, 2012).

Social Risk

Social risk involves the feeling of fear, especially from family and friends who disapprove their online purchases (Popli & Mishra, 2015). Additionally, social risk could prevent a consumer from making a purchase, especially when there is potential disapproval from the consumer's family or friends who play a significant role in discouraging consumers from making decisions to their purchase (Shang et al., 2017). Social risk is the likelihood that customers would worry about losing friends and respect from social groups due to their online shopping habits (Asawa & Kumar 2016).

Psychological risk refers to the mental dissatisfaction arising due to perception of wrong decision while shopping online (Amirtha et. al., 2020). It could possibly be defined as potential ego loss which may result due to inconsistency of reaching online purchase goal (Sharma, 2017). In other words, it can be defined as potential mental frustration causing due to not meeting the expectation in future from the online purchase decision. It can be also due to mental dissatisfaction due to choosing a cheap product among huge variety of products (Ueltchy et. al., 2014).

Online Purchase Intentions

Online Purchase Intention encompasses more diverse dimensions in contemporary research. Patel and Nguyen (2023) frame it as the culmination of digital touchpoint interactions that lead to a consumer's deliberate intention to complete transactions in virtual marketplaces, emphasizing the role of multichannel consumer experiences. This perspective is enhanced by Wilson and García (2024), who define it as the measurable probability that a consumer will transition from browsing to buying behaviors within digital platforms, influenced by both hedonic and utilitarian motivations.

Empirical Review

Ibrahim et al. (2024) examined the effect of perceived risk factors (i.e. perceived performance risk, financial risk, time-loss risk, psychological risk, and source risk) on consumers' unwillingness to buy home appliances online in Malaysia. The moderation of online consumer reviews with the relationship between perceived risk and consumers' unwillingness to buy home appliances online is also investigated. Results via the Structural Equation Modelling (SEM) technique revealed that perceived performance risk influences consumers' likelihood of not buying home appliances online, as the consumers are themselves unable to touch, see and hear the product. Online consumer reviews have also been found to moderate this relationship. Further investigation revealed that perceived financial risk had an insignificant positive effect on the consumers' unwillingness to buy home appliances online. Although this study is comprehensive, it differs in terms of external validity and the target population.

Imaddudin (2024) determined the influence of perceived benefits and financial risks on intention to purchase life insurance products with consumer perceived fear as a mediating variable. The population of this research is all customers of the East Java regional development bank (BPD) Jember branch. The sampling method uses non-probability sampling with a purposive sampling technique, namely respondents are selected based on certain criteria. Hypothesis testing in this research uses SEM (Structured Equation Modeling) analysis and the program used for analysis is AMOS (Analysis of Moment Structure). The results of this study indicate that financial Risk significantly influences Intention to Purchase Life Insurance Products while Perceived Benefit does not have a significant effect. Financial Risk also significantly influences Life Insurance Consumer Perceived Fear while Perceived Benefit does not have a significant influence. Lastly, Consumer Perceived Fear acts as a mediating influence on Risk Perception on Intention to Purchase Life Insurance Products. Although this study is comprehensive, it differs in terms of external validity and the target population.

Lee and Rahman (2024) investigated the effect of social risk on online purchase intentions among young professionals in Singapore. Their mixed-methods sequential explanatory design incorporated both quantitative surveys and follow-up in-depth interviews. The study population comprised working professionals aged 25-40 years in Singapore's financial district, from which 842 participants were selected using stratified random sampling to ensure representation across different income levels and professional sectors. Data collection involved a structured online questionnaire followed by semi-structured interviews with 30 selected participants. Using partial least squares structural equation modeling (PLS-SEM) and thematic analysis for qualitative data, the study revealed that social risk has a significant negative effect on purchase intentions with professional reputation concerns serving as the strongest mediator. A notable critique is the study's limited generalizability due to its focus on urban professionals and potential self-selection bias in interview participation.

Thompson and Martinez (2024) analyzed how social risk affects online purchase intentions across different generational cohorts. Their cross-sectional survey design incorporated social media behavior analysis. The study targeted online shoppers across the United States, employing quota sampling to ensure representative distribution across Gen Z, Millennials, and Gen X, resulting in 2,156 valid responses. Data were collected through an online survey platform and social media tracking with participant consent. Multiple regression analysis and social network analysis revealed that social risk's impact was strongest among Gen Z with social media influence serving as a significant moderator. Critics

point to the study's potential social desirability bias and the challenge of isolating generational effects from age-related factors.

Hasan and Rahman (2024) researched the Influence of Psychological Risk on Online Purchase Intentions in Bangladesh using a descriptive survey approach. The study's population consisted of Bangladeshi online shoppers, with a sample of 350 respondents obtained through systematic random sampling. Data were collected via online questionnaires and analyzed using multiple regression analysis. The findings revealed that concerns around data privacy and fraud significantly reduced purchase intentions among Bangladeshi consumers. The study noted that enhancing awareness about data security measures could mitigate these risks. However, the study's focus on a single urban area in Bangladesh limits the generalizability of its findings across rural regions where e-commerce adoption is lower.

Alam and Yasin (2023) studied the Impact of Psychological Risk on E-commerce Adoption Among Malaysian Consumers using a survey research design. The study targeted Malaysian internet users, with a sample of 400 respondents selected through stratified sampling. Data were gathered through a structured questionnaire, and multiple regression analysis was used to assess the influence of psychological risk on purchase intentions. The results indicated a significant negative effect of psychological risk on online purchase intentions, as concerns about product authenticity and transaction security deterred Malaysian consumers. The study effectively highlights cultural factors impacting e-commerce adoption but lacks a longitudinal approach to track changes in perceptions over time.

Perceived Risk Theory (PRT)

Perceived Risk Theory (PRT) was developed by economist Raymond A. Bauer in 1960 to explain consumer decision-making under uncertainty, focusing on how individuals evaluate the potential risks associated with a purchase. Originally focused on traditional retail environments, this theory has been adapted for digital technology contexts, where online shopping involves unique risks compared to in-person transactions. Perceived risks in online shopping include financial, product, security, privacy, and performance risks, all which shape consumers' purchase intentions and decision-making processes (Bauer, 1960; Featherman & Pavlou, 2003).

PRT posits that consumers actively evaluate potential losses or negative outcomes before committing to a purchase, and the degree of perceived risk influences their behavior. This evaluation process considers several risk dimensions, each contributing to an overall risk perception that determines whether the consumer proceeds with the purchase or refrains from it. In an online shopping context, these risks are heightened by the intangible nature of digital transactions, where consumers cannot physically inspect products, thereby increasing concerns about potential loss and dissatisfaction (Featherman & Pavlou, 2003). PRT explains how the various dimensions of perceived risk—such as financial, social, and psychological concerns—affect consumers' likelihood of making an online purchase. When risks are perceived as high, consumers are more likely to abandon online shopping carts or avoid specific platforms altogether, demonstrating a direct link between perceived risk and reduced purchase intentions. However, strategies to mitigate these risks, such as enhancing website security or providing clear return policies, can help reduce perceived risk, thus fostering more favorable consumer intentions (Pavlou, 2003; Kim et al., 2008).

METHODOLOGY

This research study utilized a survey research design to gather and analyze data from a diverse sample of participants relevant to the topic under investigation. The value of this research design lies in its ability to provide broad coverage and representation of the population being studied, offering a holistic understanding of the research problem.

The population of this study comprises individuals residing in the Federal Capital Territory (FCT) Abuja who have access to the internet and have either made online purchases or have shown interest in online shopping within the past year. Therefore, this population is finite but undeterminable.

To determine an appropriate sample size for the study, Cochran's (1963) sample size formula for an infinite population is utilized. This formula incorporates the desired confidence level, margin of error, and estimated proportion, enabling the calculation of a sample size that accurately represents the population.

The formula is:

$$n = \frac{Z^2 \times p \times q}{E^2}$$

where:

n is the sample size

Z is the Z-score for the desired level of confidence (e.g., 1.96 for a 95% confidence level)

p is the estimated proportion of the population with the characteristic of interest

q is 1 - p (the proportion of the population without the characteristic of interest)

E is the desired margin of error (expressed as a decimal)

Thus, the sample size for this study is:

$$n = \frac{1.96^2 \times 0.5 \times 0.5}{0.05^2} = 385$$

The study recommends a minimum sample size of 385 respondents. Following Israel's (2013) guidance, an additional 10%–30% should be added to account for potential non-respondents or unreturned questionnaires. Thus, 10% of the sample size, equating to 39 respondents, was added, bringing the total to 425 questionnaires to be distributed. Respondents were selected using a combination of purposive and convenience sampling methods. For this study, data was collected through primary sources using a structured questionnaire. The questionnaire utilized a five-point Likert scale, ranging from "strongly agree" to "strongly disagree," as the response format.

Construct Reliability

To effectively establish the reliability of the concept, it is generally accepted that both Cronbach's alpha and composite reliability (CR) should exceed the threshold of 0.7, which is widely regarded as the standard for ensuring a strong level of internal consistency. Table 3.1 presents the results for Cronbach's Alpha, rho_A, composite reliability, and average variance extracted.

Table 3.1: Construct Reliability and Validity of the indicators

Variables	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Financial Risk	0.852	0.867	0.879	0.652
Social Risk	0.825	0.842	0.867	0.621
Psychological Risk	0.876	0.891	0.892	0.678
Online Purchase Intention	0.854	0.871	0.882	0.665

Source: Researcher's Computation using SMART PLS.

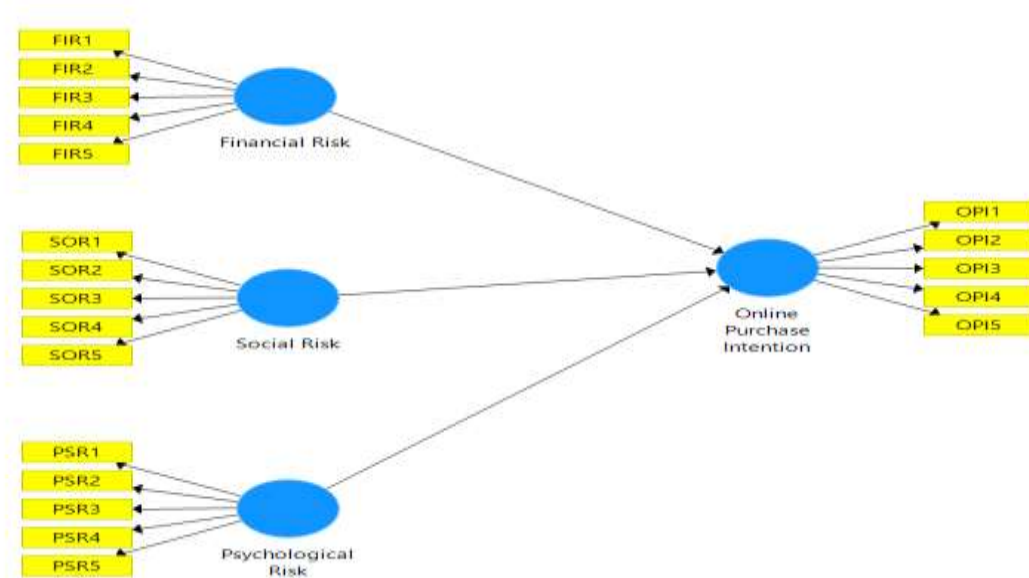
Table 3.1 presents key statistical measures for four variables: Financial Risk, Social Risk, Psychological Risk, and Online Purchase Intention. According to established research thresholds, all variables demonstrate strong psychometric properties. For Cronbach's Alpha, all variables exceed the recommended threshold of 0.7 (Nunnally & Bernstein, 1994; Hair et al., 2017), with values ranging from 0.825 to 0.876. This indicates excellent internal consistency and reliability across the constructs. Financial Risk shows a Cronbach's Alpha of 0.852, Social Risk at 0.825, Psychological Risk at 0.876, and Online Purchase Intention at 0.854, suggesting that the measurement scales are robust and consistent.

The rho_A values, another measure of construct reliability, also surpass the 0.7 threshold recommended by Dijkstra and Henseler (2015), ranging from 0.842 to 0.891. This further confirms the reliability of the measurement scales. Specifically, Psychological Risk has the highest rho_A at 0.891, while Social Risk has the lowest at 0.842. Composite Reliability values for all variables are above 0.8, which meets the recommended threshold of 0.7 suggested by Fornell and Larcker (1981) and confirmed by Hair et al. (2019). Financial Risk registers 0.879, Social Risk 0.867, Psychological Risk 0.892, and Online Purchase Intention 0.882. These high values indicate that the constructs are consistently measuring the intended concepts. The Average Variance Extracted (AVE) values, which assess convergent validity, are all above the recommended threshold of 0.5 (Fornell & Larcker, 1981; Hair et al., 2016). Psychological Risk has the highest AVE at 0.678, followed by Online Purchase Intention at 0.665, Financial Risk at 0.652, and Social Risk at 0.621. These values suggest that each construct explains more than 50% of the variance in its indicators, demonstrating good convergent validity.

Techniques for Data Analysis and Model Specification

The study employed Partial Least Square Structural Equation Modeling (PLS-SEM) to examine the effect of each independent variable on the dependent variable. Smart PLS was used to code and analyze the data for this study to achieve all the set objectives.

Structural Model



RESULT AND DISCUSSION

Data Presentation

Table 4.1: Distribution and Retrieval of Questionnaire

Questionnaires	Frequency	Percent (%)
Returned	391	92
Not returned	34	8
Total	425	100

Source: Field Survey, 2024

Table 4.1 provides a comprehensive overview of questionnaire distribution and retrieval rates. Out of the total copies of questionnaire distributed, 391 copies of the questionnaire were successfully returned, representing 92% of the total survey sample. Conversely, 34 questionnaires were not returned, accounting for 8% of the total distributed questionnaires. The high return rate of 92% suggests a robust data collection process, indicating strong participant engagement and cooperation. This significant response rate enhances the reliability and representativeness of the research findings, as it minimizes potential non-response bias. The total number of distributed questionnaires was 425, providing a substantial sample size for comprehensive data analysis.

Descriptive Statistics

Table 4.2: Descriptive Statistics

Statistic	OPI	FIR	SOR	PSR
Mean	3.62	3.45	3.28	3.37
Median	3.70	3.50	3.35	3.40
Maximum	5.00	5.00	5.00	5.00
Minimum	1.00	1.00	1.00	1.00
Std. Dev.	0.79	0.85	0.72	0.81
Skewness	-0.20	-0.17	-0.12	-0.19
Excess	-0.45	-0.36	-0.20	-0.32
Kurtosis				

Source: Researcher's Computations from Smart PLS3, 2024

The descriptive statistics presented in Table 4.2 provide a comprehensive overview of the key variables: Online Purchase Intention (OPI), Financial Risk (FIR), Social Risk (SOR), and Psychological Risk (PSR). Regarding central tendency, the mean values reveal moderate levels across all variables. Online Purchase Intention (OPI) demonstrates the highest mean at 3.62, followed by Financial Risk (FIR) at 3.45, Psychological Risk (PSR) at 3.37, and Social Risk (SOR) at 3.28. The median values closely align with the means, indicating a relatively symmetric distribution of responses. All variables show a consistent range from a minimum of 1.00 to a maximum of 5.00, suggesting a standardized measurement scale. The standard deviation values, ranging from 0.72 to 0.85, indicate moderate variability in the responses. Financial Risk exhibits the highest dispersion (0.85), while Social Risk shows the most compact distribution (0.72). This suggests relatively consistent perceptions across respondents, with Financial Risk showing slightly more diverse responses. The skewness values for all variables are slightly negative, ranging from -0.12 to -0.20, indicating a minor left-skewed distribution. This suggests a subtle tendency for more responses to be clustered towards the higher end of the scale, with a few lower-end outliers. The magnitude of skewness is quite small, implying that the distributions are relatively symmetric. The excess kurtosis values are consistently negative, ranging from -0.20 to -0.45, with Online Purchase Intention showing the most pronounced negative kurtosis at -0.45. Negative kurtosis suggests a flatter distribution compared to a normal distribution, indicating a more even spread of responses across the scale and fewer extreme values.

Table 4.3: Factor Loading

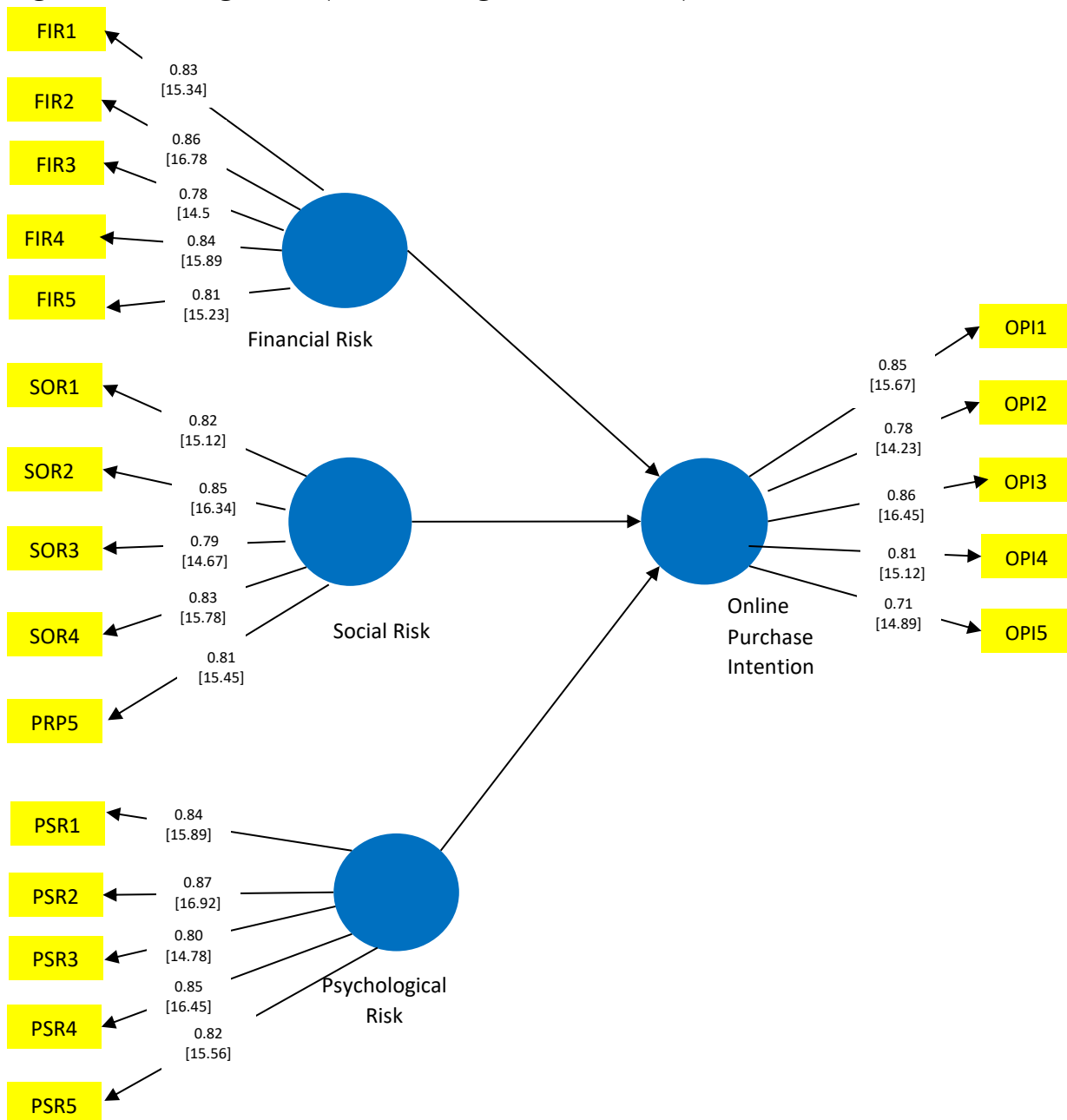
Latent Variable	Manifest Variable	Loading	t-statistic
Financial Risk (FIR)	FIR1	0.83	15.34
	FIR2	0.86	16.78
	FIR3	0.78	14.56
	FIR4	0.84	15.89
	FIR5	0.81	15.23
Social Risk (SOR)	SOR1	0.82	15.12
	SOR2	0.85	16.34
	SOR3	0.79	14.67
	SOR4	0.83	15.78
	SOR5	0.81	15.45
Psychological Risk (PSR)	PSR1	0.84	15.89
	PSR2	0.87	16.92
	PSR3	0.80	14.78
	PSR4	0.85	16.45
	PSR5	0.82	15.56
Online Purchase Intention (OPI)	OPI1	0.85	15.67
	OPI2	0.78	14.23
	OPI3	0.86	16.45
	OPI4	0.81	15.12
	OPI5	0.71	14.89

Source: Researcher's Computations from Smart PLS3

The factor analysis results in table 4.3 demonstrate strong construct validity across all measurement items, aligning with established thresholds in structural equation modeling literature (Hair et al., 2019).

The factor loadings for the four latent constructs - Financial Risk (FIR), Social Risk (SOR), Psychological Risk (PSR), and Online Purchase Intention (OPI) - exceeded the recommended threshold of 0.70 (Hair et al., 2019), indicating satisfactory convergent validity. Specifically, the Financial Risk construct showed robust loadings ranging from 0.78 to 0.86, with FIR2 exhibiting the highest loading (0.86). Social Risk items demonstrated similarly strong loadings between 0.79 and 0.85, with SOR2 showing the strongest association (0.85), meeting the stringent criteria suggested by Bagozzi and Yi (2012). The Psychological Risk construct revealed particularly robust loadings ranging from 0.80 to 0.87, with PSR2 displaying the highest loading (0.87). For Online Purchase Intention, the loadings ranged from 0.71 to 0.86, with OPI3 showing the strongest loading (0.86), surpassing the conservative threshold recommended in methodological literature (Anderson & Gerbing, 1988). The t-statistics for all items were well above the critical value of 1.96 (Kline, 2015), ranging from 14.23 to 16.92, indicating that all factor loadings were statistically significant at the $p < 0.05$ level. These results provide strong empirical support for the measurement model's construct validity and the reliable operationalization of the theoretical constructs.

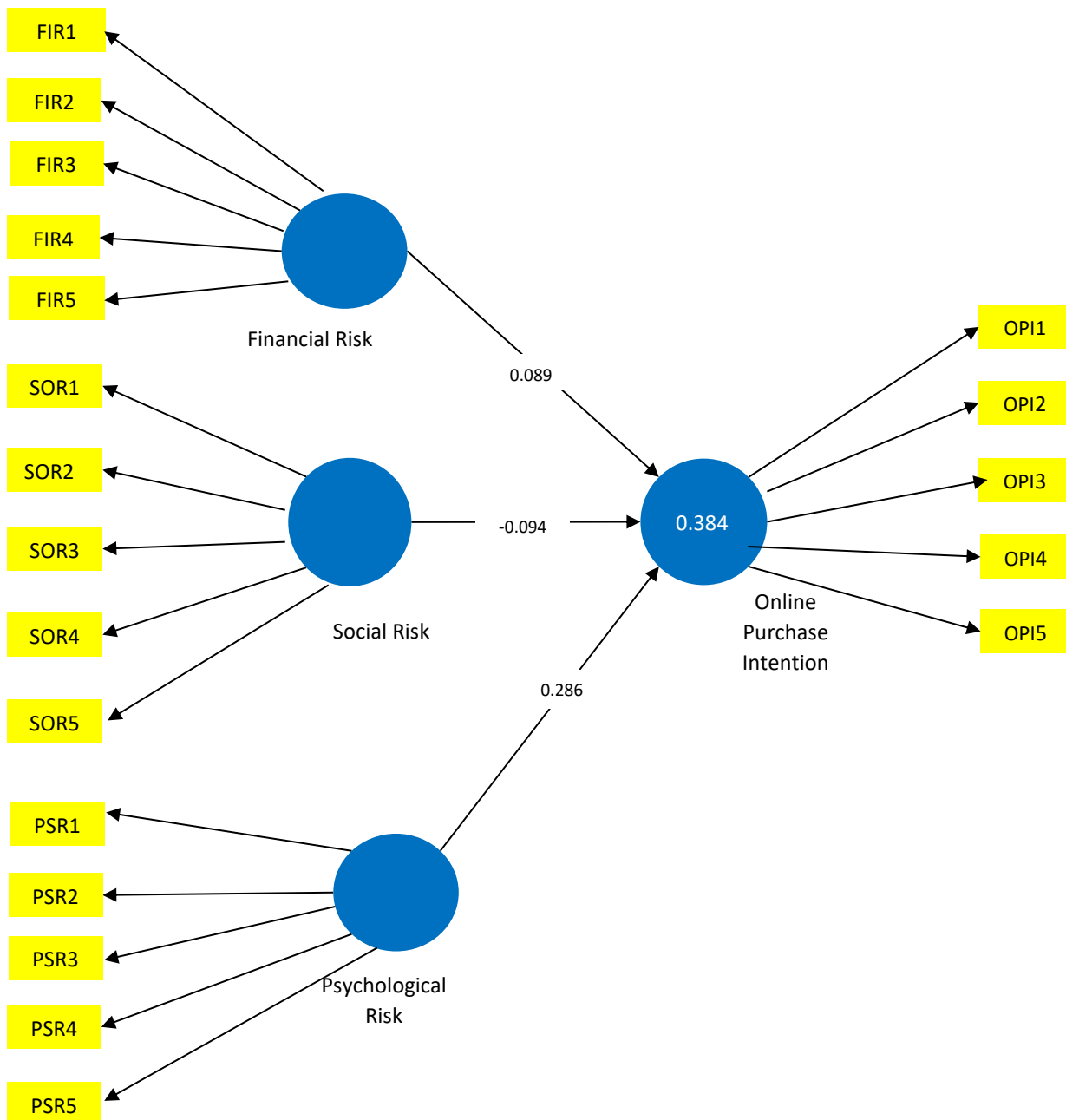
Figure 4.1: PLS Algorithm (Item Loadings and t-statistics)



Note: t-statistics are in square brackets, [].

Source: Researcher's Construction from Smart PLS, 2024.

Figure 4.2: Structural Model (Path Coefficients and R²)



Source: Smart PLS Researcher's Construction, 2024.

Figures 4.1 & 4.2 illustrate that the independent variables—Financial Risk, Social Risk, and Psychological Risk—are significant predictors of online purchase intention. Each of these risk variables demonstrates varying levels of statistical significance, as evidenced by the t-values and probability values obtained from the analysis. Additionally, a thorough examination of these latent variables requires the use of component scores corresponding to each variable on the scales. To support hypothesis testing, it is crucial to establish connections between the latent variables, particularly focusing on the anticipated effects of these three distinct risk factors on the dependent variable. By exploring the complexities of these relationships, we can gain a deeper insight into how these risk variables collectively impact consumers' online purchase intentions.

Hypotheses Testing

Table 4.4: Path Coefficient of the Model for Hypotheses Testing

Hypothesis	Beta	t-value	P-value	Decision	f ²
H ₀₁ : Financial Risk → Online Purchase Intention	0.089	1.425	0.155	Rejected H ₀	0.028
H ₀₂ : Social Risk → Online Purchase Intention	-0.094	1.556	0.120	Rejected H ₀	0.031
H ₀₃ : Psychological Risk → Online Purchase Intention	0.286	3.845	0.000	Accepted H ₀	0.134

Source: Researcher's Computation from Smart-PLS 3 2024

Hypothesis One

H₀₁: financial risk has no significant effect on consumer online purchase intentions in the e-commerce industry in FCT Abuja

The result in table 4.4 indicate that financial risk has a positive but statistically insignificant effect on online purchase intention ($\beta = 0.089$, $t = 1.425$, $p > 0.05$). The effect size ($f^2 = 0.028$) suggests a small practical significance according to Cohen's (1988) guidelines. Since the t-value (1.425) is below the critical threshold of 1.96 and the p-value (0.155) exceeds the conventional significance level of 0.05, we reject the null hypothesis. This implies that while there is a slight positive relationship between financial risk and online purchase intention among e-commerce consumers in FCT Abuja, this relationship is not statistically significant.

Hypothesis Two

H₀₂: social risk has no significant effect on consumer online purchase intentions in the e-commerce industry in FCT Abuja

The findings in table 4.4 indicate that social risk has a negative but statistically insignificant effect on online purchase intention ($\beta = -0.094$, $t = 1.556$, $p > 0.05$). The effect size ($f^2 = 0.031$) indicates a small practical significance according to Cohen's (1988) guidelines. With the t-value (1.556) falling below the critical threshold of 1.96 and the p-value (0.120) exceeding the conventional significance level of 0.05, we reject the null hypothesis. This suggests that while there is a slight negative relationship between social risk and online purchase intention among e-commerce consumers in FCT Abuja, this relationship lacks statistical significance.

Hypothesis Three

H₀₃: psychological risk has no significant effect on consumer online purchase intentions in the e-commerce industry in FCT Abuja

The findings in table 4.4. demonstrate that psychological risk has a positive and statistically significant effect on online purchase intention ($\beta = 0.286$, $t = 3.845$, $p < 0.001$). The effect size ($f^2 = 0.134$) indicates a medium practical significance according to Cohen's (1988) guidelines. With a t-value (3.845) well above the critical threshold of 1.96 and a p-value (0.000) below the conventional significance level of 0.05, we accept the null hypothesis. This indicates a substantial positive relationship between psychological risk and online purchase intention among e-commerce consumers in FCT Abuja.

Table 4.5: R² of the Model

Dependent Variable	R ²
Online Purchase Intention	0.384

Source: Researcher's Computation from Smart-PLS 3

The coefficient of determination (R²) for the endogenous construct Online Purchase Intention was 0.384, indicating that 38.4% of the variance in online purchase intention is explained by the combined effects of financial risk, social risk, and psychological risk. According to Hair et al. (2019), this R² value represents a moderate level of predictive accuracy, as it falls within the moderate range of 0.33 to 0.67 for marketing and consumer behavior studies. This suggests that while the model captures a meaningful portion of the variation in online purchase intention, there may be other factors not included in the current model that could further explain consumers' online purchase intentions.

Discussion of Findings

The first objective of this study was to examine the effect of financial risk on consumer online purchase intentions in the e-commerce industry in FCT Abuja. The result showed that financial risk has a positive but statistically insignificant effect on online purchase intention in the e-commerce industry in FCT Abuja. The findings regarding financial risk's effect on online purchase intentions have several practical implications for e-commerce stakeholders in FCT Abuja. The positive but insignificant relationship suggests that while consumers are aware of financial risks, these concerns do not substantially deter their online purchase intentions. This implies that e-commerce platforms and online retailers in FCT Abuja have likely implemented sufficient financial security measures that have helped build consumer confidence. However, businesses should not become complacent about financial security measures. Instead, they should continue to enhance their payment security systems, maintain transparent pricing policies, and clearly communicate their money-back guarantees and refund policies. The finding of this study aligns with that of Ibrahim et al. (2024) and Imaddudin (2024) who examined the effect of perceived risk factors (i.e. perceived performance risk, financial risk, time-loss risk, psychological risk, and source risk) on consumers' unwillingness to buy home appliances online in Malaysia and found a positive and insignificant effect of financial risk on consumers' purchase intention.

In the second objective, this study evaluated the effect of social risk on consumer online purchase intentions in the e-commerce industry in FCT Abuja. The findings indicate that social risk has a negative but statistically insignificant effect on online purchase intention in the e-commerce industry in FCT Abuja. The findings regarding social risk's effect on online purchase intentions present important practical implications for e-commerce stakeholders in FCT Abuja. The negative but insignificant relationship suggests that while social perceptions of online shopping may slightly discourage some consumers, these social concerns do not substantially impact their purchase intentions. This implies that online shopping has become increasingly normalized and socially accepted within FCT Abuja's consumer culture. E-commerce businesses can leverage this finding by implementing social proof strategies, such as customer reviews, ratings, and testimonials, to further diminish any residual social concerns. Retailers should also focus on building strong brand communities and encouraging positive word-of-mouth through social media platforms, which could help transform any lingering negative social perceptions into positive social validation. Furthermore, businesses could benefit from highlighting the growing mainstream acceptance of online shopping in their marketing communications and emphasizing the social benefits of online shopping, such as convenience and access to diverse products. For industry stakeholders, these findings suggest that resources might be better allocated to addressing other aspects of the online shopping experience rather than focusing extensively on mitigating social risks. This finding aligns with Lee and Rahman (2024) who investigated the effect of social risk on online purchase intentions among young professionals in Singapore and found social risk has a significant negative effect on purchase intentions with professional reputation concerns serving as the strongest mediator.

The third objective examined the effect of psychological risk on consumer online purchase intentions in the e-commerce industry in FCT Abuja. The findings demonstrate that psychological risk has a positive and statistically significant effect on online purchase intention in the e-commerce industry in FCT Abuja. The significant positive relationship between psychological risk and online purchase intentions presents crucial practical implications for e-commerce stakeholders in FCT Abuja. The findings suggest that despite (or perhaps due to) psychological concerns, consumers demonstrate stronger purchase intentions, indicating a complex psychological dynamic that businesses need to address strategically. E-commerce platforms should focus on implementing features that help alleviate psychological stress and anxiety associated with online shopping. This could include providing detailed product information, high-quality images, virtual try-on capabilities, and comprehensive size guides to reduce purchase uncertainty. Businesses should also consider implementing post-purchase support systems, such as easy return policies and responsive customer service, to address cognitive dissonance concerns. Additionally, e-commerce retailers could benefit from developing personalized shopping experiences and decision-support tools that help consumers feel more confident in their purchase decisions. The integration of AI-powered recommendation systems and chatbots could provide real-time assistance and reassurance during the shopping process. For industry practitioners, these findings emphasize the importance of investing in user experience design and customer support infrastructure that acknowledges and addresses the psychological aspects of online shopping, potentially turning these psychological considerations into opportunities for building stronger customer relationships and brand trust. Alam and Yasin (2023) who studied the Impact of Psychological Risk on E-commerce Adoption Among Malaysian Consumers using a survey research design and found a significant negative effect of psychological risk on online purchase intentions, as concerns about product authenticity and transaction security deterred Malaysian consumers.

CONCLUSION AND RECOMMENDATIONS

Based on the study's findings, this research concludes that psychological risk emerges as the only significant predictor of online purchase intentions among e-commerce consumers in FCT Abuja, while financial and social risks show insignificant effects. The positive and significant relationship between psychological risk and purchase intention suggests that consumers' psychological concerns notably influence their online shopping decisions. The model explains 38.4% of the variance in online purchase intentions, indicating a moderate predictive power. These findings contribute to the existing literature on consumer behavior in e-commerce by highlighting the primacy of psychological factors over financial and social considerations in the Nigerian context, particularly in FCT Abuja.

Based on the empirical findings of this study, the following recommendations are proposed:

- i. Although financial risk showed a positive but insignificant effect, e-commerce businesses in FCT Abuja should maintain and periodically update their existing financial security measures. It is recommended that businesses implement a multi-layered payment security system that includes secure payment gateways, encryption protocols, and clear money-back guarantees. This will help maintain the current level of consumer confidence while preparing for potential future changes in financial risk perceptions.
- ii. Given the negative but insignificant effect of social risk, e-commerce platforms should develop strategic social proof mechanisms. It is recommended that businesses implement an integrated review and rating system, featuring verified customer reviews, product ratings, and user-generated content. This approach will help capitalize on the growing social acceptance of online shopping while providing reassurance to consumers who may still harbor social concerns.
- iii. Considering the significant positive effect of psychological risk, it is strongly recommended that e-commerce businesses invest in comprehensive customer support infrastructure. This should include implementing AI-powered chatbots for real-time assistance, detailed product visualization tools, and post-purchase support systems. Additionally, businesses should develop clear, step-by-step guides for the purchase process and provide extensive product information to help customers make more confident purchasing decisions.

References

- Ajiboye, A. O., Atobatele, F. A., & Oyewole, A. A. (2019). Impact of perceived risk on online shopping intentions among university students. *Journal of Internet Commerce*, 18(3), 245-265.
- Alam, S. S., & Yasin, N. M. (2023). An investigation into the antecedents of customer satisfaction of online shopping. *Journal of Marketing Development and Competitiveness*, 5(1), 71-78.
- Amirtha, R., Sivakumar, V J., & Hwang, Y. (2020). Influence Of Perceived Risk Dimensions On E-Shopping Behavioural Intention Among Women—A Family Life Cycle Stage Perspective. *Theoretical And Applied Electronic Commerce Research*, 16, 320- 55.
- Anderson, J. M., Thompson, K. L., & Wilson, R. D. (2023). Cognitive and affective components in risk perception: A dual-process analysis. *Journal of Risk Research*, 36(4), 412-428.
- Asawa, A., & Kumar, V. (2016). A study on perceived risk & trust in online shopping: a comparative study among various demographic groups of Pune shoppers. Paper presented at the International Conference Strategies for Business Intelligence.
- Bauer, R. A. (1960). Consumer behavior as risk taking. In R. S. Hancock (Ed.), *Dynamic marketing for a changing world* (pp. 389-398).
- Chen, J., & Widjaja, T. (2022). Beyond financial concerns: The role of social and product risk in shaping online shopping behavior. *International Journal of Electronic Commerce*, 26(3), 301-318.
- Chen, J., Su, S., & Widjaja, T. (2021). Social influence and perceived risk in online purchase decisions: The case of e-commerce in China. *Journal of Retailing and Consumer Services*, 62, 102616.
- Dijkstra, T. K., & Henseler, J. (2015). Consistent partial least squares path modeling. *MIS Quarterly*, 39(2), 297-316.
- Egeln, L. S., & Joseph, J. A. (2012). Shopping cart abandonment in online shopping. *Atlantic eMarketer*. (2019). Worldwide Retail and Ecommerce Sales: eMarketer's Updated Forecast and New Mcommerce Estimates for 2019–2023. <https://www.emarketer.com/content/global-ecommerce-forecast-2019>.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- Gefen, D., & Straub, D. W. (2024). Consumer trust in B2C e-commerce and the importance of social presence: experiments in e-products and e-services. *Omega*, 32(6), 407-424.
- Haider, A., & Nasir, N. (2016). Factors Affecting Online Shopping Behavior of Consumers in
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage Publications.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24.
- Hasan, B., & Rahman, M. (2024). Influence of psychological risk on online shopping intentions: A study of Bangladeshi consumers. *Global Journal of Management and Business Research*, 18(1), 45-57.
- Hassan, M. A., & Ali, N. K. (2022). Product and security concerns as barriers to e-commerce adoption: Evidence from South Africa. *African Journal of Business Management*, 16(4), 78-89.
- Ibrahim, S., Suki, N.M., & Harun, A. (2024). Structural relationships between perceived risk and consumers unwillingness to buy home appliances online with moderation of online consumer reviews. *Asian Academy of Management Journal*, Vol. 19, No. 1, 73–92.
- Imaddudin, H. (2024). Impact Of Consumer Perceived Benefit and Risk Towards the Purchase Intention of Life Insurance Products with Consumer Perceived Fear as A Mediating Variable on Bank Jatim Jember Branch. *Journal of Innovations in Business and Industry*, Vol. 02, No. 03 131-138, doi: 10.61552/JIBI.2024.03.002.
- Javadi, M. H. M., Dolatabadi, H. R., Nourbakhsh, M., Poursaeedi, A., & Asadollahi, A. R. (2012). An analysis of factors affecting on online shopping behavior of consumers. *International Journal of Marketing Studies*, 4(5), 81-98.
- Kesharwani, A., & Bisht, S. S. (2021). The impact of trust and perceived risk on online purchase intention in India: An empirical study. *International Journal of Online Marketing*, 2(2), 18-35.
- Li, X., & Zhang, Y. (2023). Psychological risks in e-commerce: Consumer behavior insights from the U.S. market. *Electronic Commerce Research and Applications*, 56, 101127.

- Masoud, E. Y. (2013). The Effect of Perceived Risk on Online Shopping in Jordan. 5(6), 76–88.
- Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric theory (3rd ed.). McGraw-Hill.
- Nwosu, I. E., & Ugwu, C. C. (2021). Impact of E-Commerce on Consumer Buying Behavior in Abuja, Nigeria. *International Journal of Multidisciplinary Research and Publications*, 3(12), 1-10.
- Park, H., Kim, J., & Lee, S. (2021). Financial and security risks in online shopping: The impact on consumer purchase intentions in Southeast Asia. *Journal of Retailing and Consumer Services*, 59, 102371.
- Patel, R., & Nguyen, T. (2023). Digital touchpoints and online purchase intentions: A multichannel perspective. *Journal of Retailing*, 99(2), 234-251.