Online Shopping Risks: Understanding Consumer Perceptions in the Yemeni Market

[1]Ahmed Lakwa, [2]Mohammed Fadhl

[1,2]Faculty of Engineering and Computing, University of Science & Technology, Aden, Yemen

Authors E-mail: [1]ahmedlakwa22@gmail.com, [2]m.albadwi@ust.edu

Abstract - **The major shift in purchasing behavior from traditional to online presents many facilitations and challenges, specifically. However, there is a lack of understanding of consumers' perceptions of online shopping risks, especially in the context of Yemen. To address this gap, there is a need to assess Yemeni consumers' use of online purchasing behavior and explore their perceptions and experiences of online shopping risks. The study adopted a quantitative approach using a questionnaire that included a sample of 160 participants. The results showed that consumers have a medium to high level of perceived risks, including product risks, financial risks, delivery risks, and privacy risks, with demographic characteristics influencing risk perception. These findings highlight the need to enhance consumer trust by improving the quality of services and products provided, providing clear privacy policies, and increasing transparency in product offerings to solve the financial problems faced by consumers in the electronic market in Yemen.**

Keywords: Online Shopping, Perceived Risks, Product Risk, Purchase intention.

I. INTRODUCTION

Online Shopping is a modern form of Buying behavior that takes place online using various electronic devices. This type of Buying includes all processes related to buying and selling goods and services, from browsing products to making payments and receiving orders. As businesses large and small rely on this form of commerce, they can transcend geographical boundaries and reach a global audience more easily and effectively than ever before. The field encompasses many components that help facilitate business processes, such as the transfer of financial data, exchange of information, and facilitating logistics to ensure that transactions are carried out successfully [1].

One of the most important features of e-commerce is the ability to shop online, where consumers can access a wide range of products and services at the click of a button from the comfort of their homes or on the go using smartphones or tablets. This flexibility and convenience has contributed to a major shift in consumer behavior towards online shopping instead of visiting brick-and-mortar stores. This shift has not only been driven by convenience, but also by the availability of wider choices, competitive prices, and special offers accessible online [2].

Another equally important aspect is digital payments, as e-commerce has made it easier to carry out financial transactions securely and quickly. Available payment methods include credit and debit cards, e-wallets such as PayPal, and online payment services offered by banks. This has made it easier to make online purchases and increase trust in these transactions [3].

The emergence and spread of online shopping in Yemen has been slow but shows potential for growth, despite facing many challenges. Current status of e-commerce in Yemen The e-commerce sector in Yemen is still in its early stages, with limited penetration compared to other countries. As of 2022, internet penetration in Yemen was only 26.7%, with around 8.24 million internet users [4] [5]. This relatively low internet adoption rate has hindered the widespread adoption of online shopping. However, there are signs of growth and potential in the market.

Yemen's e-commerce market is estimated to be worth around $1 billion, including small retailers who use social media platforms such as WhatsApp and Facebook for sales [6]. The contribution of e-commerce is estimated at $229 million (0.1%) to Yemen's GDP [4]. There is a growing interest in online shopping, especially among younger generations and in urban areas such as Sana'a, Aden and Taiz.

Online shopping presents many risks that can affect consumer behavior and product adoption. The main risks that have been identified in various studies include the following:

Perceived risks refer to the subjective assessment of the potential negative outcomes associated with a decision or action. This concept is widely studied across various fields, including consumer behavior, health research, and technology adoption. [7] Research suggests that perceived risk significantly influences consumer online shopping behavior, playing a complex role in shaping trust and purchase intention

[8]. High levels of perceived risk may undermine trust in e-retailers, negatively impacting consumer purchase intention, however, perceived service quality can mitigate these risks and enhance consumer trust. In some contexts, such as the adoption of 'pay later' services in Indonesia, perceived risk is a critical factor influencing behavioral intentions to use these services [8]. In emerging markets, such as South Africa, risks related to financial security and convenience significantly influence consumers' attitudes towards online shopping, although these risks do not necessarily affect their actual intention to shop online [9].

II. ONLINE SHOPPING RISKS DEFINITION

2.1 Purchase intention: Purchase intention refers to the likelihood or willingness of a consumer to buy a product or service. It is an indicator of the consumer's mindset and predisposition towards making a purchase. [10]

2.2 Financial risk: Financial risk is often viewed as the probability of experiencing financial losses due to various factors, including market fluctuations, credit defaults, operational failures, and other economic changes. [11]

2.3 Product Risks: Product risks refer to concerns consumers have about the quality of a product and whether it meets expectations, including concerns about receiving a defective, ineffective, or different product than described. These risks are key factors influencing consumer confidence in online shopping. [12]

2.4 Privacy Risks: Privacy risks refer to the potential threats to an individual's personal information and data when it is collected, stored, or shared. These risks can arise in various contexts, particularly in the digital realm, where personal data is frequently exchanged and processed. Understanding privacy risks is crucial for both individuals and organizations to safeguard sensitive information and comply with legal standards. [13]

2.5 Delivery Risks: Delivery risks refer to potential challenges and uncertainties that can negatively impact the successful delivery of goods, services, or projects. These risks can arise from various factors, including operational, logistical, and environmental issues. [14]

III. METHODOLOGY

3.1 Target Population

The target population for this study is customers of local e-commerce companies in Yemen. We chose Bazari, Absheer, and Tawseel in as local companies in Yemen who have experience in online shopping. A group of clients of these companies was identified based on the aim of the research

which focused on understanding risk perceptions in this specific context. The target population includes males and females of different age groups and online shopping experience levels.

"The target population is the entire group of individuals or objects to which researchers are interested in generalizing the conclusions." [15].

Online Shopping Experiment	Frequency	Percentage	Valid Percent	Cumulative Percent
Once a year	26	19.4	19.4	19.4
Two to five times	52	38.8	38.8	58.2
Six to ten times	23	17.2	17.2	75.4
More than ten times	33	24.6	24.6	100.00
Total	**134**	**100**	**100**	**100**

3.2 Sampling

A simple random sampling technique was used to select study participants. This method ensures that everyone in the target population has an equal opportunity to participate, which increases the generalizability of the results."Simple random sampling is a method of selecting a sample in such a way that each individual in the population has an equal chance of being chosen." [16].

The sampling strategy employed in this study is a critical component of the research design, as it determines the representativeness of the sample and the generalizability of the findings. In this case, the researcher have opted for a random sampling technique, which [17] describe as "a probability sampling procedure in which all individuals in the defined population have an equal and independent chance of being selected for the sample." This approach aligns with the study's objective of ensuring that each member of the target population has an equal opportunity of being included, thereby minimizing the potential for selection bias. As emphasized by [16], "random sampling is the best way of obtaining a representative sample" as it allows the researcher to make inferences about the broader population with a high degree of confidence.

3.3 Research Instrument

The research instrument used is a questionnaire specifically designed to measure risk perceptions related to online shopping. The questionnaire was developed based on a review of relevant literature and ensuring that it covers all important aspects related to risk perceptions, was reviewed by a committee of University of Science and Technology

professors. The questionnaire consists of several sections including demographic information, questions related to the online shopping experience, and risk perceptions.

3.3.1 Pilot questionnaire

Before conducting a large-scale research study, I developed a pilot questionnaire based on previous literature to be tested with a small sample of participants. The purpose of this pilot phase was to evaluate the clarity, comprehensiveness and functionality of the questionnaire before disseminating it to the larger participant group. The pilot questionnaire covered a range of topics consistent with the study objectives, including participants' Internet experience, daily Internet use patterns, online shopping behaviors, and perceptions of risks associated with digital technologies. The questionnaire included a combination of multiple-choice questions, Likert scale, and open-ended questions to collect quantitative and qualitative data from the pilot participants.

3.3.2 Pilot testing the questionnaire

By administering the pilot questionnaire to a subgroup of 32 individuals, and to ensure the reliability of the collected data, the Cronbach's Alpha reliability coefficient was used to measure the internal consistency of the questionnaire used in the study. Cronbach's alpha is a common measure for investigating the reliability of research instruments, and indicates the consistency of items measuring the same construct or variable.

3.3.3 Reliability Test

Reliability testing is a crucial aspect of research methodology that assesses the consistency and stability of measurement instruments, such as questionnaires and surveys. It ensures that the results obtained are dependable and can be replicated across different contexts and populations. A reliable instrument minimizes measurement error, thereby enhancing the validity of the findings. Various methods are employed to evaluate reliability, including test-retest reliability, inter-rater reliability, and internal consistency measures like Cronbach's alpha. By establishing the reliability of a measurement tool, researchers can confidently draw conclusions and make informed decisions based on the data collected, ultimately contributing to the robustness of their research outcomes.

Table 3.1: Case Processing Summary

	NO	%
Case Valid	32	100.0
Exclude	0	0
Total	32	100.0

A list wise deletion based on all variables in the procedure.

Table 1 provides a summary of case processing for the analysis. It shows that all 32 cases were valid and included in the analysis, representing 100% of the total dataset. No cases were excluded, indicating that the data collection process was complete and free of missing values. This completeness enhances the reliability and validity of the results, ensuring robust analysis.

Table 3.2: Reliability of questioner

Cronbach' Alpha	N of Items
0.802	26

Table 2 presents the reliability analysis of the questionnaire using Cronbach's Alpha. The value of Cronbach's Alpha is 0.802 for the 26 items, which exceeds the commonly accepted threshold of 0.7. This indicates a high level of internal consistency among the items in the questionnaire, demonstrating that the instrument is reliable for measuring the constructs under investigation.

3.4 Analysis Tools

Data were analyzed using statistical analysis software such as SPSS. Descriptive analysis was used to analyze demographic data and determine frequency distributions, means, and standard deviations. In addition, tests of differences (e.g. t-test, ANOVA) and regression analysis were used to test hypotheses and determine relationships between variables.

"Data analysis involves the application of statistical techniques to describe, explore, and infer conclusions from collected data."[18]. In this case, the researcher have employed statistical analysis techniques to examine the data. As highlighted by [17], "quantitative research often involves the use of statistical analysis to examine relationships among variables." This approach aligns with the objectives of the current study, which likely aims to explore the associations between various factors and the target population's attitudes or behaviors. [16] Further emphasizes the importance of statistical analysis, stating that it "provides the means for describing phenomena, testing hypotheses, and exploring relationships."

Results were interpreted based on descriptive and inferential statistics, with an emphasis on identifying patterns and relationships between demographic variables and risk perceptions. The results were presented in detail through

tables and graphs to facilitate understanding and interpretation.

IV. RESULTS AND DISCUSSIONS

4.1 Gender Distribution

The research sample consisted of a number of male and female participants. Out of a total of 160 participants, 112 were male (70%) and 48 were female (30%). This balanced gender representation allows the researcher to examine potential differences in the variables of interest between males and females. By including this number of participants of each gender, the study can explore how the main findings may be influenced by gender-related factors.

Table 4.1: Gender Distribution

Gender	Frequency	Percentage	Valid Percent	Cumulative Percent
Male	112	70.00	70.00	70.00
Female	48	30.00	30.00	100.00
Total	**160**	**100**	**100**	**100**

4.2 Age Distribution

The study sample included participants from a wide range of ages. The ages of the 160 research participants ranged from those under twenty years old to those over fifty years old, with an average age of 31.34 years and a standard deviation of 8.12 years. This age distribution allows the examination of potential age-related differences in the variables of interest. The sample was divided into four age groups for further analysis: younger than 20 (2.5% of participants), 20-30 (54.4% of participants), 31-50 (42.5% of participants) and older than 50 (0.6% of participants). This division ensures that the perspectives and experiences of younger, middle-aged, and older adults are represented in the study.

Table 4.2: Age Distribution

Age	Frequency	Percentage	Valid Percent	Cumulative Percent
younger than 20	4	2.5	2.5	2.5
Between 20 and 30	87	54.4	54.4	56.9
Between 31 and 50	68	42.5	42.5	99.4
Older than 50	1	0.6	0.6	100.00
Total	**160**	**100**	**100**	**100**

4.3 Education Distribution

The educational background of the research participants was diverse, reflecting the diverse levels of academic achievement within the target population. Among the 160 individuals in the study sample, 11.9% held a diploma or less, 75.6% obtained a bachelor's degree, 10.6% obtained a master's degree, and 1.9% obtained other educational qualifications such as training courses and others. This range of educational attainment allows the researcher to explore potential differences in variables of interest based on participants' level of education.

Table 4.3: Education Distribution

Educational Level	Frequency	Percentage	Valid Percent	Cumulative Percent
diploma or less	19	11.9	11.9	11.9
bachelor's degree	121	75.6	75.6	87.5
master's degree	17	10.6	10.6	98.1
doctoral's degree	0	0.00	0.00	98.1
Others	3	1.9	1.9	100.00
Total	**160**	**100**	**100**	**100**

4.4 Internet Experience

Approximately 0.6% of the 160 participants reported having less than 2 years of Internet experience, with limited knowledge and use of online platforms and digital tools. Another 7.5% of the sample indicated that they had between two and five years of Internet use experience, and used the Internet regularly for a variety of purposes but were not necessarily considered "power users." 18.1% of participants reported that they had six to nine years of experience using the Internet, and the remaining 73.8% of participants reported that they had more than nine years of experience using the Internet, demonstrating extensive knowledge and proficiency in navigating and using various Internet-based technologies and applications.

Table 4.4: Internet Experience Distribution

Internet Experience	Frequency	Percentage	Valid Percent	Cumulative Percent
less than 2 years	1	0.6	0.6	0.6
between two and five years	12	7.5	7.5	8.1
six to nine years	29	18.1	18.1	26.2
more than nine years	118	73.8	73.8	100
Total	**160**	**100**	**100**	**100**

4.5 Mean intention to buy online

The table summarizes the mean responses of participants regarding their intentions to shop from online stores, assessed through various related questions. The results indicate a high perception of intention to purchase from online stores, with a mean score of 3.88, suggesting a favorable attitude towards e-commerce. The interest in shopping soon received a mean score of 3.52, indicating a moderate positive inclination. Notably, the exploration of products online scored higher at 3.91, reflecting a strong perception in this area. Additionally, the responses to offers on online stores were rated at 2.67, categorized as low perception. Overall, the weighted average of 3.52 suggests that while there is a generally positive disposition towards online shopping, specific aspects, such as responsiveness to offers, reveal areas for improvement.

Table 4.5: Mean perception of intention to buy online

Perceived risks	SA5 (%)	A4 (%)	N3 (%)	D2 (%)	SD1 (%)	Mean	SD	Decision
Intention to purchase from online stores	17 (10.63%)	84 (52.50%)	46 (28.75%)	13 (8.13%)	0 (0%)	3.66	.77	High Perception 3.66>3.52
interested in trying online shopping soon	35 (21.87%)	81 (50.63)	33 (20.63%)	11 (6.87%)	0 (0%)	3.88	.83	High Perception 3.88>3.52
exploring rare products from online stores	35 (21.88%)	87 (54.37%)	26 (16.25%)	12 (7.50%)	0 (0%)	3.91	.82	High Perception 3.91>3.52
offers on online stores	11 (6.88%)	23 (14.37%)	42 (26.25%)	66 (41.25%)	18 (11.25%)	2.64	1.07	Low Perception 2.64<3.52
Total	98	275	147	102	18	3.52		
Weighted Average=						3.52		

4.6 Mean perception of Privacy Risks

Table 4.6 presents the mean perceptions of consumers regarding privacy risks concerns. The data indicates a notable apprehension among respondents about unauthorized access to personal information, with a significant percentage expressing concern. Specifically, 20% strongly agree and 40% agree that they are worried about unauthorized access, leading to a cumulative perception score of 3.57, categorized as low. This reflects a broader sentiment where respondents feel relatively secure, yet still acknowledge the risks involved. Furthermore, the table reveals that 29.12% of consumers are concerned about the risk of identity theft when providing personal information online, achieving an average perception score of 3.47, also considered low. Similarly, concerns regarding the privacy of personal information and its potential misuse are evident, with average scores of 3.65 and 3.64, respectively. Finally, 53% strongly agree that they are concerned about online stores lacking clear privacy policies, which correlates with a higher average perception score of 4.14, indicating a significant level of concern.

Table 4.6: Mean perception of Privacy Risks

Privacy Risks	SA5 (%)	A4 (%)	N3 (%)	D2 (%)	SD1 (%)	Mean	SD	Decision
unauthorized access to my personal information	32 (20%)	64 (40%)	30 (18.75%)	32 (20%)	2 (1.25%)	3.57	1.06	Low Perception 3.57<3.69
losing my personal data and it being accessed by other parties	35 (21.88%)	67 (41.88%)	24 (15.00%)	33 (20.62%)	1 (0.62%)	3.64	1.06	Low Perception 3.64<3.69
identity theft when providing personal information	29 (18.12%)	60 (37.50%)	31 (19.37%)	37 (23.12%)	3 (1.87%)	3.47	1.09	Low Perception 3.47<3.69
privacy of information and how it is shared with other parties or retained for a long period	30 (18.75%)	74 (46.25%)	26 (16.25%)	30 (18.75%)	0 (0%)	3.65	0.99	Low Perception 3.65<3.69

lack clear privacy policies for online stores	53 (33.12%)	87 (54.37%)	9 (5.62%)	11 (6.87%)	0 (0%)	4.14	0.80	High Perception 4.14>3.69
Total	179	352	120	143	12	3.69		
Weighted Average=						3.69		

4.7 Mean perception of Product Risks

The table 4.7 highlights consumers' perceptions of product risks in online shopping, with an overall high-risk perception (weighted average: 3.86). The most significant concerns are the lack of consumer ratings and reviews (mean: 4.29) and difficulty evaluating product quality (mean: 4.14), indicating uncertainty about product reliability. Complexities of return policies are also perceived as a high risk (mean: 3.94). In contrast, concerns about mismatches between product specifications and descriptions are moderate (mean: 3.42). These findings emphasize the need for online retailers to enhance product transparency, encourage customer reviews, and simplify return processes to build trust and reduce perceived risks.

Table 4.7: Mean perception of Product Risks

Product Risks	SA5 (%)	A4 (%)	N3 (%)	D2 (%)	SD1 (%)	Mean	SD	Decision
difficult to evaluate the quality of products due to relying on images and descriptions on websites	54 (33.75%)	81 (50.62%)	19 (11.87%)	6 (3.75%)	0 (0%)	4.14	0.768	High Perception 4.14>3.86
products sold through online stores may not match the specifications displayed on the website	25 (15.62%)	49 (30.62%)	56 (35%)	28 (17.5%)	2 (1.25%)	3.42	0.994	Low Perception 3.42<3.86
The lack of consumer ratings and reviews makes the products displayed online ambiguous	63 (39.37%)	80 (50%)	17 (10.62%)	0 (0%)	0 (0%)	4.29	0.648	High Perception 4.29>3.86
the complexities of return policies	41 (25.62%)	82 (51.25%)	23 (14.37%)	14 (8.75%)	0 (0%)	3.94	0.866	High Perception 3.94>3.86
additional fees such as shipping or restocking costs	28 (17.5%)	91 (56.87%)	26 (16.25%)	14 (8.75%)	1 (0.62%)	3.82	0.846	Low Perception 3.82<3.86
losing the product during the return process	28 (17.5%)	66 (41.25%)	39 (24.37%)	23 (14.37%)	4 (2.5%)	3.57	1.019	Low Perception 3.57<3.86
Total	239	449	180	85	7	3.86		
Weighted Average=						3.86		

4.8 Testing the Hypothesis

Before performing ANOVA test to evaluate the difference between the means of the variables under study, we performed Levene test for homogeneity of the variances in our sample and Kolmogorov-Smirnova test to verify the normality of distribution. Now, let first we put the null hypothesis as that means of all the different groups are equal.

Null Hypothesis (H01):

There is no significant difference in purchase intention across participants with varying genders, ages, educational levels, and internet experience.

Alternative Hypothesis (H11):

There is a significant difference in purchase intention across participants with varying genders, ages, educational levels, and internet experience.

The One-Way ANOVA test results indicate the effect of age on purchase intention. The Sum of Squares shows that 2.406 of the variance is explained by differences between age groups, while 70.340 is due to individual differences within groups, making a total variance of 72.746. The degrees of freedom (df) are 3 for between groups, 156 for within groups, and 159 in total. The Mean Square values are 0.802 between groups and 0.451 within groups, with an F-value of 1.779,

indicating limited differences between age groups. The p-value (Sig.) is 0.153, which is greater than 0.05, showing that the differences are not statistically significant. Therefore, age does not significantly affect purchase intention, as most variation occurs within groups rather than between them.

Table 4.8: One-Way ANOVA Test for purchase intention with Different Age

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.406	3	.802	1.779	.153
Within Groups	70.340	156	.451		
Total	72.746	159			

The results presented in Table 4.8 display a One-Way ANOVA test conducted to investigate differences in purchase intention based on varying levels of internet experience. The "Sum of Squares" indicates the total variability in the data, with 1.052 attributed to differences between groups and 71.695 attributed to variability within groups. The degrees of freedom (df) for between groups is 3, while for within groups it is 156. The corresponding mean squares are calculated as 0.351 for between groups and 0.460 for within groups. The F value of 0.763 assesses the significance of the differences among group means. The significance value (Sig.) of 0.516 surpasses the conventional alpha level of 0.05, indicating that there are no statistically significant differences in purchase intention across different levels of internet experience. These results suggest that internet experience does not have a meaningful effect on purchase intention in the sample analyzed.

Table 4.9: One-Way ANOVA Test for purchase intention with Different Internet Experience

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.052	3	.351	.763	.516
Within Groups	71.695	156	.460		
Total	72.746	159			

Null Hypothesis (H02):

There is no significant difference in Privacy Risks across participants with varying genders, ages, educational levels, and internet experience.

Alternative Hypothesis (H12):

There is a significant difference in Privacy Risks across participants with varying genders, ages, educational levels, and internet experience.

Table 4.10 presents the results of a one-way ANOVA test assessing perceived privacy risks across different age groups. The sum of squares between groups is 1.224, while within groups is 118.770, resulting in a total of 119.994. The degrees of freedom are 3 for between groups and 156 for within groups. The F-value is 0.536, with a significance (Sig.) value of 0.658. Since this value exceeds the 0.05 threshold, we fail to reject the null hypothesis, indicating no statistically significant differences in perceived privacy risks among age groups. Thus, age does not substantially influence perceptions of privacy risks in this sample.

Table 4.10: One-Way ANOVA Test for Privacy Risks with Different Age

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.224	3	.408	.536	.658
Within Groups	118.770	156	.761		
Total	119.994	159			

Table 4.11 presents the results of a one-way ANOVA test examining differences in perceived privacy risks based on varying levels of internet experience. The sum of squares between groups is 1.380, while within groups is 118.614, leading to a total of 119.994. The degrees of freedom are 3 for between groups and 156 for within groups. The mean square for between groups is 0.460, and for within groups, it is 0.760. The calculated F-value is 0.605, with a significance (Sig.) value of 0.613. Since the Sig. value is well above the 0.05 threshold, we fail to reject the null hypothesis, indicating that there are no statistically significant differences in perceived privacy risks across different levels of internet experience. Consequently, internet experience does not significantly affect perceptions of privacy risks within this sample.

Table 4.11: One-Way ANOVA Test for privacy Risks with Different Internet Experience

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.380	3	.460	.605	.613
Within Groups	118.614	156	.760		
Total	119.994	159			

Null Hypothesis (H03):

There is no significant difference in Product Risks across participants with varying genders, ages, educational levels, and internet experience.

Alternative Hypothesis (H13):

There is a significant difference in Product Risks across participants with varying genders, ages, educational levels, and internet experience.

In Table 4.12 For the effect of age on perceived product risks, a one-way ANOVA test showed a statistically significant difference among age groups. The analysis yielded an F-statistic of 4.749 and a p-value of 0.003, which is less than the significance level of 0.05. The between-group variance was notable, with a sum of squares of 4.094 and a mean square of 1.365. These results suggest that age has a significant influence on how consumers perceive product risks.

Table 4.12: One-Way ANOVA Test for Product Risks with Different Age

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.094	3	1.365	4.749	.003
Within Groups	44.826	156	.287		
Total	48.919	159			

In Table 4.13, the analysis of internet experience using a one-way ANOVA revealed no statistically significant effect on perceived product risks. The F-statistic was 2.183, and the p-value was 0.092, slightly above the standard significance level of 0.05. While the results suggest that internet experience does not have a significant impact, the p-value is relatively close to the threshold, warranting further exploration to confirm these findings.

Table 4.13: One-Way ANOVA Test for Product Risks with Different Internet Experience

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.971	3	.657	2.183	.092
Within Groups	46.949	156	.301		
Total	48.919	159			

V. CONCLUSION

The purpose of this research is to assess the practice of consumers in Yemen for online shopping behavior, and explore their perceptions and experiences of online shopping risks and challenges. For this purpose, a survey was conducted through questionnaires on 160 participants to assess their experiences with online shopping behavior from e-stores. The results show that most consumers have the intention to shop online with their awareness of the perceived risks, and product risks represent the highest perceived among all the risks under study, with a weighted average of 3.86. Slightly more than privacy risks. We also found that most consumers practice online shopping routinely. Raising awareness of online shopping risks is a clear message to e-store owners to find solutions to these concerns. Therefore, there is a need to focus on enhancing consumer confidence by improving the quality of services and products provided, providing clear privacy policies, and increasing transparency in product offerings to solve the financial problems faced by consumers in the e-market in Yemen and find a solution to the problems of delayed parcel delivery. The main recommendation is that e-stores in Yemen and the relevant regulatory bodies should focus on reducing these concerns by innovating the best solutions to develop this market that affects the country's economy.

REFERENCES

[1] Sulistyowati, H. Pahlawansah, and A. Makassar, "Measurement Analysis of the Level of E-Commerce Adoption Readiness in SMEs Using Technology Readiness Index Method," *Jurnal Sistim Informasi dan Teknologi*, vol. 10, no. 2, pp. 45-56, 2023.

[2] AgusDediSubagja, "Analysis of Factors Leading to E-commerce Adoption," *Apollo: Journal of Tourism and Business*, vol. 1, no. 1, 2023, doi: 10.58905/apollo.v1i1.6.

[3] B. T. Khoa and T. T. Huynh, "The influence of social media marketing activities on customer loyalty: A study of e-commerce industry," *International Journal of Data and Network Science*, vol. 7, no. 1, 2023, doi: 10.5267/j.ijdns.2022.11.005.

[4] M. S. M. Saifan, N. Muhammad, and S. Sawaluddin, "Factors affecting online shopping intention among Generation 'Y' in Yemen: Building a conceptual framework," *International Journal of Academic Research*, vol. 10, no. 3, pp. 101-115, 2022.

[5] Y. K. Al Harazi, G. Tian, S. A. A. Shah, A. K. Al Harazi, S. Y. Alwan, and A. M. A. Amer, "Unlocking the Potential of E-Commerce in Yemen: Identifying Key Impacting Factors and Exploring Strategic Solutions," *Sustainability (Switzerland),* vol. 15, no. 18, 2023, doi: 10.3390/su151813712.

[6] "Yemen's pursuit of an e-commerce sector - Wamda." Accessed: Aug. 04, 2024. [Online]. Available: https://www.wamda.com/2023/02/yemens-pursuit-e-commerce-sector

[7] J. Su, M. G. Del Altcazar, and X. Tong, "What are the Barriers to Young Millennials' Consumption of Sustainable Apparel? A Cross-Cultural Analysis of Perceived Risks of Sustainable Apparel,"

Environmental Science, Sociology, Business, vol. 15, no. 6, pp. 45-58, 2020.

[8] B. Daroch, G. Nagrath, and A. Gupta, "A study on factors limiting online shopping behaviour of consumers," *Rajagiri Management Journal,* vol. 15, no. 1, 2021, doi: 10.1108/ramj-07-2020-0038.

[9] S. Habib and N. N. Hamadneh, "Impact of perceived risk on consumers technology acceptance in online grocery adoption amid covid-19 pandemic," *Sustainability (Switzerland),* vol. 13, no. 18, 2021, doi: 10.3390/su131810221.

[10] Ngah, A.H., Gabarre, S., Han, H., Rahi, S., Al-Gasawneh, J.A., & Park, S. (2021). Intention to Purchase Halal Cosmetics: Do Males and Females Differ? A Multigroup Analysis. *Cosmetics,* 8, 19.

[11] Motashko, T., &Martyniuk, V. (2022). Theoretical and methodological basis of financial risk management of a strategic enterprise. *Scientific Bulletin of Flight Academy. Section: Economics, Management and Law*.

[12] G. Emilien, R. Weitkunat, and F. Lüdicke, *Consumer Perception of Product Risks and Benefits*. *Springer,* Jan. 2017. DOI: 10.1007/978-3-319-50530-5. ISBN: 978-3-319-50528-2.

[13] B. C. Das, M. H. Amini, and Y. Wu, "Privacy Risks Analysis and Mitigation in Federated Learning for Medical Images," *arXiv preprint arXiv:2311.06643*, Nov. 2023. [Online]. Available: https://doi.org/10.48550/arXiv.2311.06643.

[14] Cate JJM, Bloom E, Chu A, Bauer ST, Kuller JA, Dotters-Katz SK. Suboptimally Controlled Diabetes in Pregnancy: A Review to Guide Antepartum and Delivery Management. *Obstet Gynecol Surv.* 2024 Jun; 79(6):348-365. doi: 10.1097/OGX.0000000000001270. PMID: 38896431.

[15] Sekaran, U. & Bougie, R. (2016). Research methods for business. *A sill building approach (7th ed.) John Willey: UK*.

[16] Babbie, E. (2016). *The practice of social research* (14th ed.). *Teaching Sociology*.

[17] J. W. Creswell and J. D. Creswell, "Research design: Qualitative, quantitative, and mixed methods approaches," *How Media Inform Democracy: A Comparative Approach*, *Sage Publications*, 2012.

[18] J. Pallant, "SPSS Survival Manual: A Step by Step Guide to Data Analysis using IBM SPSS," *Open University Press*, 2020.

AUTHORS BIOGRAPHY

Ahmed Salem Mohammed Lakwa, He completed his secondary education at Al-Saeed High School. He obtained a Bachelor's degree in Computer Science from the Faculty of Computers, University of Aden, Yemen, and later obtained a Master's degree in Information Technology from the University of Science and Technology in Yemen. Specializes in data analysis and consumer behavior research. His academic pursuits focus on understanding the interplay between digital trust and e-commerce adoption in emerging markets. he can be contacted at: ahmedlakwa22@gmail.com

Mohammed Fadhl Abdullah is currently a Professor of Computer Engineering in Faculty of Engineering at Aden University in Yemen. He received his Master and PhD degrees in Computer Engineering from Indian Institute of Technology, Delhi, India, in 1993, and 1998 respectively. He is a founding member of the International Center for Scientific Research and Studies (ICSRS). His main research interests are in the fields of Machine learning, Parallel algorithms, and Cybersecurity. He is the author of several reputed journal and conference papers and a reviewer for many research articles. He can be contacted at email: m.albadwi@ust.edu, or al_badwi@hotmail.com

****