
The Impact of Consumer Purchase Behaviour toward Risk Perception on Internet Shopping

Shah Iskandar Fahmie Ramlee¹, Nik Alif Amri Nik Hashim^{2*}, Zaimatul Awang², Fadhilahanim Aryani Abdullah², Siti Rohana Mohamad¹, Siti Afiqah Zainuddin¹ and Tahirah Abdullah¹

DOI: 10.9734/bpi/ieam/v4

ABSTRACT

Online shopping is a popular method nowadays because consumers feel comfortable buying products from their home or office. One of the main reasons for the joy of consumer shopping is when the peak season arrives; they do not have to wait in long lines at the physical store to buy products and services because consumers can buy products directly through online facilities. With the advancement of technology, past scholars have identified what consumers consider to be risks, which is their main concern in the decision-making process when shopping through internet shopping as in online shopping. The relationship between consumer risk perceptions and internet shopping intentions is not widely explored, especially in the Malaysian context, but current studies show that there is a close relationship between them. This study aims to examine the influence of consumer risk perception on internet shopping purchase behavior to purchase products and services in Malaysia. A total of 138 valid responses from the sample were obtained. Convenience sampling techniques have been adapted for young users in this study. Data collection instruments are questionnaires that use self-administered distribution techniques. Structural Equation Model Partial Least Square (SEM-PLS) version 3.0 was used to analyze the data. The results of Partial Least Square has confirmed the fitness of the model in the population studied. Similarly, findings from path analysis found that consumers' perceptions of functional risk have influenced their internet shopping intentions in purchasing products and services.

Keywords: Young user; risk; internet shopping; behaviour.

1. INTRODUCTION

Online shopping is a priority for customers as the internet has become an important tool for communication and business around the world. According to Internet World Statistics [1], in 2017, there were more than four billion internet users and increased 57.7% compared to internet users in 2000. The number of internet user keep on increase in 2019 which is around 4.39 billion internet users [2]. As stated by Statista [3], the projection shows an increase of up to \$ 4.48 million by 2021 which represents a huge surge in online shopping [4]. This shows that the internet has revolutionized the business of online shopping [5,6]. With access to computers connected to the internet, as well as mobile and tablets, whether at work, home or through facilities such as cybercafes, cafes and libraries, now this shopping trend is becoming a common transaction style. Despite the rapid development in e-commerce and online shopping, these exciting developments have led to a number of new problems and challenges involving the protection of key user data, payment security, and enforcement, information disclosure, e-contract validity, enforcement and product quality acceptable [4,6].

¹Faculty of Entrepreneurship and Business, Universiti Malaysia Kelantan, Malaysia.

²Faculty of Hospitality, Tourism and Wellness, Universiti Malaysia Kelantan, Malaysia.

*Corresponding author: E-mail: nikalifamri@gmail.com;

The consumer's risk perception to buy online has been an important problem for research as it will have a direct impact on customers' attitudes to buy online, and their attitudes will have a significant impact on online shopping behaviour [7]. As mentioned by Almousa [8], the perceived risk in online shopping has a negative impact on the intention to buy the product online. Users may experience a certain level of risk when they intend to spend over the internet. However, the perceived online shopping risk is not fully identified as there are many online retailers that still pose a threat to online businesses, and this can affect retailers' transactions and performance. An understanding of the broader perception of young consumer risk will help marketers and retailers to bring a positive image for consumers to participate in online shopping. To overcome this gap, this paper examines the impact of consumer risk on online purchasing behaviour. Such an approach can help enhance more effective mitigation plans in response to potential threats.

2. LITERATURE REVIEW

2.1 Risk Perception

Perceived risk is can be known as an expected loss [9]. The greater the expected of loss, the higher the level of risk that the consumer will see. As stated by Laroche, McDougall and Bergeron [10], the perceived risk can be identified as a negative impact on the expected and changeable outcome of the purchased product. Simultaneously, Ko, Jung, Kim and Shim [11] have defined risk as consumer perception of variable outcomes and contrary to the purchase of a product or service. This concept consists of two elements, namely uncertainty and consequence. Uncertainty can be identified as the probability of an unprofitable outcome and consequently defined as a profit loss [10]. Kim, Kim and Kumar [12] add that customer confidence in these changes comes from online shopping transactions.

Risk perception plays an important role in determining consumer buying intentions. Perceptions of consumer risk are important in determining their valuation and purchasing behavior [11,6]. Past studies have shown that the perceived risk of consumers can have a negative impact on online consumer purchasing intentions for clothing [8,13,14]. The greater the perception of risk among consumers, the more it prevents consumers from intending to buy them. According to Lee and Tan [15], higher risk consumers tend to buy products or services online. In summation, perceived risk has a negative impact on consumer intention to buy through the internet [16]. As Kim & Lennon [17] point out, the higher the risk seen by online retailers, the less likely it is to convince consumers of online retailers. In contrast, Masoud's [18] study on the perceived impact of perceived risk on online shopping intentions on online shoppers in Jordan is related to time risk, financial risk, information security risk, delivery risk and product risk.

Accordingly, the results of this study show that product risk, information security, finance and delivery have a negative impact on online shopping intentions. It can be concluded that online sellers should be alert to their customers' risk perceptions, and strategies need to be implemented to avoid those risks. Furthermore, Akhlaq and Ahmed [19] have found that perceived risk has a negative impact on consumers intention to buy online. This show that the user's desire to buy online is stopped when the user realizes that the transaction is risky [19]. Accordingly, consumers will have a positive online shopping experience if they have a lower level of risk on the internet. In the future, the growth of purchase intentions will occur if a lower level of risk is perceived. As stated in the literature, the theoretical framework for this study will be conceptualized based on the above results, using financial risk, physical risk, time risk, social risk and functional risk. This is because variables that are widely recognized as consumer risk variables that hinder online purchasing intentions and experts in this field mostly study these variables. Thus, the variables are suitable for this study.

2.2 Internet Shopping Behaviour

Internet shopping behaviour is a type of attitude that involves customers browsing the web to find, select and purchase goods and services, to meet their needs and wants. This includes user feedback and decision making. As mentioned by Close and Kukar-Kinney [20], the intention to buy online comes from the intention to buy. The purpose of an online purchase is the willingness of customers to buy through the internet [13]. Consumer willingness to purchase products or services through internet

stores is defined as the intention to purchase online [21]. Meanwhile, positive on online shopping behaviour will lead to the success of e-commerce transactions. Online shopping has become a new type of retail shopping worldwide. This is because customers will feel very easy, have a wider choice, very competitive prices, better product information (including people reviews) and very easy to find products. In online stores, consumers may have less confident and consider online shopping high risk due to lack of face-to-face communication. The scholars realize that consumer confidence in a company's ability to meet their needs and wants is more than just trust, it is also a good intention to influence consumer buying intentions.

3. METHODOLOGY

Quantitative approach methods were used for this study. This study involved a young consumer population aged 18-35 years. Samples have been selected to meet certain criteria, for example, young users must be proficient in using internet shopping to purchase their products. The data collection process is done in Kota Bharu Kelantan on weekends. Young internet-shopping users were approached, and a total of 138 responses were obtained using GPower sample sizes [22]. Once the data were collected, the data were analyzed through partial least squares structural equation model (SEM-PLS). There are four parts of the questionnaire that have been developed to collect data from young users. Part A of the questionnaire is a screening question, part B questions are related to perceived travel risk at the destination, and part C is related to questions related to online purchasing behaviour. The last part D is about demographic questions. Instrumentation for perceived risks and intentions is adopted and adapted from previous studies, such as Ariffin, Mohan & Goh [23], Lim, Osman, Salahuddin, Romli & Abdullah [24]; Hashim et al. [6] and Nik Hashim, et al. [25]. A seven-point Likert scale was used for this item to ensure that research would obtain in-depth information, ranging from (1 = strongly disagree to 7 = strongly agree).

Meanwhile, this study tests reliability and validity before the actual data collection process. The purpose of conducting reliability analysis is to study the consistency and stability of the response from the respondents. There are four criteria that researchers can follow in increasing reliability: (1) configuring all constructions, (2) filtering measurements, (3) using multiple indicators, and (4) conducting tests [26]. If the score is more than 0.7, it can be assumed that the items in the questionnaire measure the required construct accurately. Therefore, the higher the score, the higher the reliability of the scale produced. As for the content validity, an academicians from Universiti Malaysia Kelantan (UMK) were contacted to check content validity. Table 1 shows the rules of thumb for Cronbach's Alpha Coefficient Measurement.

Table 1. Rules of thumb of cronbach's alpha coefficient size

Coefficient Alpha Range	Strength of Association
>0.90	Excellent
0.80 to < 0.90	Very Good
0.70 to < 0.80	Good
0.60 to < 0.70	Moderate
< 0.60	Poor

(Hair, Hult, Ringle, & Sarstedt, 2017)[27]

4. FINDING AND DISCUSSION

4.1 Profile of Respondent

The demographics of the respondents are shown in Table 2. About 78 respondents were female (56.5%), and 60 respondents were male (44.4%). Regarding age, more than half of the respondents were between 26 and 30 years old (63.8%), about 23.9% were 21-25 years old, and 7.9% were under 20 years old. Almost more than 60% of respondents are bachelor's degree holders, followed by respondents with a diploma or STPM (23.9%). Furthermore, 8% of respondents are SPM holders and a smaller percentage (4.3%) of respondents have a Bachelor's education background. The majority of

respondents were students (73.9%), followed by self-employed (13.8%), professionals and those in management (7.2%). A small number of respondents are housewives (5.0%).

Table 2. Demographics of consumer (n = 138)

Variables	Category	Frequency	Percentage (%)
Gender	Male	60	44.4
	Female	78	56.5
Age	18- 20	11	7.9
	21-25	33	23.9
	26-30	88	63.8
	31-35	6	4.3
Education	SPM	11	8.0
	Diploma/STPM	33	23.9
	Bachelor Degree	88	63.8
	Mater Degree	6	4.3
Occupation	Student	102	73.9
	Self-Employment	19	13.8
	Professional &	10	7.2
	Management		
	Housewife	7	5.0

4.2 Hypotheses Testing and Path Analysis

Based on the Partial least square analysis, it is shown that only the H4 hypothesis is supported while the H1, H2, H3, and H5 hypotheses have been rejected. Financial, physical, time, functional and social risks are independent variables and online purchasing behaviour as dependent variables. The functional risk has a significant influence on online buying behaviour ($\beta = -0.459$, $p < 0.05$), P value less than 0.05. As a result, hypothesis 4 is supported. Furthermore, the results show that the total impact on financial risk (H1), physical risk (H2), time risk (H3) and social risk (H5) is not significant for online purchasing behaviour.

5. CONCLUSION

In summation, past studies have shown that perceptions of consumer risk are complex and multidimensional. The results of this study show that customers are at risk when they want to buy online; a number of samples- financial, physical, time, social and functional risks, in this study, confirm this. While, the four risk factors found to be insignificant were financial, physical, time and social risks. Among these factors, the functional risk is a major contributor to the cancellation of online purchases by consumers. The results show that it is important to understand the factors that influence the intention to buy consumer perceptions of online risk as they provide valuable information to online retailers in e-commerce activities. To improve the generalization of the findings, repeated studies are proposed in future studies, where this study can be done with the study of similar models between different backgrounds, as unique in other countries and not just in the context of Kelantan. It is more beneficial to have a sufficient number of respondents for each respondent. The emphasis of this study is to show different perceptions of national consumer groups. In addition, the available studies have not been accurately designed to assess the factors related to moderators and mediators regarding risk perception, and intention to purchase online. Upcoming studies may consist of effects on personality traits and previous experience in the model to understand in a way how variables can influence the simplification of both independent and dependent variables. The role of mediation, such as trust is also recommended for future studies. In short, it is hoped that the results will provide info and knowledge to Malaysian online retail participants, in particular, in planning their marketing strategies to attract consumers. For example, the results of future studies may show online stores where they can offer complete information about their business and considerations on their security policies, to prevent cyber fraud. Online sellers can mitigate financial and other risks associated with acknowledging those risks and offer trading plans for inappropriate products.

ACKNOWLEDGEMENTS

We would like to express our appreciation to all experts who willing to spend time to publish this chapter in book particularly to the members of Faculty of Hospitality, Tourism & Wellness and Faculty of Entrepreneurship & Business, Universiti Malaysia Kelantan.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Statista. E-commerce worldwide. Statistics and facts; 2018. Available: www.statista.com/topics/871/online-shopping/
2. Paynter J, Lim J. Drivers and impediments to e-commerce in Malaysia. *Malaysian Journal of Library and Information Science*. 2001;6(2):1-9.
3. Bourlakis M, Papagiannidis S, Fox H. E-consumer behaviour: Past, present and future trajectories of an evolving retail revolution. *International Journal of E-Business Research*. 2008;4(3):64-76.
4. Hashim NAAN, Ramlee SIF, Yusoff AM, Nawi NMN, Awang Z, Zainuddin SA, Abdullah T, Ahmad G, Rahim MA, Fatt BS. Internet Shopping: How the Consumer Purchase Behaviour is Impacted by Risk Perception. *TEST Engineering & Management*. 2019;59(6S):1014-1021.
5. Ariff MSM, Sylvester M, Zakuan N, Ismail K, Ali KM. Consumer perceived risk, attitude and online shopping behaviour; empirical evidence from Malaysia. *IOP Conference Series: Materials Science and Engineering*, IOP Publishing. 2014;58(1).
6. Almousa M. Perceived risk in apparel online shopping: a multi-dimensional perspective. *Canada Social Science*. 2011;7(2):23-21.
7. Schierz PG, Schilke O, Wirtz BW. Understanding consumer acceptance of mobile payment services: an empirical analysis. *Electronic Commerce Research and Applications*. 2010;9(3):209-216.
8. Laroche M, Yang Z, McDougall GHG, Bergeron J. Internet versus bricks-and-mortar retailers: An investigation into intangibility and its consequences. *Journal of Retailing*. 2005;81(4):251-267.
9. Ko HJ, Jung JM, Kim JY, Shim SW. Cross-cultural differences in perceived risk of online shopping. *Journal of Interactive Advertising*. 2004;4(2):20-29.
10. Kim YK, Kim EY, Kumar S. Testing the Behavioral Intentions Model of Online Shopping for Clothing. *Clothing and Textiles Research Journal*. 2003;21:32-40.
11. Meskaran F, Ismail Z, Shanmugam B. Online purchase intention: Effects of trust and security perception. *Australian Journal of Basic and Applied Sciences*. 2013;7(6):307-315.
12. Zhang L, Tan W, Xu Y, Tan G. Dimensions of consumers' perceived risk and their influences on online consumers' purchasing behavior. *Communications in Information Science and Management Engineering*. 2012;2(7):8-14.
13. Lee KS, Tan SJ. E-retailing versus physical retailing: A theoretical model and empirical test of consumer choice. *Journal of Business Research*. 2003;56(11):877-885.
14. Liu X, Wei KK. An empirical study of product differences in consumers; E-commerce adoption behavior. *Electronic Commerce Research and Applications*: 2(3);229-239.
15. Kim J, Lennon SJ. Effects of reputation and website quality on online consumers' emotion, perceived risk and purchase intention: based on the stimulus-organism-response model. *Journal of Research in Interactive Marketing*. 2013;7(1):33-56.
16. Masoud EY. The effect of perceived risk on online shopping in Jordan. *European Journal of Business and Management*. 2013;5(6):76-87.
17. Akhlaq A, Ahmed E. Digital commerce in emerging economies: Factors associated with online shopping intentions in Pakistan. *International Journal of Emerging Markets*. 2015;10(4):634-647.
18. Close AG, Kukar-Kinney M. Beyond buying: Motivations behind consumers' online shopping cart use. *Journal of Business Research*. 2010;63(9/10):986-992

19. Li N, Zhang P. Consumer online shopping attitudes and behavior: an assessment of research. *AMCIS 2002 Proceedings*. 2002;74.
20. Faul F, Erdfelder E, Lang AG, Buchner A. G* Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 2007;39(2):175-191.
21. Ariffin SK, Mohan T, Goh YN. Influence of consumers' perceived risk on consumers' online purchase intention. *Journal of Research in Interactive Marketing*. 2018;12(3):309-327
22. Lim YJ, Osman A, Salahuddin SN, Romli AR, Abdullah S. Factors Influencing Online Shopping Behavior: The Mediating Role of Purchase Intention. *Procedia Economics and Finance*. 2016;35:401–410
23. Nik Hashim NAA, Yusoff AM, Awang Z, Aziz RC, Ramlee SIF, Bakar NA, Noor, Fatt BS (2019). The Effect of Domestic Tourist Perceived Risk on Revisit Intention in Malaysia. *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*. 2016;8(10):4591-4596
24. Sekaran U, Bougie R. *Research Methods for Business: A Skill Building Approach*. United Kingdom: John Wiley & Sons, Ltd, Publication.
25. Hair JF, Hult GTM, Ringle CM, Sarstedt M. *A Primer on Partial Least Squares Structural Equation Modeling*. 2nd Ed. Thousand Oaks: Sage; 2017.
26. Internet World Stats. Internet usage in Asia; 2018.
Available:www.internetworldstats.com/stats3.htm
27. Internet World Stats. Internet usage in Asia; 2020.
Available:www.internetworldstats.com/stats3.htm

Biography of author(s)



Dr. Shah Iskandar Fahmie Ramlee

Faculty of Entrepreneurship and Business, Universiti Malaysia Kelantan, Malaysia.

He completed his Master degree and Doctor of Philosophy (PhD) from Universiti Teknologi Malaysia in 2010 and 2017 respectively. He is working as a Senior Lecturer in Faculty of Entrepreneurship and Business, Universiti Malaysia Kelantan. His research interest includes. He has been involved in research projects with industry players and releases many articles nationally and internationally. Among his areas of expertise are Human Resource Development, Entrepreneurship and Small and Medium Enterprises. He is currently appointed as Director of Centre for University-Industry Collaboration (CUIC) Universiti Malaysia Kelantan.



Nik Alif Amri Nik Hashim

Faculty of Hospitality, Tourism and Wellness, Universiti Malaysia Kelantan, Malaysia.

He is a lecturer in the Department of Tourism Management, Faculty of Hospitality, Tourism and Wellness (FHPK), Universiti Malaysia Kelantan (UMK). He holds a Bachelor Science of Tourism Management minor Hospitality and holds a Master's Degree in Tourism Management from Universiti Teknologi MARA (UiTM). He has been involved in research projects and releases many articles nationally and internationally. Among his areas of expertise are Tourism and Hospitality Management, Tourism Technology, Culture & Heritage, Travel Risk Perceptions, Destination Destinations, Tourist Travelers and Intimate Adventures, Event Management in Tourism and Crisis & Disaster Management. He is currently pursuing a Doctor of Philosophy (PhD) in Tourism & Hospitality at the University of Queensland, Australia.



Zaimatul Awang

Faculty of Hospitality, Tourism and Wellness, Universiti Malaysia Kelantan, Malaysia.

She is a tourism lecturer in the Department of Tourism Management, Faculty of Hospitality, Tourism and Wellness (FHPK), Universiti Malaysia Kelantan (UMK). She holds a Bachelor Science of Tourism Management minor Hospitality and holds a Master's Degree in Tourism Management from Universiti Teknologi MARA (UiTM). She has been involved in research projects and published numerous articles nationally and internationally. Her research interests are in Tourism Management, Tourism Technology, Tourism Crisis & Disaster Management, Tourism Heritage & Culture and Tourist Behaviour. She is currently pursuing a Doctor of Philosophy (PhD) in Tourism & Hospitality at public university in Malaysia.



Fadhilahanim Aryani Abdullah

Faculty of Hospitality, Tourism and Wellness, Universiti Malaysia Kelantan, Malaysia.

She is a lecturer in the Department of Tourism Management, Faculty of Hospitality, Tourism and Wellness (FHPK), Universiti Malaysia Kelantan (UMK). She holds a Bachelor of Information Technology and Chemistry Education from Universiti Teknologi Malaysia and a Master's Degree in Science Education with ICT from Universiti Malaya. She's also hold a Diploma of Entrepreneurship Educators from Universiti Malaysia Kelantan. Currently, she is pursuing her PhD in Entrepreneurship Management majoring in innovation in health tourism industry. She has been involved in many research projects related to Science, ICT, Entrepreneurship, Tourism and Management. Among her areas of expertise are Tourism and Hospitality Management, Tourism Technology, Culture & Heritage, Event Management, innovation in tourism management, Resilience of tourism management, Hotel and Accommodation, Community Based Tourism, ASEAN Homestay and Impact Investment in Islamic Tourism.



Siti Rohana Mohamad

Faculty of Entrepreneurship and Business, Universiti Malaysia Kelantan, Malaysia.

She is currently a lecturer at Universiti Malaysia Kelantan (UMK). Previously, she was appointed as a tutor at UMK from 2011 to 2015. She obtained Bachelor in Finance from UiTM Kelantan and Master of Finance (Islamic Finance) from International Islamic University of Malaysia (IIUM). At present, she is also doing PhD in Finance at the Faculty of Business and Management, Universiti Sultan Zainal Abidin (UNISZA). In term of her career as a lecturer, she has taught courses various courses in finance, banking and management to students from various age groups and backgrounds. Her research interest lies in areas of waqf, Islamic philanthropy and Islamic banking and finance.



Siti Afqah Zainuddin

Faculty of Entrepreneurship and Business, Universiti Malaysia Kelantan, Malaysia.

She is a senior lecturer in the, Faculty of Entrepreneurship and Business (FKP) Universiti Malaysia Kelantan (UMK). She holds a Bachelor Art of Accounting from Islamic Science university of Malaysia (USIM), Master Science of Accounting from International Islamic University of Malaysia (IIUM) and PhD in Accounting from University of Aberdeen (UoA). She has been involved in research projects and releases many articles nationally and internationally. Among her areas of expertise are Management Accounting, Financial Accounting, Operational Risk Management, Social Accounting and Organizational Studies.



Dr. Tahirah Abdullah

Faculty of Entrepreneurship and Business, Universiti Malaysia Kelantan, Malaysia.

She is a lecturer in the Faculty of Entrepreneurship and Business (FKP), Universiti Malaysia Kelantan (UMK). She holds a Bachelor in Accounting from Universiti Sains Islam Malaysia (USIM) and holds a Masters Degree in Accounting from Universiti Islam Antarabangsa Malaysia (UIAM). She has been involved in many research projects and releases articles nationally. Among her areas of expertise are Capitals Investment Decision-making in Small and Medium Enterprises (SMEs) and Accounting in Neoliberal Enterprises. She received her Doctor of Philosophy (PhD) in Accounting, Aberdeen, Scotland.

© Copyright (2020): Author(s). The licensee is the publisher (Book Publisher International).

DISCLAIMER

This chapter is an extended version of the article published by the same author(s) in the following journal.
TEST Engineering & Management, 59(6S): 1014 - 1021, 2019.