Information Management and Business Review (ISSN 2220-3796)
Vol. 15, No. 3, pp. 50-58, September 2023

The Influence of Perceived Risk Factors on Online Purchase Intention among Millennials in Malaysia

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Abstract: This study investigates perceived risk factors that influence online purchase intention among Millennials in Malaysia. The study examined several predictor variables, namely financial risks, product risks, and non-delivery risks, whereas the result variable under investigation was online purchase intention. The study employs structured questionnaires verified for data collection through face and content validity. The data were analyzed using descriptive statistics through the Statistical Package for Social Sciences (SPSS) version 23. Multiple regression analysis was conducted to ascertain the association between the predictor factors and the outcome variable. The findings indicate a significant relationship between the predictor variables, namely financial risks, product risks, and non-delivery risks, and the outcome variable. The analysis shows that non-return risks exhibited the highest association with online purchase intention. The findings of this study offer significant contributions to the advancement of future research and the enhancement of online entrepreneurs' ability to optimize their online operations and give enhanced consumer value experiences.

Keywords: *Perceived risk, financial risk, product risk, convenience risk, non-delivery risk, online purchase intention, millennials.*

1. Introduction and Background

The rise of online shopping is causing a significant transformation in the global marketing industry, as it steadily garners more popularity among customers daily. There is a pressing need for additional research to comprehensively comprehend the phenomenon of online shopping from the psychological standpoint of customers. Their behavior influences their inclination to engage in online product purchases. This inquiry transcends mere comprehension of client preferences and expectations, delving into the underlying motivations that drive customers to make online purchasing decisions. A comprehensive understanding of the primary determinants influencing consumers' desire to make online purchases can offer valuable insights for online retailers in developing and delivering creative product offerings that align with and fulfill customer expectations, specifications, and satisfaction. The popularity of online shopping is increasing in several countries due to the convenience it offers individuals to buy through the Internet. The Internet facilitates the communication of pertinent information regarding products and services between buyers and sellers, hence expediting the process of business transactions (Andriani & Sihombing, 2015). Various factors influence consumers' intention to engage in online purchasing before the actual transaction. Lissitsa and Kol (2016) propose that the propensity for online buying is contingent upon the customer's financial resources. This implies that those with higher incomes exhibit a greater propensity to engage in online purchasing activities than those with lower incomes. However, the existing literature provides limited data to establish a correlation between income level and online shopping (Aziz & Wahid, 2018).

Gaining insight into millennials' purchasing intention, particularly about online items, holds significance for online entrepreneurs seeking to devise methods that efficiently tap into the online market among this demographic. The International Trade Ministry of Malaysia implemented several e-business reforms to augment the adoption of electronic commerce by small and medium enterprises (SMEs). About 77 percent of SMES establishments have embraced digitalization (SMECorp, 2021). Approximately 25.08 individuals in Malaysia use the Internet, representing nearly 79 percent of the country's population, as reported in the Malaysia Country Commercial Guide of 2018. This vast market is a significant opportunity for online marketers to leverage to enhance sales. The growth of online marketing in Malaysia is seeing significant expansion. To ensure the long-term viability of this emerging market, thorough research is needed to gain insights into customer perceptions and understand how these perceptions influence their buying intentions. Gupta (2017) asserts that the existing literature lacks a comprehensive understanding of internet buying in

Malaysia. This implies that internet marketers risk losing out on the potential benefits of comprehending customer behavior, as there is currently a lack of expertise in this regard. Understanding client behavior concerning online purchasing can significantly enhance the efficacy of online marketing endeavors in Malaysia. This knowledge can be leveraged to improve various aspects of the online market, including but not limited to delivery service, product quality, security, and privacy.

Revesencio (2017) asserts that online shopping continues to elicit several inquiries among consumers and potential consumers. These inquiries encompass the customer's inclination towards purchasing products from online retailers, determining which things to purchase, and considering pricing factors. This statement implies that those engaged in online sales must understand the underlying elements that influence consumer behavior. Chawla, Khan, and Pandey (2019) argue that online retailers face challenges in accurately understanding and fulfilling client preferences and expectations, resulting in the provision of products that may not fully align with customer needs. It might be argued that online shops often present unnecessary product options for the buyer, which is a concern for online marketers. Consumer wants are inherently intricate and subject to constant evolution. This phenomenon renders it challenging for proprietors of online retail platforms to anticipate and fulfill the expectations and requirements of customers effectively, hence hindering their ability to provide products that align with customer preferences. Determining the factors influencing consumers' online purchase intentions is a challenging task. Failure to adequately understand the customer's psychology and behavior can significantly impede online businesses and their ability to gain a competitive advantage in highly competitive markets. The potential consequences of this phenomenon include a decrease in sales and the viability of Internet marketing. The study examines the factors that influence the desire to make online purchases among millennials in Malaysia, focusing on the relationship between financial risks, product risks, convenience risks, non-delivery risks and consumer purchase intention.

This study's scope is restricted to examining four predictor variables, namely financial risks, product risks, convenience risks, and non-delivery risks. The dependent variable in this study is the intention to make online purchases. While several elements influence customers' intention to purchase online products, these four factors appear widely observed and applicable in online purchase decisions (Gupta, 2017). The scope of this study is confined to online buying activities, specifically within the geographical boundaries of Malaysia. Therefore, the findings and conclusions derived from this research cannot be extrapolated to encompass online shopping behaviors in other countries or regions. However, it is noteworthy that certain commonalities in the elements influence online purchasing throughout different regions of the globe. The participants for this study were selected from millennials who live in Kuala Lumpur, specifically those who possess prior expertise in engaging in online buying activities. The participants were chosen for the study based on convenience sampling to minimize the likelihood of non-response.

2. Literature Review

Online Shopping: The term "online shopping" pertains to utilizing digital or e-commerce platforms to facilitate the purchase of goods or services. This process involves customers utilizing internet-connected technology devices to make direct purchases from the convenience of their location, hence eliminating the need to physically visit traditional marketplaces (Aziz & Wahid, 2018). Although online buying is a relatively recent phenomenon, it is gaining popularity among young individuals, particularly those who are predominantly occupied and find it challenging to visit physical marketplaces for shopping. The option is comparatively convenient and offers cost savings regarding time and transportation expenses. The buyer can complete their purchase by clicking a few times, adding products to their shopping cart, and proceeding to checkout. This may be done within seconds, all from the convenience of their preferred location. According to Aziz and Wahid (2018), the process is characterized by a lack of tension, and upon receiving the correct address; the consumer can have their package delivered to their preferred location or doorstep. In addition, Kumar (2016) suggests that an alternative option for payment can be arranged at the time of delivery. Individuals with a strong inclination towards making purchases through online platforms are likely to engage in online shopping activities, acquiring various items (Lim et al., 2016). In their study, Lim et al. (2016) examined the factors that influence the intention of Malaysian university students to make online consumer purchases. They observed that online marketing has become increasingly prominent in Malaysia, primarily

due to the widespread availability of internet access. According to Lim et al. (2016), internet access significantly increased from 3,700,000 in 2010 to 17,723,000 in 2012, representing a growth within two years.

The substantial growth in user population implies that Internet marketing is poised to become the dominant force in future corporate operations, potentially leading to a shift in customer focus from traditional physical retail outlets to online purchasing experiences. According to a study conducted by Wong, Lo, and Ramayah (2014), it was observed that approximately 91% of internet users in Malaysia engage in online shopping. Furthermore, more than 54% of these individuals make monthly purchases, while 27% make at least one weekly or more frequent purchase of online products. According to a study by Lim et al. (2016), statistical data indicates that Malaysia has allocated around 1.8 billion ringgits towards implementing Internet banking. The bright outlook for the future of online banking in Malaysia is attributed to the continual growth in the number of online shoppers. Given the relative novelty and extensive scope of online buying, researchers must document how online shopping can be effectively maintained and positioned as a formidable alternative to traditional brick-and-mortar retail establishments.

Online Purchase Intention: The purchasing behavior of individuals is contingent upon their initial intentions. Purchase intention refers to the inclination or desire of a consumer to acquire a specific product or service (Sien, 2015). Regarding online shopping, an individual's inclination to make purchases from virtual retail establishments constitutes a significant element of the company process and customer decision-making (Xiao, Yang & Iqbal, 2019). In general, online buying is commonly linked to the concept of customer satisfaction, which pertains to the evaluation made by a consumer regarding their online shopping experience after placing an order, making a payment, receiving the goods, and using it, all inside the context of an online business. Customer satisfaction in online buying can be measured as the discrepancy between customers' initial expectations and their subsequent experience, which influences their post-purchase intentions. Additionally, the process entails customers assessing the Internet services provided by comparing them to those available in brick-and-mortar establishments.

Furthermore, the determination of consumer intent is typically preceded by a thorough needs assessment. During this process, the customer must evaluate whether the product being considered for purchase can effectively fulfill its intended purpose. This process typically involves conducting many background checks, such as seeking testimonials from individuals who have previously purchased and utilized the goods, reviewing product evaluations on the company's website, or examining the product's specifications to determine its suitability. If the pertinent information acquired regarding the product is sufficiently persuasive, the consumer typically develops an inclination to purchase the product based on the available choices. When making online purchases, customers typically consider many variables, such as financial considerations, pricing, product quality, convenience, and the possibility of non-delivery. However, if it is subsequently discovered that the product fails to meet their needs, this will lead to disappointment and overall dissatisfaction. According to Wang and Hazen (2016), the circumstances above may ultimately hurt the individual's future desire to make online purchases and diminish their commitment and loyalty towards the specific product or brand.

It is crucial to emphasize that individual with a favorable mindset or intention regarding online purchases tends to order or buy goods and services through online platforms consistently. Xiao, Yang, and Iqbal (2019) propose that a high positive intention can foster a more robust and enduring relationship between sellers and buyers in online commerce. This information suggests that individuals who conduct their business online should prioritize satisfying the demands of buyers rather than solely pursuing financial gain. When customers experience satisfaction with their purchases, they are more inclined to exhibit repeat purchasing behavior, rewarding the online entrepreneur. This scenario can be characterized as mutually beneficial since the customer obtains their desired product or service while the seller achieves a successful transaction and financial gain. On the contrary, in such instances, disgruntled customers seek alternative sellers who can fulfill their expectations and provide them with a satisfactory return on their investment. As previously said, numerous aspects significantly stimulate buyers' intention to purchase online goods. There are numerous and diverse factors, including but not limited to product pricing, online purchasing security, privacy concerns, and apprehensions regarding the receipt of defective merchandise. According to Ma and Yang (2018), prior

research has indicated that consumers tend to evaluate the quality of a product concerning its price. Various theoretical frameworks are employed in research to examine how individuals or customers initially intend to purchase a product. This approach aims to comprehensively grasp this notion by considering multiple perspectives.

Financial Risk: The primary concern for most prospective online customers revolves around the apprehension related to financial threats. Individuals desire to ascertain the potential risks associated with engaging in online shopping activities. Financial risks can be defined as the subjective assessment of prospective online consumers regarding the potential monetary loss they may incur during or after an online transaction. The apprehension around financial losses in the context of online buying is more prevalent among those from the baby boomer age group than those from the millennial cohort (Liew & Falahat, 2019). Conversely, millennial demographics exhibit a comparatively lower level of apprehension over the financial hazards of Internet transactions. One possible explanation is that individuals in the latter two age groups exhibit a higher propensity towards technology adoption and usage than those in the former age group. The primary concern arising from financial risk is the potential disclosure of personal financial information by online store owners to other parties, which may result in misuse or abuse, such as fraudulent activities or unauthorized access to accounts. While the notion above is more prevalent among the older demographic than the younger generation, it is essential to emphasize that financial dangers are a universal worry that impacts all internet consumers. The issue at hand pertains to the perception held by individuals who engage in online shopping, wherein they have biases that lead them to believe that there is a likelihood of financial loss associated with this mode of shopping. However, it is essential to note that there is a lack of empirical data to substantiate this assumption (Gan & Wang, 2017).

Kamalul Ariffin, Mohan, and Goh (2018) employed an online survey methodology to gather data from 350 participants and examine the factors influencing customers' intention to make online purchases. The findings of their study revealed a significant correlation between perceived financial risks and customers' online purchase intention. The authors acknowledge that numerous online customers continue encountering diverse types and levels of dangers while and after online purchasing. Consequently, they emphasize the importance for online retailers to enhance their operations to mitigate the perceived risks of conducting business online. Given that the prosperity of a firm is significantly influenced by its customers, online entrepreneurs must address client concerns about financial dangers to attain a competitive edge and enhance sales and profitability. The findings indicate that customers hesitate to engage in online shopping mainly due to concerns around security, encompassing the safeguarding of their bank accounts, ATM details, and overall personal financial information. However, the study also concludes that particular online consumers tend to overestimate the perceived dangers associated with online shopping, leading them to assume that they are at a higher likelihood of experiencing financial losses through this medium. Based on their assessment, it appears that customers may not possess a comprehensive understanding of the primary dangers inherent in online buying and the underlying factors contributing to these risks. In the context presented, an inverse relationship exists between the level of perceived risks and the consumer's propensity to engage in online product purchases. Given the lack of definitive evidence in existing studies about the perceived financial risks associated with online purchasing, the present study aims to contribute to this discourse by putting forth the proposition that:
Hypothesis 1: The degree of financial risks impacts a consumer's intention to purchase online.

Product Risk: Essentially, customers desire immediate access to products close to their immediate vicinity. One potential concern individuals may have regarding online purchasing is the absence of an option for customers to physically own and evaluate a product concerning their personal requirements, expectations, and specifications. Harris, Dall'Olmo Riley, Riley, and Hand (2017) conducted a survey involving 871 UK consumers with prior experience in online and traditional supermarket shopping. Based on the survey results, the study aimed to analyze and evaluate the advantages and disadvantages of these two shopping methods. The researchers employed the avoidance behavior theory as the conceptual framework for their study. They discovered that individuals prefer purchasing from physical brick-and-mortar stores rather than online shops due to their desire to evade perceived risks or disadvantages. The magnitude of these perceived risks varies depending on the specific customer in question.
Notably, those who patronize physical supermarkets tend to engage in a more thorough evaluation of the

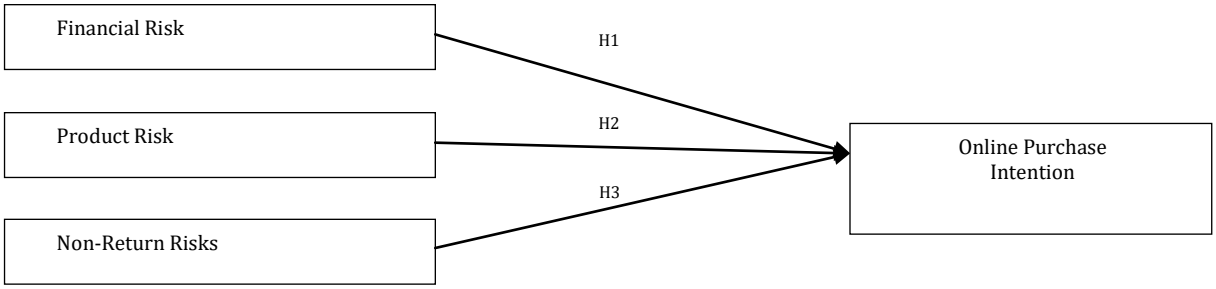
products they intend to purchase, considering factors such as actual quality, features, functioning, design, and other relevant considerations. By adopting this approach, customers can reassess their expectations and specifications to align them with the current market offerings, thereby forming an intention to purchase (Lee, Cheng, & Shih, 2017). However, online marketing does not exhibit the same characteristics. Frequently, e-commerce vendors fail to provide customers with the necessary and precise information required to facilitate a thorough buy intention or decision. To address customers' perceptions of product hazards, it is essential to furnish sufficient product information and present relevant product visuals. One potential improvement may be incorporating a feature that allows users to enlarge the product photographs, enhancing the clarity of the visuals and facilitating the process of making well-informed decisions. Given the customers' need for optimal cost-effectiveness, it is imperative to acknowledge the significance of furnishing clients with comprehensive and precise information and detailed product visuals to mitigate any hazards associated with product perception. The study was conducted by Pascual-Miguel, Agudo-Peregrina, and Chaparro-Peláez (2015).

In their study, Lee et al. (2017) examined the phenomenon of internet purchase of medical equipment or products in Taiwan and China. Their research aimed to determine the effects of such purchases on customers, with a specific focus on product features/characteristics, product involvement, and word-of-mouth. The study revealed a significant correlation between the research variables and the end variable, specifically online buy intention. However, it should be noted that product quality did not exhibit a positive link with purchase intention. Liew and Falahat (2019) studied internet marketing in Malaysia, focusing on the factors influencing online purchase intention. Their findings revealed a significant correlation between purchase intention, perceived usefulness, and perceived risks, specifically product risks. Factors such as product price and perceived trust were also found to be influential in shaping purchase intention. This study posits the following hypothesis:
Hypothesis 2: The degree of product risk impacts a customer's intention to purchase online.

Non-Return Risks: While it is not a frequent phenomenon, the apprehension of shoppers regarding the non-receipt of purchased things in online buying is widely shared. The potential loss of a return refers to the possibility of items being lost or damaged, which instills apprehension in customers over the timely receipt of their goods as per the business's stated timeframe (Dachyar & Banjarnahor, 2017). Several variables can influence the customer's receipt of a non-return, such as inadequate shipping and handling procedures during transportation. Due to many potential complications, consumers may opt not to finalize a transaction due to uncertain delivery commitments. One effective strategy for alleviating customer concerns regarding shipping and non-delivery is to provide precise and timely updates regarding the anticipated arrival of their ordered product.

The study by Khan, Liang and Shahzad (2015) revealed that the perception of non-return risks significantly influenced individuals' purchase intention in online purchasing. When customers possess a greater understanding of the perceived risks related to non-return in the context of online shopping, it is more probable that their intention to make a purchase will increase, resulting in a corresponding increase in their level of satisfaction. Conversely, a decrease in customers' knowledge of these risks will likely have the opposite effect. In their study, Rosillo-Díaz, Blanco-Encomienda, and Crespo-Almendros (2019) adopt a cross-cultural perspective to examine the impact of perceived product quality and perceived risks on individuals' purchase intention of e-commerce products. The authors highlight that uncertainty avoidance, precisely the apprehension related to non-return risks associated with e-commerce, discourages individuals from participating in e-business activities. Therefore, there is a notable correlation between the perception of non-delivery risks and the intention to make purchases in the context of online purchasing. Hence, this study posits that:
Hypothesis 3: The degree of non-return risks impacts a consumer's intention to purchase online.

Figure 1: Conceptual Framework of Perceive Risks towards Intention to Purchase Online



3. Research Methodology

This part presents and analyses the findings derived from the data collection process. As previously mentioned, a sample of 300 participants was selected, and 300 survey questionnaires were given to the prospective respondents. Upon the conclusion of the data collection procedure, a total of 287 questionnaires were received, indicating a response rate of about 96 percent. Descriptive analysis was conducted using SPSS version 23.0 for data analytic purposes.

4. Results and Discussion

The profile data of the respondents encompassed various demographic variables such as gender, nationality, age, monthly household expenses, occupation, level of education, duration of online shopping activity, online shopping experience, types of products purchased online, expenditure on online shopping within the past six months, and the practice of price comparison at physical retail markets before engaging in online shopping. Please refer to Table 1 for the respondents' background information.

Table 1: Respondents Background Information

Variable	Frequency	Percentage
GENDER		
Males	173	60.3%
Females	114	39.7%
Total	**287**	**100%**
NATIONALITY		
Local	273	95.1%
Foreigner	14	4.9%
AGE		
19-30	264	91.9%
31-40	23	8.01%
>41	0	0%
Total	**287**	**100%**
EDUCATION		
Diploma	27	9.4%
Bachelor Degree	202	70.4%
Postgraduate qualification	58	20.2%
Total	**287**	**100%**
MONTHLY HOUSEHOLD EXPENSES		
<RM1k	53	18.5%
RM1k – RM2k	84	29.2%
RM2.1k 0 RM4k	118	10.8%
RM4k >	32	8.4%
Total	**287**	**100%**
OCCUPATION		
Unemployed / Student	111	38.7%
A student with a part-time job	80	27.8%
Employed	96	33.5%

Total	**287**	**100%**
ONLINE SHOPPING EXPERIENCE		
Yes	287	110%
No	0	0%

Hypotheses Testing: The regression analysis was conducted to determine the relationship between the explanatory variable that explains the response variable. The results show that the R-square is .913, which implies that 91.2% of the variation in intention to purchase online was explained by factors of convenience risks, financial risks, product hazards and non-return risks.

The regression analysis showed a β-value of -0.199, and p-values of 0.00388 for financial risks, which is significant at the .005 alpha level. This result indicates that financial risks have a negative relationship with the intention to purchase online. Therefore, H1: The level of financial risk that impacts a customer's purchase intention of online products is accepted. This finding is consistent with that of Liew & Falahat (2019), who argue that financial risk is the number one issue before customers make online purchases. Gan & Wang (2017) stated that the underlying issue of financial risks is the fear of having financial information disclosed to a third party after the online transaction.

As for product risk and intention to purchase online, the regression analysis outcome reported a β-value of -0.267 with p-values of 0.0000. This explains that product risks have a negative relationship and can predict the intention to purchase online. Hence, H2: The level of product risk significantly affects a customer's purchase intention of online products is accepted. According to Lee, Cheng, & Shih (2017), the advantage of shopping from a traditional brick-and-mortar store is that the product is right in front of the customer to touch, feel, and manage expectations. Since online shopping lacks this opportunity, product risks become a vital issue of concern to the customer because customers are often presented with limited information on the products sold at online shops.

Next, for non-return risks, the regression analysis reported a β-value of -0.376 with p-values of 0.0000. This means that non-return risks had a negative relationship with university students' intention to purchase online. Therefore, H4: The level of non-return risk impacts customer's purchase intention of online products is accepted. Based on the regression analysis, non-return risks appear to be the most important factor customers would consider before purchasing online. This finding agrees with the research findings of (Dachyar & Banjarnahor, 2017) that many online customers fear the potential loss of their package, delivery to a wrong location, or non-delivery. Other issues related to non-return risks are delayed delivery and delivery of malfunctioned products, amongst others. The results of regression analysis indicate students consider non-return risks as the most significant factor in making purchase intention, followed by product and financial risks.

5. Managerial Implications and Recommendations

The findings derived from the data analysis indicate that although online shopping has generated significant value for customers, there remains a need for further efforts to enhance customer confidence in this mode of commerce. It is imperative to acknowledge that internet marketers must acquire knowledge and comprehension of client needs and expectations and demonstrate an understanding of customer concerns. This entails the ability to discern the customer's underlying thoughts and offer alternate resolutions.

As evidenced by the findings of this study, it is essential to acknowledge that a significant portion of potential consumers continue to refrain from making online purchases due to their apprehension regarding the perceived hazards connected with online purchasing. Hence, due consideration is recommended to be given to matters such as financial, product, convenience, and non-return risks. One potential approach to mitigating financial risks is for online shoppers to refrain from divulging their customers' financial information to third parties. Ensuring client safety while shopping online is crucial in fostering a sense of trust and confidence among consumers. Additionally, it is imperative to mitigate product risks by ensuring that the claimed online features, designs, price, and quality are accurately supplied to customers. Clients frequently encounter situations when they pay for a particular product but subsequently receive a dissimilar product that exhibits

characteristics such as substandard quality, inferior features, and inadequate design, among others.

To mitigate the matter of online shopping convenience, online marketers must acquire the skill of adhering to their designated delivery timetables. The failure to adhere to predetermined delivery timelines results in the generation of avoidable stress and discomfort for the consumer. The primary reason for customers to inquire about delivery dates before placing online orders is to ensure timely receipt of products that fulfill specified requirements. Delivering delays undermine the intended purpose for which the product was purchased, causing concern. Lastly, online retailers must mitigate the potential risks associated with non-return of items, as this remains a paramount worry for customers. This may be achieved by ensuring accurate delivery of products to customers' designated addresses and timely shipment to the specified locations. This measure will effectively mitigate the prevailing idea that many online retail establishments are fraudulent, dispelling concerns regarding their inability to fulfill customers' purchases.

The present study is limited in its scope regarding the variables under investigation. Several aspects influence customers' buying intentions in the context of online shopping. Notably, elements such as product price, product design, and product quality and features hold significant importance for customers when making decisions regarding online purchases. Nevertheless, this study was constrained by its focus on a subset of characteristics, including financial, product, convenience, and non-return risks. The scope of the investigation was constrained by the people who live in Kuala Lumpur, Malaysia. This suggests that the findings may lack sufficient representativeness to allow for generalization about the overall perceptions of Malaysian students regarding internet purchasing. Additionally, the study was constrained by the size of the sample. A total of 300 questionnaires were distributed, of which 278 were successfully retrieved, indicating a response rate of roughly 93 percent. Furthermore, it is essential to note that this study exclusively employed a quantitative research methodology without using qualitative or mixed-mode approaches.

Conclusion: Online marketing has established a permanent presence and is poised for ongoing market share and volume expansion. Despite the potential benefits Internet shopping offers customers, researchers must acknowledge and address the significant obstacles associated with this mode of commerce. Numerous unresolved matters persist within the existing body of literature, primarily stemming from divergent findings on accurately identifying elements that genuinely forecast client online purchase intention. This study contributed novel empirical findings to the existing literature on online shopping. The study's findings suggest a strong relationship between financial risks, product risks, convenience risks, non-return risks, and customer online purchase intention.

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