

## Research Article

# THE IMPACT OF PERCEIVED RISK ON ONLINE PURCHASE INTENTION THE CASE OF CLOTHING IN HO CHI MINH CITY, VIETNAM

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### ABSTRACT

In recent years, e-commerce has become increasingly popular, with everything available for purchase online. However, in the fashion industry, where customers often need to try on and feel the products, the question arises whether online clothing stores can meet customer needs, prompting a need to assess the impact of risks associated with buying clothes online. This study investigates the relationship between risk factors and online purchase intention in clothing industry in Ho Chi Minh City. Utilizing a quantitative method approach, we conducted surveys to gather data. The data obtained from 286 respondents in Ho Chi Minh City. Our findings indicate a significant correlation between psychological risk, social risk and time risk and online purchase intention. This study illuminates the evolving landscape of the online clothing business model, and the research findings will assist online apparel businesses in optimizing benefits and addressing the challenges and concerns faced by customers when purchasing clothes online. The implications of our study extend to the broader discussion on the future of education in a digital age.

**Keywords:** perceived risk, online purchase intention, clothing.

### INTRODUCTION

The online clothing market is highly dynamic due to its offering of a wide variety of styles and fashion choices for customers. However, Vietnamese fashion brands are currently facing numerous challenges in the face of the influx of Chinese goods. Chinese products are cheaper, come in a greater variety, have faster shipping times, and offer flexible payment options. Therefore, this research aims to explore the reasons, concerns, and risks that impact the intention to purchase clothes online. This will help Vietnamese online clothing brands gain a deeper understanding of this issue and formulate strategies to address it, ultimately winning over Vietnamese customers and enhancing competitiveness against Chinese products. With the increase of e-commerce platforms, online merchandise must consider the risk factors that influence the intention to purchase online. For instance, the perceived risks include financial risk, product risk, security risk, time risk, social risk and psychological risk and how they impact on online purchase intention (Shaizatulaqma *et al.*, 2018). In another paper, the perceived risk includes consumer perception of product risk, consumer perception of service risk, the degree of trust in other platforms, negative reports and how they impact on buying behavior (Xiaoxue *et al.*, 2020). There was another study that also proved the relationship between perceived risks and purchase intention (Kok Wai Tham *et al.*, 2019). In this paper, authors stated that the perceived risks (financial risk, product risk, convenience risk, non-delivery risk, return policy risk) influence shopping behavior.

This study aims to identify the risk factors that have the most significant impact on the intention to purchase clothing online. The investigating takes into account financial risk, product risk, security risk, time risk, social risk and psychological risk that have related to online purchasing in clothing industry in Ho Chi Minh City, Vietnam.

Furthermore, the study seeks to figure out especially in clothing industry if customers have different perspective about risks. The objective is to bridge a research gap by offering a theoretical contribution, as there has been no prior exploration of perceived risks on online purchase intention in clothing industry in Ho Chi Minh City, Vietnam

### THEORITICAL BACKGROUND

There is abundant research demonstrating that consumers' perceived risks are negatively associated with trust and purchase intention. When examining the online behavior of consumers on e-commerce platforms in Ho Chi Minh City, it is important to clarify the concept of perceived risk. Perceived risk is defined as a belief in the negative uncertainty from online commerce transactions (D. Kim *et al.*, 2008). Some studies consider perceived risk as one-dimensional uncertainty (Teo and Liu, 2007), while others view it as a multidimensional concept, including financial risk (economic), privacy risk, personal risk, performance risk, product risk, security risk, physical risk, psychological risk, social risk, and more (e.g., Bauer, 1960; Dai *et al.*, 2014).

Financial risk (or economic risk) is the possibility of losing money, often occurring when online shoppers do not receive a product or cannot return a product that does not meet expectations (Peterson, Albaum and Ridgway, 1989). This type of risk involves the medium (online marketplace) more than a specific product (Bhatnagar, Misra, and Rao, 2000). Privacy risk refers to the possibility that online shoppers might disclose their private information while conducting online shopping, as well as the possibility of losing their private information from identity theft (Pavlou, 2003). Personal risk (also known as physical risk) refers to the possibility of being harmed by an unsafe product (Pavlou, 2003). Performance risk encompasses the risk caused by a product whose performance does not meet expectations (Dillon and Reif, 2004) and fails to satisfy the shopping goal. Product risk is the probability of receiving a product that differs from the image on the website (Nah and Hong, 2008; Nah, Hong, &

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Kang, 2008) or a defective product (D. Kim *et al.*, 2008). Security risk refers to the possibility that an online shopping mall may not follow security requirements, such as encryption or authentication (D. Kim *et al.*, 2008). Psychological risk refers to the possibility that a product fails to fit well with a consumer's self-image (Jacoby and Kaplan, 1972). Roselius (1971) viewed psychological risk as "ego loss" (potential loss of self-esteem) because shoppers feel bad about themselves when others find them buying a defective product. It is a concept similar to social risk, which involves others' opinions of you when you buy a certain brand product (Jacoby and Kaplan, 1972). Psychological risk and social risk have also been used interchangeably (Featherman and Pavlou, 2003). Time risk involves the opportunity cost of time spent searching for, delivering, adjusting, repairing, or replacing a failed product (Roselius, 1971; Stone and Grønhaug, 1993).

These dimensions of perceived risk operate independently; that is, when one-dimension increases, the others may increase, decrease, or remain unchanged (Jacoby and Kaplan, 1972). In examining various types of perceived risk, Forsythe and Shi (2003) found that three types of perceived risk: financial, product, and time risk are all negatively associated with the amount of time spent online. Additionally, they found that neither product risk nor financial risk critically influenced online visits. Still, in perceiving the ease of internet use as a shopping medium, financial risk and time risk had a negative influence. One interesting finding in this study was that, for heavy/frequent online shoppers, product (or performance) risk was a major concern when shopping online. In another recent line of research, Saizatulaqma *et al.*, (2018) found that when purchasing digital products online, security risk had the most significant negative impact on consumers' online purchase intention, followed by financial risk and product risk. Kok *et al.*, (2019) found that the variable of financial risk has a negative but not significant effect on shopping intention. In another recent research by Xiaoxue *et al.*, (2020) indicates that the risks associated with products and services have the most significant impact on online shopping intentions. In contrast, financial risk does not show a substantial effect on the intention to shop online. In summary, these previous studies highlight that, in various contexts, time frames, and shopping cultures, the influence of risk factors on online shopping intentions varies.

## METHODOLOGY

A total of 286 online survey questions were distributed to internet users that do online shopping in Ho Chi Minh City over a period of three months. A questionnaire was used to measure the following variables of the study: Financial risk (four items), product risk (four items), security risk (four items), time risk (three items), social risk (three items), psychological risk (three items) were developed from Shaizatulaqma *et al.*, 2018, Xiaoxue *et al.*, 2020 and Kok Wai Tham *et al.*, 2019. A Likert scale was used to measure (1=strongly disagree to 5= strongly agree) four items on financial risk, four items on product risk, four items on security risk, three items on time risk, three items on social risk and three items on psychological risk. The data were analyzed using the Statistical Package for Social Science 24 (IBM SPSS Statistics 24).

## ANALYSIS AND FINDINGS

### Demographic Analysis

The analysis of data from 286 individuals reveals that's a majority of women 75,9% of the total, while men make up 24,1%. All of them are gen Z, most of them are from 18-22 years old, university students comprise of 73,8%, the rest are high school students. All of them are

living in Ho Chi Minh City. The data indicates that 61.1% are experts in the field of online shopping, 30.1% have experience in online shopping, and only 9.8% are beginners. In summary, respondents are predominantly led by female, most of them are university students and are experts in online shopping.

### Reliability Analysis

In Table 1 result, the summation of all the seven variables' scale, it shows all the seven variables are getting good scores with the results are at the range between 0.710 and 0.922. It is considered highly reliable, and valid for this research, where they are fulfilling the rule of thumb for good and excellent rating, high reliable alpha value of >0.07 (Glen, 2014). From the reliability test result, which shows in this research, it can be concluded that it is an appropriate, sufficient and acceptable score, therefore, the analysis is trustworthy and rightful to use.

Table 1: Reliability test

Variables	Number of items	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items
FR	4	0,878	0.876
PR	4	0,868	0.868
SR	4	0,922	0.920
TR	3	0,864	0.883
SOR	3	0,710	0.709
PSR	3	0,823	0.824
PI	3	0,814	0.814

### Factor analysis

All 21 variables belonging to independent factors that meet the conditions for Cronbach's Alpha reliability analysis were entered into an Exploratory Factor Analysis (EFA). The task of the EFA is to explore the structure of the measurement scale of factors influencing the intention to purchase online through 6 factors: Financial Risk (FR), Product Risk (PR), Security Risk (SR), Time Risk (TR), Social Risk (SOR), and Psychological Risk (PSR). After ensuring the correct execution of the EFA process, the factors will be examined to clean the data. Conducting EFA analysis for the entire set of 21 variables belonging to independent factors influencing the intention to purchase online, we obtained the following results:

Table 2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.667
Bartlett's Test of Sphericity	Approx. Chi-Square	5429.762
	df	210
	Sig.	.000

In the table 2, with the results of the factor analysis of variables belonging to independent factors, the author obtained a Kaiser-Meyer-Olkin (KMO) coefficient of 0.667, which is greater than 0.5, with a Sig. value of 0.000. This affirms the adequacy of the KMO value for ensuring the appropriateness of exploratory factor analysis and the significance of the data entered into the factor analysis. The Chi-Square statistic for the Bartlett's test is 5,429.762 with a Sig. value of 0.000 < 0.05. Simultaneously, the variance extracted analysis shows that the extracted variance reaches a value of 77.247%, which is quite high. Thus, 77.247% of the data variability is explained by the 6 factors, and the extracted scales are valid and acceptable. The stopping point for extracting factors occurs at the 6th factor, with an Eigen value of 1.119, which is greater than 1 (confirming that the variables entered are grouped into 6 factor clusters).

**Correlation Analysis**

The results of the correlation analysis aimed to examine the relationship between dependent and independent factors for potential correlation before running the regression model. In the table 3, based on the correlation analysis results of the factors, it is observed that the dependent factor, the Intention to Purchase online (PI), has a negative correlation with the 6 independent factors. Specifically, the Pearson correlation values for the factors Financial Risk (FR), Product Risk (PR), Security Risk (SR), Time Risk (TR), Social Risk (SOR), and Psychological Risk (PSR) are -0.523, -0.259, -0.198,

-0.347, -0.638, and -0.759, respectively. The Sig. coefficients for the factors Financial Risk (FR), Product Risk (PR), Security Risk (SR), Time Risk (TR), Social Risk (SOR), and Psychological Risk (PSR) are all smaller than 0.05 (i.e., less than 5%), with values of 0.000, 0.000, 0.001, 0.000, 0.000, and 0.000, respectively. This ensures that the correlation between the factors is statistically significant, allowing the author to proceed with running a linear regression model. Therefore, during the linear regression analysis, the author will include the 6 factors (Financial Risk (FR), Product Risk (PR), Security Risk (SR), Time Risk (TR), Social Risk (SOR), and Psychological Risk (PSR)) to identify the factors influencing the Intention to Purchase online (PI)

**Correlations<sup>a</sup>**

		Financial Risk	Product Risk	Security Risk	Time Risk	Social Risk	Psychological Risk	Online Purchase Intention
Financial Risk	Pearson Correlation	1	.030	.022	.135*	.490**	.458**	-.523**
	Sig. (2-tailed)		.618	.705	.023	.000	.000	.000
Product Risk	Pearson Correlation	.030	1	-.002	.072	.054	.229**	-.259**
	Sig. (2-tailed)	.618		.973	.224	.365	.000	.000
Security Risk	Pearson Correlation	.022	-.002	1	-.121*	.125*	.163**	-.198**
	Sig. (2-tailed)	.705	.973		.042	.034	.006	.001
Time Risk	Pearson Correlation	.135*	.072	-.121*	1	.228**	.264**	-.347**
	Sig. (2-tailed)	.023	.224	.042		.000	.000	.000
Social Risk	Pearson Correlation	.490**	.054	.125*	.228**	1	.484**	-.638**
	Sig. (2-tailed)	.000	.365	.034	.000		.000	.000
Psychological Risk	Pearson Correlation	.458**	.229**	.163**	.264**	.484**	1	-.759**
	Sig. (2-tailed)	.000	.000	.006	.000	.000	.000	.000
Online Purchase Intention	Pearson Correlation	-.523**	-.259**	-.198**	-.347**	-.638**	-.759**	1
	Sig. (2-tailed)	.000	.000	.001	.000	.000	.000	.000

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\*. Correlation is significant at the 0.01 level (2-tailed).

a. Listwise N=286

**Regression analysis**

**Table 5. Regression analysis**

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
	1 (Constant)	6.958	.240				28.959	.000		
Financial Risk	-.128	.035	-.139	-3.615	.000	-.523	-.212	-.115	.687	1.456
Product Risk	-.129	.035	-.121	-3.660	.000	-.259	-.214	-.117	.937	1.067
Security Risk	-.102	.034	-.098	-2.970	.003	-.198	-.175	-.095	.930	1.075
Time Risk	-.117	.028	-.140	-4.126	.000	-.347	-.240	-.132	.886	1.129
Social Risk	-.292	.040	-.289	-7.348	.000	-.638	-.403	-.234	.657	1.523
Psychological Risk	-.472	.040	-.475	-11.736	.000	-.759	-.575	-.374	.621	1.609

a. Dependent Variable: Online Purchase Intention

The results of the regression model analysis show that the overall significance (Sig.) of the linear regression coefficients for the independent factors is less than 5%. This indicates that the 6 factors: Financial Risk (FR), Product Risk (PR), Security Risk (SR), Time Risk (TR), Social Risk (SOR), and Psychological Risk (PSR), all have a significance level of 5%, or in other words, they achieve a 95% confidence level in the model and each factor has an impact on the Intention to Purchase online (PI). Therefore, the regression equation (based on the unstandardized coefficients) of the model demonstrates the relationship between the factors: Financial Risk (FR), Product Risk (PR), Security Risk (SR), Time Risk (TR), Social Risk (SOR), Psychological Risk (PSR), influencing the Intention to Purchase online (PI) as follows:

$$PI = 6,958 - 0,128*FR - 0,129*PR - 0,102*SR - 0,117*TR - 0,292*SOR - 0,472*PSR + Ei$$

The regression equation (based on standardized coefficients) of the model illustrates the relationship between the factors: Financial Risk (FR), Product Risk (PR), Security Risk (SR), Time Risk (TR), Social Risk (SOR), Psychological Risk (PSR), influencing the Intention to Purchase online (PI) as follows:

$$PI = -0,139*FR - 0,121*PR - 0,098*SR - 0,140*TR - 0,289*SOR - 0,475*PSR + Ei$$

From the regression results, it is evident that the factor Intention to Purchase online (PI) has a linear relationship with the 6 risk factors: Financial Risk (FR), Product Risk (PR), Security Risk (SR), Time Risk (TR), Social Risk (SOR), and Psychological Risk (PSR). To delve into the specifics, the author individually analyzed each factor to observe their influence on the Intention to Purchase online (PI) based on the standardized Beta coefficients. The highest impact on the Intention to Purchase online (PI) is from the Psychological Risk factor (standardized beta is -0.475; with a negative effect). When the Psychological Risk factor improves (increases by 1 unit), the Intention to Purchase online decreases by 0.475 units. Next is the Social Risk factor (standardized beta is -0.289; with a negative effect). When the Social Risk factor improves (increases by 1 unit), the Intention to Purchase online decreases by 0.289 units. The Time Risk factor (standardized beta is -0.140; with a negative effect) shows that when the Time Risk factor improves (increases by 1 unit), the Intention to Purchase online decreases by 0.140 units. The Financial Risk factor (standardized beta is -0.139; with a negative effect) indicates that when the Financial Risk factor improves (increases by 1 unit), the Intention to Purchase online decreases by 0.139 units. The Product Risk factor (standardized beta is -0.121; with a negative effect) suggests that when the Product Risk factor improves (increases by 1 unit), the Intention to Purchase online decreases by 0.121 units. Finally, the Security Risk factor (standardized beta is -0.098; with a negative effect) demonstrates that when the Security Risk factor improves (increases by 1 unit), the Intention to Purchase online decreases by 0.098 units.

**The extent of the impact of risk factors on the intention to shop online.**

Factors	Level of impact (1: strongest)
Financial risk	4
Product risk	5
Security risk	6
Time risk	3
Social risk	2
Psychological risk	1

Therefore, it is evident that various factors impact the Intention to Purchase online (PI). However, for this study, factors such as Financial Risk (FR), Product Risk (PR), Security Risk (SR), Time Risk (TR), Social Risk (SOR), and Psychological Risk (PSR) are critical factors to consider when evaluating the Intention to Purchase online (PI)

**CONCLUSION**

The study intended to measure the impact of six types of perceived risk factors namely financial risk, product risk, security risk, time risk, social risk and psychological risk on online purchase intention of young consumers in Ho Chi Minh City. It can be concluded that the objectives of the study have been achieved by testing the impact of selected six types of risk on online purchase intention. Security risk is found to have a negative but insignificant impact on online purchase intention. This shows that although customers prefer to avoid possible security risk, this factor is not important in the context of online shopping. This research confirms the most significant impact of psychological risk, social risk, and time risk on online purchase intention. The outcome of the study recommends online businesses minimize psychological risk by providing products as described on their website. Online businesses should make sure that customers can receive attractive clothes that appear on online shopping platforms, not only the size, colors, and patterns but also the outfit should be suitable for customers. If online businesses can solve this problem, they are solving the biggest risk of online shopping. Regarding the social risk, online businesses should provide more variety of clothes, make it special and unit, this will help reduce the social risk. For time risk, online businesses should design their websites or online shops in such a way that helps customers easily to find out what they are looking for. For website and online shops, there is a need of get advice and consultants from experts in the field of web designing, because technologies and applications are developed and updated in a fast manner, online businesses need to catch up with these new trends to offer the best platforms for customers to use.

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