

Perceived Risk and Online Purchase Intention of Online Buying and its Affinity: Perceived Behavioral Control as a Moderator

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Perceived risk, E-shopping, Customer e-satisfaction, Purchase intention, Perceived behavior

JEL Classification

L81, M31, O14

Abstract: The intention of this Conceptual Research work is to develop a model showing that the connection of the numerous magnitudes of perceived risk and the online purchase intention of consumers. Riding on the Theory of planned behavior (TPB), the model highlights the importance of perceived behavioral control to change the strength of the perceived risk and purchase intent and its association. This model links the purchase intention to actual purchase behavior of consumers and the model has been tested by applying hierarchical regression. The findings are helpful to understand the complex relationships between various dimensions of risk and online purchase intention. Mainly the perceived interactive control as a mediator in the relationships has an important theoretical and practical implications of concerning online buying.

1. Introduction

The previous researchers found that the impact of risk of consumer behavior which perceived the risk that has been thought to be a primary behavioral deterrent. Another landmark in marketing literature is the identification of several forms of risk. Researchers were able to see how perceived risk could influence customer behavior by categorizing it into different categories of risks namely; financial, product, time, delivery; social and psychological are the different perceived risk which has been fascinated the customer's attention over the years.

Perceived risk has highlighted a detrimental effect on the desire to adopt e-commerce in some research (Featherman *et al.*, 2003; Pavlou, 2003; Li and Huang, 2009). Researchers have traced the purchasing habits with the factors that stimulate the product type and purchasing channel. New

technology related to intake and the uses looked out for the same for purchase intention of the customers (Cunningham *et al.*, 2004; Cocosila *et al.*, 2009).

2. Review of Literature

The technological advancements in the present century have resulted in a paradigmatic change in consumer behavior (Lian and Lin, 2007). One of the significant changes is online buying by consumers (Gerber *et al.*, 2014; Tham *et al.*, 2019). Online buying enables individual to purchase very conveniently and also it is comfortable for the customers. This enables the consumers to observe various products and compare prices from multiple websites. There is an increase in e-commerce and social media which give a vast thickening result in online buying by consumers. The global online shoppers have increased from 1.7 billion in 2018 to 1.92 billion in 2019 and 2.14 billion in 2021 (Coppala, 2021; Zhao *et al.*, 2021).

One of the primary reasons which consumers prefer that online buying is 'convenient'. Consumers can access an extensive portfolio of goods and services and select what they need, through online stores 24x7, and the only requirement is the net connection. Consumers can search and buy any product at the global level without visiting any stores through offline and can also purchase goods offered by international vendors (Kim, 2002; Verhagen and van Dolen, 2011). Dawson and Kim (2009) documented that consumers find online shopping more convenient when compared to offline shopping.

For more motivation for online shopping convenience the purchase intention comes from the utilitarian and hedonic benefits of the products. Consumers derive practical benefits for their convenience, website flexibility, and various products available in online stores. More than that consumer engage in buying necessities, and to buy things is task-oriented and hence seriously consider the objective characteristics of the products (Babin *et al.*, 1994). Finally, consumers engage in online shopping to derive hedonic benefits that include shopping as fun, and zeal with emotional satisfaction (Li *et al.*, 2008).

While consumers enjoy the benefits of convenience, hedonic, and utilitarian benefits, it is also essential to highlight the risks involved in online shopping. Many researchers have documented that perceived risk focus a vital point in influencing consumers' buying intents and ultimate purchase decisions (Laroche *et al.*, 2005; Soltanpanah *et al.*, 2012). Perceived risk is a multi-dimensional construct, and various researchers have offered different types of perceived risks: social, financial, physical, performance, time, and psychological risks (Featherman and Pavlou, 2003; Garner, 1986; Ko *et al.*, 2004).

Through this study, we develop a theoretical model to highlight the consequences of various categories of perceived hazard on consumers' e-purchase intention. We also examine the association between numerous kinds of perceived risk an e buying intent through regulatory role of perceived behavioral control. At the same time, we investigate the relationship between online buying target and actual procurement behavior. A conceptual model followed by propositions are discussed with the expected moderate relationships based on the previous literature reviews.

3. Theoretical Framework and Conceptual Design

The notional base of the current framework comes from the Theory of Planned Behavior (TPB) developed by Ajzen (1991), which is an addition of the Theory of Reasoned Action (TRA) developed

by Ajzen and Fishbein (1980). The basic intent of TPB is that an individual's behavior depends on boldness, personal norms, and perceived behavioral control. The purpose of purchase behavior, and intention is analyzed by consumers' attitudes and individual norms (Hagger, 2019). The construct attitude represents an individual's evaluation of behavioral outcomes. Assertiveness of customers can be optimistic or undesirable, depending on the evaluation of behavior outcome. An intention to behave depends on the subjective norms, which represents whether the behavior is socially acceptable or not. The TPB contend that the intention to conduct is necessary but not sufficient whether the individual has adequate resources to perform to the act. For example, if two individuals have the intention to buy an automobile, a person who can pay will buy the car, whereas the person who does not have enough money may not be able to buy. Finally, the perceived behavioral control represents the personality's ease of performing an act. TPB has been used as a theoretical platform by several researchers who explored consumers' purchase behavior (Arora and Sahney, 2018; Pavlou and Fygenon, 2006; Singh and Srivastava, 2019; Suh and Han, 2003).

Riding on the TPB, this conceptual research work with a model is recognized to show an effect of apparent risk on the online purchase intent, leading towards actual purchase behavior. First, we explain the various risks of independent variables, such as perceived risk, which consists of financial, product, time, delivery, social, and psychological risk. Second, we introduce perceived behavioral control as an arbitrator in the association between various components of risks. Third, we explain how online purchase intention results are an actual purchase decision.

3.1. Perceived Risk

Many researchers have reported about the importance of considering the perceived risk in purchase decisions (Alreck and Settle, 2002; Garbarino and Strahilevitz, 2004). Here, the risk of buying products through e-services, has been one of the major concerns affecting consumer decision-making (Park and Stoel, 2005). Perceived risk act as a noteworthy variable in several other research works (Parayitam *et al.*, 2020). High risk associated with products and services keeps consumers away from online shopping.

3.1.1. Financial Risk

Since online buying involves spending money using credit cards/debit cards, consumers are concerned about the safety of their personal information. Though some consumers prefer to opt for other mode of paying for purchase such as cash on delivery, using third-party payment methods such as PayPal, the inherent threats cannot be minimized. Researchers in the past have documented the fear of credit card deception in the present-day digital world and cybercrimes, which is most common these days (Abrar *et al.*, 2017; Lu *et al.*, 2005).

3.1.2. Product Risk

This is related to the performance of a product, when consumers receive a different product than what has been ordered or what has been purchased, and product risk is rated as high. When the product purchased does not function as it was supposed to, consumers cannot verify the products through online (Kim, 2010). Product risk is also labeled as functional risk related to the performance

of the product or service bought by consumers. Several researchers have studied that product risk is destructively associated to e-buying intents because when consumers perceive high product risk in terms of the difference in the product quality mentioned in the website and product delivered, it is unlikely they would show the inclination to purchase (Popli and Mishra, 2015).

3.1.3. Time Risk

Time risk is concerned with the probability of time lost in buying decisions. It includes the time spent in returning the product if found defective, time lost when web server of the e-retailer is down for more extended periods. Consumers realize that online buying involves the unwanted wastage of time, may find it difficult to search appropriate websites, taking time to find the right product in the web, and time lost in waiting for the product delivery. Past researchers identified that time risk is negatively connected to the online purchase intention of consumers (Ye, 2004).

3.1.4. Delivery Risk

Delivery risk is concerned with the consumers' fear about the delay in the delivery of the product, getting a different product than ordered, damages during the delivery, etc. (Claudia, 2012). Some researchers found a negative association of delivery risk through online buying intention of consumers (Tham *et al.*, 2019).

3.1.5. Social Risk

Social risk is concerned with the embarrassment of the consumer's feel when the product was bought in low quality and disapproved by the social groups or peers. Social risk results in the consumer's destruction and reputation of consumers among their friends. To prevent this risk, consumers take the opinions of their friends and peers about the quality of the product and purchase the product only after their approval.

3.1.6. Psychological Risk

This is related to the displeasure of the consumer by choosing a low-quality or wrong product available among alternative several products. Psychological risk results in loss of self-respect (Stone and Gronhaug, 2003). Previous researchers found that this risk entails to reduce consumer's motivation to go in for online shopping, and psychological risk is negatively related to online buying (Han and Kim, 2017)

3.2. Perceived Behavioral Control

In this typical study the most crucial variable is the perceived behavioral control, which modifies the associations among various magnitudes of perceived risk and e- buying intents. As explained by Ajzen (1991), perceived behavioral control denotes to the point where a personality can perform the desired behavior. Perceived behavioral control deals with the aspects like 'I can't (I can buy this product). Closely associated with Bandura's concept of self-efficacy, perceived behavioral control is concerned with their ability to reach goal-directed behavior.

3.3. Online Purchase Intention

The primary dependent variable in this conceptual model is the online behavioral intention of consumers. Purchase intention is concerned with consumer’s willingness to involve in purchasing through internet and web-surfing (Jamali, 2010). The purpose of consumers to use virtual shopping carts and the frequency with which the consumers engage in online buying is closely related to online purchase intention. For example, during the global pandemic, most consumers were inclined to purchase goods and services online, either because of frequent lockdowns and social distancing norms or exhibited higher online purchase intentions.

3.4. Actual Purchase Behavior

The final stage in consumers’ decision-making is to engage in the purchase behavior. Once the consumers have decided to purchase products online, they go through websites, look for the products they want, and proceed to buy. First, they select the products and send them to the virtual purchase cart, and before making a final ‘click’ to purchase, they assess the risks involved and benefits from shopping and then decide to click. Once they press the button ‘click,’ consumers are said to engage in actual purchase behavior.

3.5. Conceptual Model and Propositions

The interrelationships among all the variables mentioned above were presented in a conceptual model.

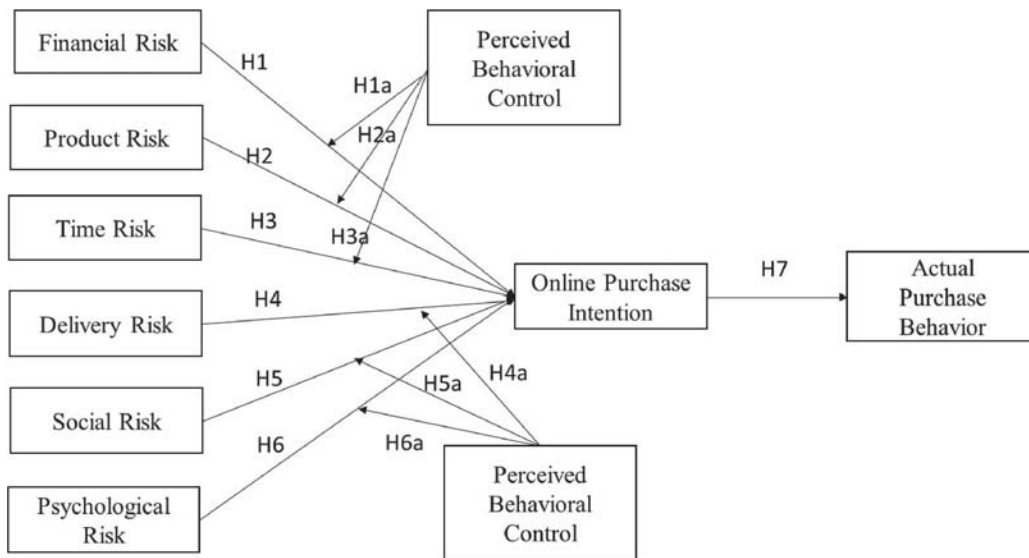


Figure 1: The Conceptual Model

Source: Authors’ Own Compilation

4. Hypotheses of the Study

This model offers the following hypotheses.

- H₀₁: Financial risk is negatively related to e-buying intent.
- H₀₂: Product risk is negatively associated to e-buying determination.
- H₀₃: Time risk is negatively correlated to online purchase purpose.
- H₀₄: Delivery risk is negatively associated to online buying goal.
- H₀₅: Social risk is negatively related to online buying intent.
- H₀₆: Psychological risk is negatively associated to e - buying attitude.
- H₀₇: E- purchase intention is positively related to actual buying behavior.

Moderator Hypotheses

- H_{1a}: Perceived behavioral control curbs the relationship amongst financial risk and e-buying determination.
- H_{2a}: Professed behavioral control moderates the association among product risk and e-buying attitude.
- H_{3a}: Perceived behavioral control regulates the rapport amidst time risk and internet buying outlook.
- H_{4a}: Observed behavioral control moderates the association between delivery risk and internet buying view.
- H_{5a}: Perceived behavioral control moderates the association between social risk and e-buying behavior.
- H_{6a}: Perceived behavioral control moderates the association between psychological risk and online purchase behavior.

5. Data and Sample

For the determination of this study the data was collected from 669 southern part of India. As far as gender is concerned, 288 (43.04%) sample respondents were male and 381 (56.96%) sample respondents were female. With regard to education, 357 (53.36%) sample respondents are with Under-graduate degrees, and 312 (46.64%) sample respondents are with Masters and Professional degrees. Nearly, 360 (53.8%) sample respondents had experience of below ten years and the remaining sample respondents hold experiences for more than ten years.

6. Data Analysis

Hierarchical regression was applied to test the hypothesis. The hierarchical regression results are presented in the given table below.

Table 1: Results of Risk and Perceived Behavioral Control on Online Purchase Intention

Dimensions	1	2	3	4
Dependent Variable→	<i>e- buying attitude</i> Phase 1 'β'	<i>e- buying attitude</i> Phase 2 't' values	<i>e- buying attitude</i> Phase 3 'β'	<i>e- buying attitude</i> Phase 4 't' values
Financial Risk	-.075	-1.900	-.839***	-4.368
Product Risk	.026	.584	.488**	2.001
Time Risk	-.112**	-2.677	-.729***	-4.010
Delivery Risk	.060	1.225	.357	1.425
Social Risk	-.085	-1.729	-.648**	-2.497
Psychological Risk	-.180***	-4.717	1.188***	5.643
Perceived Behavior Control	-.688***	-25.134	.447	2.648
Financial Risk x Perceived Behavioral Control			.179***	4.056
Product Risk x Perceived Behavioral Control			-.106	-1.881
Time Risk x Perceived Behavioral Control			.150***	3.529
Delivery Risk x Perceived Behavioral Control			-.073	-1.279
Social Risk x Perceived Behavioral Control			.133**	2.251
Psychological Risk x Perceived Behavioral Control			-.234***	-4.877
R ²	0.538		0.573	
Adj R ²	0.533		0.565	
ΔR ²			0.035	
F	109.82***		20.64***	
ΔF			9.06***	
Df	7,661		13,655	

Note(s): Standardized regression coefficients are reported; ***p < 0.000; **p < 0.05

Source: Authors' Own Compilation

As shown in the above table, time risk is meaningfully and negatively associated to e-purchase intention ($\beta = -0.112$, $p < .05$) thus assisting H3. The results also indicate psychological risk is destructively and suggestively associated through online buying intent ($\beta = -0.688$, $p < .001$), thus supporting H6. The regression coefficients of financial, product, delivery and social risks are not significant and hence Hypotheses 1, Hypotheses 2, Hypotheses 4, and Hypotheses 5 are not accepted in this study.

With regard to moderation effects, column 2 (Table 1) shows that the regression coefficient of multiplicative term financial risk and perceived behavioral control is significant ($\beta_{\text{financial risk x perceived behavioral control}} = 0.179$, $p < .001$), thus subsidiary H_{1a}. The regression coefficient of multiplicative term time risk

and perceived behavioral control was significant ($\beta_{\text{time risk} \times \text{perceived behavioral control}} = 0.150, p < .001$), thus associating H_{3a} . Further, the regression coefficients of multiplicative terms ($\beta_{\text{social risk} \times \text{perceived behavioral control}} = 0.133, p < .05$) and ($\beta_{\text{psychological risk} \times \text{perceived behavioral control}} = -0.234, p < .001$) thus supporting H_{5a} and H_{6a} . The moderation graphs are presented in Figures 2, 3, 4, and 5.

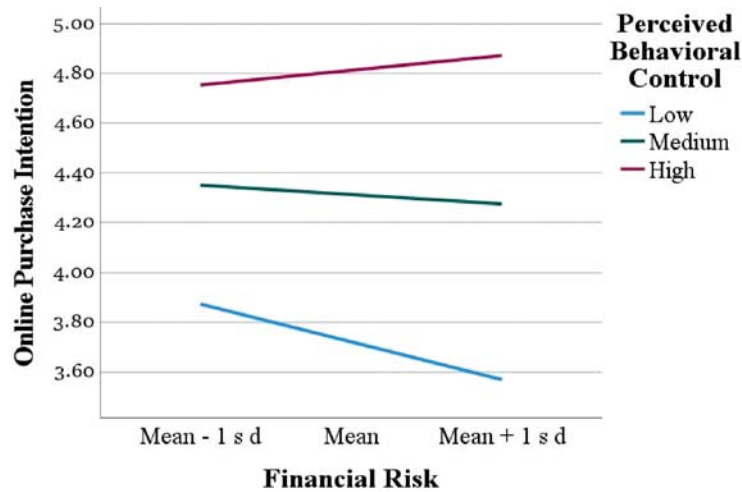


Figure 2: Financial Risk and e-buying Intention Relationship with Perceived Behavioral Control as a Mediator

Source: Authors' Own Compilation

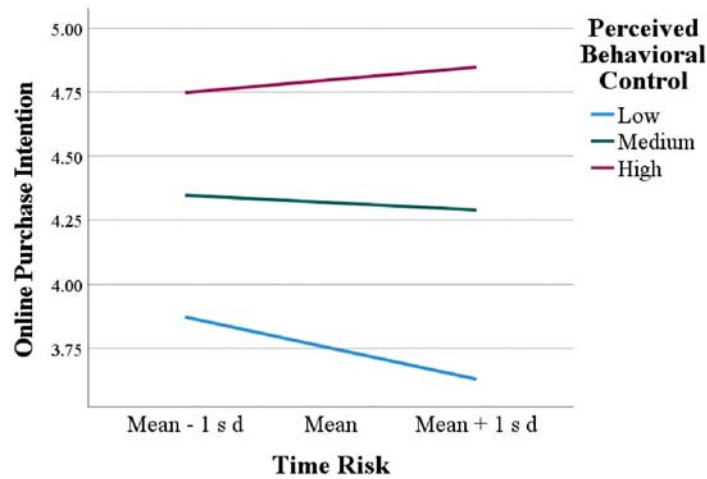


Figure 3: Time Risk and e-buying Behavior Association with Perceived Behavioral Control as a Mediator

Source: Authors' Own Compilation

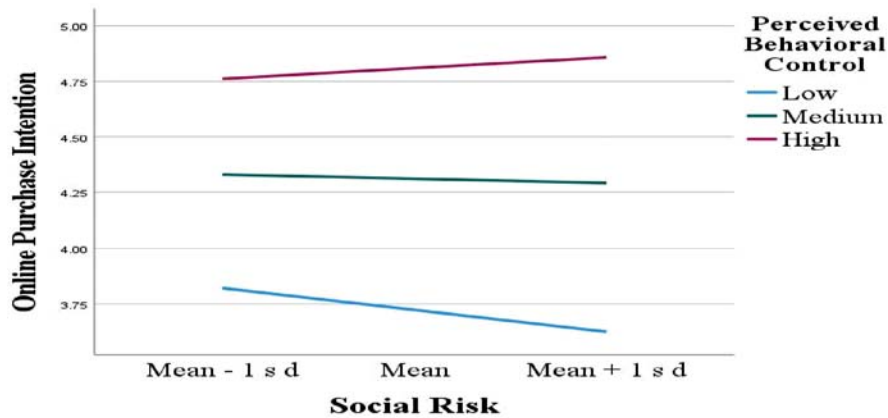


Figure 4: Social risk and e-buying Determination Affiliating with Perceived Behavioral Control as a Mediator

Source: Authors' Own Compilation

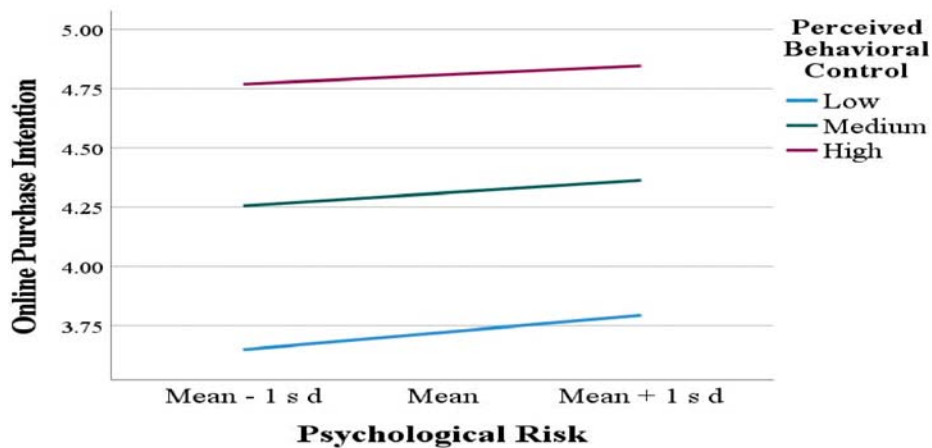


Figure 5: Psychological Risk and e-buying Understanding Associating with Perceived Behavioral Control as a Mediator

Source: Authors' Own Compilation

An interaction graphs show that sophisticated levels of perceived behavioral control are connected with advanced level of internet buying intention when various risks like financial, time, social, and psychological risks are low. Even when the levels of the numerous risks like, financial, time, social, and psychological risks remain increasing, higher levels of perceived behavioral control are associated with increase in the online purchase intention of consumers. These interaction graphs provide strong support for the moderation hypotheses.

The regression coefficient of e-buying attitude of customers on actual procurement tendency is positive and significant (0.716 $p < .001$), thus supporting hypothesis 7.

7. Discussion

The conceptual model developed and tested in this model represents modest attempt to show the relationship between various magnitudes of threats and e-purchase intent. The moderation effects, shown in Figures 2, 3, 4 and 5 add novelty to this research.

The moderating effects would also be similar in the sense that under the conditions of higher levels of perceived behavioral control would result in higher levels of online purchase intention when compared to the lower level of behavioral control. For example, as shown in Figure 2, even when financial risk increases from low to high, perceived behavioral control would increase the online behavioral intention. The underlying reasons could be the information exchanged between the members in the social media through EWOM; it is more likely that the financial risk as perceived may not be real. Hence, the consumers may exhibit electronically connected buying attitude.

Previous studies demonstrated the constructive association amongst purchase intention and actual consumer tendency; and the results supported the findings from the literature.

8. Conclusion

The present conceptual model helps understand consumer behavior, especially when consumers engage in online buying. The importance of professed danger theorized as an independent variable, pertaining to various dimensions of apparent risk are expected to affect online buying intention negatively. The perceived behavioral control acts as a moderator that changes the supremacy of the association amongst various dimensions of the risks. The implications of this study would be helpful to the e-retailers. The present model highlights the importance of the electronically connected consumer's attitude towards the perceived behavioral control.

From practitioners' view, the conceptual model tested and presented offers the retailers to focus on perceived behavioral control of consumers. In the present-day digital world dominated by social media, it is very likely that the consumers would influence each other in buying products and services. The perceived behavioral control exercised by consumers by following what their peers and co-consumers are responding to the online products plays important roles. Therefore, the retailers need to be cognizant of taking feedback about their products and periodically go over the reviews from the consumers. Often the consumer posts their experiences through social media and retailers need to consider these reviews and make required changes in products and services to satisfy the customers. As actual purchase behavior largely depends on the e- buying determination, as it is essential for retailers to consider changes in tastes and preferences of consumers expressed through social media. Overall, this study portrays the importance of perceived behavioral control in consumers' online purchase intention.

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