

ONLINE REVIEW AS A MODERATOR IN THE ASSOCIATION BETWEEN RISK AND PURCHASE INTENTION IN ONLINE SHOPPING

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Abstract:

The upsurge of information technology has brought drastic changes in human lives, internet shopping being one among the major contributions. Even when the consumers use internet for information search, they tend to restrain from making the final purchase on web on account of the risk perceptions associated with web based purchases. The risks associated with web based transactions are explored by several researchers in detail. But e-tailers are attempting new endeavours with the help of technology. This paper is an attempt to explore the risks that consumers perceive while doing online shopping. Along with the risks the moderating influence of online reviews which is considered. The 186 responses obtained were further analysed using SPSS ver.26 with Process Macro v.4.0 by Hayes and it was identified that online review has a moderating effect in the association between risk and purchase intention in an online setting, though there were no significant differences established in various categories in the demographics.

Keywords: Online purchase intention, Perceived risks, online review

1.0 Introduction

The shopping through internet raises questions concerning customer intentions to online shopping. Web shopping involves numerous concerns of consumers, including trade fraud, product quality, monetary losses, privacy, and information quality and so on. Online shopping frauds grew at a rate of 30% in 2017 – twice as fast as the rate of ecommerce sales. This exponential rise is being continued over the years. According to Internet World Stats 2021, India contributes to 27.3% of internet users out of 53.4% of Asian internet users and the internet population penetration rate in India is 54.2%. This enormous web base will have an immediate effect in the Indian web shopping or online retail business. But this tremendous growth is not likewise reflected in online purchasing,

primarily leads to the risks perceived by the customers in online purchasing. The growing concerns of consumers impede the adoption of online shopping. The increasing perception of risks diverts customers from online shopping to brick and mortar shops. E-tailers venture into several techniques for developing the confidence among the customers, the use of haptic information, Online reviews and ratings ,free returns are a few among them.

2.0 Conceptual Framework

2.1 Perceived risks in online buying

The past decade has witnessed the growth of internet in various fields like communication, entertainment, e-commerce etc. replacing the existing technologies. Nevertheless, this explosive growth was accompanied, by concerns regarding the collection and dissemination of consumer information by marketers who participate in online retailing. Some of these concerns pertain to the privacy and security of accumulated consumer data (Briones 1998; Culnan 1999) and the perceived risks that consumers may experience with respect to these issues (Ernst & Young 1999; Milne and Boza 1999), financial risk where consumers are worried that the internet still has very little security with respect to using their credit cards and disclosing personal information (Paul.P, 1996), productrisk, in which the consumer believe that the Internet, just like any type of non-store shopping, makes it difficult to examine physical goods. The consumers are constrained with the minimal information and pictures shown on the computer screen (Jarvenpaa and Tractinsky, 1999), deliveryrisk, wherein there could be potential loss of delivery associated with goods lost, goods damaged and sent to the wrong place after shopping (Dan et al., 2007),social risk perception that a product purchased may result in disapproval by family or friends (Li and Zhang, 2002), time risk when the time, convenience, or effort may be wasted when a product purchased is repaired or replaced (Hanjun et al., 2004). Several studies are available to show the empirical evidence on shopping behavior over the Internet and its negative influence by economic (van den Poel and Leunis 1999; Bhatnagar, Misra, and Rao 2000), performance (Dahle´n 1999; Bhatnagar, Misra, and Rao 2000),social (Eastlick and Lotz 1999) and privacy (Swaminathan, Lepkowska-White, and Rao 1999; Liu et al. 2005) risks. Among the many risks associated with online buying, financial, performance and security are the considered to be the most vital (Guru S.et.al ,2020) .Along with these three risks, time risks is also considered for this study as it is also considered to play a vital role in onlinebuying by some of the researchers (Kumar, D., & Dange, U.,2014)

2.2 Financial risk

Despite the exorbitant growth of internet and its users, consumers often exhibit the abandonment behavior while performing online purchasing majorly due to the risks perceived by them. Among the various risks experienced by the consumer, financial risks are considered to be a vital risk. Consumers are often worried about the financial loss associated with any online transaction. Financial risk is the perception that a certain amount of money may be lost or required to make a product work properly. Also, it is defined as potential net loss of money, and includes consumers' sense of insecurity regarding online credit card usage, which has been evidenced as a major obstacle to online purchases (Maignan & Lukas, 1997). Financial risk is defined as the probability of an internet shopper suffering monetary loss from a purchase when the product does not perform well or if the product is not worth the price paid (Featherman and Pavlou, 2003). According to Popli and Mishra (2015), financial risk also includes the repair cost that may require for a product and also the hidden charges like delivery charges that may add up along with the actual cost. Hence in this study we propose that

H1: Financial risk will have a negative influence on online purchase intention

2.3 Performance risk

Consumers may prefer to purchase experience or touch products (Flavián, Gurrea, and Orús 2016; Heitz- Spahn 2013) in a physical store more so than is the case for search and non-touch products. Tangibility is a key product characteristic that determines how users search for information and influences their online behaviors. The prerequisite to distinguish the design and delivery of services from tangible products has been stressed in the literature, and the convolution of managing services has also been highlighted (Fitzsimmons and Fitzsimmons 2004). The intangibility of a product is a predominant source of perceived difficulty during information gathering and pre-purchase situations (Murray 1991). According to Lal and Sarvary (1998) tangible and intangible attributes define products. In an online store the consumer will solely depend on the information provided by the vendor and hence there are always possibilities that the product may not meet the actual displayed features like the products' color, shape or outlook may be not be the same, so it is beyond the customer's reach and abilities to examine and check the actual product qualities. Performance risk deals with whether a product's performance meets the expectations of a consumer while buying the product from online sources. Apart from this, there are multiple factors that affect performance risk such as trust in product quality (Hong 2015), brand of product, information quality, and web site design and content. Based on this discussion, H2 is proposed: *H2*. There is a negative relationship between performance risk and online purchase intention.

2.4 Security risk

One of the prominent reasons why consumer's avoid online shopping is not because of inconvenience but because most customers are scared of losing their credit card information to credit card theft (Martin and Camarero, 2009). Customers doubt regarding the truthfulness of the website and also many a times they are apprehensive to share their personal or financial information like the credit card details over the net. There have been studies which confirmed that transaction security can exert a negative effect on willingness and consumer become reluctant to share credit information if risk increases (Liao and Cheung, 2001). Security risk is defined as a potential loss due to online fraud or hacking, which exposes the security of an internet transaction or online user (Soltanpanah et al., 2012). Azizi and Javidani (2010) stated that security is linked with disclosure of financial information such as credit card number, account number and safe pin number. It is agreed that one of the barriers for online shopping is security fears (Teo, 2002). Thus, we propose that security risk has a significant influence on online shopping intention.

H3. There is a negative influence of security risk on online purchase intention.

2.5 Time risk

Time risk is one of the influential factors on consumers' purchasing behavior via the internet (Zhang et al., 2012; Ye, 2004). Time risk is the perception that time, convenience, or effort may be wasted when a product purchased is repaired or replaced Hanjun et al. (2004). Time risk includes the inconvenience incurred during online transactions, often resulting from difficulty of navigation and/or submitting orders, or delays receiving products (Forsythe et al., 2006). It also refers to the time that consumers take to make a purchase, waiting time for the products to be delivered at their home and the time that consumers had spent for browsing product information (Dai et al., 2014; Forsythe et al., 2006; Ko et al., 2004). Time risk also includes when products did not meet consumers' expectation levels and consumers have to return the product for a new replacement (Ariff et al., 2014). Time risk will also deter the consumers' purchase intention to buy online when it requires a lot of time to find a suitable apparel or website (Forsythe and Shi, 2003; Forsythe et al., 2006). Based on the discussion, H4 is developed:

H4. There is a negative relationship between time risk and online purchase intention

2.6 Online Reviews

Several studies have shown that traditional word-of-mouth (WOM) has an influence on the buying behavior of consumers (Arndt, 1967; Marsha and Teri, 1988). Some studies even depicted that WOM is more credible and effective than marketer-generated content, such as advertisements and product descriptions from sellers (Dellarocas, 2003). Extending this idea, electronic WOM or online reviews refer to any positive or negative online consumer comments for products or sellers (Henning-Thurau et al., 2004). Jindal and Liu (2008) researched on the timings of the reviews and they found that the more recent the reviews, the more consumers are attracted to gain attention, which tends to increase the purchase intention. Park et.al. (2007) in their study showed that the popularity of product will be measured by the large quantity of positive reviews that are able to convince people to buy the product. With the advent of technology, online reviews can easily reach a large scale of people when compared with traditional WOM (Lee et al., 2012). Many consumers infer product quality and reduce uncertainty by referring to online reviews from other consumers during online purchasing. Based on the discussion, H5 is developed as follows:

H5: Online reviews moderate the relationship between risk and online purchase intention

2.7 Purchase intention

The term purchase intention is broadly treated as a predictor of purchase. "Purchase intention represents the likelihood that an individual will purchase a particular product based on the interaction between customer needs, attitude and perception towards the product or brand" (Beneke et al., 2016). Purchase intention can be considered as consumer's interest to buy a particular product (Kamalul Ariffin et al., 2018). In other words, purchase intention determines the strength of consumer willingness to purchase (Lee et al., 2012). It is crucial to recognize consumer's purchase intention because consumer's action usually predicted through their intention (Hsu et al., 2017). Purchase intention acts as a conjunction between consumer's concentrations on buying a product and the likelihood of buying (Wu et al., 2015). Purchase intention can be treated as an estimator of consumer behavior (Wu et al., 2011). Therefore, the construct of purchase intention considered as outcome variable in this study and included as dependent variable in our model.

3.0 Research Model

The above propositions have led the researchers to frame the research model with the risks, financial, product, security and time as the independent variables and purchase intention as the dependent variable. We also took online review as a moderator in this relation. Hence the final proposed model was as follows:

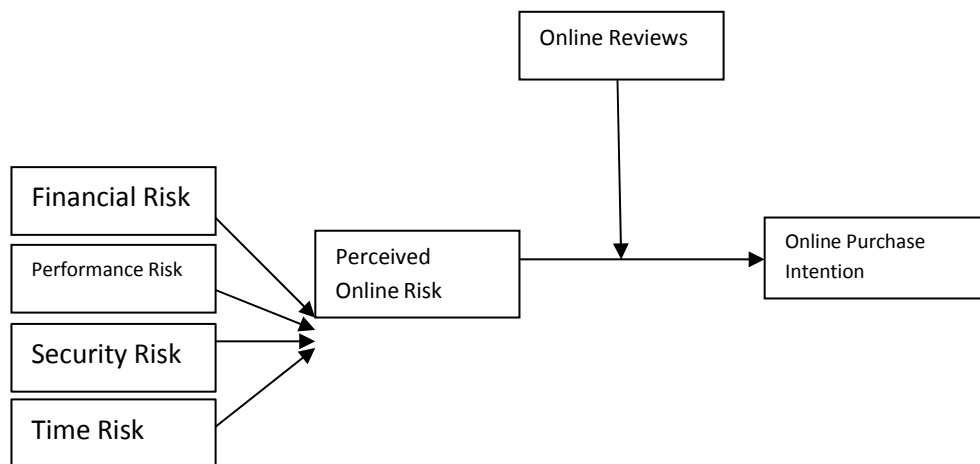


Fig: 1-Proposed Model

4.0 Research Methodology

Items used for measuring the constructs were adapted to meet the prerequisites of online buying behavior and were derived from various sources; A pool of items pertaining to risk were generated including financial risk developed and validated by Featherman and Pavlou (2003), product risk by Dai et al. (2014), security risk by Featherman and Pavlou (2003) and time risk by Masoud (2013) and Marcelo et al. (2014) and also from earlier studies in which perceived risk was measured (Bhatnagar, Misra and Rao (2000); Grazioli and Jarvenpaa (2000); Kim and Lennon (2000); Kwon, Saae and Arzeni (1991) and Stone and Gronhaug (1993)). The scale by Park and Lee (2009) were used for Online reviews and intention to shop online were measured using the scale of Salisbury et.al (2001). Although the items were taken from previous studies, they were adapted for this study. The questionnaire also included the demographic information such as age, gender, residential area, monthly income and educational qualifications. Each construct were measured with a minimum of three items. All items were measured in a five-point Likert scale. The questionnaires were distributed randomly among 450 respondents and 186 usable responses were received back,

resulting in a response rate of 41.33%

5.0 Results & Interpretations.

All the risks, financial, performance, time and security risks, were found to have a negative influence on the purchase intention exhibited by the consumers, $r = -0.279$, $n = 186$, $p = .000$; $r = -0.442$, $n = 186$, $p = .000$; $r = -0.319$, $n = 186$, $p = .000$; $r = -0.333$, $n = 186$, $p = .000$ respectively. A Multiple regression was run to predict the purchase intention from financial, performance, time and security risks. These variables statistically significantly predicted the purchase intention, $F(4, 181) = 14.0304$, $p = .000$, $R^2 = 0.220$. All four variables added statistically significantly to the prediction as p value was less than .05.

To investigate the influence of online review on online purchase intention, a moderator analysis was done using Process v.4 and the following results were obtained.

Model Summary

| R | R-sq | MSE | F | df1 | df2 | p |
|-------|-------|-------|----------|--------|----------|-------|
| .8094 | .6552 | .1709 | 115.2641 | 3.0000 | 182.0000 | .0000 |

Model

| | coeff | se | t | p | LLCI | ULCI |
|----------|--------|-------|---------|-------|--------|--------|
| constant | 2.1621 | .2515 | 8.5967 | .0000 | 1.6658 | 2.6583 |
| Risk | -.3500 | .0706 | -4.9611 | .0000 | -.4892 | -.2108 |
| Review | .3639 | .1120 | 3.2494 | .0014 | .1429 | .5849 |
| Int_1 | .0743 | .0330 | 2.2500 | .0256 | .0091 | .1394 |

Conditional effects of the focal predictor at values of the moderator(s):

| Review Effect | se | t | p | LLCI | ULCI | |
|---------------|--------|-------|---------|-------|--------|--------|
| 1.3645 | -.2487 | .0339 | -7.3331 | .0000 | -.3156 | -.1818 |
| 2.1433 | -.1908 | .0280 | -6.8136 | .0000 | -.2461 | -.1356 |
| 2.9220 | -.1330 | .0417 | -3.1873 | .0017 | -.2153 | -.0507 |

The outcome variable of the study was purchase intention and the predictor variable was risk and the moderator was online review. The interaction between risk and review was found to be statistically significant (0.0743, 0.0091, 0.1394, $p < 0.05$). The conditional effect of the risk on the purchase intention showed corresponding results. At low moderation, the risk is 1.3645 (conditional effect = -0.2487, 95% confidence interval (-0.3156, -0.1818), $p < 0.05$). At medium moderation, the risk is 2.1433 (conditional effect = -0.1908, 95% confidence interval (-0.2461, -0.1356), $p < 0.05$) and at high moderation, the risk is 2.9220 (conditional effect = -0.1330, 95% confidence interval (-0.2153, -0.0507), $p < 0.05$). These results show that online review has a moderating effect in the relationship between online risk and online purchase intention.

The interaction plot of low and high review in risk and purchase intention shows a significant influence of review.

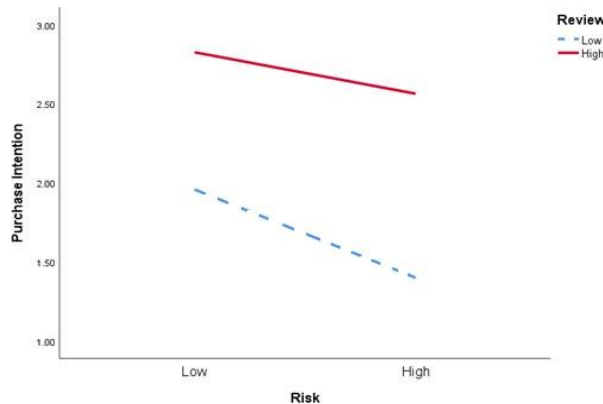


Fig: 2-Interaction Plot

The interaction plot above depicts the influence of review. As risk increases from low to high, purchase intention is decreasing. The decrease in purchase intention is higher when the review is low than the decrease in purchase intention when the review is high. The dotted line shows the change in purchase intention when review is low.

Further analysis was done to identify the influence of various demographic variables on the variables. T test was done in order to identify the influence of gender on risk, review

and purchase intention, but did not show any significant influence $t(184) = .648, p = .517$, $t(184) = 1.849, p = .066$ and $t(184) = .792, p = .429$. Similar results were shown for the residential area as well, rural and urban, $t(184) = -.435, p = .664$, $t(184) = .565, p = .573$ and $t(184) = 1.122, p = .263$. MANOVA was

Done to identify any significant difference among the different categories of people based on education, monthly income and occupation with the variables risk, review and purchase intention and no significant differences were established.

6.0 Managerial Implications

Risk in varied form plays a significant role in consumer's buying decision. All risks like financial, performance, time and security risk plays a very important role in consumer's decision making and this leads to the abandonment of the purchase decision thus creating an opportunity loss for the e-tailer. E-tailers try various techniques to overcome these risks encountered by consumer with the help of various methods, online review being one among them. The study has identified that online review has a significant direct influence as well as it has a moderating effect in the relationship between risk and purchase intention in an online buying environment. Hence e-tailers can promote reviews to be posted by the buyers which will generate a confidence among the consumers thus converting the abandonment to purchase. Positive reviews is thus seen to reduce the risk feeling among the consumers leading to actual purchases. Since the reviews are written by other similar consumers, the buyers will gain confidence since the activity is from one among them and not by the seller. Hence managers shall thus promote the review writing by the satisfied consumers in order to overcome the risk felt by the consumers. Also the satisfied consumers are to be identified and motivated to write the reviews, while the concerns of the discontented consumers, if any, needs to be addressed at the right time so that there are no negative review

7.0 Limitations and future scope

This study is limited to the risk and the influence of reviews as a moderator in online purchase intention 186 responses. Other variables which may have a significant influence like the promotional offers or the pandemic situation were forced online buying happens to a certain extent as movement is restricted etc are not considered for this study. Also the study is done within the geographical boundary of Kerala. In a similar vein, the possible influence of product type on this relationship is not considered in this study

8.0 Conclusion

Internet has brought abundant opportunities for retailers. Nevertheless the risks pertinent with online purchasing channels raise concerns in the minds of the customers and they tend to finish their purchases in a retail shop. This study is done to identify the influence of risk and review on online buying. The influence of risk is moderated by the online reviews. It is identified that online reviews help consumers in overcoming the risk to a certain extent. These searches can likewise be changed over to sales if the online sites can retain the customers by reducing the purchasing barriers and hence promoting satisfied consumers to write positive reviews can help in increasing sales.

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