

International Journal of Advance Research in Computer Science and Management Studies

Research Article / Survey Paper / Case Study

Available online at: www.ijarcsms.com

A Study to Identify the Risk Factors in Online Shopping: A Case Study of Online Shoppers from Delhi and Haryana

Vinay Nandal¹

Research scholar
IMSAR, MDU Rohtak, India.

Dr. Jagdeep Singla²

Associate professor,
IMSAR, MDU Rohtak, India.

Abstract: The research aims to identify the factors associated with the online shopping. Sample of 400 online shoppers from Delhi and Haryana state was taken on random sampling basis, and survey was conducted for primary research. The data was put through factor analysis and descriptive analysis. It can be concluded from the study that perceived risk related to online shopping can be categorised into four factors, which reflects different types of risk namely; product risk, performance risk, delivery risk and Financial and information risk. Overall, online shoppers perceive the risk of finance and personal information higher than other type of risk. Online shoppers were found to be more worried about the sellers' identity and guarantee obligations to be fulfilled by the seller for online products.

Keywords: Perceived Risk, Online Shopping, India, Shoppers, Delhi, Product Risk, Performance Risk, Delivery Risk and Financial and Information Risk.

I. INTRODUCTION

Online shopping has become an integral part of our daily lives. Almost everything that we purchase is either bought from an online vendor or is bought from a vendor that uses online navigation to procure the commodity. The net forces of the proliferation of internet services, advanced IT technology and globalization, has made such a phenomenon as online shopping a more pronounced feature of consumer lifestyle. It is not only a utilitarian activity that most people perform but has become a centre-point of defining the ways in which individuals and groups belong and identify with each other and the larger social collective. Online shopping has been defined as 'the means that allows the consumer to buy directly from the seller without any third person on an Internet browser'. The rise in use of online shopping websites like Amazon, Flipkart, Snapdeal and other very specific product-oriented websites like Myntra, Nykaa, Snapdeal and others has been a part of this process. Brands have swiftly shifted to making their websites easily accessible to customers; one can now buy directly from the brand website rather than have to go to a store in order to purchase the same product. Hence, it becomes imperative to study the processes that go into making of such an experience. Keeping in view the drastic growth in online shopping, current study was attempted. The study aims to identify the factors pertaining to the risk in online shopping. Current study was purely based on the perceptions of the online shoppers, hence primary data was major type of data used in the study. Researcher has collected the data from Delhi (Union Territory) and the Haryana state, while in Haryana mainly the Haryana adjacent to Delhi has been taken which includes the cities likes; Faridabad, Sonipat, Gurgaon, Bahadurgarh, and Rohtak. In a sample of 400 online shoppers, 62 percent of the online shoppers were from Delhi, and only 38 percent of the online shoppers were from Haryana state. 59.8 percent of the online shoppers were male, while 40.3 percent of the total online shoppers in the sample of 400 online shoppers were female. Majority of the proportion of the online shoppers in the sample were from young age group, who are between their 20s to 30s, graduate, from service class people with a family income between 50000 to one lakh per month.

II. REVIEW OF LITERATURE

Literature on 'risk' identified six main types of risk that play a decisive role in consumer orientation. These are psychological, social, financial, temporal, performance, and physical (Jacoby and Kaplan, 2019). The following section is a review of literature on these themes and 'risk perception' in online shopping.

More recently, the effect of live streaming shopping on online consumers has been studied by Song and Lui (2021). Using Stimulus-Organism-Response (SOR), the effect of the external environment was seen to have a significant effect on the risk perception of online shoppers. It was observed that perceived risk had a negative effect on the customer's purchase intention. However, it was also observed that the richness of media sources was not a significant factor in deciding perceived risk and purchase intention, as consumers were noted to be not entirely motivated via online streaming into buying products. Even if consumers came across information that was 'rich', it would not substitute for their need to measure the utility of the information and product itself. Interactivity, too, was perceived to be not significantly connected to the perceived risk concerning live streaming shopping. It has been suggested that online vendors use streamers who are attractive and trustworthy to promote their products to improve customer engagement.

Tandon and Mahendru (2019) study the perceived risk behaviour of 500 online shoppers from North India. Several risk factors such as time, security, product performance, privacy, and social risks were found to be significant in online consumers' shopping experiences. Perceived risk emerged as a 'second-order multidimensional construct', where social risk, time risks, and privacy risks emerged as the primary indicators of perceived risk. The financial risk was found to be an active detriment to online shopping. Risks around product performance too were found to be influential in the makeup of decisions around online shopping as people were shown to prefer the sense of touch and feel and examining the product rather than simply browse it online before a purchase.

More recently, the effect of advanced technology on perceived risk has been studied. Hwang and Choe (2019) have shown how perceived risk are navigated in building successful drone food delivery systems. The facets of perceived risks in using drone delivery systems, the image of the drone delivery system and its relationship with perceived risk, and the attitudes and reflections of the consumer on the same have been the focal point of discussion here. It was inferred that financial risk did not affect the perception of drone food delivery services. Time risk, however, was found to have a negative impact on the image of drone food delivery services, as customers felt that the excess time consumption in learning to use the services was not good. There was, on the other hand, no relationship found between privacy risk and the image of drone food delivery systems. This has been attributed to the consumers' already existing comfort with providing personal information while ordering online using smartphones which establishes that such sharing is vital to the purchasing process. Performance risk was also found to be an important factor and so were psychological risks. This meant that consumers were less likely to have a good image of the food delivery system if they felt nervous about using drone delivery services.

Bhatti et al. (2018) have studied the various forms of risk coupled with the moderating effect of 'attitude' among Masters' degree students in Pakistan. Particularly, the effects of perceived risk, convenience risk, and product risk were studied with special focus. It was observed that privacy risk is significantly and negatively associated with online shopping and the same went for convenience and trust too. It was also observed that financial risk had an insignificant impact on online shopping. The attitude was found to be a major moderating factor in the risk-perception of consumers. In the absence of attitude, convenience risks negatively impacted consumers' shopping behaviour whereas it did not have any significant effect on product risk in its absence. Without attitude, perceived risk, however, was found to have a significant effect on the consumers' behaviour. Both purchasing, as well as information behaviour, were found to be influenced by consumers' attitudes, perceived risk, and other important factors.

Arora and Rahul (2018) study the impact of perceived risks of various types on women in India who shop online. Using a sample population of 508 women and employing structural equation modeling, it was, contrary to other studies, found that perceived risks did not play an important role in influencing the shopping attitudes of women in India. However, online shopping attitudes were found to have a significant impact on online shopping intentions. The elements of perceived risk-security, privacy, non-delivery, and product risks, were also confirmed in the study. It has been observed that since net banking transactions are more secure these days with modern technology, the factor of security risk is diminished to a large extent. This is also informed to a certain extent by the proliferation of 'cash-on-delivery options which mitigates consumer insecurities about non-delivery. Privacy risk, too, for women was found to be insignificant owing to the availability of a 'continue as guest' facility on several e-commerce websites which reduces any chances of data theft or privacy breach because the same is not shared by the user in the first place. It was also found that the proliferation of online shopping in India was directly connected to customers feeling less need to provide basic information. Product risks are reduced to a significant extent owing to better return policies of online vendors and non-delivery risks were reduced too owing to online delivery tracking systems and cash-on-delivery mechanisms.

III. OBJECTIVE

The objective of the research paper is to identify the factors associated with the online shopping.

IV. RESEARCH METHODOLOGY

Current study is an ex-post facto research, which explains the reasons for why online shoppers afraid from online shopping, which is measured through perceived risk. Ex-post facto research explains the reasons when the event has already been happened. Here, the experiences of the online shoppers have been recorded who have already experienced the online shopping. Current study was purely based on the perceptions of the online shoppers, hence primary data was major type of data used in the study. Perception of online shoppers towards the risk involved in the online shopping. While, secondary data is also required to know about these constructs in detail and for that review of literature is required. In addition to this, to know about the online markets, trends, and growth at global level, and national level is studied using the secondary data. The methods to be applied for the data analysis was understood through secondary data only. Primary data has been collected with the help of survey method, and source of data was mainly the online shoppers who were involved in online shopping. Here, the respondents were from Delhi, and Haryana state.

V. RESULTS AND FINDINGS

Reliability test

Description	Variables	Alpha value
Perceived risk	21	0.952
Product risk	5	0.966
Financial and information risk	7	0.969
Delivery risk	4	0.958
Performance risk	5	0.955

The reliability of the perceived risk section in the research instrument was measured using Cronbach alpha method, which gave the alpha value of 0.952 for 21 statements under the perceived risk. Further, the reliability of each of the factors which leads to perceived risk was also measured using the alpha method, and for all the factors the alpha values were found to be above 0.70. It signifies that perceived risk and its factors were reliable and instrument can fetch the reliable results which can be generalized to the overall population.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.908
Bartlett's Test of Sphericity	Approx. Chi-Square	12056.970
	df	210
	Sig.	.000

The KMO test value was 0.908, which indicate that the data taken in the sample i.e. 400 respondents and the 21 variables is adequate to run the exploratory factor analysis on the data set. If this value is close to one, it is assumed that data set is good enough to apply factor analysis. Further, the Bartlett's test also approves the initial conditions for applying the factor analysis on a data set. Here, the chi-square value was found to be 12056.970, which is significant at 0.000, it shows that data set used for the factor analysis is correct and factor analysis will give the normal results which can be applicable to the population.

Communalities		
	Initial	Extraction
Product do not match with its description	1.000	.821
Lower quality of product	1.000	.911
Faulty or damaged product	1.000	.932
Not original but copy of the original product	1.000	.906
Product feature may not match to the expected use of the buyer	1.000	.848
End up with paying twice for same product	1.000	.818
Stuck of money while making payment	1.000	.826
My personal information may get stolen	1.000	.887
My card information can be used by the hackers	1.000	.844
Auto debit of amount from my bank account	1.000	.811
Bank information or wallets code may be stolen	1.000	.877
Hacking my email id used for shopping/ or phone numbers	1.000	.902
Product may get lost during delivery	1.000	.871
Product may be delivered to wrong address	1.000	.895
Product may get damaged during delivery	1.000	.931
Late delivery of products	1.000	.887
Product may not perform as per expectations	1.000	.780
Seller may not provide the post delivery services	1.000	.865
No address to communicate with the seller in case product do not work	1.000	.932
Seller warranty may not be available as seller closes its business	1.000	.900
Exchange and return facilities are not provided	1.000	.799

Extraction Method: Principal Component Analysis.

In the current study, researcher has applied the Principal component method, hence the initial communalities were found to be one, and extraction was found to be highest for the variables; No address to communicate with the seller in case product do not work (0.932), Faulty or damaged product (0.932), and Product may get damaged during delivery (0.931). While the least extraction was noticed for the variables; Product may not perform as per expectations (0.780), and Exchange and return facilities are not provided (0.799).

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.7	51.314	51.314	10.7	51.314	51.314	5.92	28.232	28.232
2	3.64	17.339	68.653	3.64	17.339	68.653	4.55	21.710	49.942
3	2.27	10.844	79.497	2.27	10.844	79.497	4.32	20.596	70.538
4	1.54	7.375	86.873	1.54	7.375	86.873	3.43	16.334	86.873
5	.411	1.958	88.831						
6	.377	1.797	90.627						
7	.369	1.758	92.386						
8	.271	1.289	93.675						
9	.202	.962	94.637						
10	.193	.921	95.557						
11	.158	.752	96.310						
12	.134	.637	96.947						
13	.127	.606	97.552						
14	.102	.485	98.037						
15	.093	.442	98.480						
16	.073	.350	98.829						
17	.062	.294	99.123						

18	.056	.269	99.392						
19	.048	.226	99.619						
20	.045	.212	99.830						
21	.036	.170	100.000						
Extraction Method: Principal Component Analysis.									

21 variables were converted into four factors, which reflects the perceived risk by online shoppers related to the online shopping, based on their eigen values. Out of 21 variables, only four variables were sorted which have shown eigen value more than one. These four factors explain total 86.8 percent variation in the latent variable, while 14 percent remained unexplained. Highest variation is caused by the first and second factor i.e. 28.2 and 21.7 percent respectively, while fourth factor causes least variation in the latent variable i.e. 16.3 percent.

Rotated Component Matrix^a				
	Component			
	F1	F2	F3	F4
Hacking my email id used for shopping/ or phone numbers	.909	.117	.211	.131
My personal information may get stolen	.897	.098	.184	.200
Bank information or wallets code may be stolen	.892	.137	.216	.124
My card information can be used by the hackers	.892	.078	.136	.153
Auto debit of amount from my bank account	.877	.055	.158	.120
Stuck of money while making payment	.830	.119	.252	.242
End up with paying twice for same product	.816	.170	.310	.164
Faulty or damaged product	.127	.921	.137	.222
Not original but copy of the original product	.122	.914	.146	.184
Lower quality of product	.150	.900	.134	.245
Product feature may not match to the expected use of the buyer	.086	.876	.166	.214
Product do not match with its description	.096	.856	.169	.223
No address to communicate with the seller in case product do not work	.211	.161	.912	.174
Seller warranty may not be available as seller closes its business	.230	.160	.889	.178
Seller may not provide the post delivery services	.200	.174	.865	.217
Exchange and return facilities are not provided	.256	.147	.829	.156
Product may not perform as per expectations	.309	.143	.805	.124
Product may get damaged during delivery	.225	.299	.198	.867
Product may be delivered to wrong address	.213	.283	.210	.852
Product may get lost during delivery	.232	.294	.213	.828
Late delivery of products	.253	.301	.221	.827
Extraction Method: Principal Component Analysis.				
Rotation Method: Varimax with Kaiser Normalization.				

Perceived risk related to online shopping has been categorised into four factors, which reflects different types of risk namely; product risk, performance risk, delivery risk and Financial and information risk. Product risk mainly covers the statements related to the faulty or damaged product, not original but copy of the original product, lower quality of product, product feature may not match to the expected use of the buyer, and product do not match with its description. Performance risk mainly covers the statements related to the no address to communicate with the seller in case product do not work, seller warranty may not be available as seller closes its business, seller may not provide the post delivery services, exchange and return facilities are not provided, and product may not perform as per expectations. Delivery risk mainly covers the statements related to the product may get damaged during delivery, product may be delivered to wrong address, product may get lost during delivery, and late delivery of products. Financial and information risk mainly covers the statements related to the hacking my email id used for shopping/ or phone numbers, my personal information may get stolen, bank information or wallets code may be stolen, my card information can be used by the hackers, auto debit of amount from my bank account, stuck of money while making payment, and end up with paying twice for same product.

Descriptive Statistics							
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Product risk	400	5.00	25.00	14.2700	5.20045	.078	.122
Financial and information risk	400	7.00	28.00	18.0450	6.58113	-.014	.122
Delivery risk	400	4.00	20.00	10.0475	4.36209	.702	.122
Performance risk	400	5.00	25.00	14.7300	4.63690	.197	.122
Categories N (listwise)	400						

The descriptive statistics for all the four type of perceived risk related to the online shopping highlighted the fact that financial and information risk is the highly perceived risk among the online shoppers, based on its mean value i.e. 18.04, followed by the performance risk. While, the risk related to the delivery of the product is least perceived by the online shoppers. Hence, the major concern area as a risk for the online shoppers is the risk to get their money lost in online shopping, risk of losing their private information, hacking of their cards, or bank details etc. while, second highly perceived risk is related to the performance of the product, whether the product they are buying will perform as per their expectations or the utility of the product will be as per their expectations or not. Overall, online shoppers perceive the risk of finance and personal information higher than other type of risk.

VI. CONCLUSION

It can be concluded from the study that perceived risk related to online shopping can be categorised into four factors, which reflects different types of risk namely; product risk, performance risk, delivery risk and Financial and information risk. Financial and information risk is the highly perceived risk among the online shoppers, based on its mean value i.e. 18.04, followed by the performance risk. While, the risk related to the delivery of the product is least perceived by the online shoppers. Overall, online shoppers perceive the risk of finance and personal information higher than other type of risk. Online shoppers were found to be more worried about the sellers' identity and guarantee obligations to be fulfilled by the seller for online products. If there is no communication means available between the shoppers and the sellers then it creates some kind of distrust among the shoppers towards the sellers, and which makes them hesitate to buy products online.

References

1. Arora, N., & Rahul, M. (2018). The role of perceived risk in influencing online shopping attitude among women in India. *International Journal of Public Sector Performance Management*, 4(1), 98-113.
2. Bhatti, A., Saad, S., & Gbadebo, S. M. (2018). Convenience risk, product risk, and perceived risk influence on online shopping: Moderating effect of attitude. *International Journal of Business Management*, 3(2), 1-11.
3. Chaudhry, M., & Kaur, R. (2016). WEB BASED SHOPPING: AN ANALYSIS OF FACTORS AFFECTING CONSUMERS ATTITUDE TOWARDS ONLINE SHOPPING. *THE STRAITS OF SUCCESS IN A VUCA WORLD*, 7.
4. Ganapathi, P., & Abu-Shanab, E. A. (2019). Customer satisfaction with online food ordering portals in Qatar. *International Journal of E-Services and Mobile Applications (IJESMA)*, 12(1), 57-79.
5. Kohli, R., Devaraj, S., & Mahmood, M. A. (2004). Understanding determinants of online consumer satisfaction: A decision process perspective. *Journal of Management Information Systems*, 21(1), 115-136.
6. Kumar, A., Mangla, S. K., Luthra, S., Rana, N. P., & Dwivedi, Y. K. (2018). Predicting changing pattern: building model for consumer decision making in digital market. *Journal of Enterprise Information Management*.
7. Pal, D., Funilkul, S., Eamsinvattana, W., & Siyal, S. (2019). Using online food delivery applications during the Emergency: What drives University Students' satisfaction and loyalty? *Journal of Foodservice Business Research*, 1-45.
8. . *International Journal of Trade, Economics and Finance*, 4(3), 104-110.
9. Purwati, A. A., Fitrio, T., Ben, F., & Hamzah, M. L. (2019). Product Quality and After-Sales Service in Improving Customer Satisfaction and Loyalty. *Jurnal Economia*, 16(2), 223-235.
10. Shankar, V., Smith, A. K., & Rangaswamy, A. (2003). Customer satisfaction and loyalty in online and offline environments. *International journal of research in marketing*, 20(2), 153-175.

11. Shankar, V., Venkatesh, A., Hofacker, C., & Naik, P. (2010). Mobile marketing in the retailing environment: current insights and future research avenues. *Journal of interactive marketing*, 24(2), 111-120.
12. Shergill, G. S., & Chen, Z. (2005). WEB-BASED SHOPPING: CONSUMERS' ATTITUDES TOWARDS ONLINE SHOPPING IN NEW ZEALAND. *Journal of electronic commerce research*, 6(2), 78.