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DIMENSIONS OF PERCEIVED RISK AMONG STUDENTS OF HIGH EDUCATIONAL INSTITUTES TOWARDS ONLINE SHOPPING IN PUNJAB

PAWAN KUMAR

Lovely Professional University, Mittal School of Business, Punjab, India,

Tel: +917508005150;

Email: thegreatpk@gmail.com

RAKHI BAJAJ

Department of Management, Guru Nanak Girls College, Model Town,

Ludhiana, India

Abstract

The main objective of the article is to find out various dimensions of perceived risk of online shopping among students of high educational institutes of Punjab. The population of the state consists of online shoppers of universities of four cities Ludhiana, Jalandhar,

Patiala and Amritsar. Respondents were selected from different genders, age groups, income groups, qualifications and occupations having online shopping experience. A pre-structured questionnaire was used with five point likert rating scale to measure various dimensions of online buyers of four cities. Data from respondents was collected through convenience sampling method. Survey of the respondents was also done regarding ambiguity in questionnaire. Reliability Analysis was conducted by Cronbach alpha test. Mean, standard deviation, and z-test were used in this study as statistical techniques for analyzing collected data. The key findings are that significant amount of various dimensions of perceived risk are present among student of high educational students of Punjab.

Keywords: Internet; Online Buyer; Perceived Risk; Dimensions; Online Shopping; Students; Attitude

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INTRODUCTION

Online buying or the shopping through Internet has grown exponentially throughout the world. World research forecast by IBIS has shown an 8.6 percent increase in online revenue in coming five years. Consumers in Asia Pacific had spent more than North America in 2014 making it the largest regional e commerce market in the world. This year also e commerce sales are expected to reach \$525.2 billion in the Asia region compared with \$482.6 billion in North America. According to Forrester within the ASIA Pacific region the e commerce market in India is set to grow the fastest at a CAGR of over 57 percent from 2012-16. At present India has approximately 137 million internet users and the country has crossed Japan recently to become the third largest Internet user in the world. The advantage of online trading is the ease that a consumer derives in saving time and efforts. The online shopping also gives a plenty of choices for different category of items and also the opportunity of comparing the offerings from different vendors. The second benefit is the significant discounts given by these e- retailers to attract the customers. The availability of online stores is 24 hours a day. Searching or browsing

an online catalog is faster. Buyers also have better access to product review and rating systems along with information about a company. Further Internet-based Electronic Commerce helps in bringing easier and cheaper global markets within the reach of buyers and sellers [1].

DEFINITIONS OF PERCEIVED RISK

Perceived risk is a risk perceived by consumers while purchasing. Bauer [2] is the one who introduced the concept of perceived risk in the field of the social sciences. Bauer [2] mentioned consumer attitude as a measure of risk taking behavior in marketing literature. Further Cox et al. [3] explained that the above stated risk may be considered as a function of the uncertainty of the consequences of an unpleasantness behavior. Miyazaki et al. [4] explained that perceived risk decreases with internet experience and prior purchase experience.

Dimensions of Perceived Risk

Prior researches have proved that perceived online risk has an adverse impact on online purchase or we can say that higher the risk perception, there are less chances of using it for their purchase decisions [5]. Perceived risk is multidimensional [6,7].

Financial risk: This risk measures consumer's concern about monetary loss while shopping through the internet [8]. The risk is more prevalent in e retailing [9] as there is major concern credit card fraud. It also has references to lower discounts in internet shopping as compared to traditional shopping, extra charges of delivery and online payment.

Performance risk: performance risk measures a consumer's concern about the product quality, performance of a product, falseness of a product and product related problem. It is the uncertainty in the mind of the consumer that whether the existing product will perform as expected [10]. It is related with the disappointment that consumer may experience when the online purchased product does not meet their expectations [11]. Product

performance risk depends on the products types, product complexity; price [9].

Time risk: This dimension of risk is defined as the risk related with loss of time in the purchase process [12].

Privacy risk: This risk explains a consumer’s concern regarding personal information secrecy. It includes information regarding a consumer’s home address, e mail address, telephone number, and account number of credit or debit cards. It is due to the probability of misuse of credit card information [13].

Source risk: This risk is about the sellers and products asymmetric information perception by consumer. It also states the concern and discomfort faced by customer as they are not certain regarding the trust on the catalog or mail order retailer [14].

Psychological risk: This risk explains that products purchased by them may lead to others laugh [15-17] (Table 1). Jacoby et al. [7] defined it as dissatisfaction or mental stress caused by the purchase of the product by a consumer.

Table 1: Dimensions of Perceived Risk and Related Literature.

Dimensions of Perceived Risk	Related Literature
Financial Risk	[8,9]
Performance Risk	[7,9-11]
Time	[12]
Privacy Risk	[13,18-20]
Source Risk	[14]
Psychological Risk	[7,15-17]
Source: Related Literature	

LITERATURE REVIEW

Bauer [2] was the one to introduce the concept of perceived risk in the field of the social sciences. Bauer [2] stated that the behavior of consumer is a kind of risk taking in which consumer becomes unable to know more about the information of products and the consequences of using it. Thus it is a combination of unforeseen consequences along with the possibility of serious outcome. Some of these consequences may be unpleasant. Cox et al. [3] explained it as a function of the uncertainty of the consequences of a behavior and unpleasantness of the same. Cox [3] further mentioned two major dimensions of perceived risk, performance and psychological risks. Performance risk is further classified into three types: economic, effort and temporal while psychological risk was classified into two types: social and psychological. Cunningham [6]; Taylor [21]; and many researchers also supported the concept that perceived risk intergraded the above said two factors. Roselius [12] explained that buyers hesitate to take active decisions while planning a purchase of product or service because they are uncertain that all of their buying goals will be achieved with the purchase. He further suggested customers may suffer from time loss, hazard loss, ego loss, and money loss when they purchase. He was of the opinion that buying brand which has been tested and approved by a private testing company or an official branch of the government will create more confidence in the customer and therefore reduce private risk. Jacoby et al. [7] in his study mentioned that overall perceived risk include five dimensions of perceived risks, which are financial, functional, physical, psychological and time-loss risk. Stone et al. [22] also described six types of risk: financial, functional, physical, psychological, social, and time risk. A few more dimensions of perceived risks was also identified and studied with the increasing popularity of online shopping.

Jarvenpaa et al. [23] suggested there is a perceived personal risk. Jarvenpaa et al. [23] differentiated perceived risk into economic risk, security risk, social risk, performance risk and privacy risk. Economic risk or financial risk is the loss of money due to poor purchase choice or inability to exchange or return the product. Economic risk refers to credit card embezzlement. Social risk exists when shopping on the web is considered as socially

unacceptable. Tan [17] mentioned that since 1960's there have been numerous studies designed to understand the concept of perceived risk. Sweeney et al. [13] also mentioned that apprehensions regarding misuse of account information during online transactions or issues in delivery of products are some other concerns that affect consumer's online purchase actions. Bhatnagar et al. [9] in their study mentioned two dimensions of perceived risks in online shopping which are product risk and financial risk. Vijayasathy et al. [24] in their study found the impact of perceived risk on attitudes towards online shopping and intention to shop online in line with other studies. Miyazaki et al. [4] explained that perceived risk may decrease with increase in internet experience and prior purchase experience. Campbell et al. [25] stated that perceived risk has become a key construct of marketing sciences, on which prior studies have primary focused. Featherman et al. [15] stated that the idea of perceived risk has been captured through the use of various scales by measuring the perception of dangerous events occurring or the presence of the attribute in service. Chellappa et al. [26] mentioned that buyer's concern about information security may have an effect on perceived risk to conduct an online purchase. Cases [27] has given various types of perceived risks as Financial risk, Performance risk and Privacy risk. Cases [27] also mentioned past experience, website reputation and payment security as risk reduction strategies. Vijayasathy [24] defined security as the extent of belief of consumer making secure payments in online shopping. Forsythe et al. [19] stated that perceived risk can be considered as a function of the uncertainty about the potential unpleasantness of outcomes of a behavior. Huang et al. [28] also found that online shoppers possessed lower perceived risk than nonshoppers. Chang et al. [29] confirmed that web site quality also affect perceived risk and purchase intention. Suresh et al. [30] studied six components of perceived risk having significant impact on online shopping. Cengel [31] found that social risk is the major factor that is given priority in the internet shopping. Sahney [32] expressed that consumers experience a state of uneasiness and tension while making a purchase decision and immediately after purchase. Cheng et al. [33] studied five kinds of perceived risk in online group buying which are financial risk, performance risk, social risk, time risk and perceived risk. Meenakshi et al. in his research shed lights on some important factors influencing online

shopping in Punjab. The study showed that perceived risk, perceived trust and benefit of online shopping affects online shopping in youngsters. The prime factor influencing online shopping behavior is perceived trust. People do not prefer to give their confidential information during online transaction. Dai et al. [34] examined the impact of online shopping experience on specific types of risk perception associated with purchase intentions.

GAPS IN RESEARCH

Review of previous literature shows that most of them focused on the advantages and disadvantages of perceived risk in online marketing but very few researchers have raised the issues regarding the consumer's concern in e shopping. Few studies have been done in this regard in foreign countries but their situation is entirely different from India. The nation though in developing state shows steady growth towards online shopping. State Punjab is filled up with rich people showing increasing trend towards online shopping but regarding the types of perceived risk no literature can be found.

NEED OF THE STUDY

Online buying is one of the fastest growing business models. The competition is getting escalated with the increasing popularity and it has become imperative for e retailers to understand the motivators to shop online [35]. The present paper addresses the issue of perceived risk in Internet marketing from the perspectives of the students of high educational institutes of Punjab. It also seeks to determine the dimensions of risk perception of Internet shoppers. Findings of the current study can contribute to the e commerce field by illustrating the useful applicable strategies to reduce possible outcomes.

SCOPE

The study covers the four major cities Amritsar, Jalandhar, Ludhiana and Patiala City of Punjab. These cities have maximum number of high educational institutions. These cities

have universities also. Thus students of these high educational institutions will provide a good database for the purpose of research study. Students of high educational Institutes who are computer literate and more attracted towards online purchase were considered for the well-structured questionnaire survey for research. Study covers professional graduate students of B. Tech, B. Arch, Post Graduate students of various courses, post graduate professional students like M.Tech. and research scholars of Guru Nanak Dev University (Amritsar), Lovely Professional University (Jalandhar), Punjab Agricultural University (Ludhiana), Guru Nanak Engineering College (Ludhiana) and Panjabi University (Patiala).

RESEARCH METHODOLOGY

The data for the current study was collected from February 2015 – October 2015 via a structured non disguised questionnaire, which was useful for analyzing perceived risk on online shopping experience, influence of their demographic characteristics of online users. Survey of students was also done to clarify ambiguity in the questionnaire.

RESEARCH DESIGN

The research design envelops the method and procedure adopted to conduct scientific research. Thus the current research design illustrates the procedures for the collection, measurement and analysis of data.

The particular study is descriptive in nature.

Secondary data sources included data previously collected for other purposes [36]. For this a literature review was studied to review published articles and books explaining theories and past empirical studies concerning consumer behavior, online purchasing and risk.

Primary data was gathered and assembled specifically for the current study [36]. Quantitative as well as qualitative method was used to collect information about dimensions of perceived risks on online buying. A questionnaire was prepared and analyzed to study the data. Survey of students was also done.

POPULATION AND SAMPLE SIZE

In this study the required population consisted of educated students from high educational institutes four major cities of Punjab undergoing online shopping [37]. Equal numbers of respondents are chosen from each city as there was no sampling frame. There was no prior data available regarding complete list of students using online shopping. Sample consists of 400 respondents from various areas of Punjab State. Convenience sampling method was used to collect data. Attempts were made to get responses from different gender and places.

TECHNIQUES AND TOOLS

A manual questionnaire was distributed to study online customer's demographic profile, dimensions of perceived risk and previous online shopping experience. Following a pilot study, a structured questionnaire was prepared and given to the respondents [38]. The questionnaire was made using Likert scale questions as well as categorically scaled questions. Physical survey was also conducted. Data was cleaned, edited and coded. Reliability checking and validity was done using specific tests. Descriptive as well as inferential data was collected and interpreted with the use of the appropriate tests of significance [39]. Cronbach's Alpha Test, Mean Score and Z test was used. Statistical Package for Social Sciences (SPSS) was used to analyze the collected and processed data.

TESTING HYPOTHESIS

The present study includes hypotheses to be tested with the help of statistical tools like mean score, Standard deviation and Z test [40].

The hypothesis of the study is

Hypotheses 1: Students of high educational institutes of Punjab feel significant amount of various dimensions of perceived risk during shopping.

EXPECTED OUTCOME

Study will help to find various dimensions of perceived risk in case of educated students of high educational institutes of Punjab using online shopping.

RELEVANCE OF EXPECTED RESULTS

The relevance of the expected result will help in identifying importance of dimensions of perceived risks in online shopping among educated students of high educational institutes of Punjab. Results from present study will provide in depth knowledge to operators running online business in understanding dimensions of different risks perceived by perspective educated students.

For online consumers study will provide deeper insights to various dimensions of perceived risk so that they can understand them and use appropriate risk reduction strategies.

The particular problem is recent in origin and there is ample scope for budding researcher to study.

HYPOTHESIS TESTING

H 1(a)

Null Hypothesis: Students of high educational institutes of Punjab does not perceive significant amount of financial risk during online purchase.

Alternate Hypothesis: Students of high educational institutes of Punjab perceive significant amount of financial risk during online purchase.

H 1(b)

Null Hypothesis: Students of high educational institutes of Punjab does not perceive significant amount of performance risk during online purchase.

Alternate Hypothesis: Students of high educational institutes of Punjab perceive significant amount of performance risk during online purchase.

H1(c)

Null Hypothesis: Students of high educational institutes of Punjab does not perceive significant amount of time risk during online purchase.

Alternate Hypothesis: Students of high educational institutes of Punjab perceive significant amount of time risk during online purchase.

H 1(d)

Null Hypothesis: Students of high educational institutes of Punjab does not perceive significant amount of privacy risk during online purchase.

Alternate Hypothesis: Students of high educational institutes of Punjab perceive significant amount of privacy risk during online purchase.

H 1(e)

Null Hypothesis: Students of high educational institutes of Punjab does not perceive significant amount of source risk during online purchase.

Alternate Hypothesis: Students of high educational institutes of Punjab perceive significant amount of source risk during online purchase.

H 1(f)

Null Hypothesis: Students of high educational institutes of Punjab does not perceive significant amount of psychological risk during online purchase.

Alternate Hypothesis: Students of high educational institutes of Punjab perceive significant amount of psychological risk during online purchase.

RESULTS AND DISCUSSION

Reliability Analysis

Initially the reliability of the collected data was examined by conducting reliability analysis and required value was obtained. The value of Cronbach's alpha was 0.865. The value of alpha coefficient is relatively high. It is greater than .8 and hence the data collected and measurement are considered reliable. Then we have collected the demographic profile of all the respondents. The results are shown in Table 2.

Scale: VARIABLES

Reliability Statistics

Value of Cronbach's Alpha: 0.865

No of Items: 44

Demographic profile of sampled respondents

Table 2: Demographic profile of the sampled respondents.

Particulars	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Gender				
Male	221	55.2	55.2	55.2
Female	179	44.8	44.8	100.0
Total	400	100.0	100.0	
Age				
Below 18	9	2.2	2.2	2.2
18-25	338	84.5	84.5	86.8
25-35	49	12.2	12.2	99.0
Above	4	1.0	1.0	100.0
Total	400	100.0	100.0	
Education				
Graduation (B Tech, B Arch, LLB)	166	41.5	41.5	41.5
Post-Graduation(MA)	201	50.2	50.2	91.8
Professional(M Tech, Research Scholar)	33	8.2	8.2	100.0
Total	400	100.0	100.0	

Occupation				
Student	308	77.0	77.0	77.0
Professional	76	19.0	19.0	96.0
Self Employed	16	4.0	4.0	100.0
Total	400	100.0	100.0	
Income				
Up to 10000 Rs	49	12.2	12.2	12.2
10,000-25,000	147	36.8	36.8	49.0
25000-50000	132	33.0	33.0	82.0
More than 50000	72	18.0	18.0	100.0
Total	400	100.0	100.0	
Area of residence				
Amritsar	100	25.0	25.0	25.0
Jalandhar	100	25.0	25.0	50.0
Ludhiana	100	25.0	25.0	75.0
Patiala	100	25.0	25.0	100.0
Total	400	100.0	100.0	
Source: Survey Data				

The following Table 3 concerns the demographics of respondents including their gender, age group, education level, occupation, income and area of residence.

Almost equal numbers of male and female respondents are selected for study Majority of respondents are students having post-graduation degree and aged in the range 18-25. Their family monthly income lie in the range of 10,000-25,000 Rs and 25,000-50,000 Rs. Lastly equal numbers of respondents are selected from high educational institutes of four major cities of Punjab as there was no data available regarding number of students using online shopping.

Table 3: Comparative Mean Score Dimensions of Perceived risk.

Dimensions of Perceived risk	Mean Score	Rank
Financial Risk	2.97	3
Performance Risk	3.22	1
Time Risk	2.86	5
Privacy Risk	3.01	2
Source Risk	2.88	4
Psychological Risk	2.72	6
Source: Survey Data		

The Table 4 shows that students of high educational institutes of Punjab face maximum dimensions of performance risk followed by privacy risk. Financial risk takes the third place. Source risk is at the fourth position. Time Risk and Psychological Risk are having almost same dimension and takes the fifth and sixth position respectively.

Table 4: Perceived risk of online shopping (N=400).

Financial risk	Mean score	Std. Deviation	Z-score
1. The information of credit card may be known by third parties.	2.92	1.307	-0.69
2. Credit Card may be Overcharged.	2.85	1.201	-1.91
3. I may not get the product after purchase.	2.56	1.227	-6.60**
4.I may get lower discount as compared to traditional shopping.	3.04	1.143	1.22
5. It is difficult to get refund money if I want to return the product after purchasing.	3.23	1.235	4.21**
6. I have to pay extra for delivery and online payment.	3.20	1.258	3.62**

Overall Score	17.81	4.691	25.38**
Performance risk	Mean score	Std. Deviation	Z-score
7. The size of product may not be same as required.	3.01	1.232	-3.41**
8. The colour of the product may not be same as shown.	3.18	1.223	-0.70
9. The material of the product may not be as stated.	3.20	1.469	-0.31
10. The quality of the product may not be same as stated	3.20	1.186	-0.38
11. It may be difficult to check the performance of the product on websites.	3.51	1.268	4.61**
Overall Score	16.10	4.754	17.82**
Time risk	Mean score	Std. Deviation	Z-score
12. It may take more than required time to search required website.	2.77	1.202	-1.50
13. It may take more than required time to search required product.	3.02	1.196	2.72**
14. It may take more than required time to place the order	2.78	2.388	-0.69
15. It may take more than required time to receive the order.	2.91	1.072	0.93
16. It is not convenient to find suitable product online in required time.	2.83	1.202	-0.49
Overall Score	14.31	4.974	9.86**
Privacy risk	Mean score	Std. Deviation	Z-score
17. My personal information (e.g. address, credit card number,, phone number,) may not be kept safely.	2.89	1.162	-2.02*

18. My personal information (e.g. address, name, phone number, credit card information) may be sold to third parties.	3.01	1.188	-0.04
19. I may be contacted by the company repeatedly without prior consent	3.13	1.106	2.12*
Overall Score	9.03	2.858	-19.82**
Source risk	Mean score	Std. Deviation	Z-score
20. I suspect the legitimacy of online websites.	2.78	1.029	-1.70
21. I suspect the legitimacy of the product source.	2.97	0.954	1.99*
Overall Score	5.75	1.751	-69.81**
Psychological risk	Mean score	Std. Deviation	Z-score
22. The style of the product may not fit with my image.	3.00	1.098	5.15**
23. I may feel tense if others know that I have purchased online.	2.65	1.141	-1.27
24. Products purchased by me online may lead to others laugh.	2.51	1.206	-3.40**
Overall Score	8.17	2.685	-27.52**
Source: Survey Data			
** and * significant at one and five per cent level of significance			

The above table shows the mean score, standard deviation and corresponding z value regarding statements of various dimensions of perceived risk (Table 5).

The study shows that z value of all the dimensions of perceived risk are significant at one percent level of significance, hence all the dimensions have significant amount of perceived risk and hence null hypothesis is rejected in each case.

Table 5: Hypothesis testing and Interpretation.

<i>Hypothesis</i>	<i>Z score</i>	<i>Significance</i>	<i>Testing of Hypothesis</i>
H1(a) Youth of high educational institutes of Punjab perceive significant amount of financial risk during online purchase	25.38**	**significant at one per cent level of significance	Null Hypothesis Rejected
H1(b) Youth of high educational institutes of Punjab perceive significant amount of performance risk during online purchase	17.82**	**significant at one per cent level of significance	Null Hypothesis Rejected
H1(c) Youth of high educational institutes of Punjab perceive significant amount of time/convenience risk during online purchase	9.86**	**significant at one per cent level of significance	Null Hypothesis Rejected
H1(d) Youth of high educational institutes of Punjab perceive significant amount of privacy risk during online purchase	-19.82**	**significant at one per cent level of significance	Null Hypothesis Rejected
H1(e) Youth of high educational institutes of Punjab perceive significant amount of source risk during online purchase	-69.81**	**significant at one per cent level of significance	Null Hypothesis Accepted
H1(f) Youth of high educational institutes of Punjab perceive significant amount of psychological risk during online purchase	-27.52**	**significant at one per cent level of significance	Null Hypothesis Rejected
Source: Survey Data			

CONCLUSION

The result emphasizes attention to student's perception of dimensions of risk in online shopping. Past researches done by researcher mentioned in literature review have also indicated that Internet shopping decisions are more risky than brick and mortar. Online

perceived risk is an important issue in B to C commerce. The study shows that online shopping is still considered a risky venture instead of its advantages. To reduce it e marketer and e-tailor should know the dimensions which are having high risk. From the survey data it was concluded that educated students of high educational institutes of Punjab face maximum dimensions of performance risk followed by privacy risk. Financial risk, Source risk, Time risk and Psychological risk are comparatively of less concern. E marketer should be encouraged to minimize performance risk. This can be done by providing more information to cope with the uncertainty such that virtual view of 3D images to illustrate product features, material components and product comparison. Source risk can be reduced by introducing proper websites. Psychological risk can be reduced by making people aware of the product by its advertisement. Punjab has big size of population and provides huge potential for online marketing. The changing scenario needs retailer to understand the issues related to perceived risk.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

The study has some limitations which should be taken into consideration while interpreting the findings. Sample size was small. Only those respondents having experience in online shopping was considered for study. Other novice consumers might feel more perceived risk. Convenience sampling method was used. The respondents was of the same state i.e. Punjab and hence may not represent the view of entire country. Due to time constraint only limited dimensions of perceived risk was taken. However these may not cover all the perceived risk customer may encounter. The study covers only tangible goods and not services. Further investigation is required to cover services. The study shows the need to attempt further studies regarding impact of perceived risk on online purchasing behavior of respondents of other states.

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