



Identifying key factors affecting consumer purchase behavior in an online shopping context

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Abstract

Internet shopping is a phenomenon that is growing rapidly nowadays. In this study, an attempt was made to explore the factors influencing the online buying behavior. The respondents for the study were the consumers of Haryana and the sample selected had at least one-time online shopping experience. The sample size of the present study is limited to 400 respondents only. The analysis of the data is done by using descriptive as well as inferential statistics. The main influencing factors for online shopping were identified as Online shopping is more expensive than sold in retail store, Online shopping provides special offers/discounts for purchase, Hesitate to give my credit debit card number, Hidden charges causes confusion while purchasing product, Online shopping is risky these cross-loadings are highly influential that affects the customers attitude in online shopping context and need to be eliminated.

Keywords: online buying behaviour, internet shopping, consumers, e-commerce

Introduction

While interactions in the real-world shopping are mainly based on face-to-face activities between consumers and service personnels, interactions in electronic commerce take place mainly through the retailer's Web site (Chanana & Goele, 2016) ^[4]. Since its transition into a global interconnection network for sharing and delivering information, internet has emerged as a useful marketing tool to serve as a platform for domestic and international transaction. The internet-based electronic commerce environment enables consumer to search for information and purchase products or services through direct interaction with the online store. E-commerce is the buying and selling of the goods and services online; internet is the best source to use this tool. One of the growing areas of E-commerce is Online Buying (Grant *et al.*, 2007) ^[7]. More and more consumers are turning to the World Wide Web for their shopping needs, which gives them access to either local or international products with just a click of the mouse. Today the amount of trade that is conducted electronically using ecommerce has increased with a wide spread usage of internet and technology. E-commerce includes transferring of funds online, supply chain management, marketing over internet. In addition to the benefits of anywhere-to-buy and anytime-to-buy. The theme of anytime anywhere shopping appeals to consumers who cannot take time off their busy schedules to go out and shop. The internet is being developed rapidly since last two decades, and with relevant digital economy that is driven by information technology also being developed worldwide. The detailed product information and improved service attracts more and more people and changed their consumer behaviour from the traditional mode to more rely on the internet shopping (Mittal, 2013) ^[12]. On the other hand, more companies have realized that the consumer behaviour transformation is unavoidable trend, and thus change their marketing strategy. The consumers can also avail of a variety of services for communication, consultancy and so on. But even with all its advantages, online buying still raises many questions – Are the transactions secure enough? Does the consumer get the

goods he has ordered? And so on. These unanswered questions have raised many issues on the potentiality and utility of Online Buying.

A related study by IPSOS Open Thinking Exchange (2012) found that 56 percent of the respondents from 24 countries prefer to shop in a traditional store rather than an online store (Jin *et al.*, 2016) ^[9]. Even in developed countries such as United States, out of 63 percent of the consumers would make a survey on the internet before proceed to purchase traditional consumer electronics online, but only half of the consumers will truly purchase online. The consumers tend to listen to verbal recommendations from close families and relatives, friends or even media before making a shopping decision. Therefore, to change the Indian consumers' perception to e-store, online retailers need to maximize efforts in doing promotion and performing good customer services in order to raise their interest in online shopping (Kumar & Ayodeji, 2021) ^[14]. The consumers also consider it a hassle when they faced difficulty to log in into the account, product information provided are limited and difficult to reach the online retailers by phone.

Not only benefits but also risk is associated with online shopping. Generally, internet users avert online shopping because of credit-card fraud, lack of privacy, non-delivery risk, lack of guarantee of quality of goods and services. Concerned authorities are devising policies to minimize the risk involved in e-business (Dani, 2017) ^[5]. On the other hand, E-commerce has been grown very fast because of many advantages associated with buying on internet because of lower transaction and search cost as compared to other types of shopping. Through online shopping consumers can buy faster, more alternatives and can order product and services with comparative lowest price. Thus, this research is primarily to examine factors that could influence online shopping behavior in India.

Literature review

(Park *et al.*, 2012) ^[14] investigated the relationship between various characteristics of online shopping and consumer purchase behavior. Results of the online survey with 602

Korean customers of online bookstores indicate that information quality, user interface quality, and security perceptions affect information satisfaction and relational benefit, that, in turn, are significantly related to each consumer's site commitment and actual purchase behavior. (Jusoh & Ling, 2012) ^[10] investigated how socio-demographic (age, income and occupation), pattern of online buying (types of goods, e-commerce experience and hours use on internet) and purchase perception (product perception, customers' service and consumers' risk) affect consumers' attitude towards online shopping. The study collected data of 100 respondents through self-generated questionnaire in Taman Tawas Permai, Ipoh. The findings revealed that there is no significant difference in attitude towards online shopping among age group, but there is a significant difference in attitude towards online shopping among income group. The research finding also showed that there is no significant difference in attitude towards online shopping among occupation group and types of goods group. (Babar *et al.*, 2014) ^[2] examined the factors that influence the online shopping behavior of consumers. Data was collected and analyzed from 132 internet users on four measures of usefulness, ease of use, financial risk and attitude. Among these four variables usefulness was found to be the noteworthy forecaster of attitude towards online shopping, however, ease of use and financial risk did not have strong influence on attitude as compared to usefulness and ease of use. (Akroush & Al-Debei, 2015) ^[1] examined an integrated model of factors affecting attitudes toward online shopping in Jordan. A sample of 273 of online shoppers was involved in the online survey. A series of exploratory and confirmatory factor analyses were used to assess the research constructs, unidimensionality, validity, and composite reliability (CR). Structural path model analysis was also used to test the proposed research model and hypotheses. The study found that the perceived website reputation, relative advantage, perceived website image, and trust have directly and indirectly affected consumers' attitudes toward online shopping. Online consumers' shopping attitudes are mainly affected by perceived relative advantage and trust. Trust is a product of relative advantage and that the later is a function of perceived website reputation. Relative advantage and perceived website reputation are key predictors of perceived website image. Perceived website image was found to be a direct predictor of trust. Also, the authors found that 26 percent of variation in online shopping attitudes was directly caused by relative advantage, trust, and perceived website image. (Nittala, 2015) ^[13] examined the factors that influencing online shopping behavior of urban consumers in the State of Andhra Pradesh, India and provides a better understanding of the potential of electronic marketing for both researchers and online retailers. Data from a sample of 1500 internet users (distributed evenly among six selected major cities) was collected by a structured questionnaire covering demographic profile and the factors influencing online shopping. Factor analysis and multiple regression analysis are used to establish relationship between the factors influencing online shopping and online shopping behavior. The study identified that perceived risk and price positively influenced online shopping behavior. Results also indicated that positive attitude, product risk and financial risk affect negatively the online shopping behavior. (Jin *et al.*, 2016) ^[9] examined the relationship between perceived usefulness,

subjective norm and online shopping behavior while mediated by purchase intention. The study collected primary data of 800 respondents from University Malaysia Perlis aged between 18 and 34. The study used Structural Equation Modeling (SEM) to examine the model fits and hypothesis testing. The study found that the subjective norm and perceived usefulness significant positively influence online purchase intention but subjective norm insignificant influence shopping behavior in a negative way. It is interesting to note that perceived usefulness also insignificantly influences online shopping behavior. Finding also revealed that purchase intention significant positively influence online shopping behavior. (Jadhav & Khanna, 2016) ^[8] explored the factors that influencing the online buying behavior of the college students. Convenience sampling method was used to select the sample of 25 college students and qualitative content analysis was used for analyzing the textual content of the depth interview data. The study found that the availability, low price, promotions, comparison, convenience, customer service, perceived ease of use, attitude, time consciousness, trust and variety seeking are the main influencing factors for online shopping. (Bucko *et al.*, 2018) ^[3] determined the factors that affect the consumers' willingness to purchase product from the online store. The study evaluated the criteria based on which users make decisions when purchasing online. The study found that the factors of price, availability, social proof, scarcity, product details, conditions and social media activity are the main influencing factors for online shopping. (Tham *et al.*, 2019) ^[16] examined the impact of financial risk, convenience risk, non-delivery risk; return policy risk and product risk on online consumer behavior of Malaysian consumers. The study collected data from 245 Malaysian online shoppers by using convenience sampling. Confirmatory Factor Analysis found that product risk, convenience risk, and return policy risk have a significant and positive impact on online shopping behavior. Financial risk is found to have insignificant and negative effects on consumer behavior. In addition, the non-delivery risk is found to have a significant and negative impact on online shopping behavior. (Rungsrisawat *et al.*, 2019) ^[15] determined the factors that encourage and influence the online buying behaviour amongst consumers. The study collected data of 350 respondents from Malaysia. The statistical tool used in this study is SPSS and the tests that have been applied were Multiple Regression Analysis and Reliability Analysis. The study found that the perceived benefit and psychological factors (such as security, privacy, and trust) have a direct and significant relationship with online buying behaviour; on the contrary, perceived risks have an inverse and negative relationship with online buying behaviour. (Doan, 2020) ^[6] examined the factors that influencing online purchase intention of Vietnamese. Based on the Unified Theory of Acceptance and Use of Technology (UTAUT), the study develops a theoretical model including four explanatory variables of online purchase intention: performance expectancy (PE), social influence (SI), effort expectancy (EE) and facilitating conditions (FC). The empirical results obtained in a sample of 204 valid interviewees reveal the statistically significant and concurrent impact of the mentioned determinants on the intention to purchase online. Among them, performance expectancy (PE) and social influence (SI) exert the most significant influence. The findings provide guidance for

online firms to improve their conditions and develop marketing strategies in order to highlight efficiency, ease of use, and convenience; become a trend of social communities and then encourage the online purchase.

Research methodology

The essential data were collected with the help of a questionnaire on a combination of judgmental and snowball sampling were used because of the list of the online shoppers was not available. The first set of respondents was selected on the basis of judgement. Subsequently additional units were obtained on the basis of information given by initial sample units and then further referrals were taken from those selected in the sample. The respondents for the study were the consumers of Haryana and the sample selected had at least one-time online shopping experience. The sample size of the present study is limited to 400 respondents only. The analysis of the data is done by using

descriptive as well as inferential statistics. The factor analysis was performed in SPSS to identify the factors that influence the online buying behaviour of customers.

Profile of sample

The sample was selected of them who are consumers. The sample size of the present study is limited to 400 respondents only. Most of the respondents belong to the age group of below 25, followed by 25-45, and 45-55 - Below. This shows that the Age group of below 25 is highly interested in the online shopping. From the total respondents, 43.30 % were males and 56.70 % were females. We can see that the number of females is more compared to the number of male respondents. This reveals the interests of the female respondents in online shopping. From the total respondents, 31.44 % were belong to the monthly income of 2 lakh to 3 lakh, followed by 1 lakh to 2 lakh (30.67 %) and 1 lakh (21.13%).

Table 1: Demographic profile of Respondents

Profile		Frequency	Percentage
Age	Below 25	160	41.24
	25-45	110	28.35
	45-55	70	18.04
	Above 55	38	09.79
Gender	Male	168	43.30
	Female	220	56.70
	Third Gender	00	00
Educational Qualifications	Final School	94	24.22
	Graduate	120	30.93
	Post Graduate	112	28.87
	Others	62	15.98
Occupation	Employee	138	35.57
	Businessman	124	31.96
	Professional	74	19.07
	Others	52	13.40
Annual Income	Below 100000	82	21.13
	100001 to 200000	119	30.67
	200001 to 300000	122	31.44
	Above 300000	65	16.76
Monthly Online Shopping (in rupees)	Below 5000	172	44.33
	5001 to 10000	158	40.72
	Above 10000	58	14.95
Experience towards Online Shopping	Below 2 years	102	26.29
	2 years to 5 years	153	39.43
	5 years to 10 years	78	20.10
	Above 10 years	55	14.18

Factors influencing online buying behaviour of consumers

The factor analysis was performed to identify the factors that influence the online buying behaviour of customers. Exploratory Factor Analysis (EFA) is a statistical method

used to uncover the underlying structure of a relatively large set of variables. EFA is a technique within factor analysis whose overarching goal is to identify the underlying relationships between measured variables (Thompson, 2007)^[17].

Table 2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.947
Bartlett's Test of Sphericity	Approx. Chi-Square	3998.795
	df	136
	Sig.	.000

KMO and Bartlett test of sphericity sign posted that the data was suitable for exploratory factor analysis (Zeynivandnezhad *et al.*, 2019)^[18]. As the KMO measures the sampling adequacy that should be greater than 0.7 and it was 0.947 indicating that the sample was adequate to

consider the data suitable for factor analysis. From the table 3, it can be observed that Bartlett's test of sphericity was 3998.795 significant at 0.000 level of significance. It indicates that the correlation matrix was not an identity matrix. The above facts show that the data collected on

different attributes of online shopping from respondents were suitable for factor analysis. Hence the null hypothesis is rejected and H₁ is accepted. Results from Table:3 shows

that all the variables have commonalities of more than 0.6. It represents that all variables are significantly loaded on the factor.

Table 3: Communalities

	Initial	Extraction
The information given about the products and services on the internet is sufficient.	1.000	.720
I am satisfied with the customer services provided by the online shopping	1.000	.728
I do not mind paying in advance for the products on the internet	1.000	.727
Online shopping Provides guarantee and warrantee	1.000	.763
I do not mind paying in advance for the products on the internet	1.000	.598
Large selection of products.	1.000	.658
I am satisfied with the product tracking process provided shopping.	1.000	.603
Online shopping provides special offers/discounts for purchase.	1.000	.645
Simplicity of purchase process	1.000	.619
Detailed description and information availability to every product	1.000	.622
Prefer online shopping if online prices are lower than actual price	1.000	.650
Easy refund and return policy	1.000	.682
Hidden charges causes confusion while purchasing product	1.000	.712
Online shopping is risky	1.000	.665
Hesitate to give my credit debit card number	1.000	.658
Online shopping is more expensive than sold in retail store.	1.000	.721
Online shopping provides variety of products for purchase.	1.000	.748

Extraction Method: Principal Component Analysis.

Table 4: 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	8.248	48.519	48.519	8.248	48.519	48.519	4.328	25.461	25.461
2	1.906	11.213	59.732	1.906	11.213	59.732	4.228	24.871	50.332
3	1.365	8.032	67.764	1.365	8.032	67.764	2.963	17.432	67.764
4	.667	3.926	71.690						
5	.487	2.863	74.553						
6	.472	2.777	77.330						
7	.457	2.687	80.017						
8	.432	2.539	82.556						
9	.403	2.372	84.928						
10	.381	2.241	87.168						
11	.375	2.206	89.374						
12	.364	2.141	91.516						
13	.328	1.927	93.443						
14	.315	1.852	95.295						
15	.282	1.662	96.957						
16	.259	1.523	98.481						
17	.258	1.519	100.00						

Extraction Method: Principal Component Analysis.

The total variance explained output is presented in Table 4. The total items were 17, which constitutes five components. There are three factors from the analysis explaining a total of 67.764 percent of the variation in the entire data set

which indicates well. The percentage of the variation is explained by the three factors 25.641, 50.331 and 67.764 percent respectively after varimax rotation is performed.

Table 5: Component Matrix

	Component		
	1	2	3
The information given about the products and services on the internet is sufficient.	.260	.256	.466
I am satisfied with the customer services provided by the online shopping	.272	.151	.494
I do not mind paying in advance for the products on the internet	.277	.273	.459
Online shopping Provides guarantee and warrantee	.221	.304	.489
I do not mind paying in advance for the products on the internet	.482	.238	.474
Large selection of products.	.783	.153	.148
I am satisfied with the product tracking process provided shopping.	.420	.220	.188
Online shopping provides special offers/discounts for purchase.	.739	.172	.264
Simplicity of purchase process	.414	.254	.213
Detailed description and information availability to every product	.346	.175	.185

Prefer online shopping if online prices are lower than actual price	.442	.275	.156
Easy refund and return policy	.246	.462	.202
Hidden charges causes confusion while purchasing product	.192	.800	.188
Online shopping is risky	.213	.457	.718
Hesitate to give my credit debit card number	.794	.471	.160
Online shopping is more expensive than sold in retail store.	.742	.479	.237
Online shopping provides variety of products for purchase.	.249	.406	.191

Extraction Method: Principal Component Analysis.

This table contains component loadings, which are the correlations between the variable and the component. Table 5 shows the loadings (extracted values of each item under 3 variables) of the 17 variables on the three factors extracted. The higher the absolute value of the loading, the more the factor contributes to the variable. The study has extracted three variables wherein the 17 items are divided into 3 variables according to the most important items which are similar responses in component 1 and simultaneously in components 2 and 3. The gap (empty spaces) on the table represents loadings that are less than 0.5, this makes reading the table easier. Study suppressed all loadings less than 0.5.

As the requirement of having precise computation of each factor component, Table 5 depicts that there is the presence of cross loading i.e. one factor measuring more than one component. As this cross-loading is very high in Table 5 i.e. Large selection of products, Online shopping is more expensive than sold in retail store, Online shopping provides special offers/discounts for purchase, Hesitate to give my credit debit card number, Hidden charges causes confusion while purchasing product, Online shopping is risky these cross-loadings are highly influential that affects the customers attitude in online shopping context and need to be eliminated.

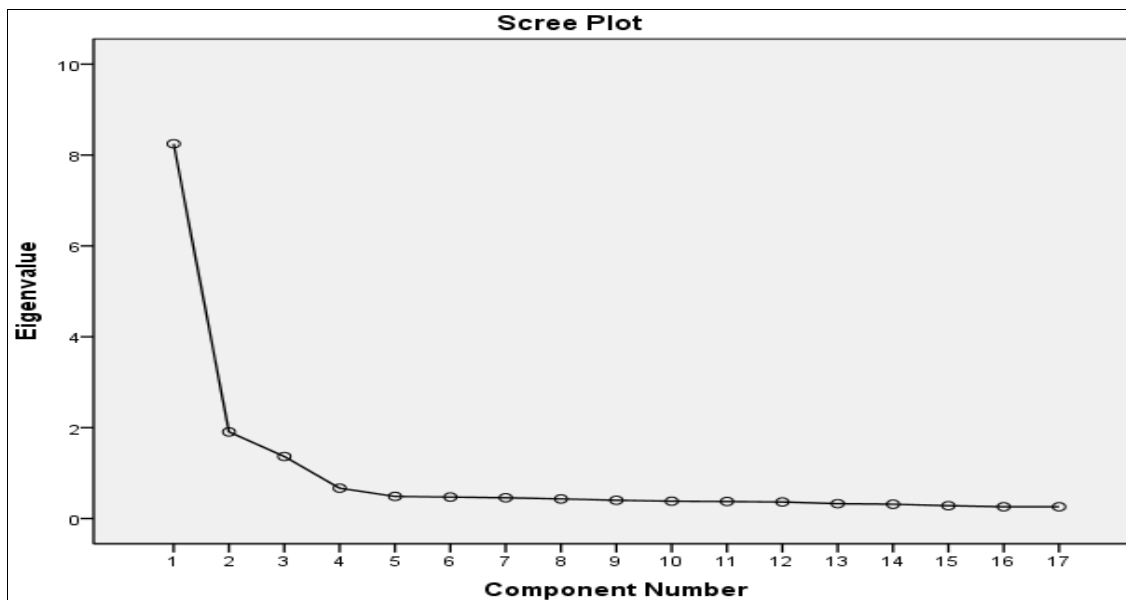


Fig 1: Scree Plot

A scree plot is a plot of eigen values against the number of factors in order of extraction. As shown in Fig. 1, it indicates that there are ten factors which have eigen values greater than one based on 17 variables.

Conclusion

The present research makes a significant contribution to the stream of research in the area of on-line shopping behavior. In particular, it empirically demonstrates that on-line shopping behavior in a developing country is influenced by online shoppers’ positive attitude, product risk, financial risk, perceived risk, and price. In this study, an attempt was made to explore the factors influencing the online buying behavior. The main influencing factors for online shopping were identified as Online shopping is more expensive than sold in retail store, Online shopping provides special offers/discounts for purchase, Hesitate to give my credit debit card number, Hidden charges causes confusion while purchasing product, Online shopping is risky these cross-loadings are highly influential that affects the customers attitude in online shopping context and need to be

eliminated. These findings are useful for online retailers, and traditional retailers, as many of them are initiating online retailing.

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