

Analyzing Deterrents to Online Retailing: A Study of Users and Non Users in India

Urvashi Tandon

Research Scholar, School of Behavioural Sciences and Business Studies
Thapar University, P.O.Box 32, Patiala, India

Ravi Kiran

Professor and Head, School of Behavioural Sciences and Business Studies
Thapar University, P.O.Box 32, Patiala, India
Corresponding Author's Email: rkiran@thapar.edu

A. N. Sah

Assistant Professor, School of Behavioural Sciences and Business Studies
Thapar University, P.O.Box 32, Patiala, India

Abstract

Purpose: The purpose of this paper is to empirically analyse the hindrances and inhibitions which restrain Indians to purchase online.

Design/Methodology/Approach: Data was collected from 385 users and 100 non users of online shopping from North Indian States of India. Random sampling method was used to collect the data. The information obtained was subjected to various statistical tools like ANOVA, Correlation, Factor analysis, and Chi-Square to analyze the data.

Findings: The results of the study highlight that there is a significant difference in the mean ratings of both the groups for most of the deterrents to online shopping.

Practical Implications: The study has practical implications for online retailers. This study will help online retailers in North India to recognize challenges for customer retention and satisfaction. Thus, it will help online retailers to focus in the right direction to eliminate threats and convert non shoppers to online shoppers.

Originality: This is one of the initial studies dealing with deterrents to online shopping from all perspectives. Contrary to the research in developed countries highlighting online shopping risk, fear of faulty products, poor logistics and delayed delivery as major deterrents, in this study slow internet speed and inapt query handling emerge as deterrents for users as well as non users. This study has also incorporated the perception of non users so that retailers can convert them into online shoppers.

Keywords: Internet retailing, Online shopping, Gender, Users, Non-Users, Deterrents, India

1 INTRODUCTION

The development of Internet as a new channel of marketing has evoked interest from practitioners and researchers all over the world. India as an emerging economy presents a prospective market for online retailing. Online retailing although started in India in 2000 with few sites like rediff.com, indiaplaza.com and bazee.com yet it gained impetus with the entry of flipcart.com in 2007 post which a large number of online retailers entered the e-space triggering a phenomenal increase in the number of online shoppers. Despite this, online retailing is still at its emerging stage (0.1 % of total retail) and is projected to grow at accelerated pace to reach

7-8% of total Indian retail market by 2020 (Singh *et al.* 2012). Online retailing market in India stood at the level of 0.21 Bn USD in 2007 is expected to be around 13.5 Bn USD in 2017. Modest estimates indicate that out of 19.6 million users who accessed internet for enquiring details related to a specific product or service, nearly 73 percent actually bought a product or service in the end (Varshney, Rashi 2013).

In India, the Internet has the potential to fundamentally revolutionize the way consumers shop and buy goods and services which is anticipated to grow and reach 800 million users by 2020 (Internet and Mobile Association of India, 2012). Growing aspirations, changing lifestyles, increase in purchasing power of people, awareness about global brands and fashion trends have driven people to shop online. Limited availability of brands in tier II and tier III Indian cities which are far away have driven even these consumers to go online and shop.

As the use of internet for sales and purchase of products continues to grow in India so does the appearance of bottlenecks and challenges in day to day operations. Although a number of researchers have adopted a usual approach to study factors influencing B2C customer satisfaction which highlight the significance of variables like perceived usefulness (Devraj *et al.* 2002; Ha and Stoel, 2008; Lin and Sun 2009; Liao and Shi, 2009; Wu, 2013), perceived ease of use (Devraj *et al.* 2002; Rose *et al.* 2007; Lin and Sun 2009; Liao and Shi, 2009), pleasure and playfulness (Prasad and Ansari, 2009; Khare and Rakesh, 2011), shared values (Mukherjee and Nath, 2007), self-efficacy (Hernandez *et al.* 2010), trust (Chen and Dubinsky, 2003; Dash, 2012; Nair, 2009; Ha and Stoel, 2008; Wang and Head, 2007; Mukherjee and Nath, 2007; Salo and Karjaluoto 2007; Wu, 2013). Research implies that customer satisfaction in online atmosphere is appreciably higher than in traditional channels because of the ease of use in acquiring information (Hernandez *et al.* 2010; Devraj *et al.* 2002). Although these studies have made significant contributions towards explaining customer satisfaction and what factors trigger online purchase but there is acute dearth of research aimed at understanding the challenges in online shopping.

Previous studies have also identified major barriers towards online shopping like risk, technology ignorance and touch and feel factor (Rajamma *et al.* 2009; Iyer and Eastman, 2006; Hansen and Jensen, 2009; Pradas *et al.* 2013; Lian and Yen 2013; Qureshi *et al.* 2014). Most of the academic research reported has been carried out in countries who had adopted online shopping prior than India. Therefore, the results of these studies may not be applicable to developing countries like India which differ in socio-cultural background as well as technology. The findings of developed countries need to be validated for diverse cultures across the developing countries also so that these may have a broad acceptance irrespective of culture. Therefore the study has been undertaken to identify barriers to online shopping.

The study has significant contributions for researchers and online retailers. For academicians, this study identifies barriers to online retailing in Indian context. The study this sets an outline for further research as it is one of the initial study in emerging economies. The study also includes new scale items like slow internet speed and inapt query handling which are the concerns exclusive to developing nations. The study has enhanced our knowledge about under researched area of barriers to online shopping. Online retailers can understand the reasons for which Indians restrain from shopping online. This will help online retailers to design strategies to rise above these barriers.

2 THEORETICAL BACKGROUND

Regardless of a remarkable and enthusiastic adaptation of Internet retailing in past few years, still a considerable number of people in India circumvent online shopping. Consumers may be contented with some facet of online shopping but are discontented with other facets. Therefore, an in-depth analysis of the challenges of online shopping is the need of the hour. Consequently, the purpose of this paper is to understand the hindrances and inhibitions which restrain people from making online purchases.

Based on earlier literature barriers to online retailing have been identified. Earlier researchers have highlighted many inherent structural and functional weaknesses of internet retailing such as problems related to faulty products and delivery (Teo, 2006; Forsythe and Shi, 2003; Batnagar *et al.* 2000; Tan 1999), unwillingness to reveal personal information over the web despite assurances given by online retailers (Ranganathan and Ganpathy, 2002), online shopping risk perceptions (Chen and Dubinsky, 2003; Nair, 2009;) poor logistics (Grewal *et al.* 2004), channel conflict (To and Ngai, 2008), problems related to payment system and language problems (Dawn and Kar, 2011). Trocchia and Janda (2000) considered that the principal obstacles which make older consumers more reluctant to shop online are lack of IT experience, resistance to change and their insistence on trying out the product before purchase. Selvidge *et al.* (2002) noticed that longer waiting time (delay) in opening of web pages lead to increase frustration which ultimately results in the participants failing to complete shopping tasks. Anckar (2003) identified barriers to e-commerce and grouped them into five (distribution efficiency, privacy, bargain hunting, shopping efficiency, information efficiency) and four (shopping limitation, cost, financial risks) factors and differentiated between Internet adopters and non adopters, as well as e-commerce adopters and non adopters. Garbarino and Strahilevitz (2004) in their research found that women have higher level of perceived risk than men. Forsythe and Shi (2003) highlighted product performance risk as a strongest deterrent to shop online. Gerrand *et al.* (2006) stipulated that online shoppers are unable to access the actual product and paying online perceived higher risk as compared to traditional brick and mortar stores. Iyer and Eastman (2006) confirmed that older users were uncomfortable and had less expertise in using computers, therefore were unable to do comparison shopping on internet. A study by Singh *et al.* (2005) predicted that websites that adapt Indian culture were shown to be perceived more favourably than others. However, a study by Dash and Saji (2008) conducted among Indian consumers confirmed that higher presence in social media leads to low perceived risk. Rajamma *et al.* (2009) from their research found that when consumer's expectation about risk (e.g security and privacy of the information asked) during checkout process are negatively disconfirmed, they may get demotivated from complete transaction thus leading to shopping cart abandonment. Hansen and Jensen (2009) studied shopping orientation and online clothing purchases across four different gender allied purchasing contexts and found that perceived difficulty in selecting items is an important barrier for women. Hernandez *et al.* (2010) analysed whether individuals' socioeconomic characteristics – age, gender and income – influence their online shopping behaviour and results of the study showed that socioeconomic variables moderate neither the influence of previous use of the internet nor the perceptions of e-commerce; in short, they do not condition the behaviour of the experienced e-shopper. Chattaraman *et al.* (2012) in his study on older customers identified six main barriers namely perceived risk barriers, trust barriers, social support barriers, familiarity barriers, experiential barriers and search barriers. Kachen *et al.* (2013) accentuated that online stores are perceived to have competitive disadvantages with respect to shipping and handling charges, exchange refund policy for returns, providing an interesting social and family experience, helpfulness of sales people, post purchase service, and uncertainty about getting the right item. Pradas *et al.* 2013 studied the behaviour of B2C non-shoppers and indicated that there exist four types of non B2C shoppers: skeptical/ distrustful non shoppers whose main concern is online safety and security, infrastructure-conditioned non shoppers who lack resources to engage in online shopping, product conditioned non shoppers who prefer to shop at traditional physical channels and others. Lian and Yen (2013) in their survey on comparison of younger and older consumers of Taiwan found major barriers as value, risk and tradition. Further, their research also indicated that rejecters have highest barriers followed by opponents and postponers.

Online shoppers expect fast and efficient processing of their online transactions (Srinivasan *et al.* 2002), however incomplete shopping procedures, long registration forms to be filled up, shipping and handling charges that are not revealed until late transaction, technical glitches

etc., are transaction related inconveniences which make transaction complex and cause dissatisfaction. These disadvantages are not entirely overcome by online stores. To overcome these disadvantages online retailers make use of privacy policies, consumer feedback, customer support but the fact remains that even after an online retailer succeeds in winning the trust of its customers by employing all trust winning strategies, a number of customers still leave without completely purchase of the products (Rajamma *et al.* 2009). While shopping physically, consumers can usually examine a product before purchasing and clarify doubts with sales person but in case of online shopping, they are usually unable to do so. Hence, consumers may need to spend more time and effort to find detailed information before buying them (Teo, 2006).

The literature reviewed is comprised of the empirical studies carried out by researchers of those countries who adopted online retailing earlier than India. Only few studies are available in India and these too are focussing on the factors that trigger online purchase and the question still remains unrequited “Why Indians hesitate to shop online”? Although online shopping is accompanied by good growth rate but still a number of people refuse online shopping. Moreover, the objective of above studies has mainly been to analyse the deterrents of online shopping at the beginning of the diffusion process, with limited coverage of bottlenecks in penetration of the technology for improvement in the process. Some of the studies have been carried out when the number of users was low or those users who had yet to familiarise fully with the on line purchase environment. Hence, an understanding of significant rejection issues of online shopping becomes imperative and it needs to be investigated further. Moreover, the diffusion of internet in developed countries and models prevalent there cannot be generalised for developing countries like India.

A lack of understanding regarding barriers in existing literature points to the need for the research. Due to scarcity of research with respect to India, an in-depth and a complete understanding of the barriers and problems becomes vital. Therefore, the objectives of the present study are:

- To examine the deterrents to online retailing on the basis of gender, age and education.
- To analyse the characteristics of users and non users of online retailing.
- To identify and analyse factors acting as impediments to online retailing.

The study has apparent benefits. Theoretically, the study highlights under researched area of barriers to online shopping and managerially, the study will help online retailers in North India to recognize challenges for customer retention and satisfaction. Thus, this study will help online retailers to focus on the right direction to eliminate threats and convert non shoppers to online shoppers. Further, steps to tackle these barriers have also been suggested.

3 RESEARCH METHODOLOGY

To achieve the above mentioned objectives of the study a self administered questionnaire was developed to collect data from users as well as non users of online shopping. The literature reviewed provided an initial source for the development of the key items of questionnaire. The questionnaire had twenty questions covering barriers to online shopping. The questionnaire was discussed with several academicians, management experts and scholars. This resulted in some minor amendments in the original wording and sequence of items. Final questionnaire had fifteen questions which were considered pertinent for both users and non users of online shopping. Population of this research consisted of North Indian internet savvy consumers who have adopted online shopping as well as those who have not adopted online shopping. In order to guarantee the representativeness of the sample, random sampling method was used and sample of users and non users of online shopping was drawn from all North Indian states. The places of access chosen were offices, shopping malls, colleges and supermarkets. The questionnaire was tested for its overall reliability and overall reliability score as depicted by

Cronbach's Alpha was 0.814. The survey was carried from March 2013 to January 2014. 2000 questionnaires were administered to youth including students, businessmen and service class people. A total of 465 questionnaires from users were obtained out of which 385 were retained for further analysis. Data was also collected from 100 non users of online shopping. Various statistical tools like descriptive Statistics, ANOVA, factor analysis, correlation and chi-square test were used to analyse the data.

4 RESULTS AND ANALYSIS

4.1 DEMOGRAPHIC PROFILE OF RESPONDENTS

Table 1 shows the basic characteristics of the consumers surveyed. Out of the total 385 users of online shopping, 54.08 percent were males and 45.2 percent were females. This is consistent with Teo (2006) who explained that males are more likely to be interested in online shopping than females. Among the respondents, 65.2 percent were between 18-30 years of age followed by 23.4 percent in middle age group of 31-45 years of age and remaining 11.4 percent were above 45 years of age. There is a need to encourage those above 45 years old to use the Internet for online shopping. Education profile of respondents shows 49.9 percent were postgraduates followed by 26.2 percent as undergraduates and remaining 23.9 as graduates. The nature of the consumer showed 40.8 percent were students, 47.5 percent were in service and remaining 11.7 percent were self-employed. Majority of the respondents (44.4 percent) were having annual income 3.5-6 Lakh followed by 42.6 percent having income less than 3.5 Lakh and remaining 12 percent having income above 6 Lakh. A sizeable number of respondents 36.6 percent spend 7-16 hours on internet in a week followed by 34.3 percent spending more than 16 hours on internet which shows that majority of respondents are internet savvy. A substantial number of respondents (46.8 percent) indicated that they have been shopping online from 1-3 years followed by 39.0 percent who had been shopping from internet since 1 year. Majority of respondents (41.6 percent) had purchased 2-5 products from internet followed by 38.9 percent who had purchased more than five products from internet in last year. From above analysis it appears that a considerable number of respondents were well educated i.e., postgraduates and graduates, of young age and enjoying average income. The findings are consistent with Swinyard and Smith (2003); Burroughs and Sabherwal (2002) and Teo, (2006) who found that adopters of the Internet tend to be highly educated, have computer literacy and spend more time on internet.

4.2 GENDER-WISE ANALYSIS ON IMPEDIMENTS TO ONLINE RETAILING

Overall results as depicted in table II indicate "Inability to try products before purchase" had the highest average score 4.147 from males and 4.396 from females and is the strongest inhibitor of online shopping. This was followed by "Inability to touch products" having mean score of 4.142 by males and 4.0 by females. This is in consensus with prior studies like Gerrand et al. 2006; Park et al. (2008) and Hansen and Jensen (2009). Next in the rating are "Fear of faulty products", "Inapt query handling" and "Not assured of size of the products." This supports the findings of Kachen et al. (2013), Lian and Yen (2013) which highlight risk of faulty products as main deterrent to online shopping.

4.3 AGE WISE ANALYSIS OF BARRIERS TO ONLINE RETAILING

From age wise analysis as summarised in Table-III it can be inferred that "Inability to touch products" and "Inability to try products before purchase" have been rated high by all age groups as well. Thus there is need to focus on these barriers. For middle age group i.e., 31-45 years old consumers consider "Posting their personal details online" is a strong inhibitor of online shopping with mean score of 4.022. Age group above 45 have given high rating to "Inapt query handling" followed by "Fear of faulty products." This implies that people above the age of 45 exhibit less willingness to shop online due to distrust about products available on internet and

process of online purchase due to non familiarity of the medium (Trocchia and Janda, 2000). The results are consistent with the findings of Batnagar *et al.* 2000; Tan 1999 who considered product risk among older users as a major deterrent of online shopping.

4.4 EDUCATION QUALIFICATION AND BARRIERS TO ONLINE SHOPPING INSERT TABLE IV ABOUT HERE

From the results it was concluded that “inability to try product before purchase” was the main inhibitor of online shopping. Next to follow were inability to touch products, fear of faulty products, inapt query handling and not assured of size of the product.

4.5 RELATIONSHIP BETWEEN BARRIERS TO ONLINE RETAILING

In order to find out the relationships between variables, Pearson’s correlation coefficients were calculated. Correlations of 1.00 on the diagonal indicate that every variable is “Perfectly and Positively” correlated within itself. A positive and significant correlation also exists between most of fifteen variables (Table V) for example, Inability to touch products showed unique correlation with inability to try products. Similarly, not assured about size of product is also highly correlated with lack of confidence in online retailing. Slow internet speed showed similar pattern of relationship with tiresome browsing through internet, lack of confidence in online shopping, difficulty in placing orders online and inapt query handling. Time consuming to make changes to orders placed online is negatively but significantly associated with slow internet speed. This implies that all the variables are well defined. After getting high correlation values factor analysis was performed on users and non users to categorize barriers.

4.6 FACTOR ANALYSIS OF BARRIERS TO ONLINE RETAILING

After identifying behavioural relationships with reference to gender, age and education qualification, and getting correlation matrix factor analysis was performed and it helped to classify barriers into four factors:

- Query handling and return procedures
- Perceived Risk
- Technology ignorance factor
- Ignorance of consumer

These four factors explained 54.718 percent of variance. Query handling and return procedures emerged as important factor accounting for 14.918 percent of variation. Many online retailers donot inform about consumer’s rights regarding return procedures, the right of withdrawal, after sales service and legal warranty on a durable product. Hence, difficulty in exchange of faulty products with loading of .725 and inapt query handling with loading of .714 emerged as strongest deterrents to online buying.

Perceived risk emerged as second important factor accounting for 14.500 percent of total variance. Inability to try products before purchase (.825) and inability to touch products (.785) had higher loadings than fear of faulty products (.673) and not assured of size of product (.524). Fear of using debit card/ credit card comparatively had less loading (.491) but was included due to its importance in understanding barriers. This agrees with the results of studies like Garbarino and Strahilevitz 2004; Gerrand *et al.* 2006; Park *et al.* 2008; Hansen and Jensen, 2009; Chattaraman *et al.* 2012; Lian and Yen , 2013 who stated that risk negatively influences online purchase among shoppers.

The third factor technology ignorance factor explained 14.226 percent of variation. In this sub-factor of confidence in internet retailing (.762) loaded heavily as compared to difficulty in placing orders online and slow internet speed. These findings support by Iyer and Eastman, 2006; Salo and Karjaluoto 2007; Gupta *et al.* 2009; Chattaraman *et al.* 2012; Lian and Yen,

2013 who found that older users are uncomfortable with online shopping because of low confidence in internet and non-familiarity of internet practices.

Ignorance of consumer has been recognised as fourth important factor explaining 11.074 percent of variation. Major features of this factor include posting personal details online inhibit online shopping (.781) and inability to bargain (.773).

The solution's KMO measure of sampling adequacy was 0.744 above the highest standard. The value of Bartlett's test of sphericity is 1292.116 (df: 105) and is significant at less than .01 percent, indicating that assumption of multivariate normality was met.

After performing factor analysis users and non users on the basis of barriers were also divided into sub-groups: 'Sceptical' who are doubtful about query handling and return procedures; 'Risk perceivers' whose main concern is faulty products, inability to touch and feel products, 'Technology ignorant' who are not well versed with the procedures of online shopping and 'Conformist' who are disinterested in sharing their details online and look for more bargains from traditional stores. To understand the relation of degree of each barrier and intention among respondents, mean and standard deviation were calculated. From the results it can be inferred that females are more sceptical, perceive more risk, technology ignorant and more conformist than males. Respondents of age group 18-30, with income less than 3.5 Lakh were found more sceptical than others. Likewise, people above age group 45, postgraduates and with income group less than 3.5 Lakh avoid online shopping due to perceived risk. Technology ignorant and conformist group comprised of people with age group 31-45 and income more than 6 Lakh.

4.7 ANALYSIS OF VARIANCE (ANOVA) BETWEEN USERS AND NON USERS OF INTERNET SHOPPING

After analysing the descriptive statistics and factor analysis, an effort was made to conduct ANOVA analysis for the users and non users. The data for inhibitors was also collected from 100 non users to realise whether there was a significant difference in the mean ratings of both the groups. The results are shown through table VIII.

ANOVA results for users and non users highlight that there is a significant difference in the mean ratings of both the groups as results are significant for most of the inhibitors. ANOVA results are not significant for Inability to touch products, Inability to try products, Fear of faulty products, Posting my personal details online inhibit shopping, Tiresome browsing through internet and difficulty in placing orders online. Fear of debit card/ credit card had less item loading but was found significant in ANOVA analysis showing its significance in the study.

Further, Chi-square test was performed to find association between users and non users of online shopping. The Chi-square test revealed the significant association between users and non users of online shopping with respect to Fear of faulty products (Pearson value 21.263), Not assured of size of product (Pearson value 14.470), Inability to bargain (Pearson value 14.328), Lack of confidence in online retailing (Pearson Value 35.792), Large variety of products available online confuse me (Pearson value 24.552) and Time consuming to make changes to orders placed online (Pearson value 20.021) at 99% level. This leads us to conclude that users and non users consider these variables as deterrents to online shopping. On the other hand, Posting personal details online (Pearson value 9.903), Slow internet speed (Pearson value 9.231) and difficulty in exchange were found significant at 95 percent confidence level. Variables like Inability to touch products, Inability to try products, Tiresome browsing through internet, Difficulty in placing orders online, Fear of debit/credit card and Inapt query handling were found insignificant indicating there is no significant relationship between users and non users with respect to these variables.

Overall results of mean scores of users and non users signify that "Inability to try products before purchase" had highest mean followed by "Inability to touch products". Both users and non users considered "Inapt query handling" and "Fear of faulty products" as important hindrance factors for online shopping. This highlights that consumers are apprehensive of

defective products being handed over to them. Thus, it can be tackled by transparency in dealings of online retailers and detailed policies of return, security and privacy need to be displayed on websites.

DISCUSSION AND CONCLUSION

The results of the study present interesting insights on the users and non users of online shopping. It also throws light on the factors inhibiting online shopping. The study empirically identified fifteen variables as deterrents to online shopping through a self-structured questionnaire. The barriers basket in the study essentially includes physical touch and try, fear of faulty products and exchange difficulty besides inability to bargain, lack of confidence and posting of details about credit/debit cards and other internet use problems and perceptions. Compared with the results of the developed countries, this study the two deterrents which are rated high are “Slow internet speed” and “Inapt query handling” which are still a major concern in developing countries like India. This highlights that the models of developed countries cannot be implemented as such for the developing countries.

The foremost objective of the study has been to identify deterrents to online retailing on the basis of gender, age and education. The results of the study reveal that Internet users in India are predominantly young, post graduate, and are adaptable to new technology. It is surprising that gender-wise analysis, age-wise analysis and analysis on the basis of education qualification identified Inability to try products before purchase and Inability to touch products as strongest inhibitors of online shopping. But, there is limited availability of users above the age of 45. There is a need to persuade those above 45 years old to adopt internet shopping. Older adults may face problems related to use of internet for shopping also but this segment symbolizes a profitable market. Since adults above the age of 45 have good leisure time and high disposable income and once this segment performs one or more online purchase, their mind-set towards online shopping may transform. Providing social support to people above 45 will help them to assuage their perceived risks and augment their trust for online shopping. The results are consistent with the findings of Trocchia and Janda, 2000; Batnagar *et al.* 2000; Tan 1999. There is some variation in other results but these two factors are considered as strongest deterrents to online shopping. Women considered Inability to bargain also among the top five barriers. By nature Indians love to bargain and the tendency is more among Indian women. This supports earlier study by Anckar 2003 who also identified bargain hunting as a barrier to online shopping.

The next objective of the study was to analyse the differences in the impediments to online retailing on the basis of users and non users. Again, Inability to try products before purchase and Inability to touch products emerged as vital deterrents for both users and non users of online shopping. Online retailing entitles a transformation in consumer's current shopping practices and they need some time to adjust to this buying behaviour. Online retailers need to understand this adaptation on Indian consumers so that non users can be converted into users. Inapt query handling and fear of faulty products have also emerged as critical restraints by both users and non users of online shopping. Online retailers need to be little more considerate towards customers' needs. Competent sales support staff must handle queries of consumers swiftly which will add trustworthiness to online businesses. Online retailers need to display clear privacy policy, payment terms, guarantee, product return policy procedures and statements about product quality. Online chat forums need to be included in the website so that any issue regarding purchase of product can be resolved promptly without any delay. In addition online retailers can instil confidence providing help to first time user of online shopping e.g. “First time user of Online Shopping? Click here”, making new users recognizable with procedure of online shopping. Online chat with the first time user may also help in reducing the fear of faulty products. These chat rooms, FAQs, and other events will improve

customers' needs for social interaction, and may inculcate confidence in new users to use online shopping frequently.

Factor analysis analysed the factors acting as impediments to online shopping. The factors identified through this study are: i) Query handling and return procedures ii) Perceived risk iii) Technology ignorance factor iv) Ignorance of consumer. Query handling and return procedures, and Perceived risk explained 29.418 percent of variation. These results have been corroborated by studies of Chen and Dubinsky 2003; Garbarino and Strahilevitz 2004; Gerrand *et al.* 2006; Nair 2009; Rajamma *et al.* 2009; Lian and Yen 2013; Chattaraman *et al.* 2012 as they focussed on online shopping risk perceptions. Inability to touch products and inability to try products before purchase loaded heavily followed by difficulty in exchange of faulty products and inapt query handling. Salo and Karjaluo (2007) also highlight lack of ability to touch, smell or see the goods as vital barriers to online shopping. This may be handled by providing accurate dimensions, measurement and size guides etc. especially for apparels.

Technology ignorance factor and ignorance of consumers explained 25.300 percent of variation. Lack of confidence in online shopping, difficulty in placing orders online and slow internet speed loaded highly which shows that unlike developed countries slow speed of internet and ease of online shopping still acted as a major deterrent in this factor. These findings support earlier researches by Hernandez *et al.* 2010; Iyer and Eastman 2006; Chattaraman *et al.* 2012; Lian and Yen 2013 who found that lack of experience in internet impedes online shopping. Moreover, internet users in India need simplified online shopping procedures. At present uncomplicated shopping cart versions and simple check out procedures are compulsory for inexperienced shoppers. In addition, online shoppers need to be more transparent regarding the policy of replacements and good query handling software is the need of the hour. A right focus on these issues will help e-tailers to improve their performance.

Hence it becomes imperative for online retailers to provide consumers with quality products, excellent service and useful information based on communication technology to encourage repetitive purchases. One such challenge tackled admirably by online retailers in India is "Cash-on-Delivery" mode of payment as a safe and reliable way to pay for purchases. Cash – on delivery mode of payment has helped to alleviate the fear of using debit card/ credit card. In Indian society, people tend to be motivated from discussion with their friends, co-workers, relatives and technically proficient classmates. Therefore, social influence may generate wide consumer base. Adding social networking features enhance the credibility by providing online customers alternative trustful source of information rendered by social networks (Lee and Kozer 2012). Online retailers may provide incentive to these opinion leaders who would encourage online consumers to use online shopping.

In summary, findings from this study could help to understand the behaviour of users and non users of online shopping and hence implement strategies to overcome these barriers. Comprehending perception of users and non users is significant in understanding consumer behaviour which will infuse confidence among consumers about online shopping. These findings will help online retailers to improve negative shopping experiences, improve post purchase satisfaction and eventually increase customers of online shopping.

LIMITATIONS

The present study also has few limitations. An important limitation of the study is that this study was conducted for respondents of North India. Although to remove this constraint an effort was made to compare results with studies conducted in South and West as well. However, the results cannot be generalised for the whole country as exposure of online retailing varies in different parts of the country. Secondly, the limited availability of respondents above the age of 45 was a factor that affected scope of the research and the type of analysis done.

Since online retailing is a multifaceted process as compared to brick and mortar store and future studies should look to more related factors to form a comprehensive picture of impediments to

online retailing. Further researchers can compare websites of online retailers with respect to specific convenience, risk, waiting time and examine their effect on online purchases.

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Table I: Frequency Distribution for Users

Demographic Characteristics	N=385	Response	Valid percentage
Gender			
Male		211	54.08
Female		174	44.94
Age			
18-30		251	65.2
31-45		90	23.4
Above 45		44	11.4
Education Qualification			
Undergraduate		101	26.2
Graduate		92	23.4
Post graduate		192	49.9
Nature of consumer			
Student		157	40.8
Self-employed		45	11.7
Service		192	49.9
Annual income			
Less than 3.5 lakhs		164	42.6
3.5-6 lakhs		171	44.4
More than 6 lakhs		50	13.0
Number of hours spent on internet in a week			
Less than 7 hours		112	29.1
8-16 hours		141	36.6
More than 16 hours		132	34.3
Number of years of online shopping			
Less than 1 year		150	39.0
1-3 years		180	46.8
More than 3 years		54	14.2
Number of products purchased online in a month			
Less than 2		75	19.5
2-5		160	41.6
More than 5		150	38.9

Table II: Gender-wise Analysis of Barriers to Online Retailing

Barriers to Online Retailing	Gender					
	Male		Female		Total	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Inability to touch products	4.14	1.03	4.00	0.91	4.07	.98
Inability to try products before purchase.	4.14	1.02	4.39	1.05	4.27	1.09
Fear of faulty products	3.77	1.17	3.94	1.01	3.85	1.10
Not assured about the size of the product.	3.64	1.13	3.84	1.06	3.73	1.10

Posting my personal details online inhibits online shopping.	3.39	1.29	3.68	1.21	3.52	1.26
Inability to bargain	3.57	1.30	3.77	1.24	3.66	1.28
Slow internet speed	3.36	1.38	3.65	1.21	3.49	1.31
Tiresome browsing through internet	3.17	1.23	3.51	1.26	3.32	1.25
Lack of confidence in online retailing.	3.02	1.23	2.91	1.29	2.97	1.26
Difficulty in placing orders online	2.92	1.35	2.84	1.16	2.88	1.26
Fear of using debit card/credit card	3.49	1.34	3.31	1.28	3.41	1.31
Large variety of products available online confuse me.	3.18	1.24	3.18	1.09	3.18	1.18
Difficulty in exchange of faulty products.	3.63	1.07	3.70	1.01	3.66	1.04
Time consuming to make changes to orders placed online.	3.62	0.95	3.84	1.01	3.73	0.98
Inapt query handling	3.71	0.93	3.94	0.98	3.82	0.96

Table III: Age-wise Analysis of Barriers to Online Retailing

Barriers to Online Retailing	18-30 years		31-45 Years		Above 45 Years		Total	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Inability to touch products	4.09	1.03	4.05	0.87	4.04	0.93	4.07	0.98
Inability to try products before purchase.	4.40	1.09	4.12	0.93	3.84	1.16	4.27	1.09
Fear of faulty products	3.80	1.05	4.01	1.09	3.79	1.35	3.05	1.10
Not assured about the size of the product.	3.68	1.12	3.90	1.09	3.65	1.03	3.73	1.10
Posting my personal details online inhibits online shopping.	3.35	1.25	4.02	1.14	3.47	1.33	3.52	1.26
Inability to bargain	3.63	1.32	3.85	1.17	3.45	1.26	3.66	1.28
Slow internet speed	3.45	1.29	3.62	1.34	3.43	1.40	3.49	1.31
Tiresome browsing through internet	3.28	1.24	3.42	1.34	3.38	1.20	3.32	1.25
Lack of confidence in online retailing.	2.94	1.23	3.03	1.41	3.04	1.07	2.97	1.26
Difficulty in placing orders online	2.89	1.30	2.86	1.22	2.88	1.16	2.88	1.26
Fear of using debit card/credit card	3.35	1.32	3.61	1.32	3.31	1.21	3.41	1.31
Large variety of products available online confuse me.	3.16	1.20	3.27	1.14	3.18	1.12	3.18	1.18
Difficulty in exchange of faulty products.	3.70	1.06	3.80	0.97	3.15	0.96	3.66	1.04
Time consuming to make changes to orders placed online.	3.78	0.99	3.70	0.99	3.43	0.89	3.72	0.98
Inapt query handling	3.91	0.91	3.68	1.06	3.52	0.91	3.81	0.96

Table IV: Education Qualification and Barriers to online retailing

Barriers to Online Retailing	Undergraduate		Graduate		Post Graduate		Total	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Inability to touch products	3.83	1.15	4.06	1.00	4.21	0.85	4.07	0.98
Inability to try products before purchase.	4.01	1.10	4.13	1.08	4.47	1.10	4.27	1.09
Fear of faulty products	3.88	1.05	3.67	1.11	3.92	1.12	3.85	1.10
Not assured about size of the product	3.80	1.02	3.47	1.28	3.82	1.03	3.73	1.10
Posting my personal details online inhibits online shopping.	3.33	1.24	3.53	1.28	3.64	1.26	3.52	1.26
Inability to bargain	3.79	1.25	3.53	1.21	3.66	1.32	3.66	1.28
Slow internet speed	3.56	1.29	3.46	1.32	3.46	1.32	3.49	1.31
Tiresome browsing through internet	3.51	1.22	3.13	1.30	3.32	1.24	3.32	1.25
Lack of confidence in online retailing.	3.14	1.23	2.86	1.21	2.93	1.29	2.97	1.26
Difficulty in placing orders online	2.98	1.33	2.72	1.15	2.91	1.27	2.88	1.26
Fear of using debit card/credit card	3.40	1.28	3.78	1.10	3.23	1.38	3.41	1.31
Large variety of products available online confuse me.	2.82	1.21	3.65	0.98	3.16	1.18	3.18	1.18
Difficulty in exchange of faulty products.	3.57	1.15	3.76	0.91	3.66	1.04	3.66	1.04
Time consuming to make changes to orders placed online.	3.85	0.96	3.79	0.88	3.61	1.04	3.72	0.98
Inapt query handling	3.95	0.87	3.88	0.89	3.72	1.02	3.81	0.96

Table V: Correlation Matrix

Barriers to Online retailing N=484		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Pearson Correlation	1	.537**	.329**	.272**	.061	.127**	.028	.073	.222**	.115*	.109*	.121**	.169**	.032	.132**
	Sig.(2 tailed)		.000	.000	.000	.179	.005	.539	.107	.000	.011	.016	.007	.000	.485	.004
2	Pearson Correlation	.537**	1	.453**	.265**	.145**	.160**	.048	.112*	.161**	.109*	.061	.066	.104*	.014	.089
	Sig.(2 tailed)	.000		.000	.000	.001	.000	.290	.014	.000	.016	.183	.149	.023	.765	.049
3	Pearson Correlation	.329**	.453**	1	.427**	.251**	.226**	.107*	.301**	.266**	.209**	.173**	.054	.103	.032	.070
	Sig.(2 tailed)	.000	.000		.000	.000	.000	.019	.000	.000	.000	.000	.237	.023	.489	.123
4	Pearson Correlation	.272**	.265**	.427**	1	.194**	.356**	.074	.209**	.303**	.295**	.063	.070	.170**	.006	.009
	Sig.(2 tailed)	.000	.000	.000		.000	.000	.105	.000	.000	.000	.165	.122	.000	.888	.848
5	Pearson Correlation	.061	.145**	.251**	.194**	1	.427**	.130**	.278**	.107*	.250**	.155**	-.005	.018	.125**	.041
	Sig.(2 tailed)	.179	.001	.000	.000		.0000	.000	.000	.019	.000	.000	.907	.686	.006	.363
6	Pearson Correlation	.127**	.160**	.226**	.350**	.422**	1	.195**	.306**	.161**	.196**	.096*	.025	.019	.145**	-.029
	Sig.(2 tailed)	.005	.000	.000	.000	.000		.000	.000	.000	.000	.035	.589	.685	.001	.524
7	Pearson Correlation	.028	.048	.107*	.074	.130**	.195**	1	.335**	.285**	.156**	.001	-.012	-.060	.171**	-.017
	Sig.(2 tailed)	.539	.290	.019	.105	.004	.000		.000	.000	.000	.974	.790	.188	.000	.703
8	Pearson Correlation	.073	.112*	.301**	.209**	.278**	.306**	.335**	1	.384**	.349**	.159**	.155**	.139**	.095*	.186**
	Sig.(2 tailed)	.107	.014	.000	.000	.000	.000	.000		.000	.000	.000	.001	.002	.036	.000
9	Pearson Correlation	.222**	.161**	.266**	.383**	.107*	.161**	.285**	.384**	1	.490**	.203**	.156**	.090*	-.031	.109*
	Sig.(2 tailed)	.000	.000	.000	.000	.019	.000	.000	.000		.000	.000	.000	.018	.492	.017
10	Pearson Correlation	.115*	.109*	.209**	.295**	.250**	.196**	.156**	.349**	.490**	1	.198**	.297**	.096*	.113*	.064
	Sig.(2 tailed)	.011	.016	.000	.000	.000	.000	.000	.000	.000		.000	.000	.034	.013	.161
11	Pearson Correlation	.109*	.061	.173**	.063	.155**	.096*	.001	.159**	.203**	.198**	1	.252**	.313**	.167**	.173**
	Sig.(2 tailed)	.016	.183	.000	.165	.000	.035	.974	.000	.000	.000		.000	.000	.000	.000
12	Pearson Correlation	.121**	.066	.054	.070	-.005	.025	-.012	.155**	.156**	.277**	.252**	1	.301**	.225**	.244**
	Sig.(2 tailed)	.007	.149	.237	.122	.907	.589	.790	.000	.000	.000	.000		.000	.000	.000
13	Pearson Correlation	.169**	.104*	.103	.170	.018	.019	-.060	.139**	.090*	.096*	.313**	.301**	1	.317**	.441**
	Sig.(2 tailed)	.000	.023	.023	.000	.685	.685	.188	.000	.048	.034	.000	.000		.000	.000
14	Pearson Correlation	.032	.014	-.032	.006	.125**	.145**	-.171**	.095*	-.031	.113	.167**	.225**	.317**	1	.404**
	Sig.(2 tailed)	.485	.765	.489	.888	.000	.000	.001	.036	.492	.013	.000	.000	.000		.000
15	Pearson Correlation	.132**	.089*	.070	.009	.041	.029	.017	.186**	.109*	.064	.173**	.244**	.441**	.404**	1
	Sig.(2 tailed)	.004	.049	.123	.848	.363	.524	.703	.000	.017	.161	.000	.000	.000	.000	

** Correlation is significant at the 0.01 level (2-tailed) *Correlation is significant at the 0.05 level (2- tailed)

1-Inability to touch products 2-Inability to try products 3-Fear of faulty products 4-Not assured of size of the product 5-Posting personal details online inhibits online shopping 6- Inability to bargain 7-Slow internet speed 8- Tiresome browsing through internet 9-Lack of confidence 10-Difficulty in placing orders online 11-Fear of debit card/credit card 12-Large variety of products available confuse me 13-Difficulty in exchange of faulty products 14-Time consuming to make changes to orders placed online 15- Inapt query handling

Table VI: Factor Analysis of Barriers to Online Retailing

Barriers to online retailing	<i>Query handling and return procedures</i>	<i>Perceived risk</i>	<i>Technology Ignorance factor</i>	<i>Ignorance of consumer</i>
i. Difficulty in exchange of faulty products	.725			
ii. Inapt query handling	.714			
iii. Time consuming to make changes to orders placed online	.672			
iv. Large variety of products available online confuses me	.592			
Eigen value	2.238			
% of Variation	14.918			
i. Inability to try products before purchase.		.825		
ii. Inability to touch products		.785		
iii. Fear of faulty products		.673		
iv. Not assured of size of product		.524		
v. Fear of using debit card/credit card.		.491		
Eigen value		2.175		
% of Variation		14.500		
i. Lack of confidence in online retailing			.762	
ii. Difficulty in placing orders online			.668	
iii. Slow internet speed			.614	
iv. Tiresome browsing through internet			.611	
Eigen value			2.175	

% of Variation	14.226	
i. Posting my personal details online inhibits online shopping		.781
ii. Inability to bargain		.773
Eigen value		1.661
% of Variation		11.074
Cumulative Variation		54.718

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	0.722
Approx. Chi-Square	1580.138
df	105
Bartlett's Test of Sphericity	Sig. 0.000

Table VII: ANOVA results of users and non users

ANOVA						
Barriers to Online Retailing		Sum of Squares	df	Mean Square	F	Sig.
Inability to touch products	Between Groups	.412	1	.412	.435	.510
	Within Groups	458.412	483	.949		
	Total	458.825	484			
Inability to try products before purchase	Between Groups	.838	1	.838	.142	.706
	Within Groups	2844.474	483	5.889		
	Total	2845.311	484			
Fear of faulty products	Between Groups	3.351	1	3.351	2.903	.089
	Within Groups	557.495	483	1.154		
	Total	560.845	484			
Not assured about size of product	Between Groups	10.579	1	10.579	8.031	.005**
	Within Groups	636.287	483	1.317		
	Total	646.866	484			
Posting my personal details online inhibits online shopping	Between Groups	5.070	1	5.070	3.368	.067
	Within Groups	727.124	483	1.505		
	Total	732.194	484			
Inability to bargain	Between Groups	16.617	1	16.617	9.740	.002**
	Within Groups	824.034	483	1.706		
	Total	840.652	484			
Slow internet speed	Between Groups	7.457	1	7.457	4.276	.039**
	Within Groups	842.234	483	1.744		
	Total	849.691	484			
	Between Groups	.260	1	.260	.166	.684

Tiresome browsing through internet	Within Groups Total	756.474 756.734	483 484	1.566		
Lack of confidence in online retailing	Between Groups Within Groups Total	6.375 818.030 824.404	1 483 484	6.375 1.694	3.764	.050*
Difficulty in placing orders online	Between Groups Within Groups Total	5.715 787.757 793.472	1 483 484	5.715 1.631	3.504	.062
Fear of using debit card/credit card	Between Groups Within Groups Total	11.890 795.335 807.225	1 483 484	11.890 1.647	7.220	.007**
Large variety of products available online confuses me	Between Groups Within Groups Total	10.266 737.268 747.534	1 483 484	10.266 1.526	6.725	.010**
Difficulty in exchange of faulty products	Between Groups Within Groups Total	4.767 493.967 498.734	1 483 484	4.767 1.023	4.662	.031**
Time consuming to make changes to orders placed online	Between Groups Within Groups Total	9.840 504.572 514.412	1 483 484	9.840 1.045	9.419	.002**
Inapt query handling	Between Groups Within Groups Total	3.502 443.479 446.981	1 481 482	3.502 .922	3.798	.050*

Table VIII: Chi- Square test of users and non users of Online Retailing

Barriers	Users					Non-Users					Pearson value	df	Sig.
	1	2	3	4	5	1	2	3	4	5			
Inability to touch products	12 2.5%	19 3.9%	44 9.1%	162 33.5%	148 30.6%	2 .4%	2 .4%	18 3.7%	35 7.2%	42 8.7%	5.866	4	.209
Inability to try products	11 2.3%	18 3.7%	45 9.3%	140 28.9%	171 35.3%	2 .4%	4 .8%	12 2.5%	39 8.1%	42 8.7%	.554	4	.968
Fear of faulty products	14 2.9%	33 6.8%	83 17.1%	120 24.8%	135 27.9%	3 .6%	6 1.2%	2 .4%	52 10.7%	32 34.5%	21.263	4	.000**
Not assured of size	15 3.1%	45 9.3%	75 15.5%	142 81.6%	108 22.3%	13 2.7%	11 2.3%	23 4.8%	32 6.6%	21 4.1%	14.470	4	.006**
Posting personal details online	41 8.5%	39 8.1%	80 16.5%	126 26%	99 78.6%	2 .4%	13 2.7%	16 3.3%	41 8.5%	27 21.4%	9.903	4	.042*
Inability to bargain	38 7.9%	35 7.2%	69 14.3%	118 24.4%	125 25.8%	20 4.1%	10 2.15	16 3.3%	36 7.4%	17 3.5%	14.328	4	.006**
Slow internet speed	45 9.3%	43 8.9%	81 16.7%	109 22.5%	107 22.1%	9 1.9%	10 2.1%	15 3.1%	22 4.5%	43 8.9%	9.231	4	.050*
Tiresome browsing through internet	42 8.7%	58 12%	95 19.6%	112 23.1%	78 16.1%	11 2.3%	14 2.9%	29 6.0%	28 5.8%	17 3.5%	1.104	4	.894
Lack of confidence	58 12%	88 18.2%	92 19.0%	99 9.9%	48 9.9%	23 4.8%	8 1.7%	6 1.2%	45 31.3%	17 3.5%	35.792	4	.000**
Difficulty in placing orders online	70 14.5%	86 17.8%	82 16.9%	111 22.9%	36 7.4%	27 5.6%	23 4.8%	19 3.9%	22 4.5%	8 1.7	4.834	4	.305
Fear of debit/credit card	51 10.5%	42 8.7%	80 16.5%	121 25.0%	91 18.8%	6 1.2%	7 1.4%	20 4.1%	34 7.0%	32 6.6%	7.159	4	.128
Large variety of products confuse me	40 8.3%	64 13.2%	118 24.4%	109 22.5%	54 11.2%	24 5.0%	24 5.0%	12 2.5%	24 5.0%	15 3.1%	24.552	4	.000**

Difficulty in exchange	8 1.7%	53 11.0%	89 18.4%	145 30%	90 18.6%	1 .2%	7 1.4%	15 3.1%	53 11.0%	23 4.8%	10.507	4	.033*
Time consuming to change orders	7 1.4%	44 9.1%	82 16.9%	168 34.7%	84 17.4%	10 2.1%	12 2.5%	20 4.1%	46 9.5%	11 2.3%	20.021	4	.000**
Inapt query handling	2 .4%	39 8.1%	88 18.2%	152 31.4%	104 21.5%	1 .2%	9 1.9%	11 2.3%	43 8.9%	35 7.2%	7.916	4	.095

** Significance at the 0.01 level (2-tailed)

*Significance at the 0.05 level (2- tailed)

Table IX: Barriers to Online Retailing

Barriers to Online Retailing of Users and Non-Users	Users of online shopping Mean(SD)	Non Users of online shopping Mean(SD)
Inability to touch products	4.08 (0.99)	4.14 (0.93)
Inability to try products before purchase.	4.27 (2.69)	4.16 (0.93)
Fear of faulty products	3.85 (1.10)	4.05 (0.95)
Not assured of size of product	3.73(1.11)	3.35(1.29)
Posting my personal details online inhibits online shopping	3.52(1.27)	3.78(1.05)
Inability to bargain	3.66(1.29)	3.20(1,39)
Slow internet speed	3.49(1.32)	3.80(1.34)
Tiresome browsing through internet	3.32(1.26)	3.26(1.23)
Lack of confidence in online retailing	2.97(1.26)	3.25(1.45)
Difficulty in placing orders online	2.87(1.26)	2.60(1.32)
Fear of using debit card/credit card	3.41(1.32)	3.79(1.15)
Large variety of products available online confuse me	3.18(1.18)	2.81(1.43)
Difficulty in exchange of faulty products	3.66(1.04)	3.90(0.87)
Time consuming to make changes to orders placed online	3.72(0.99)	3.36(1.15)
Inapt query handling	3.81 (0.96)	4.03 (0.96)

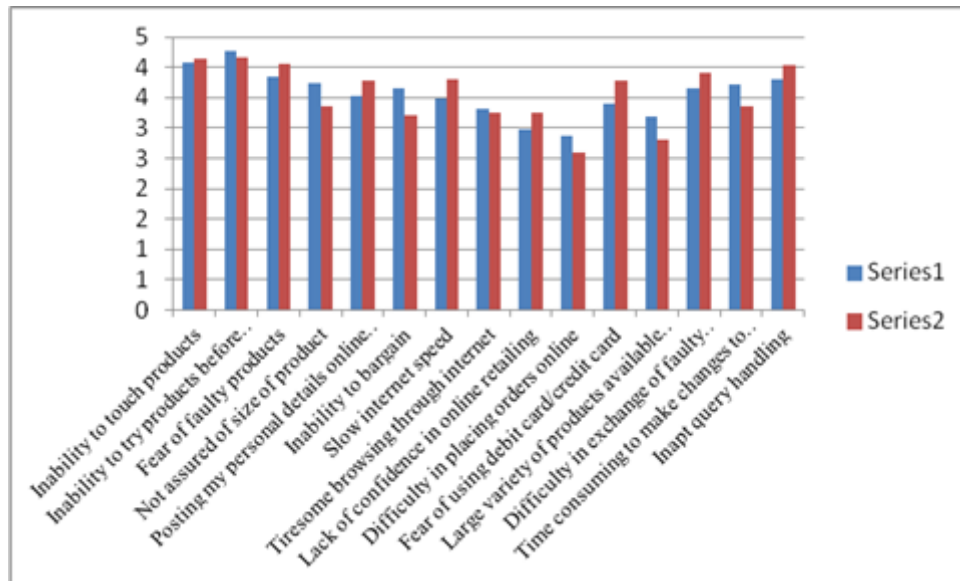


Figure 1: Mean score of users and non-users of Barriers to Online Retailing

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