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ARTICLE INFO
Jayendra Sinha and Jiyeon Kim (2012). Factors affecting Indian consumers’ online buying behavior. *Innovative Marketing*, 8(2)

JOURNAL
"Innovative Marketing"

FOUNDER
LLC “Consulting Publishing Company “Business Perspectives”

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Factors affecting Indian consumers’ online buying behavior

Abstract

India has been gaining importance as a high potential lucrative market for global retailers. Since the recent economic reforms, Indian consumers have just begun to understand the benefits of using Internet for shopping. However, the growing number of Internet users has not been reflected to the online sales. Thus, it is important to identify factors affecting Indian consumers’ online buying behavior in order to find the way to stimulate their online shopping behavior. The purpose of this study is to identify factors affecting Indian consumers’ attitude toward shopping online by investigating Indian consumers’ risk perceptions about shopping online. Constructs tested included previously identified factors (convenience risk, product risk, financial risk, perceived behavior control, return policy, subjective norm, attitude, and technology specific innovativeness) and Indian-specific factors (concerns associated with delivery of an ordered product and cyber laws, shipping fees, and after service) specifically developed for this study. The concerns associated with delivery of product, social and perceived behavioral control have been found to be significant factors affecting attitude toward using Internet for shopping. In terms of gender difference, perceived risks (product, convenience, financial, and non-delivery) and technology specific innovativeness were found to be significant for males and, for females, convenience risk and attitude towards online shopping were significant factors.

Keywords: online shopping, Indian consumer behavior.

Introduction

With the improving economic conditions because of liberal economic policy, India has been gaining importance as a high potential lucrative market for global retailers. In 2009 Indian retail market size was ranked as the 5th largest globally, and was valued at US$400 billion. A recent industry report by global consultancy Northbridge Capital stated the growth of India’s retail industry to be US$700 billion in 2010. The per capita income in India has gone up (Hubacek et al., 2007) as much as 14.2% (2006-07) after the recent economic reform, resulting in an increasing number of Indian consumers with an affordability to use Internet service (at home, cyber cafes, or on a phone, etc) (www.tradechakra.com, 2008). This supports industry statistics by Internet and Mobile Association of India (IAMAI), showing 30% growth (2.15 billion USD) of e-commerce and mobile industry in 2008 alone.

In spite of a number of evidence showing the growth of Internet usage by Indian consumers, Internet sales show less than 1 percent of the total retail sales in India. This may represent a great potential to grow yet some obstacles to overcome for online retailers. Many Indian consumers have low self-efficacy in using Internet and feel shopping online to be unconventional. It seems that even for those, who use Internet on regular bases, Internet is mainly for searching product information, comparing prices, and/or checking consumer reviews rather than making a purchase. Would the reasons for Indian shoppers not shopping online be the same as the ones identified in other countries online shopping environments? Would there be specific concerns applied to Indian online shopping environments? In order to address these research questions, it is important to test previously identifies concerns (in other countries) as well as Indian-specific concerns associated with online shopping. Thus, the purpose of this study is to identify factors affecting Indian consumers’ attitude toward shopping online. This information will help Internet retailers find the way to encourage Indian shopper’s online purchase behavior.

Previous studies (i.e., Bhatnagar et al., 2000; Jarvenpaa and Todd, 1997; Vijayasarathy and Jones 2000) attempted to identify factors affecting Indian consumers’ online purchases. However, only risk and benefit factors identified from the US studies were applied to the Indian online shopping context, failing to incorporate Indian culture-specific factors. Thus, the purpose of this study is to identify factors affecting Indian consumers’ online shopping behavior, specifically elucidating them in the Indian context. In addition to the previously identified factors (i.e. psychological reasons such as perceived risks, shipping costs & time, trust etc.), this study included Indian culture-specific factors (e.g., shopping and leisure habits, credit card penetration rate, Internet related infrastructure, reliability of postal carriers, etc.) that may play an important role in determining Internet adoption for e-commerce. Also, potential gender difference in identifying factors affecting male/female purchase behavior was investigated.

1. Literature review

1.1. Theory of Planned Behavior (TPB). Theory of Planned Behavior (TPB) explains behaviors over which individuals have incomplete voluntary control (Azjen, 1985, 1991; Azjen & Fishbein 1980). Attitude toward a behavior and subjective norm
about engaging in a behavior are supposed to influence intention. *Attitude* depicts an individual’s feelings, inclination or disinclination towards performing a behavior. A prospective technology user’s overall attitudes toward using a given technology-based system (i.e., Internet) or procedure represents major determinants as to whether or not he/she will ultimately use the system (Davis, 1993). *Subjective norms* reveal the individual’s perceptions of the influence of significant others (e.g., family, friends, peers, etc.). Others’ opinions about online shopping as well as online reviews will influence online shopping behavior. TPB additionally includes *perceived behavior control* over engaging in behaviors, suggesting that human behavioral decision-making is affected by the consumer’s ability to perform the behavior. The ability to shop online (e.g., Internet accessibility, credit card ownership, etc.) might refrain a consumer from shopping online.

1.2. Diffusion of innovation. The concept of innovation has received a great deal of attention particularly in the information technology and marketing research (Agarwal & Prasad, 1998; Midgley & Dowling, 1978; Rogers, 1995). Rogers (1995) conceptualized “personal innovativeness” as the degree and pace of adoption of innovation by an individual.

Consumers who are innovative are representative as being highly abstract and possess a generalized personality trait (Im, Bayus & Mason, 2003). Examples as to the levels of abstraction inherent across the various literatures utilizing this perspective include “a willingness to change” (Hurt et al., 1977) and the receptivity to new experiences and novel stimuli (Goldsmith, 1984; Leavitt & Walton, 1975). The Internet is a fairly new and considered to be innovation that requires individuals to learn new skills in order to use the technology. Diffusion of innovation theory is applicable to understanding online consumer behavior. Consumers who are used to shopping in brick-and-mortar stores may have difficulty in changing habits and shopping online (Kaufman-Scarborough & Lindquist, 2002). On the other hand, consumers who have high level of innovativeness may more likely to shop online.

1.3. Perceived risks. Online transaction involves a temporal separation of payment and product delivery. A consumer must provide financial information (e.g., credit card details) and personal information (e.g., name, address and phone number) for delivery in order to complete the purchasing process. Risks perceived or real, exist due to technology failure (e.g., breaches in the system) or human error (e.g., data entry mistakes). The most frequently cited risks associated with online shopping include financial risk (e.g., Is my credit card information safe?), product risk (e.g., Is the product the same quality as viewed on the screen?), convenience (e.g., Will I understand how to order and return the merchandise?) and non-delivery risk (e.g., What if the merchandise is not delivered?) The level of uncertainty surrounding the online purchasing process influences consumers’ perceptions regarding the perceived risks (Bhatnagar et al., 2000).

1.4. Internet usage in India. Over the past few decades, the Internet has developed into a vast global market place for the exchange of goods and services in the world. In many countries, the Internet has been adopted as an important medium, offering a wide assortment of products with 24 hour availability and wide area coverage. Indians use the Internet for e-mail and IM (98%); job search (51%); banking (32%); bill payment (18%); stock trading (15%); and matrimonial search (15%) etc. (Feb, 2006 data) (www.internetworldstats.com).

The growth rate of electronic commerce in India, however, has yet been much below anticipation; its proportion of total retail business is still small due to its certain limitations (Sylke et al., 2004). Compared to developed countries (e.g., United States of America), Indian telecommunications infrastructure is weak. Thus consumers throughout the country are not as prone to shop online as a more technologically advanced country (Bellman, Lohse and Johnson 1999; Bhatnagar et al., 2000; MohdSuki, 2006). India’s low credit card penetration may be another barrier to online shopping. Finally, India’s distribution system is unable to provide timely and reliable delivery of products. This limitation is further exacerbated when the return of products purchased online is taken into consideration (Bingi, Ali & Khamalah, 2000; Hoffman et al., 1999; Teo, 2002). In addition, little empirical research exists regarding Indian online retail market and variables that influence Indian online consumers’ purchasing behaviors. Thus it is important to understand variables that influence Indian consumers’ online purchasing behaviors. Previous research suggested that men are more likely to purchase products and/or services from the Internet than women (Garbarino & Strahihevitz, 2004; Korgaonkar & Wolin, 1999; Van Slyke et al., 2002). Potential gender difference in identifying factors influencing attitude toward using Internet for shopping was also examined.

2. Conceptual model and hypotheses

The conceptual model was developed to examine the factors affecting Indian consumer’s online shopping behaviors (see Figure 1). This model examines (1) the influence of previously identified risk factors...
(financial, product, and convenience risks) and Indian contextual service and infrastructure factors (concerns associated with a product delivery and return policy) on attitudes towards online shopping and (2) the influence of an individual’s technology specific innovativeness (TSI), attitude, subjective norm and perceived behavioral control (PBC) on online shopping behavior.

![Proposed model of factors influencing Indian shoppers’ online shopping behavior](image)

**Fig. 1.** Proposed model of factors influencing Indian shoppers’ online shopping behavior

### 2.1. Perceived risks

Perceived risk refers to “the nature and amount of risk perceived by a consumer in contemplating a particular purchase decision” (Cox & Rich, 1964).

Before purchasing a product, a consumer typically considers the various risks associated with the purchase. Many studies have indicated credit card security, buying without touching or feeling the item (tactile input), being unable or facing difficulty to return the item, shipping charges and privacy (security) of personal information as still being the main concerns of online shoppers (Bellman et al., 1999; Bhatnagar et al., 2000; Mohd&Suki, 2006). The higher the perceived risk, the consumer may choose to patronize a brick-and-mortar retailer for the purchase of the product. Whereas, the lower the perceived risk, the higher the propensity for online shopping (Tan, 1999).

Financial risk is defined as the risk involved in conducting financial transaction through the internet. Previous research found financial risk being a primary reason consumers choose not to shop online (Miyazaki & Fernandez, 2001; Teo, 2002). Consumers are likely to be hesitant to shop online when they have concerns associated with financial risks, such as the loss of credit card information, theft of credit card information, or overcharge (Bhatnagar, Misra & Rao, 2000; Forsythe & Shi, 2003). This leads to the development of Hypothesis 1a.

**Hypothesis 1a:** The risk of losing money and financial details will have negative influence on attitude towards online shopping.

**Product risk** is defined as the risk of receiving the product that is different from what’s perceived to be in the product description. This could be resulted from the quality of the retailer’s product description and the visual representation of the product, significantly influencing the consumer’s ability to understand the product. Inability of physical product examination and insufficient product information on screen may increase concerns of consumers. The issues surrounding product risk associated with online shopping resulted in the following hypothesis.

**Hypothesis 1b:** The product risk will have negative influence on the attitude of online shopping.

Convenience risk is defined as the discontent comes from shopping via the Internet. Discomfort in online shopping is associated with the steps required to complete personal details to processes the check-out forms. The ease of shopping at the online retailer’s website influence consumers’ perceptions of the
level of convenience risk (Jarvenpa & Tractinsk, 2001). Methods for reducing convenience risk include providing an easy to navigate website as well as an extensive customer service center. A call center, return policy, and a variety of payment options all assist consumers in feeling more at ease (Lee, 2002).

Hypothesis 1c: A user friendly website and service availability to help transaction will have positive influence on attitude towards shopping online.

2.2. Service and infrastructural variables. Additional challenges for e-commerce diffusion in developing countries like India are the lack of telecommunications infrastructure throughout the country (e.g., low computer usage and Internet penetration along with the lack of qualified staff to develop and support e-commerce sites (Bingi et al., 2000; Hoffman, 1999). These concerns may no longer be significant deterrent for online shopping in many developed countries. The concerns associated with delivery of the product ordered, such as shipping fees, delayed delivery and/or not receiving a product ordered. This is due to most India’s postal careers being unreliable except for the government owned one that is pricey. Thus, online shoppers are forced to choose the pricey postal career for more secure delivery or to take a risk of not getting the product delivered when choosing other careers. Hypothesis 1d was developed considering India’s insecure inefficient delivery system.

Hypothesis 2: The fear of delayed product delivery or not getting it delivered/losing it in transit will have negative influence on attitude towards shopping online.

The ease of return policy is often a concern to online shoppers (Teo, 2002). The ramifications of how to exchange products, the length of time allowed to return a product, and the cost associated with the shipping of merchandise back to the online retailer are often concerns associated with an online return policy (Shim, Shin, Yong & Nottingham, 2002). Hypothesis 3 was developed based on effect of well-placed return policy.

Hypothesis 3: The good and convenient product return policy will have positive influence on attitude towards shopping online.

2.3. Technology specific innovativeness. Domain Specific Innovativeness (DSI) is “the degree to which an individual is relatively earlier in adopting an innovation than other members of his system” (Rogers & Shoemaker, 1971, p. 27). Thus, in the online shopping context, domain specific innovativeness is defined to be technology specific innovativeness. Shopping online for the most Indian shoppers mean going outside their usual shopping routine. While the online shopping offers consumers a wide breadth and depth of merchandise offerings, it also requires them to acquire new technology skills in order to seek, evaluate and acquire products.

Research has revealed that online shopping innovativeness is a function of attitude towards the online environment and individual personal characteristics (Midgley & Dowling, 1978; Eastlick, 1993; Sylke, Belanger & Comunale, 2004; Lassar et al., 2005). Innovative consumers are more inclined to try new activities (Robinson, Marshall & Stamps, 2004; Rogers, 1995). Adoption of online shopping is depiction of individual’s innovative characteristic (Eastlick, 1993). It is expected that person’s technology specific innovativeness has a propensity to shop online.

Hypothesis 4: Technology specific innovativeness will affect online shopping behavior.

2.4. Subjective norm. According to the Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1980) the human behavior is preceded by intentions, which are formed based on consumer’s attitude toward the behavior and on perceived subjective norms. Attitude reflects the individual’s believes. Subjective norms capture the consumer’s perceptions of the influence of significant others (e.g., family, peers, authority figures, and media). Subjective norms tend to be a strong influential factor especially in the early stages of innovation implementation when users have limited direct experience from which to develop attitudes (Taylor & Todd, 1995). It is during this stage of attitudinal development that online retailers can influence shoppers’ propensity for purchasing behaviors (Yu and Wu, 2007).

Hypothesis 5: Family members, friends and peers’ online experiences and suggestions will positively influence on online buying behavior.

2.5. Attitude. Consumers’ attitudes towards performing a behavior has been proven as a strong predictor of behavior (Fishbein & Ajzen, 1975). Attitude has been applied in several ways in the context of online shopping. Adopting a new technology is a function of one’s attitude towards it (Moore & Benbasat, 1991). It refers to the consumers’ acceptance of the Internet as a shopping channel (Jahng et al., 2001). It also refers to consumer attitudes toward a specific Internet store (i.e., to what extent consumers think that shopping at this store is appealing). Other previous researches have also revealed that attitude towards online shopping a significant predictor of making online purchases (George 2004; Yang et al., 2007).
2.6. Perceived behavioral control. Ajzen and Madden (1986) extended the TRA into the Theory of Planned Behavior (TPB) by adding a new construct “perceived behavioral control” as a determinant of behavioral intention and behavior. Perceived behavioral control refers to consumers’ perceptions of their ability to perform a given behavior. TPB allows the prediction of behaviors over which people do not have complete volitional control. Perceived behavioral control reflects perceptions of internal constraints (self-efficacy) as well as external constraints on behavior, like availability of resources. Perceived Behavioral Control (PBC) directly affects online shopping behavior (George, 2004) and has a strong relationship with actual Internet purchasing (Khalifa & Limayem, 2003). Thus, the following hypothesis was developed.

Hypothesis 7: Individual’s resources to shop online will have negative effect on online shopping behavior.

3. Methods

A survey was developed to identify factors that influence Indian online shoppers’ behavior. Variables examined are technology specific innovativeness, perceived risks (financial risk, product risk, convenience risk and non-delivery risk), perceived behavior controls, demographics and service and infrastructural factors (cyber laws, shipping charges and after sales service). Questions were adopted from previous research (40 questions) and 14 were developed by the researcher. Item scales ranged from strongly disagree (1) to strongly agree (7). The survey was created in online and paper versions and in order to reach consumers who have no regular access to Internet hence maximize the response rate.

3.1. Pilot study. The survey was written in English and pilot tested using a small group of student sample (n = 15) at Banaras Hindu University (BHU) in Varanasi, India. English is taught as a mandatory subject in schools throughout India. As such, the subjects had no problem understanding English. The purpose of the pre-test was to verify the survey’s content for clarity and understanding. Students were asked to indicate all areas that were either unclear, difficult to read, or confusing. The survey was revised based on the feedback from the pretest.

3.2. Data collection procedure. Two methods of data collection were used: online and manual distribution of a paper survey. The online survey allowed the researcher to capture the Indian consumers who were proficient technology users. As identified in the review of literature, a large portion of the Indian population does not use the Internet on a regular basis nor do they shop online. In order to obtain a better understanding of their online shopping fears (i.e., perceived risks), it was deemed critical to survey this group. Using a paper survey was deemed the most appropriate method of reaching this group. Confidentiality of responses was assured and potential respondents were invited to forward any queries via e-mail to the researcher.

The sample selected for this study consisted of persons in the Delhi region and students at Banaras Hindu University in India. A total of 987 surveys were administered; 287 paper surveys and 700 e-mail surveys. Fifty-one paper surveys and 92 electronic surveys were returned for a total of 143 surveys. From this, 127 usable surveys were obtained. The 13% response rate is acceptable given the nature of the social science research (Touliatos and Compton, 1988) and the sample population of India.

4. Analyses

The data were analyzed using SPSS 16.0. Principal Component Analysis (PCA) using varimax rotation with Kaiser Normalization conducted on the online shopping behavior measures. This analysis was conducted as a reduction technique. There were total 50 items measuring 14 variables apart from the items asking about Internet usage, pattern and demographic details (32 items). Principal component analysis has been used to factor observed interrelated variables together. Based on the PCA results, habit, trust and others have been deleted as the items were cross-loading on multiple components. Thus latent variables were viable for final analysis. Components were extracted and labeled which had eigenvalues above 1.00 and whose absolute values after rotation was greater than 0.30. Reliability and validity tests were then conducted. Ten factors were generated. They include: (1) financial risk; (2) product risk; (3) convenience risk; (4) non-delivery risk; (5) return-policy; (6) technology specific innovativeness; (7) subjective norm; (8) attitude; (9) perceived behavioral control.

The result of reliability tests indicated all the construct measures to be reliable with Cronbach’s alpha over 0.80 except for the financial risk (0.748), the non-delivery risk (0.684) and the technology specific innovativeness (0.778) (see Table 1). The items of these components and additionally product risk and PBC (perceived behavioral control) were loaded separately but when measured together performed better in reliability analysis. Construct correlations were below 0.8 indicating acceptable discriminate validity based on the rule of thumb suggested by Kline (1998). Multiple regression analysis was conducted to test Hypotheses. A significance level of p < 0.05 was used as the guideline for identifying statistically significant results.
Table 1. Factor loadings from PCA & Cronbach’s alpha

<table>
<thead>
<tr>
<th>Latent variable</th>
<th>Constructs</th>
<th>Factor loadings</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convenience risk</td>
<td><em>Feel that it will be difficult settling disputes when I shop online.</em></td>
<td>0.866</td>
<td>0.898</td>
</tr>
<tr>
<td></td>
<td><em>It is not easy to cancel orders when shop online.</em></td>
<td>0.731</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>I will have problem in returning product bought online.</em></td>
<td>0.868</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>I cannot get to examine the product when I shop online.</em></td>
<td>0.787</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Finding right product online is difficult.</em></td>
<td>0.913</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>I cannot wait till the product arrives.</em></td>
<td>0.62</td>
<td></td>
</tr>
<tr>
<td>Perceived behavior control</td>
<td><em>I do not shop online as I do not have a computer at home.</em></td>
<td>0.874</td>
<td>0.871</td>
</tr>
<tr>
<td></td>
<td><em>I do not shop online as I do not have a computer with Internet.</em></td>
<td>0.925</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>I do not shop online as I do not have a credit card.</em></td>
<td>0.844</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>I do not shop online because the internet speed is very slow (webpage download time is low).</em></td>
<td>0.623</td>
<td></td>
</tr>
<tr>
<td>Subjective norm</td>
<td><em>My friend’s opinion is important to me when I make a purchase.</em></td>
<td>0.789</td>
<td>0.810</td>
</tr>
<tr>
<td></td>
<td><em>I will have no problem in shopping online if I get to know that my friends and relatives are doing it without any problems.</em></td>
<td>0.746</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Sharing my experience through online product reviews will make me noticeable.</em></td>
<td>0.697</td>
<td></td>
</tr>
<tr>
<td>Technology specific innovativeness</td>
<td><em>I am usually the first in my group to try out new technologies.</em></td>
<td>0.670</td>
<td>0.778</td>
</tr>
<tr>
<td></td>
<td><em>My friends approach me for consultation if they have to try something new.</em></td>
<td>0.509</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>I am confident of shopping online even if no one is there to show me how to do it.</em></td>
<td>0.861</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>I feel confident of using Internet for shopping after seeing someone else using it.</em></td>
<td>0.699</td>
<td></td>
</tr>
<tr>
<td>Return policy</td>
<td><em>I do not purchase online if there is no free return shipment service available.</em></td>
<td>0.703</td>
<td>0.840</td>
</tr>
<tr>
<td></td>
<td><em>I purchase online only when I can return the product without any frills or strings attached.</em></td>
<td>0.647</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>I do not purchase online if there is no money back guarantee.</em></td>
<td>0.915</td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td><em>Using Internet for online shopping is easy.</em></td>
<td>0.930</td>
<td>0.860</td>
</tr>
<tr>
<td></td>
<td><em>Shopping online is fun and I enjoy it.</em></td>
<td>0.800</td>
<td></td>
</tr>
<tr>
<td>Product risk</td>
<td><em>I might not get what I ordered through online shopping.</em></td>
<td>0.704</td>
<td>0.881</td>
</tr>
<tr>
<td></td>
<td><em>I might receive a malfunctioning merchandise.</em></td>
<td>0.583</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>It is hard to judge the quality of merchandise online.</em></td>
<td>0.725</td>
<td></td>
</tr>
<tr>
<td>Financial risk</td>
<td><em>I feel that my credit card details may be compromised and misused if I shop online.</em></td>
<td>0.872</td>
<td>0.748</td>
</tr>
<tr>
<td></td>
<td><em>I might get overcharged if I shop online as the retailer has my credit card info.</em></td>
<td>0.817</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>I feel that my personal info given for the transaction to the retailer may be compromised to a 3rd party.</em></td>
<td>0.799</td>
<td></td>
</tr>
<tr>
<td>Non-delivery risk</td>
<td><em>I do not shop online because of non-availability of reliable &amp; well-equipped shipper.</em></td>
<td>0.910</td>
<td>0.684</td>
</tr>
<tr>
<td></td>
<td><em>I might not receive the product ordered online.</em></td>
<td>0.521</td>
<td></td>
</tr>
</tbody>
</table>

5. Results and discussion

5.1. Sample characteristics. The total number of responses obtained were 143 out of which 127 (65% male and 35% female) were valid and usable. Approximately 96% respondents were in the age range 21-39 years and average qualification was a postgraduate degree or above (around 84%) and 52 (40.9%) had an income more than Rs. 600,000/ year; approximately 73% of the respondent people belonged to a household with 3 or more than 3 people. 44 (34.6%) lived in self-owned and 34 (26.8%) in rented accommodation. Fifteen percent of the respondents never bought online and 40% of them were educated below a post graduate degree. Eighty four percent of respondents have computer at home and an 81% responded that they have even Internet connection and 62 (48.8%) have broadband service. Approximately 80% of respondents have a credit card and 80 (63%) even pay through credit cards only with a meager percent usage of other payment methods, for example ~ 36 (28.3%) use credit cards. Detailed Internet usage of the sample is presented in Table 1.

5.2. Internet usage and experience. Majority of respondents uses Internet either at home (N = 74; 58.3%) or at work/school (N=82; 64.6%) with just as few as 21.3% (N = 27) of all still visit cybercafes. Majority of respondents said that mostly use Internet either for e-mail communication (N = 85; 67%) or for work (N = 27; 21%). Of all the respondents most had fair experience with the use of Internet; 72 (56.7%) were using it for more than 5 years while 34 (26.8%) were using it for more than 3 years but less than 5 years.

5.3. Online shopping experience and usage. Only 10 (7.9%) respondent were using Internet for shopping for more than 5 years, otherwise of people using Internet for following years was like, 3-5 years – 17 (13.4%), 2-3 years – 18 (14.2%) and 1-2 years 31 (24.4%) people etc. 22 (17.3%) people never used Internet for shopping. Almost 80% people said that they bought online only 3-5 times till date. 64
(50.4%) respondents said that their online expenditure for last 6 months was more than Rs. 1500 and 61 (48%) respondents preferred buying tickets for cinema/shows, 38 (29.9%) books and 29 (22.8%) used Internet for banking or financial services etc.

Regression analysis was conducted to identify factors affecting Indian consumers’ online purchase behavior. The results were separated by gender to find out differences in the relationship between variables for male/female consumers. The regression result showed all the risk factors and technology specific innovativeness to be significant for males while for females only convenience risk and attitude towards online shopping was significant. The details of hypotheses testing results of results are presented in Table 2.

Table 2. Regression result based on gender

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>p-value</td>
</tr>
<tr>
<td>H1a: Product risk → Attitude</td>
<td>-0.289</td>
<td>0.054</td>
</tr>
<tr>
<td>H1b: Financial risk → Attitude</td>
<td>-0.186</td>
<td>0.221</td>
</tr>
<tr>
<td>H1c: Convenience risk → Attitude</td>
<td>-0.462</td>
<td>0.001*</td>
</tr>
<tr>
<td>H2: Delivery concerns → Attitude</td>
<td>0.221</td>
<td>0.144</td>
</tr>
<tr>
<td>H3: Return policy → Attitude</td>
<td>0.155</td>
<td>0.309</td>
</tr>
<tr>
<td>H4: Innovativeness → Behavior</td>
<td>-0.306</td>
<td>0.100</td>
</tr>
<tr>
<td>H5: Attitude → Behavior</td>
<td>0.652</td>
<td>0.001*</td>
</tr>
<tr>
<td>H6: Subjective norm → Behavior</td>
<td>-0.157</td>
<td>0.407</td>
</tr>
<tr>
<td>H7: Perceived Behavioral Control → Behavior</td>
<td>-0.167</td>
<td>0.377</td>
</tr>
</tbody>
</table>

Note: * = sig. at p < .05

Overall, the convenience risk was found to be the only factor affecting Indian consumers’ online buying behavior. However, the results showed some interesting differences when broken down by gender. It was found that the male are more concerned towards perceived risk factors (H1a: p = 0.002, H1b: p = 0.005, H1c: p = 0.016) and concerns associated with non-delivery of the product (H2: p = 0.049) while female where only concerned about the convenience risk (H1c: p = 0.001). This is consistent with the findings of the extant studies (e.g., Forsythe & Shi, 2003; Biswas & Biswas, 2004) where financial, product and convenience risk are an important significant risk factor for not shopping online; the possible reason of insignificance in Indian females appears to be the indifference and unwillingness towards online medium and as shopping for them is more of a social activity. As found out in a study by Swinyard & Smith (2003), there is group of Internet users (called non-shoppers of online) and since Indian Internet users do not tend to shop online they belong to this class only and the reason again seems to be preference for brick and mortar shops to get the feel of the product before buying it rather than relying completely on the provided information. The reason of difference between male and female’s perception could be that in India male are primary earning members of a family, so they are little concerned and frugal with their money. The return policy (H3) is also not significant with, male, p = 0.072 and for female, p = 0.309 (Table 1). The reason again seems to be indifference towards online shopping which is contrary to the finding of Lee (2002) which says that returning hassles lead to dissatisfaction in consumers and that is why they avoid shopping online.

For males technology innovativeness (H4) is a significant variable male respondents, p = 0.004 (Table 1) while for female respondents it was not a significant variable, p = 0.100, because they are socially more active than the females and perhaps interaction with other people makes them more aware of newer technology and developments. For females it is not significant and the the reason could be influence of other factors like habit of shopping in brick and mortar shop and non-availability of price negotiation platform as about 46.5% agreed that they do not buy unless they negotiate price and as per Westfall and Boyd (1960) neither the Indian buyer nor the seller is comfortable unless they negotiate price.

The influence of subjective norm on online shopping behavior (H5) was not statistically supported, male, p = 0.944 (Table 1) and female, p = 0.407 (Table 1). This means the opinion of friends and peers will not be likely to influence Indian consumers’ online buying behavior. This finding is consistent with previous studies Wang et al. (2007) where friends, relatives and media (subjective norm) has not been an important factor influencing the online shopping behavior but not with others like Järveläinen (2007) and Khalifa and Limayem (2003) where subjective norm has been significant. India is collective society (Hofstede, 1980). People like to go to market places together and value opinion of others.
They also opine good about sharing online experience. The reason of this inconsistency appears to be distrust for online retailers and transaction.

Attitude towards online shopping is significant for females but not for males, female \( p = 0.001 \) (Table 1) while for male, \( p = 1.351 \). There seems that female although have a good opinion for online shopping but they do not want to do it because of inconvenience they perceive in online shopping. For male it is contrary to finding of Wang et al. (2007) that found attitude to be a significant factor affecting online shopping intention of Taiwanese consumers. This means that although Indian male consumers find online shopping easy, enjoy using Internet (Mean is 4.92) but that does not give them comfort of going ahead and shop online. The possible reason could be inexperience in online shopping and lack of efforts from companies to create positive image towards this shopping medium and other factors.

The perceived behavioral control has an insignificant influence on online shopping behavior, \( p = 0.377 \) for female and \( p = 0.007 \) for males (Table 1) shows that since majority (84.3%) of respondents have computer at home and (81.1%) responded that they have even internet connection and (48.8%) have broadband service so they believe that non-availability of internet infrastructure will not significantly impact online shopping behavior. Which is contrary to the finding of Wang et al. (2007) and other studies (e.g. Khalifa and Limayem, 2003) found PBC to be a significant factor affecting online shopping behavior.

**Conclusion, Implications and limitations**

People in India are using Internet for last few years (on an average more than 3 years) for different purposes like, banking, buying travel tickets etc. but not for anything for which they do not need to queue up. The reasons as quoted by Channel Push’s (www.channelpush.com) article – State of Online Retailing in India are, slow building up of internet infrastructure, lack of interactive and informative websites and unwillingness on the part of retailers.

The results of this study shed insights of online retailing in India – specifically factors affecting Indian consumers’ online buying behavior. Although the convenience risk seemed to be the only factor significantly affecting Indian consumers’ online purchases, when looking at male and female perceptions, there were different factors affecting male/female consumer’s behaviors. Perceived risk is significant for male but not for female, except convenience risk (\( p = 0.001 \)). For female attitude has been significant factor for online shopping behavior while among male innovativeness was significant which meant females frame their opinion then they will go ahead without considering risks if the process is easy and user friendly while male will gauge various risks before shopping online. The study found that the majority of people who bought online more number of times were in the age group of 40-49 years. This is different from common prediction that younger people who will be more proficient in Internet use and hence likely to buy. Although it has been pointed out by Järveläinen (2007) that customizing the system as per the requirement for different demographic groups is not advisable, but the system should be easy to use keeping in mind for inexperienced customers and allowing experienced users some customization options could be attractive.

**Implications.** There are a few implications from these findings on online shopping that merit attention. Such as, retail companies should start taking measures to eliminate risk factor and build trust in this form of retail. The retail managers should sway consumers through ads, promotions, online only discounts etc. to let people cross the threshold and start buying because Indian consumers are still comfortable with brick and mortar format as they appreciate friendly approach of salesman and social element of shopping, which has been found as important customary element in shopping (Tauber, 1972). In addition, they need to make web their website user friendly and less intriguing. It should encourage online consumers to spend time exploring the site and comparing prices online, provide detail product information and member discounts. The results also suggest that after-sales operations like, dispute settling and delivery, should be carried out promptly and quickly so that consumer would build faith in the system. During the process of purchasing, online agents can help customers and simplify the purchasing procedure to give a feeling of friendliness of salesman – or demonstrate how to purchase with clear text, images or examples. Because of perceived lack of secured transaction, retailers should introduce a mechanism that would improve safety and privacy to motivate people to buy online. It will also be important to mention that price bargaining factor needs to be incorporated to keep people in sync with their buying habits and giving a feel of having bought a good deal. This could perhaps be done by keeping fixed and variable component in pricing and letting people chose from variable component.

Previous research has revealed that Indian online buying behavior is related to certain demographics (e.g., Li, Cheng, and Russell, 1999; Weiss, 2001), indicat-
ing that, compared with brick-and-mortar shoppers, online consumers tend to be better educated (Bellman et al., 1999; Li et al., 1999; Swinwyard and Smith, 2003), have higher income (Bellman et al., 1999; Li et al., 1999; Donthu and Garcia 1999; Swinwyard and Smith, 2003), and more technologically savvy (Li et al., 1999; Swinwyard and Smith, 2003). Thus, further study identifying particular demographics (other than just gender) that might have an influence on Indian consumers’ online shopping behavior might be useful.

The findings of the study will help online retailers to better understand the psyche of consumers and equip themselves to attract consumers towards online format. They could introduce money back guarantee, insured and assured delivery to alleviate risk factors. It would help managers understand the online consumer better and work towards new area of retail in India as Internet shopping would help retailers present a potentially low cost alternative to brick and mortar option.

Limitations. This study has few limitations. First, this survey limits us to a pool of Internet users. Hence, the results may not be generalizable to non-Internet users. Although through paper survey it was intended to cover few non-users but since the pool of respondents was either students or working professionals so all of them had sufficient exposure to Internet. Second, the samples of Internet users for this study were mostly those who are more knowledgeable about the Internet and are thus experienced Internet users. Thus, the sample of respondents may be skewed toward more experienced Internet users. This may also restrict the generalizability of the findings. Due to limitation of time a convenient sampling was done a random sampling would give a better idea of Indian consumer as a whole. Also, the sample size is small to be called a true depicter of population as the study was limited to two cities only. Inclusion of cultural and value dimensions can provide a different perspective towards Indian consumers.

References