

Factors Impacting Behaviour of Consumers Towards On-Line Shopping in India: A Factor Analysis Approach

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ABSTRACT

On-line shopping is a recent phenomenon in the field of e-business and is definitely going to be the future of shopping in the world. Most of the companies are running their on-line portals to sell their products/services on-line. Though online shopping is very common outside India, its growth in Indian market, which is a large and a strategic consumer market, is still not in line with the global market. The potential growth of on-line shopping has triggered the idea of conducting a study on on-line shopping in India. The present research paper has used factor analysis approach to depict and highlight the various categories of factors and variables impacting the behavior of consumers towards on-line shopping in India. The data was collected through questionnaires on a sample of 580 respondents from Delhi, Mumbai, Chennai, Hyderabad and Bangalore. The results of the study show that on-line shopping in India is basically impacted by five categories of factors i.e. Demographic factors, Psychographics factors, Online shopping feature and policies, Technological factors and Security factors. The results of the study are used to present a comprehensive model of on-line shopping which could be further used by the researchers and practitioners for conducting future studies in the similar area. Finally, practical implications of the study are also elucidated.

Key words: On-line shopping, Psychographics factors, Demographic factors, Technological factors, Security factors.

Introduction

The Internet and worldwide web (www) have dramatically changed the way in which consumers seek and use information. The Internet, which was earlier conceptualized as a tool for chasing information, has become an important tool to conduct business these days. Internet provides the business platform with enormous opportunities for everyone. Users of internet are no more limiting themselves to only mailing, chatting and information retrieval, rather they are using internet for buying information, shopping for goods and services. Internet has made almost everything just one click away from the customers.

Due to exponentially rising business opportunities, there are a number of services being offered on the internet. On-line shopping has emerged as one of the most prominent services available through internet. It has numerous advantages for the customers as well as for business houses. Through on-line shopping, business houses have been able to reach out to more customers at less cost. They have been able to reach out to customers living in remote areas. In fact these are acting as stepping-stones to the concept of global village. Moreover, the inventory management cost has also decreased significantly through online shopping.

The online shopping concept has not only benefited the business houses, it has also proved to be evenly beneficial for the customers. The online shopping provides an opportunity to the customers to shop from any place without physically visiting the shops/outlets. Therefore, irrespective of the location of the customer, he/she has an easy access to his/ her desired product/ service through internet. The online shopping does not provide time bound market with limited choice of products. It offers 24 hours open market with availability of variety of products/services. This also helps the customers in saving time and energy.

As everything bears cost, on-line shopping is no exception to it. No doubt, the customer has an unlimited choice but he/she can fall a victim to over choice. Customer may spend a good amount of time in searching the plethora of products just to get more and more perplexed. The second biggest disadvantage is that there is no "touch and feel factor" involved in on-line shopping. Apart from item/product cost, transaction cost is also very important. It is very much possible that customer may go for online shopping just by looking at price, but ultimately may land up paying more due to transaction cost. Thus, these extra costs need to be considered during online shopping. Other important issue is concerned with the security of the

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sensitive information related to customers as the payments are made through credit cards which may be hacked or stolen by other means.

On-Line Shopping Trends In India

India has not been far behind the online sales trends seen across the globe. The e-commerce sales were Rs.2300 crores in 2006-07 as compared to 1200 crore in 2005-06 (Economic Times, Oct 2007). It shows a significant increase of around 100%. While significant, those sales numbers still represents less than 1% of total retail sales in India. Online travel retail market in India is expected to get a boom over the next five years, with Internet-based travel retail transactions increasing by a whopping 271% between 2005 and 2010 (Euro monitor International, 2005).

Furthermore, a recent study by AC Nielsen (2009), covering 38 markets and over 21,100 respondents across the globe has revealed that more Indians are taking to shopping online. A significant observation of this study was that India beat the global counterparts in number of purchases per month, with a mean of 5.2 purchases against the global average of 4.9. In India, around 35% of the citizens buy airline reservations through online services. Nearly 24% of the citizens have bought electronic items and more than 20% of them have purchased items such as apparel, music and electronic entertainment such as movies, DVDs and games through internet. The most favoured mode of payment for online purchases in India is the use of credit cards followed by cash-on-delivery. Online shopping in India is poised for greater acceleration as more manufacturers and providers integrate the internet into their sales model. As personal computer (PC) and internet penetration grows, the increase in online purchases is bound to increase in leaps and bounds.

Review of Literature

Consumers and firms are conducting a substantial and rapidly increasing amount of business on the internet. Web will generate consumer and business-to-business sales in excess of US \$ 1000 billion by 2010 (Forrester research Inc. 2002). This clearly shows the relevance of online shopping in future.

Identification of factors and variables affecting consumer behaviour has been quiet newh area of research throughout the globe. Initial

research result in this area shows that willingness to buy is most influenced by trustworthiness of the suppliers (Jarvenpaa et al 1998). Some studies have focused on the consumers' attitudes towards Internet shopping while others have focussed on the factors affecting those attitudes towards internet shopping. For example, Poel and Leunis (1999) suggested that the consumer's adoption of the Internet for retail purchases focused on three main attributes, money back guarantees, price reductions, and well-known brands. Regan (2002) examined that the factors enhancing online shopping significantly would be: (1) an increase in major catalogue retailers taking steps to convert customers into web buyers, and (2) overcoming the tactile needs of online shoppers to make them more comfortable in buying clothing without first touching or trying on the garment.

Research on the Internet shoppers has typically included demographic questions of age, education and household income. Over time the Internet buyers, once considered the innovator or early adopter, has changed. Against the past trends when online shoppers used to be a young, professional males with higher educational levels, incomes, tolerance for risk, social status and a lower dependence on the mass media or who needs to patronize established retail channels, But today's internet buyers show a diversity of income and education (Citrin, et al 2000; Mahajan, et al., 1990; Palmer & Markus, 2000).

From the customer's point of view, the Internet offered the potential advantages of reducing shopping time and money spent. It allowed twenty-four hours a day access, provided better service, and gave the consumers a perception of control over the shopping experience (Mehta & Sivadas, 1995).

The consumer factor was suggested as an important factor for online shopping and items included under this were privacy, security, time saving, ease of use, convenience, enjoyment, previous experience, company reputation and tactility (Udo, 2001). According to Komiak & Benbasat (2004) privacy in a communications system or network is defined as a protection given to information to conceal it from others' access by the system or network. However, privacy concern was the most frequent reason cited by consumers for not making online purchases.

Becker (1965) noted that the efficient use of time was a critical issue for the modern time-scarce consumer. Internet shopping can be viewed as a time saver for the shopper and the buyer. As such, time positively influences internet shopping as it can eliminate trips to the store and the long lines and delays when at the store. Bhatnagar, Misra & Rao (2000), have found that more years of computer experience and use had a positive, direct effect on the user's acceptance of information technology. This suggests that consumers with more years of computer use would be more likely to adopt the internet for purchasing.

Having a positive company reputation can reduce the consumer's perceived risk of trying a new means of distribution. Such a reputation is developed over time through long-term relationships with the consumer. A retailer's reputation is partially built on the customer's ability to have direct face-to-face contact with the store and its management (Srinivasan, Anderson, & Ponnayolu, 2002). Online stores, by not having direct contact with the consumer, may have a more difficult time of establishing a reputation, thus decreasing the likelihood of online buying (Schiffman & Sherman, 2003). The last consumer issue is the ability to test, in terms of touch and sight, a product before buying. Consumers express apprehension when buying a product without a tactile examination (Bhatnagar, Misra, & Rao, 2000).

According to Blattberg & Wisniewsk (1989), product promotions attempt to influence the consumers' purchasing behaviour. Like other retail methods, online channels have various promotional tools such as corporate logos, banners, pop-up messages, e-mail messages, and text-based hyperlinks to web sites. These types of promotions have positively affected Internet buying.

The separation of buyer and seller noted above also plays a role in the consumer's level of comfort in regard to product returns. Today, businesses often respond to a customer's request to return a product by offering to repair, substitute, or refund the customer's money. In the case of online shopping, where the majority of products have been delivered through some third-party means, the customer is now faced with utilizing a similar service in the return process, an additional inconvenience and potential expense. These issues negatively affected online shopping behaviour of consumers (Kunz, 1997).

To a degree, online buying will depend on the efficiency and availability of the technology (Bell & Gemmell, 1996). In technological factors, three main factors suggested as important to online shopping are: the availability of personal computers and internet access, download time and product's representative, pictures and colours (Eroglu, Machleit, & Davis, 2003).

Summarizing the aforesaid literature, it can be said that over the years more and more factors have been studied in on-line shopping environment but no significant study has been done in Indian context. Companies have done few studies to target their customer through on-line retail store. The studies done abroad already make an assumption that internet is accessible everywhere and everyone uses it. But in India, internet diffusion factor has an important role to play. Therefore this research paper basically aims to identify and describe those factors and variables which impact on-line shopping in India.

Objectives of the Study

Objectives of the study are based on the gaps identified in literature review. As the literature review shows more number of studies on online shopping pertains to foreign countries like U.S.A., U.K., China, and Japan etc. But in India on-line shopping is still in nascent stage. The results of the earlier studies in foreign context cannot be extrapolated in India as the cultural, demographic and psychographics factor will creep in. Therefore, there is a need to conduct a study in the similar area in Indian context so that Indian retailers and customers could also take advantage of this new technology in the times to come. Based on the literature gaps following objectives are identified for the present study:-

- To identify the variables influencing behaviour of consumers towards on-line shopping in India.

Research Methodology

The objective of the study was to first explore and further bring key insights of this phenomenon to the body of knowledge and practice from the Indian market perspective. Hence, the study used both exploratory and descriptive research design. The exploratory research design was used to identify the various categories of factors and variables impacting online shopping behaviour in Indian context. The

purpose of descriptive design in the present study was to describe the phenomenon of online shopping by identifying interrelations and dependencies among the various factors and variables selected for the current study.

In exploratory research, review of existing literature was done to collect and compile the final list of factors and variables. For descriptive research, a cross-sectional survey of respondents was done using a structured questionnaire.

The primary data for the present study was collected through questionnaires. Whereas the secondary data mainly includes literature review conducted through journals, national and international publications, internet, books etc.

The sample size for questionnaire was 598. Questionnaire was pilot-tested on a sample of 35 to ensure the validity of the survey instrument. However, post elimination of incomplete responses, unreturned questionnaire and invalid answers, the final sample size used for analysis was 580. The sample for questionnaire was selected from Delhi, Mumbai, Chennai, Hyderabad and Bangalore. The sample was mainly collected from metros and big cities assuming the high internet diffusion rate.

In the present study non-probabilistic sampling technique was used. Judgmental and snowball sampling technique were used in respondent selection for questionnaire. Judgemental sampling was based on the following parameters:

- The sample comprised of people who have done online shopping.
- Only those people having credit cards were part of the sample.
- The sample comprised of people whose minimum qualification was at least graduation.
- The sample was taken from metropolitan cities assuming high internet diffusion rate.

Data Analysis and Interpretation

The data collected through survey was analysed through quantitative data analysis technique. To validate the constructs identified for the questionnaire, factor analysis was done. After that,

reliability test was done to ensure the scale reliability. The descriptive statistics were calculated to get an approximate understanding of the constructs.

Data Examination

Data was checked for coding errors and corrected by consulting the original questionnaire. Questionnaires were then checked for missing values. The percentage of missing values was less than .5 % for any of the variables. The demographic profile of the respondents was checked. Demographic details of the respondents are the following:

Total Respondents: 580

- o Male respondents: 331 and Female respondents: 249.
- o Married: 352 and Single: 228
- o Graduate: 373 and Post-graduate: 207
- o Nuclear family: 193, Family with two children: 257, and Extended Family: 130

Reliability and Construct Validity for Other Variables

For reliability and validity of constructs, was used. The first step involved analyzing the construct validity of observed measures used to measure latent measures. This usually takes the form of convergent validity and discriminant validity.

Convergent validity represents how well the item measures relate to each other with respect to a common concept, and is exhibited by the existence of significant factor loadings of measures on hypothesized constructs. Convergent validity of the individual first order constructs was analyzed using SPSS software. Item measures with insignificant factor loadings were removed from the scale if content validity was not sacrificed. All factor loadings for the constructs are significant. This establishes the convergent validity of the scales.

Discriminant validity represents how well an item measure relates to its hypothesized construct versus other constructs in the model. Since each construct was analyzed separately, discriminant validity of the constructs was tested with a series of pair wise factor analysis of the factors.

Results of factor analysis are shown as below:

Component Matrix : Time, Effort and Convenience

Item	Loading
Time	.976
Effort	.976
Ease	.873

Component Matrix : Security and Safety

Item	Loading
Trust	.892
Personal information	.785
Safety	.889
Privacy	.834

Component Matrix : Information About the Products

Item	Loading
Information of products	.873
Information of brands	.873

Component Matrix : Promotion

Item	Loading
Internet promotion	.918
Online advertisements	.918

Component Matrix : Return Policies

Item	Loading
Easy returns	.880
Overall return policy	.880

Component Matrix : Enjoyment

Item	Loading
Enjoyment	.756
Leisure time	.756

Component Matrix : Innovation

Item	Loading
New product information	.802
New product experience	.967
Opportunity to use new product	.877

Component Matrix : Value for money

Fashion leader	.867
Item	Loading
Value for money	.930
Quality against money	.930

Reliability represents the systematic variance of the constructs. Any measurement instrument can have an unacceptable within-method convergent validity and still be reliable; reliability was assessed after having examined the convergent validity of the constructs. Typically reliability is assessed using the Cronbach's alpha coefficient. All of the measurement models in this study have reliabilities that exceed the level of 0.60 as shown in Table 1. Since all the constructs operationalized in this study are fairly broad in nature, and each exceed practical lower bound of 0.60, they are judged to possess acceptable reliability. Results of reliability analysis are shown in Table 1.

Concluding, the measures in the study provide strong evidence of Uni-dimensionality, convergent validity, reliability and discriminant validity, they can be used for evaluation of its structure.

Table 1. Results of Reliability Analysis

Factor	Cronbach Alpha Coefficient
Time, Effort and Convenience	.93
Security	.87
Return policies	.70
Information Availability	.69
Enjoyment	.74
Innovation	.94
Value for money	.84
Promotion	.81

Results of the Study

A detailed literature review was conducted to identify the most critical factors impacting online shopping. However, the objective was to identify the various categories of factors impacting online shopping in the context of Indian Market. Therefore, survey was conducted on a sample of 580 respondents to ascertain the validity of critical factors (identified through literature review) in the context of Indian Market Scenarios. The respondents were asked to discuss the various categories of critical factors and

variables, as perceived by them, during the surveys. To validate the constructs identified for the Questionnaire, factor analysis was done. After that, reliability test was done to ensure the scale reliability.

The overall demographic profile of respondents with Mean and Standard Deviation is given in Table 2.

The final results of the study are shown in Table 3 that shows the various categories of factors and variables under each factor category identified from the study. The results show that on-line shopping in India is influenced by five categories of factors namely demographic, psychographics, on-line shopping features, technological and security factors. In demographic factor age, education, family size, income, marital status and ability to use internet influence the behavior of on-line shoppers towards on-line shopping. Psychographics factor includes variables like innovativeness of consumer, enjoyment of shopping, convenience, interaction with people and touch and feel factor. In On-line shopping feature: promotion, delivery policy, product return policy, detailed information of product, option of comparison impact on-line shoppers. In technological factor: quality, representative pictures of product and value for money impact the behaviour of consumers towards on-line shopping. In security factor: privacy and safety influence the on-line shopping behaviour of Indian consumers.

Table 2. Demographic Profile of the Respondents

	Minimum	Maximum	Mean	Standard
			Deviation	
Age	21	48	31.83	2.37
Family Size	2	7	3.56	1.50
Income	10,000-20,000	50,000+	3.72	1.18
Ability to use Internet	Skillful	Extremely Skillful	3.72	.75

Conclusions of the Study

The final outcome of the study is a model that incorporates all the identified factors that impact on-line shopping in India. If all the output variables converge into one broad factor of online shopping, the final model could be interpreted as:

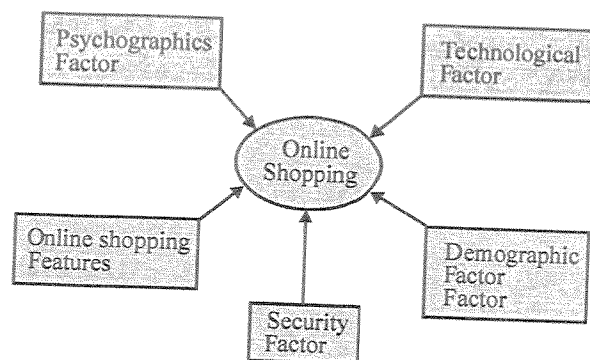


Figure 1 On-line shopping Model

Source: Compiled from Results of the Study.

Table 3. Categories of Factors and Variables Identified from the Study

S.No.	Category of factor	Variables under factor category
1	Demographic factor	Age, Gender, marital status, income/salary, family size, education, ability to use internet
2	Psychographics factor	Innovative, enjoyment, convenience, interaction with people, touch and feel
3	Online shopping feature and policies	Promotion, delivery policy, product return policy, detailed information of product, option of comparison.
4	Technological factor	Quality, representative picture of product, value for money
5	Safety factor	Security, privacy

Source: Compiled from the results of the study

The model given by the study shows that in India on-line shopping is basically impacted by psychographics and demographic variables of consumers vis-a-vis on-line shopping features, technological, and safety variables of on-line shopping mode.

Implications of the Study

The results of the study can be utilized by practitioners in re-looking or revamping their strategies for online shopping. Customer shop through online shopping because of time and effort saving, hence the online retailers should design their website in such a way that the customers can reach out to his/her desired product in the minimum time. To save time and effort of the customers the online retailers should also give an option to the customers to store and compare their choices before the actual purchase. Online retailers should focus on better positioning and representation of their products in online shopping. Websites/e-tailors should also ensure that all the relevant details regarding the quality and features are provided to the online shoppers on the website. Online shopping companies could also look into the possibility of spreading and promoting security and privacy related information on the Internet. Delivery policy of the online product should also include a defined trial period to assure that the customer does not miss the touch and feel experience. Online retailers should also look into the possibility of running call centres which could ensure that the customer get a chance to formally interact with the other party before the actual purchase.

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