# Antecedents of Online Shopping Satisfaction: A Study on Indian College Students

Subhro Sarkar<sup>1</sup> and Arpita Khare<sup>2</sup>

<sup>1,2</sup>Indian Institute of Management, Rohtak E-mail: <sup>1</sup>subhro.sarkar@iimrohtak.ac.in, <sup>2</sup>arpita.khare@iimrohtak.ac.in

Abstract—Traditional retail shopping in India is witnessing a gradual shift towards online shopping and due to the huge potential of Indian market many online retailers are emerging in India. Furthermore, international players with deep pockets are also getting attracted to the Indian market. Previous research has highlighted the importance of customer satisfaction in e-commerce and its role in maintaining a loyal customer base. The evolving competitive scenario of Indian online marketplace demands an empirical check of the decisive factors which influences the satisfaction of online buyers. Moreover, youths under the age group of 18-25 years constitute a huge market with great potential and were hence selected as the primary focus group for study. The present research addresses these issues by examining a conceptual model incorporating the key decision factors influencing satisfaction of consumers in the context of online shopping. The study examines the responses collected from 120 students studying in Indian universities using a survey questionnaire which was distributed by Electronic mail (e-mail). The data was analyzed using stepwise regression model. The results of the study revealed that Indian students' satisfaction from online shopping is primarily influenced by four variables namely customer service quality, website factors, perceived risk and perceived price. The authors present specific insights and suggestions which would enable online retailers and managers to enhance the satisfaction level of their users and thus keeping the users glued to the e-retailer.

# 1. INTRODUCTION

There has been an astounding change recently in how shoppers have changed the way they used to shop traditionally [25]. The e-commerce sector has seen a tremendous growth with the increasing use of smart phones, tablets, laptops, applications etc. and ever since there has been a considerable increase in the number of entrepreneurs coming up in e-commerce business with novel innovation and business models. The e-commerce sector in India is one of the world's emerging markets. It has seen a CAGR of 34% in between 2009 and 2014 and has reached 16.4 billion USD in 2014 with an estimation to reach 22 billion USD in 2015 [34].

E-tail represent a small fraction in e-commerce with an estimated share of 18% in India and encompasses online retail as well as online marketplaces [34]. In spite of the small share of e-tail, it is one of the fastest growing segments of e-commerce in India. This growth has been favored because of

the increasing online user base in India with the advent of low cost smart phones and mobile broadband technology [34]. It is expected that India would be having the second largest online user base of 283.8 million by 2016 leaving behind US at 264.9 million and China being on the top [6, 11]. B2C e-commerce sales in 2012 is totaled to be 12.12 billion USD in India as compared to 110 billion USD in China and 531.8 billion USD in U.S. and is expected by 2016 to grow to 30.31 billion USD in India as 554.81 billion USD in U.S [39-41]. B2C e-commerce sales in India saw a growth of 31.5% in 2014 as compared to the previous year.

Under such circumstances, the consumers have got a wide variety of options to choose among online shopping websites [43]. The online shopping websites are tremendously improving themselves and striving hard to survive and increase their share of the market in such a cut-throat competition [24].

The objective of this paper is to perform an empirical study on the antecedents of online consumer satisfaction which affect consumer's preference of one shopping website over another in India. The present study would help the website managers to understand the various attributes which the consumers look for before choosing a particular shopping website and hence would help them by building up on those attributes.

The present paper is structured as follows. A brief theoretical background is provided at first which is followed by the formation of hypotheses and a conceptual framework. The survey instrument and the sample are then described followed by the analysis of the findings and the hypotheses testing. Discussions over the results and its implication are mentioned and the paper is concluded with the limitations and scopes for future studies and research.

# 2. THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

# 2.1. Online Consumer Satisfaction

According to Oliver [29], consumer satisfaction can be defined as the consumers' evaluation of a product or service on the level of pleasure it provides on its consumption with

regards to needs and expectations. Previous research have found that consumer satisfaction leads to attitude change, loyalty, purchase intention and intention to return [2, 3, 18, 28, 31] highlighting its importance for e-commerce firms. In the present study, we try to determine the antecedents of Indian students' online shopping satisfaction by the level of contentment a consumer experiences with respect to his or her prior experience with any e-commerce firm. With reference to previous studies, we identify four dimensions that has an impact on consumer satisfaction namely website factors [13, 38, 44], perceived risk [4, 7, 17], customer service quality [30, 47] and perceived price [9, 15, 18, 36].

#### 2.2. Website Factors

Websites act as a warehouse of information and aid consumers by providing them with necessary information [9]. Online retailers whose websites have a competitive advantage over others encourage consumer behavior by providing social cues which helps in the formation of emotional bonds [46]. Shergill & Chen [38] states that a poor website design is a major cause for people not shopping online and hence website design should be as such that it can compensate for the loss in traditional in-store ambience.

Eroglu, Machleit, & Davis [13] found that the website atmospherics has a significant positive effect on consumer satisfaction. Clemes et al. [9] performed an empirical study on online shopping adoption in China and found out that a welldesigned website have a positive impact on online shopping adoption. Customer satisfaction, loyalty and attitude towards the website is strongly predicted by four factors namely website design, reliability, security and customer service [47]. Ranganathan & Ganapathy [35] identified four key dimensions of B2C websites: information content, design, security and privacy. Website quality has a direct and positive impact on online shopping impulsiveness [44] and online consumer satisfaction [3]. We, therefore, hypothesize that:

Hypothesis 1. Website factors have a positive relationship with Indian students' online shopping satisfaction.

#### 2.3. Perceived Risk

Consumers perceive higher risk in purchasing online than from traditional brick and mortar retail stores [42]. Online shopping behavior is different than traditional retail environment [32] and consumers may avoid or discontinue to use the product or service if they perceive higher risk [20]. Consumer would have an attitudinal orientation towards an online store if the perceived risk is low and subsequently the probability of making a purchase from such an online store increases [17].

Perceived risk has been explained using various dimensions in many previous studies. Chen et al. [7] identified nine different perceived risks related to price, time loss, quality, lack of good feel of product, after sale service, value, health, privacy and social pressure in his study through literature review. Sirrka L. Jarvenpaa & Todd [16] in their study recognized risks related to economic, social, performance, personal and privacy. Bhatnagar, Misra, & Rao [4] found that risk related to unexpected outcomes and credit card problems affect online shopping and with experience this risk reduces leading to frequent purchases. Ranganathan et al. [35] performed a study on B2C websites in which they found risk related to security was the distinguishing factor between high and low online purchase intentions.

Trust having a negative impact on perceived risk [20] moderates the relationship between perceived risk and consumer satisfaction [7]. Perceived risk decreases with increase in trust which leads to patronage of online retail stores which in turn enhances consumer satisfaction [33]. We, therefore, hypothesize that:

Hypothesis 2. Perceived risk has a negative relationship with Indian students' online shopping satisfaction.

#### 2.4. Customer Service Quality

Service quality is defined as the relative perceptual difference between customer expectations and actual service experience [30]. Online retailing being a service, customers will choose a retail store providing better customer service [12, 26].

Previous studies have tried to explain customer service using various dimensions. Parasuraman et al. [30] developed a scale called SERVQUAL which measures service quality on five dimensions of tangibles, reliability, responsiveness, assurance and empathy. Zeithaml, Parasuraman, & Malhotra [49] examined the distinguishing factors between service quality and e-service quality. Lee & Lin [23] modified the SERVOUAL model to consider the online shopping context and developed a scale to measure e-service quality. Wolfinbarger & Gilly [47] defined customer service as responsive, helpful and willing service that responds to customer enquiries quickly. Specific to e-service context, Ladhari [22] identified six dimensions namely reliability, responsiveness, web design, ease of use, privacy and information quality which would evaluate any type of service over the internet.

According to prior studies, e-service quality has an influence on customer e-satisfaction [37, 47]. Bressolles, Durrieu, & Senecal [5] performed a post-hoc predictive online consumer typology by using four e-service quality dimensions as predictors of e-satisfaction and found all the dimensions influencing e-satisfaction. We, therefore, hypothesize that:

Hypothesis 3. High customer service quality has a positive relationship with Indian students' online shopping satisfaction.

#### 2.5. Perceived Price

Price remains one of the most important factors in consumers' decision making process. Owing to the ability of making more price comparisons online among competing products, internet shopping would become more popular than traditional retail

shopping [45]. Jacoby & Olson [15] defined perceived price of a product as the consumer's perceptual representation or subjective perception of the objective price which leads to evaluation of products and not the actual price. With upcoming sites such as compare.buyhatke.com, comparing prices online among different e-retailers have become easier which enables the customer to pay a comparatively lesser price. Low perceived prices would attract the price-sensitive consumers towards online shopping [36] which would lead to consumer satisfaction. Indian consumers being price-sensitive [14] would have a tendency to shop online in order to maximize savings [8]. Ahuja, Gupta, & Raman [1] in their study found out that price were one of the reasons for purchasing online. Price perception has a direct and positive relationship with overall customer satisfaction [9, 18]. We, therefore, hypothesize that:

Hypothesis 4. Perceived prices has a positive relationship with Indian students' online shopping satisfaction.

Based on these four hypotheses, we represent the conceptual framework of this study in Fig. 1.

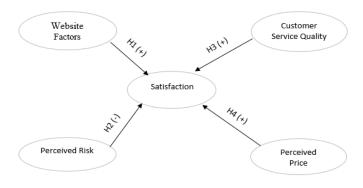


Fig. 1: Conceptual framework of the study

# **3. RESEARCH METHOD**

# 3.1. Survey Instrument and Sample

The survey instrument was composed of six sections. The first five sections contained a total of twenty seven items out of which six items were measuring website factors that were adapted from the scale suggested by Ranganathan & Ganapathy [35], nine items were measuring perceived risks that were adapted from the scale used by Chen et al. [7], three items were measuring customer service quality that were adapted from the scale suggested by Wolfinbarger & Gilly [47], four items were measuring perceived price that were adopted from the scale used by Clemes et al. [9] and five items were measuring online consumer satisfaction [48]. A 7-point Likert type scale was used to collect responses on these items with responses varying on the scale of 1 for strongly disagree and 7 for strongly agree. The last section contained measures of gender, age, purchasing frequency, monthly income and educational qualification of respondents.

The purpose of the study was to identify the influence of website factors, perceived risks, customer service quality and perceived price on Indian students' satisfaction. The youth was selected as the primary focus group for study as they constitute a huge market with great potential. A convenience sampling was done and the study sample was consisted of 120 college students enrolled in undergraduate, postgraduate and doctoral course in 3 different national universities in India. The student populations of these universities comprised of a diverse mix from different states and cities of India and were selected through a national level competition. Only 120 usable questionnaires could be obtained and used for analysis (out of 135). The sample consisted of 62.5% males and 37.5% females. As many as 70.8% of the sample were in the age group of 18-25 years, 26.7% in the age group of 26-35 years and the rest in the age group of 36-50 years. The online shopping experience of the study sample was as follows: 34.17% had an experience of 2 years or less, 47.5% had an experience of 2-4 years, 15.83% had an experience of 4-6 years and 2.5% had an experience of more than 6 years. The annual frequency of purchase was 5 times or fewer for 45.83% of the sample, 39.17% had an annual purchasing frequency of 6-10 times and the rest had an annual purchasing frequency of 11 times and higher. This shows that the respondents were aware of the online shopping websites and had visited them for browsing, product information search and for making online purchases.

# 4. ANALYSIS AND FINDINGS

The survey instrument contained 27 items in total to measure website factors, perceived risks, customer service quality, perceived price and Indian students' online shopping satisfaction. Cronbach's [10] coefficient alpha measures the extent to which the scale items cohere with each other. The reliability of the scale items were computed using the Cronbach's alpha value for each variable. Reliability coefficients of 0.7 or more are considered are considered as a criterion for internally consistent scale construct [27]. The Cronbach's alpha value ranged between 0.735-0.903 and thus fit the desired criteria of scale validation [27].

# 4.1 Hypothesis Testing

In order to understand the influence of website factors, perceived risks, customer service quality and perceived price on Indian students' online shopping satisfaction, step-wise regression analysis was run on the data obtained from the respondents. Four models were indicated as the determinant to Indian students' online shopping satisfaction from the stepwise regression results. The first model states customer service quality as the predictor of Indian students' online shopping satisfaction and having a positive influence ( $\beta$ =0.310). This is consistent with Hypothesis 1. The  $R^2$ value of .207 indicates that customer service quality contributes to 20.7% of Indian students' online shopping is primarily

ascertained to the quality of service they are being offered from the online shopping websites.

In the second model, customer service quality and website factors emerge as predictors of Indian students' online shopping satisfaction with a  $R^2$  value of .324 (p<0.01) and both of these account for 32.4% of Indian students' online shopping satisfaction. Thus there is a change in the predictors and both the  $\beta$  values being positive suggests Indian students' online shopping satisfaction is positively affected by customer service quality and website factors. This is consistent with Hypothesis 2.

In the third model, perceived risk is introduced and thus there are three predictors of Indian students' online shopping satisfaction namely customer service quality, website factors and perceived risks which account for 36.4% of Indian students' online shopping satisfaction ( $R^2$ =.364). The  $\beta$  value for perceived risks being negative suggests negative influence of perceived risks on satisfaction. This is consistent with Hypothesis 3.

The fourth model includes perceived price and all the four variables (customer service quality, website factors, perceived risks and perceived price) accounts for 39.9% of Indian students' online shopping satisfaction ( $R^2$ =.399). The  $\beta$  value for perceived price is positive suggesting positive influence of perceived price on Indian students' online shopping satisfaction. This is consistent with Hypothesis 4.

The p value for customer service quality, website factors, perceived risks and perceived price is significant at .01 levels thus proving all our hypotheses true.

# 5. DISCUSSIONS AND IMPLICATIONS

The present research reveals a number of things related to satisfaction among Indian students while shopping online. These findings will be useful to the online retailers to enhance the satisfaction level of their customers by making their shopping experience better. Previous research reveals that online consumer satisfaction has a positive relationship with e-retailer loyalty [19].

The findings of the research show that e-service quality has a positive relationship with Indian students' satisfaction from online retailers. The dimensions on which the scale tested e-service quality consists of responsiveness, helpfulness and promptness in addressing the problems [47]. This is similar to the previous research findings which posits a direct and positive relationship in between service quality and satisfaction [37, 47]. Thus online retailers can focus on improving the underlying dimensions of e-service quality and hence gain an advantage over other online retailers.

Indian students' online satisfaction is also positively influenced by the website factors as revealed from the present study. This is in compliance with the previous researchers who found out a similar positive relations in between website factors and satisfaction [3, 13, 35,47]. The dimensions on which the scale tested website factors consist of information content, design, security and privacy [35]. Thus the online retailers must try to build upon on these factors to improve their website quality as websites act as a place of interaction between online customers and the e-retailer. Hence improved website quality will aid in making the shopping experience enjoyable [35].

Perceived risks were found to have a negative relationship with Indian students' online satisfaction. Previous research studies have also suggested to reduce perceived risks associated with online shopping in order satisfy online consumers [4, 7, 16, 33]. The present study measured nine dimensions of perceived risks related to price, time loss, quality, lack of good feel of product, after sale service, value, health, privacy and social pressure [7]. The online retailers should focus on minimizing the underlying risks in an online purchase to make their customers feel safer and hence gain trust over their shopping websites which would lead to consumer satisfaction [7, 20].

Also, Indian students' satisfaction was found to be having a positive relationship with perceived price. This is again in compliance with the previous research findings which suggests online retailers to set prices that could be perceived easily [9, 15, 18, 36].

#### 6. LIMITATIONS AND FUTURE RESEARCH SCOPE

The first limitation of this study is that the scales used in this study to measure the different variables were adopted from previous research studies and were not developed in the context of Indian students. Different results can be expected if the scales were developed in the Indian context as there is a difference in the Western and Asian cultures [21].

The future research scopes would include a forward extension of this study on a larger set of data to predict the influence of online customer satisfaction on repurchase intention, word of mouth and loyalty towards the shopping websites. Also a comparative study among the shopping websites could be performed to empirically test the study results and to give better insights on the specific website features that are ascertained maximum priority by Indian students.

#### REFERENCES

- [1] Ahuja, M., Gupta, B., & Raman, P. "An empirical investigation of online consumer purchasing behavior." Communications of the ACM, 46, 12, 2003, 145.
- [2] Anderson, R. E., & Srinivasan, S. S. "E-Satisfaction and E-Loyalty: A Contingency Framework". Psychology and Marketing, 20, 2, 2003, 123–138.
- [3] Bai, B., Law, R., & Wen, I. "The impact of website quality on customer satisfaction and purchase intentions: Evidence from Chinese online visitors". International Journal of Hospitality Management, 27, 3, 2008, 391–402.

- [4] Bhatnagar, A., Misra, S., & Rao, H. R. "On risk, convenience, and Internet shopping behavior". Communications of the ACM, 43, 11, 2000, 98–105.
- [5] Bressolles, G., Durrieu, F., & Senecal, S. "A consumer typology based on e-service quality and e-satisfaction". Journal of Retailing and Consumer Services, 21, 6, 2014, 889–896.
- [6] Business Standard. India to have second largest online user base after China by 2016, 2014.
- [7] Chen, Y., Yan, X., Fan, W., & Gordon, M. "The joint moderating role of trust propensity and gender on consumers' online shopping behavior". Computers in Human Behavior, 43, 2015, 272–283.
- [8] Chiang, K.-P., & Dholakia, R. R. "Factors Driving Consumer Intention to Shop Online: An Empirical Investigation". Journal of Consumer Psychology, 13, 1-2, 2003, 177–183.
- [9] Clemes, M. D., Gan, C., & Zhang, J. "An empirical analysis of online shopping adoption in Beijing, China". Journal of Retailing and Consumer Services, 21, 3, 2014, 364–375.
- [10] Cronbach, L. J. Coefficient alpha and the internal structure of tests. Psychometrika, 16, 3, 1951, 297–334.
- [11] E-Commerce in India, January, 2013.
- [12] Eng, T.-Y. "E-customer service capability and value creation". The Service Industries Journal, 289, 2008, 1293–1306.
- [13] Eroglu, S. A., Machleit, K. A., & Davis, L. M. "Empirical testing of a model of online store atmospherics and shopper responses". Psychology and Marketing, 202, 2003, 139–150.
- [14] Goswami, P., & Mishra, M. S. "Would Indian consumers move from kirana stores to organized retailers when shopping for groceries?" Asia Pacific Journal of Marketing and Logistics, 21, 1, 2009, 127–143.
- [15] Jacoby, J., & Olson, J. C. "Consumer response to price: attitudinal, information processing perspective condensed version". University Park, Pa.: College of Business Administration, Pennsylvania State University, 1976.
- [16] Jarvenpaa, S. L., & Todd, P. a. "Consumer Reactions to Electronic Shopping on the World Wide Web". International Journal of Electronic Commerce, 12, 1996, 59–88.
- [17] Jarvenpaa, S. L., Tractinsky, N., & Saarinen, L. "Consumer trust in an internet store: a cross culture validation". Journal of Computer Mediated Communication, 5, 1999, 1–35.
- [18] Jiang, P., & Rosenbloom, B. "Customer intention to return online: price perception, attribute-level performance, and satisfaction unfolding over time". European Journal of Marketing, 391/2, 2005, 150–174.
- [19] Kaura, V., Prasad, C. S. D., & Sharma, S. "Service quality, service convenience, price and fairness, customer loyalty, and the mediating role of customer satisfaction". International Journal of Bank Marketing, 334, 2015, 404–422.
- [20] Kesharwani, A., & Bisht, S. S. "The impact of trust and perceived risk on internet banking adoption in India: An extension of technology acceptance model". International Journal of Bank Marketing, 304, 2012, 303–322.
- [21] Khare, A., & Rakesh, S. "Antecedents of Online Shopping Behavior in India: An Examination". Journal of Internet Commerce, 104, 2011, 227–244.
- [22] Ladhari, R. "Developing e-service quality scales: A literature review". Journal of Retailing and Consumer Services, 176, 2010, 464–477.

- [23] Lee, G.-G., & Lin, H.-F. "Customer perceptions of e-service quality in online shopping". International Journal of Retail & Distribution Management, 332, 2005, 161–176.
- [24] Lin, G. T. R., & Sun, C.-C. "Factors influencing satisfaction and loyalty in online shopping: an integrated model". Online Information Review, 333, 2009, 458–475.
- [25] Luo, J., Ba, S., & Zhang, H. "The Effectiveness of online shopping characteristics and well"-designed websites on satisfaction. MIS Quarterly, 364, 2012, 1131–1144.
- [26] Massad, N., & Beachboard, J. C. "Service Failure and Recovery in Electronic Retailing". Information Resources Management Journal, 223, 2009, 1–15.
- [27] Nunally, J. C., & Bernstein, I. H. Psychometric theory. New York: McGraw-Hill, 1978.
- [28] Oliver, R. L. "A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions". Journal of Marketing Research, 174, 1980, 460–469.
- [29] Oliver, R. L. Satisfaction: a behavioral perspective on the consumer. McGraw-Hill Series in Marketing Show All Parts in This Series, 1997.
- [30] Parasuraman, a, Zeithaml, V. a, & Berry, L. L. "SERVQUAL: A Multiple-Item scale for Measuring Consumer Perceptions of Service Quality". Journal of Retailing, 1988.
- [31] Park, C.-H., & Kim, Y.-G. "Identifying key factors affecting consumer purchase behavior in an online shopping context". International Journal of Retail & Distribution Management, 311, 2003, 16–29.
- [32] Peterson, R. A., Balasubramanian, S., & Bronnenberg, B. J. "Exploring the Implications of the Internet for Consumer Marketing". Journal of the Academy of Marketing Science, 254, 1997, 329–346.
- [33] Prasad, C. J. S., & Aryasri, a R. "Determinants of Shopper Behavior in E-tailing: An Empirical Analysis". Paradigm Institute of Management Technology, 131, 2009, 73–84.
- [34] Pwc. Evolution of e-commerce in India: Creating the bricks behind the clicks, 2014. Retrieved on 21 June 15
- [35] Ranganathan, C., & Ganapathy, S. "Key dimensions of businessto-consumer web sites". Information and Management, 396, 2002, 457–465.
- [36] Reibstein, D. J. "What Attracts Customers to Online Stores, and What Keeps Them Coming Back?" Journal of the Academy of Marketing Science, 304, 2002, 465–473.
- [37] Sabiote, C. M., Frías, D. M., & Castañeda, J. A. "E-service quality as antecedent to e-satisfaction: The moderating effect of culture". Online Information Review, 362, 2012, 157–174.
- [38] Shergill, G. S., & Chen, Z. "Web-Based Shopping : Consumers' Attitudes Towards Online Shopping in New Zealand". Journal of Electronic Commerce Research, 62, 2005, 79–94.
- [39] Statista. B2C e-commerce sales in India from 2011 to 2016, 2012a. Retrieved on 1 Jun 2015
- [40] Statista. B2C e-commerce sales in United States from 2011 to 2016, 2012b. Retrieved on 1 Jun 2015
- [41] Statista. B2C e-commerce sales in China from 2011 to 2016, 2012c. Retrieved on 1 Jun 2015
- [42] Suki, N. M., & Suki, N. M. "Online Buying Innovativeness: Effects of Perceived Value", International Journal of Business and Society, 82, 2007, 81–93.

- [43] Sun, C. C., & Lin, G. T. R. "Using fuzzy TOPSIS method for evaluating the competitive advantages of shopping websites". Expert Systems with Applications, 369, 2009, 11764–11771.
- [44] Turkyilmaz, C. A., Erdem, S., & Uslu, A. "The Effects of Personality Traits and Website Quality on Online Impulse Buying. Procedia - Social and Behavioral Sciences", 175, 2015, 98–105.
- [45] Vijayasarathy, L. R., & Jones, J. M. "Print and Internet catalog shopping: assessing attitudes and intentions". Internet Research, 103, 2000, 191–202.
- [46] Wang, L. C., Baker, J., Wagner, J. a, & Wakefield, K. "Can a Retail Web Site Be Social?" Journal of Marketing, 713, 2007, 143–157.
- [47] Wolfinbarger, M., & Gilly, M. C. "eTailQ: Dimensionalizing, measuring and predicting etail quality". Journal of Retailing, 793, 2003, 183–198.
- [48] Wu, I. L. 2013. "The antecedents of customer satisfaction and its link to complaint intentions in online shopping: An integration of justice, technology, and trust". International Journal of Information Management, 331, 2013, 166–176.
- [49] Zeithaml, V. a., Parasuraman, a., & Malhotra, a. "Service Quality Delivery through Web Sites: A Critical Review of Extant Knowledge". Journal of the Academy of Marketing Science, 304, 2002, 362–375.