



# ANTECEDENTS OF CUSTOMER SATISFACTION IN ONLINE SHOPPING FOR ELECTRONIC PRODUCTS

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**Abstract :** The objective of this research was to identify the antecedents of customer satisfaction in online shopping for electronic products. The study was based in Kolkata and the questionnaires were distributed to the online buyers only. Exploratory factor analysis (EFA) using SPSS was done to extract factors. Thirty five independent observed variables are reduced to twenty three, which are grouped in six constructs. The nine scale items of dependent variable were reduced to two variables. It was found through EFA that the antecedents of customer satisfaction in online shopping for electronic products are delivery process, payment system, e-service quality, price experience, return policy and website quality.

**Key words -** Online shopping, customer satisfaction in online shopping, influencing factors, e tailing, antecedents

## I. INTRODUCTION

In the digital age, more and more customers are preferring to buy through online. But the market share of e tailing industry compared to retail industry is still very low. The buying as well as selling process is changing because of the fast development of information technology and availability of internet services. The customer needs are also changing. There are advantages and disadvantages of buying through online. The high internet usage rate has given an opportunity for the firms to sale through online (Jayasubramanian et al., 2015). New customers are to be motivated to buy through online by giving them post purchase satisfaction (Tandon et al., 2017). Measurement of customer satisfaction in online shopping will guide the firms to take necessary strategies to improve the sales. Moreover, the satisfied customers will give positive word of mouth, which will increase the profitability of the firm (Biswas et al., 2019). The acceptance of buying through online will pave the way for development of the small and medium scale industries (SMEs). The whole world will be the market for the SMEs and they will be able to sale their products anywhere in the world, which will facilitate the growth of the national economy.

## II. STATEMENT OF THE PROBLEM

The success of e tailing will depend on the customer satisfaction. So it is necessary to investigate the factors that are responsible for generating customer satisfaction and improving the performance of the business (Alam & Yasin, 2010). In developing countries online buying is still not a preferred method and many organizations are trying to find out the factors that will satisfy the customers (Vasic et al., 2018), which have created a necessity to analyze customer's perception (Karim, 2013). Consumer behavior is not same in all the countries. It has relation to the different cultures of the consumers. The consumer preferences change over time. Hence there is a need to understand the changing influencing factors of customer satisfaction in online shopping. There are studies in the area of customer satisfaction, but most of them are trying to generalize the factors for different product categories. But the factors might be different for different products. Satisfying online shopping consumers will be possible through better understanding of the antecedents of customer satisfaction, but the information available in literature is limited (Tzeng et al., 2021). The studies related to customer satisfaction in online shopping for electronic products are limited in India. The objective of this study is to specifically find out the factors that influence customer satisfaction in online shopping for electronic products.

### III. LITERATURE REVIEW

Ho & Wu (1999) stated that internet technology, information content, logistics, web site quality and product variety influence customer satisfaction in online shopping. Liu et al. (2008) conducted a research study in China and concluded that there are eight latent variables that influence customer satisfaction in online shopping. These are payment options, website quality, delivery quality, information content, merchandising quality, security, transaction capability and customer service. Delivery quality, website quality, product variety are the important factors that influence customer satisfaction in online shopping (Alam & Yasin, 2010). Lin et al. (2011) concluded that delivery process, price discount, product quality, information content affect customer satisfaction. Delivery, payment and trust have great impact on customer satisfaction in online shopping (Gim, 2014). Tandon et al. (2017) collected data from 365 online shoppers in India, analyzed the factors of customer satisfaction and found that consumer's perception about the website quality is very important to influence customer satisfaction in online shopping, which will increase the purchase through online. Mandal and Sur (2017) in their research report emphasized the necessity of dividing the influencing factors in two categories namely motivating and restricting factors that influence customer satisfaction, which in turn create buying intention through online. In their research in Bangladesh among the online customers of bank, Biswas et al. (2019) observed that website quality plays a very important role to influence customer satisfaction. Vasić et al., (2019) stated that customer satisfaction depends on number of factors. But there is somewhat disagreement about the influencing factors of customer satisfaction in online shopping. Through review of research articles, they identified twenty six scale items and grouped them in seven constructs. They applied confirmatory factor analysis and came to the conclusion that customer satisfaction in online shopping depends on six factors namely quality, security of information, shipping, product information, time and price experience. Tzeng et. al. (2021) conducted a study among 594 customers in China, selected randomly from customers of five product types before and after online shopping holiday and found that web site quality, product quality and monetary savings have positive impact on customer satisfaction in online shopping. But if the return process is not easy, it can lead to dissatisfaction. In this case good after sales service can be a good service recovery method. Jayasubramanian et al., (2015) opined that product variety, fast service, price discount influence people. They said that people while buying through online will have the risk of sharing the personal information, which may lead to security problems. But presently due to technological advancements, it is difficult for the hackers and criminals to have access to the personal information. Vasić et al. (2019) were also of the view that online cheating, sharing of personal information, inconsistent product quality, shipping issues will be present in online shopping, but these problems are now minimized and people are realizing about the benefits of online shopping.

### IV. RESEARCH OBJECTIVE

To find the antecedents of customer satisfaction in online shopping for electronic products

### V. RESEARCH METHODOLOGY

Thirty five scale items were selected based on literature review. A questionnaire was designed containing these scale variables. The data was collected from residents of Kokata, who buy through online using this questionnaire. Demographic questions were designed using nominal scale and questions related to scale variables were designed applying Likert scale. Kaiser-Meyer-Olkin Measure (KMO) and Sampling Adequacy test were done to justify the application of factor analysis. Exploratory factor analysis (EFA) was done using SPSS to identify the important factors. Reliability test was done to check whether scale variables that measure the construct variables are reliable and validity tests were conducted to find whether the constructs are valid ones.

### VI. DATA ANALYSIS AND FINDINGS

Analysis was done through Exploratory Factor Analysis (EFA) using SPSS. KMO value of 0.811 and Sig. value of 0.000 in Bartlett's test of sphericity suggest that factor analysis can be applied. All scale variables have very good correlation with each other as communalities are more than 0.53. EFA using PCA extracted six antecedent factors of customer satisfaction in online shopping namely delivery process, payment system, e-service quality, price experience, return policy and website quality.

**Table 1 : Summary of results of Exploratory Factor Analysis (EFA), Reliability and Validity**

Scale item	Factors	Factor loadings	Average factor loadings	Cronbach's Alpha
@18Track	Factor 1 (Delivery process)	.836	0.734	0.785
@16Otdel		.741		
@17DelP		.732		
@21DeII		.628		
@31PayS	Factor 2 (Payment system)	.794	0.740	0.845
@33Eopo		.790		
@32Trust		.692		
@34PayD		.687		
@5Reli	Factor 3 (e-service Quality)	.708	0.652	0.761
@6ComW		.695		
@12PrPh		.680		
@4InfC		.620		
@7Conv		.561		
@26SCost	Factor 4 (Price experience)	.850	0.738	0.786
@28RewR		.721		
@25Disct		.713		
@27Promo		.668		
@23RetF	Factor 5 (Return policy)	.836	0.766	0.802
@24ERef		.738		

@22Excg		.724		
@3Speed		.737		
@2Desn	Factor 6 (Website Quality)	.721	0.704	0.744
@1Ease		.654		

These explain 67.48 percent of total variance. All the individual factor loadings are more than 0.55 and the average factor loading values of all the factors are more than 0.7 except in one case where it is 0.65 (refer table 1). These prove that there is convergent validity. All the items of each factor have very good correlation with each other and the difference between any two correlations of two different factors are more than 0.2, which justify the existence of discriminant validity. The average value of the factor loadings of each factor is more than 0.70 for almost all the factors except for factor 3, where the value is 0.65 (refer table 1). It shows that the scale variables are very good measures of their latent constructs.

## VII. CONCLUSION

EFA using SPSS was carried out and 35 independent variables are reduced to 23. The 9 scale items of dependent variable are reduced to 2 variables. The important factors that influence customer satisfaction in online shopping for electronic products are 1. Delivery process, 2. Payment system, 3. e-service quality, 4. Price experience, 5. Return policy and 6. Web site quality.

## VII. LIMITATIONS AND FUTURE RESEARCH

The sampling frame for online shopper is not available. Hence, random sampling could not be done for selecting samples. Purposive sampling technique was used to collect data from online customers of Kolkata. Though there are limitations, but this research gives a better understanding about the factors that impact the customer satisfaction in online shopping for electronic products. Further research can be conducted using these factors and structural equation modeling can be applied to have refined knowledge about the antecedent factors and their strength of relationships with the dependent variable.

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