

# Customer's Perceptions of E-SQ in Online Shopping Context: An Empirical Study in Mumbai (India)

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**Abstract-** *The increasing trend of internet usage in India provides an emerging prospect for online retailers. Online shopping has seen tremendous growth worldwide. In developing countries, online shopping is still in the infancy stage. The advent of electronic commerce has encouraged intensified interest in understanding the customer's perception about online shopping. E-tailors need to understand the nature of the relationships among service quality, customer satisfaction, and their purchase behaviour. If online retailers know the service quality dimensions affecting customer's behaviour then they can develop appropriate marketing strategies to convert browsers into active buyers. In this study various e-service quality dimensions of online shopping as perceived by customers are identified and confirmed their relationship with shopping behaviour. The study also confirms is it the perceptions of customers are independent of their gender and marital status. It was discovered that perceptions e-service quality in online shopping context differs with respect to gender but not with respect to marital status. In this study only few e-service quality dimensions were analyzed and tested. As per the study the dimensions reliability, responsiveness, access and efficiency are having positive impact where as flexibility and ease of use are having negative impact with respect to online shopping behaviour.*

**General Terms-** E-Commerce application.

**Keywords-** E-Commerce; Online Shopping; Customer's Perception; E-Service Quality.

## 1. INTRODUCTION

The e-commerce is one of the biggest things that have taken the Indian business by storm. It is creating an entire new economy, which has a huge potential and is fundamentally changing the way businesses are done. It has advantages for both buyers as well as sellers and this win-win situation is at the core of its phenomenal rise. The advent of electronic commerce has encouraged intensified interest in understanding the customer's perception about online shopping. E-tailors need to understand the nature of the relationships among service quality, customer satisfaction, and their purchase behavior.

India's e-commerce sector is zooming with transactions rising 50% annually. Online retailing, or e-tailing, which accounts for about 6% share of the Rs 46,000-crore industry, is at the forefront of the rapid growth. A large number of surfers use the internet to simply look for information about the product or service they want. There arise many questions related to shopping online about quality, delivery, satisfaction, return policies and payment security. Online shopping is not just about a jazzy website, to create a great user experience; firms have to invest

serious money to build a robust backend infrastructure, i.e., a safe and scalable platform with integrated payment solutions and the logistics. Thus, it is necessary for both researchers and online store managers to understand the various e-service quality dimensions of online shopping experience as perceived by the customers. After understanding various service quality dimensions their relationship with customers buying behavior needs to be confirmed which will help e-retailers to decide.

## 2. REVIEW OF LITERATURE

E-service is an emerging and rapidly evolving area as demonstrated by new technological innovations. Motivated by the growing interest in online commerce, we focus our research on customers' perceptions of e-service quality in online shopping. Previous research has clearly demonstrated that customers' service quality perceptions affect their behavioral intentions. Customers, satisfied with the quality of a service, are more inclined to return to a service outlet, to repurchase from the provider, to spread favourable word of mouth, and to pay regular or even premium prices (Reichheld & Sasser, 1990; Zeithaml et

al., 1996). The most experienced and successful e-commerce companies are beginning to realize that key determinants of success or failure are not merely web presence or low price but delivering high quality of e-services (E-SQ)( Wang M. ,2003)

E-service quality is defined as seven dimensions that form two scales: a core e-SQ scale and a recovery scale (Zeithamal, 2002). Core e-SQ consists of four dimensions – efficiency, reliability, fulfillment and privacy. The recovery scale includes dimensions such as responsiveness, compensation and contact. E-service quality can be defined as overall customer evaluations and judgments regarding the excellence and quality of e-service delivery in the virtual marketplace (Santos, 2003). Parasuraman et al. (1988) conceptualize service quality as a multi-item scale called the SERVQUAL model. The SERVQUAL model includes the five dimensions of tangibles, reliability, responsiveness, assurance, and empathy. Moreover, several studies have proposed that the SERVQUAL scale items must be reformulated before they can be meaningfully used in the online shopping context (van Riel et al., 2001; Santos, 2003).

Lee, Gwo-Guang & Lin, Hsiu-Fen (2005) revised SERVQUAL scale items to establish dimensions of e-service quality through web site design, reliability, responsiveness, trust, and personalization. Barnes and Vidgen (2002) developed a completely different scale to measure an organization's e-services quality offering, which they also call WebQual. The webQual measured the site's quality by customer perceptions weighted by importance on the basis of five factors: usability, design, information, trust, and empathy.

Yoo and Donthu (2001) developed a nine-item SITEQUAL scale for measuring site quality on four dimensions: ease of use, aesthetic design, processing speed, and security. Like WebQual, SITEQUAL does not capture all aspects of the online shopping process and therefore does not represent a comprehensive assessment of a site's service quality. Wolfinbarger and Gilly (2003) developed a 14-item scale called eTailQ. The scale contains four factors: Web site design, reliability/fulfillment, privacy/security, and customer service.

Zeithaml, Parasuraman, and Malhotra's (2000) study identified dozens of Web site features at the perceptual attribute level and categorized them into 11 e-SQ dimensions: Reliability, Responsiveness, Access, Flexibility, Ease of use, Efficiency, Assurance/trust, Security/privacy, Price knowledge, Site aesthetics, Customization/personalization. In this study the series of iterations resulted in the final E-S-QUAL Scale, consisting of four dimensions, as efficiency, fulfillment, system availability and privacy. Following the same process an e-recovery service quality scale (E-RecSQUAL) was created consisting of three dimensions such as responsiveness, compensation and contact. However the purpose of E-S-

QUAL (and E-RecS-QUAL) is solely to measure the service quality of Web sites.

Thus various studies contributed various dimensions to measure e-service quality. Some dimensions are specifically used to measure web quality or web site quality, site quality and e-service quality. However all this dimensions needs to be tested to measure overall e-service quality in context to the online shopping. As a beginning of the study we are considering only few dimensions such as reliability, responsiveness, access, flexibility, ease of use and efficiency to relate with online shopping behavior.

### 3. OBJECTIVE OF THE STUDY

Today the Internet has captivated the attention of retail marketers. The Internet, as a retail outlet, is moving from its infancy used by only a few to a market with significant potential (Fojt, 1996; Shim, Eastlick, Lotz & Warrington, 2001). Much research has been concentrated on the online shopping in the world. However, there is still a need for closer examination on the online shopping buying behavior in specific countries.

The objectives of the study are

1. To investigate customer's perception of e-service quality and adoption of online shopping in Mumbai.
2. To explore the key dimensions of e-service quality perceptions towards online shopping.
3. To examine the relationship between demographic characteristics and the perceived e-service quality perceptions.
4. To find out the relationship between online shopping behavior with marital status.

#### Hypothesis

**H<sub>11</sub>:** There is significant difference between Marital Status of Respondents and online Shopping behavior.

**H<sub>12</sub>:** There is significant difference between Gender of Respondents and online shopping behavior.

**H<sub>13</sub>:** There is significant relationship between Reliability and online shopping behavior.

**H<sub>14</sub>:** There is significant relationship between Responsiveness and online shopping behavior.

**H<sub>15</sub>:** There is significant relationship between Access and online shopping behavior.

**H<sub>16</sub>:** There is significant relationship between Flexibility and online shopping behavior.

**H<sub>17</sub>:** There is significant relationship between Ease of use and online shopping behavior.

**H<sub>18</sub>:** There is significant relationship between Efficiency and online shopping behavior.

### 4. RESEARCH METHODOLOGY

The data for the study is gathered through a structured questionnaire consisting of a number of question item related to online shopping behavior, and various e-service

quality dimensions (Reliability, Responsiveness, Access, Flexibility, Ease of use and Efficiency). The survey was carried out in Mumbai city to understand the customer's perceptions of e-service quality in online shopping context. The data from post graduate students collected randomly. The respondents were requested to indicate their perceptions of different e-service quality dimensions and

Online shopping behavior based on a five-point Likert-scale. As a result one hundred useful responses were received for data analysis. The Statistical Package for Social Science (SPSS) has been used to test the survey data. In particular, the following multiple regression models have been employed to examine the hypotheses proposed in the previous section.

## 5. DATA ANALYSIS & CONCLUSIONS

### Demographic Profile of the Respondents.

**Table 1. AGE**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25 yrs	25	25.0	25.3	25.3
	26-40	71	71.0	71.7	97.0
	41-50	3	3.0	3.0	100.0
	Total	99	99.0	100.0	
Missing	System	1	1.0		
	Total	100	100.0		

Table 1 shows that of the respondents sampled, 25.3% are between 18 to 25 years; 71.7% are between 26-40 years; while those aged between 41 to 50 are 3 %.

**Table 2. GENDER**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	74	74.0	74.0	74.0
	female	26	26.0	26.0	100.0
	Total	100	100.0	100.0	

Table 2 shows that Males are 74% of the sample while females comprised the remaining 26 %.

**Table 3. Income per annum of the respondents by Gender**

		Gender		Total
		male	female	
Inc_P_A	< 2,00,000	8	8	16
	200000-500000	22	13	35
	500000-1000000	26	1	27
	>1000000	14	3	17
	Total	70	25	95

Table 3 shows the Income per annum of the respondents by Gender.

22 males and 13 females are earning between 200000 – 500000 rupees; 26 males and only 1 female are earning between 500000-1000000 rupees followed by 14 males and 3 females with a 1000000 plus per annum.

### Testing of Hypothesis

**H<sub>01</sub>:** There is no significant difference between Marital Status of Respondents and online Shopping behavior.

**H<sub>11</sub>:** There is significant difference between Marital Status of Respondents and online Shopping behavior.

**Table 4. Group Statistics**

	Mar_Status	N	Mean	Std. Deviation	Std. Error Mean
esb	married	36	3.7889	1.08655	.18109
	single	62	3.6065	.84001	.10668

**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
esb	Equal variances assumed	3.532	.063	.929	96	.355	.18244	.19643	-.20747	.57235
	Equal variances not assumed			.868	59.403	.389	.18244	.21018	-.23807	.60294

The independent sample test shows that F significant value is .063 which is greater than .05 concludes that there are equal variances between marital status of respondents and online shopping behavior. Thus the p value for the t- test is .355 which is high with the significant level, so we accept the Null Hypothesis and reject the Alternative hypothesis. Therefore we conclude that there is no significant difference between married and single respondent with respective online shopping.

**H<sub>0</sub>2:** There is no significant difference between Gender of Respondents and online shopping behavior.

**H<sub>1</sub>2:** There is significant difference between Gender of Respondents and online shopping behavior.

**Table 5. Group Statistics**

	Gender	N	Mean	Std. Deviation	Std. Error Mean
esb	male	74	3.8297	.85456	.09934
	female	24	3.1917	1.03069	.21039

**Independent Samples Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
esb	Equal variances assumed	2.152	.146	3.018	96	.003	.63806	.21139	.21846	1.05767
	Equal variances not assumed			2.742	33.869	.010	.63806	.23266	.16517	1.11096



The sig. (2-tailed) p value for equal variances = .003 suggests that there is significant difference between Gender of Respondents and on line shopping. The mean value suggest that Male respondents are more interested for online shopping.

#### Regression Analysis

**H<sub>03</sub>:** There is no significant relationship between Reliability and online shopping behavior.

**H<sub>13</sub>:** There is significant relationship between Reliability and online shopping behavior.

**H<sub>04</sub>:** There is no significant relationship between Responsiveness and online shopping behavior.

**H<sub>14</sub>:** There is significant relationship between Responsiveness and online shopping behavior.

**H<sub>05</sub>:** There is no significant relationship between Access and online shopping behavior.

**H<sub>15</sub>:** There is significant relationship between Access and online shopping behavior.

**H<sub>06</sub>:** There is no significant relationship between Flexibility and online shopping behavior.

**H<sub>16</sub>:** There is significant relationship between Flexibility and online shopping behavior.

**H<sub>07</sub>:** There is no significant relationship between Ease of use and online shopping behavior.

**H<sub>17</sub>:** There is significant relationship between Ease of use and online shopping behavior.

#### Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.084	.481		-.175	.861
	Rel	.498	.111	.418	4.474	.000
	Res	.202	.132	.146	1.529	.130
	Access	.102	.126	.074	.813	.418
	Flexibility	-.201	.152	-.142	-1.319	.190
	EOU	-.062	.134	-.048	-.460	.646
	EFF	.515	.110	.443	4.683	.000

a Dependent Variable: esb

The results indicate that the independent variables namely Reliability, Responsiveness, Access and Efficiency have a positive impact for online shopping. This is because the signs of all the regression coefficients are positive. However the independent variables Flexibility and Ease of use have a negative impact for online shopping.

The R<sup>2</sup> value for the model is .521 which indicates that 52.1% of the variations in the online shopping behavior are explained by Reliability, Responsiveness, Access, Efficiency, Flexibility and Ease of use. The significance of R<sup>2</sup> is tested with the help of F statistics which works out to be 18.402 and is significant at 5% significance level.

**H<sub>08</sub>:** There is no significant relationship between Efficiency and online shopping behavior.

**H<sub>18</sub>:** There is significant relationship between Efficiency and online shopping behavior.

#### Table 6. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.742(a)	.551	.521	.64907

a Predictors: (Constant), EFF, Res, Access, Rel, EOU, Flexibility

#### ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46.515	6	7.753	18.402	.000(a)
	Residual	37.916	90	.421		
	Total	84.431	96			

a Predictors: (Constant), EFF, Res, Access, Rel, EOU, Flexibility

b Dependent Variable: esb

The results of this study show that our some hypotheses are strongly supported. Firstly, H<sub>13</sub> is strongly supported because the coefficient ( $\beta = .418$ ,  $t = 4.474$ ,  $p < .001$ ) shows that perceived Reliability has a significant and positive effect on respondent attitude towards online shopping. Secondly, H<sub>18</sub> is supported, because the coefficient ( $\beta = .443$ ,  $t = 4.683$ ,  $p < .001$ ) indicates that there is significant and positive relationship between Efficiency and online shopping. Thirdly, H<sub>14</sub> and H<sub>15</sub> are not supported, because the coefficients ( $\beta = .146$ ,  $t = 1.529$ ,  $p > .001$ ) & ( $\beta = .074$ ,  $t = .813$ ,  $p > .001$ ) suggest that Responsiveness and Access are not having significant

relationship towards online shopping. Moreover, H<sub>16</sub> and H<sub>17</sub> are not supported, because the coefficients ( $\beta = -.142$ ,  $t = -1.319$ ,  $p > .001$ ) & ( $\beta = -.048$ ,  $t = -.460$ ,  $p > .001$ ) suggest that Flexibility and Ease of use are not having significant relationship towards online shopping.

Overall we conclude that e-service quality dimensions reliability and efficiency are statistically significant and the other dimensions such as responsiveness, access, flexibility and ease of use are not statistically significant with respect to online shopping behavior. Further from the standardized coefficients it shows that the reliability dimension is the most important e-service quality dimension.

## 6. LIMITATION & FUTURE DIRECTION

As with most researchers, this study has limitation. The study has been conducted based on the data acquired from the online buyers of Mumbai (India) only and the findings may not be applicable to other countries of the world because of socio-cultural differences. Sample size is very small. To accurately evaluate Indian consumers' perception of online shopping, a large sample size is desirable. The present study covers only the perception of six dimensions of e-service quality with respect to on line shopping behavior, so that there are scope for further studies for others dimensions also like trust, security, price knowledge, website aesthetics and personalization. Further we can study more relationships with respect to on line shopping behavior like optimism of the customer's technology readiness, innovativeness of the customer's technology readiness and e shopping behavior.

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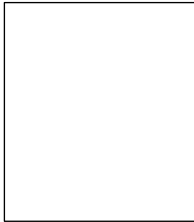
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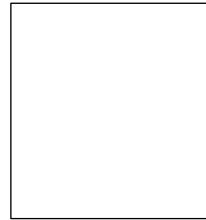
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