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E-Service Quality: Preferences of Online Shoppers in Five Indian Cities

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Abstract

Shopping via Internet is a fairly new development for Indian consumers. Even then its reach and impact in modern day marketing are remarkable. One of the foundations for long term growth of any business is the investment in quality consumer experience, and e-commerce is also not an exception. In the e-commerce context, this consumer experience can be delivered through e-service quality (e-SQ) in the absence of traditional brick and mortar stores and showrooms. E-SQ has gained popularity in academic discourses as the urge to understand the online shoppers' behaviour is increasing. The paper discusses the result of a study on preferences for various dimensions of e-SQ as expressed by online shoppers in five different cities of India namely Bangalore, Delhi, Guwahati, Kolkata, and Mumbai. The assertions of the online shoppers with regard to different e-SQ variables differ significantly across common classification variables like gender, place of residence, age, occupation etc. For the online marketers, such a varied response is imperative to note so that it helps in informed decision making.

Keywords: Online Shopping, E-SQ Dimensions, Demographic Variables

Introduction

The advancement of technology coupled with penetration of the Internet in India has added a latest dimension with regards to how people shop for goods and services. Over the last decade or so, the Internet commerce in India has seen phenomenal growth. From an INR 8,146 crore industry in 2007 it jumped to INR 19,688 crore in 2009. The industry has seen a phenomenal growth in 2011 with a business of INR 50,000 crore (IAMAI, 2011; ICICI Merchant Services, 2012). Some industry insiders claim that the global economic downturn has proved to be a boon for the e-commerce industry (ICICI Merchant Services, 2012). The growth of online shopping in the country has largely been facilitated by the path breaking developments in the realms of Information and Communication Technologies represented mainly by the Internet and secure payment gateways. It is noteworthy that the Indian e-commerce basket is dominated by online travel followed by e-retailing, financial services, other online services, and digital downloads (IAMAI, 2011).

Even though, shopping via Internet is a fairly new development for Indian consumers, its reach and impact in modern day marketing is tremendous. With more than 10% of its population, translating to around 12.1 crores (internetworldstats.com, 2011), having access to the Internet, it poses a remarkable opportunity as well as challenge for online marketers and other stakeholders. The online shopping industry is beginning to grow leaps and bounds and is seen to be redefining the tricks of the trade. Hence, its share of challenges is imperative to note so that the players in the business sustain in the long run. Lured by the opportunities new players are almost crowding the online marketplace, and as such sustainability has become a core issue for all. Therefore, the concept of quality has got a prominent role in making a meaningful discourse of online shopping. It is already established that the key determinants of success or failure in the realms of e-commerce are not merely website presence and low price but also superior service quality (Yang, 2001; Zeithaml, 2002). And as for online marketers, it is only be at their own peril to sideline this issue.

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The concept of Service Quality was extensively studied for the first time by Parasuraman et al. in 1988. Like conventional service quality, Internet retailing quality is understood to be a multi-dimensional construct that incorporates the functional aspects of the service process as well as the technical aspects of the service outcome (Gronroos et al., 2000, Collier and Bienstock, 2006). However, it has become increasingly evident that methods of measuring service quality in electronic setting should be significantly different from the traditional physical marketplace services (Parasuraman and Grewal, 2000), because customer perceptions of e-services may not necessarily be same as that of traditional services. Thus emerges the concept of e-Service Quality (e-SQ) which has found research attention in the works of Loiacono et al. (2000), Yoo and Donthu (2001), Barnes and Vidgen (2002), Wolfinbarger and Gilly (2003), Parasuraman et al. (2005), Cristobal et al. (2007), Stiakakis and Georgiadis (2009) etc. Most of these authors have tried to postulate e-SQ as a distinctly separate construct than traditional service quality and developed scales to measure the same.

Purpose of Research

Most of the academic research in e-commerce has taken place in the developed economies. As the industry is penetrating into the Indian way of life, there seems to be a dearth of empirical research focused on Indian online shopping (Gehrt et al., 2012). The handful of research taken place in the realm of e-commerce in India has addressed limited aspects of the online consumer (e.g. Kiran et al., 2008, Gupta et al., 2010, Prasad and Aryasri, 2011). Moreover, e-SQ has been largely untouched upon by academic research in India even though it's utility in delivering superior customer experience in beyond doubt. Therefore, there remains the need for delving into certain consumer aspects in particular reference to the Indian online shoppers' preferences for e-SQ dimensions.

Hence, the study is aimed at the following:

1. To assess the importance assigned by the online shoppers to various dimensions of e-service quality (e-SQ).
2. To explore the relationships of these dimensions with the users' demographic characteristics.

Methodology

With the help of a questionnaire, primary data were obtained from 817 online shoppers of 5 Indian cities, namely New Delhi, Kolkata, Mumbai, Bangalore, and Guwahati. These five cities belong to five different geographic regions of India like the North, East, West, South, and the Northeast. Hence they were thought to be representative of the Indian online shoppers. The samples were drawn in the months of October, 2011 through March, 2012 via convenience and snowball sampling. The respondents were asked to express their preferences for different e-SQ dimensions as they desire to have in the site they shop online.

Variables Measured

The e-service quality (e-SQ) variables analyzed in this study are generated from the multiple studies of Loiacono et al. (2000), Yoo and Donthu (2001), Barnes and Vidgen (2002), Wolfinbarger and Gilly (2003), Parasuraman et al. (2005), Cristobal et al. (2007), Shachaf et al. (2008), Stiakakis and Georgiadis (2009). The e-service quality variables found in these literatures broadly fall into the areas of aesthetics, functionality, responsiveness, reliability, personalization, usability, and safety and security. Syntheses of these dimensions were presented in a review paper by Sarmah and Sarma (2011). With the help of a pilot survey the exact number of variables taken for this study was determined as 43. This was achieved by removing certain dimensions which were repetitive and had nearly same meanings. Respondents rated these e-SQ variables in a scale of 1 to 5 (with 1 being of little importance and 5 being extremely important).

Further, the demographic variables of the respondents were also measured. We have taken common classification variables like gender of the respondent and place of residence. Both the variables are measured in nominal scale. Statistical Tools like T-test and ANOVA are used to analyze the data. Tests are conducted at 95% confidence level (i.e. significance level or $\alpha = 0.05$). When needed, post-hoc tests like Bonferroni and Games-Howell are also used. Bonferroni test is conducted for the data where equal variance can be assumed and Games-Howell test for the data where equal variance cannot be assumed. Various hypotheses are formulated and tested which are shown

in due course of the analysis. Similar methodology was adopted by Sarmah and Sarma (2013) while exploring the drivers of online shopping in the five cities taken for this study.

The following sections put forward the analysis and major findings of this study.

Major Findings

The respondents of this study were asked to express their preferences for various e-SQ dimensions in a scale ranging from 1 to 5. Higher the mean score, higher is the importance attributed to that particular e-SQ dimension. The following set of tables (1a to 1h) presents these dimensions arranged according to the importance attached to them by the online shoppers.

Table 1a: Highest Rated Dimensions

e-SQ Dimensions	*Score (Min 1, Max 5)*
Ease of cancellation	4.18
Rectification of mistake	4.17
Correct refund	4.11
Accurate transaction record	4.09

*Source: Field Survey

Table 1b: High Rated Dimensions

e-SQ Dimensions	*Score (Min 1, Max 5)*
Clear mention of delivery schedule	3.96
Many choices of payment	3.95
Product free from damage	3.93
CCP's ability to solve problems	3.92
Ease of understanding product info	3.92
Privacy	3.91
Presence of security symbols	3.90

*Source: Field Survey

The first set of tables (1a and 1b) show 4 and 7 dimensions respectively. They are attached highest priority by the online shoppers. While Table 1a mostly contains functionality dimensions of a site, Table 1b contains both reliability and responsiveness dimensions.

The next two tables (1c and 1d) cite 6 and 2 dimensions respectively having the least prominence attached by the online shoppers. Table 1c contains usability and personalization dimensions while Table 1d contains personalization as well as aesthetic dimensions.

Table 1c: Low Rated Dimensions

e-SQ Dimensions	*Score (Min 1, Max 5)*
Ease of navigation	3.28
Artistic look of the site	3.26
Ease of remembering the site URL	3.24
Maintaining product wishlist	3.23
Minimum ads in the site	3.22
Easy check out	3.16

*Source: Field Survey

Table 1d: Lowest Rated Dimensions

e-SQ Dimensions	*Score (Min 1, Max 5)*
Maintaining free homepage	3.02
Attractive look of the shopping site	2.93

*Source: Field Survey

The medium rated e-SQ dimensions are mentioned in the following 4 tables (1e to 1h). Paired sample T-tests are employed to club the dimensions in 4 sets based upon the presence of equality in their mean scores.

Table 1e: Medium Rated Dimensions

(Mean Range 3.87-3.85)
Clear return policy
Compensation for mistakes
In-transit damage insurance
Sincere interest in problem solving
Availability of items in inventory
Tracking the shipments

*Source: Field Survey

Table 1f: Medium Rated Dimensions

(Mean Range 3.81-3.73)
Immediate response to query
Follow up confirmation
Ease of communication with CCP
Presence of reputed brands
Warranty

*Source: Field Survey

Online shopper's preferences for empathy and reliability dimensions can be seen in Table 1e while Table 1f contains mostly responsiveness e-SQ dimensions.

Table 1g: Medium Rated Dimensions

(Mean Range 3.69-3.62)
Response to emergency order
Error free transaction
Admission of mistake
Virtual Demo of products
Less transaction links
Clarity of instructions

*Source: Field Survey

Table 1h: Medium Rated Dimensions

(Mean Range 3.59-3.47)
Delivery in ordered quantity
Safety and Security
Searching for previous dealings
Correct representation of the product
Delivery in promised time
Correctness of the information
Speed of transaction

*Source: Field Survey

The next sets of dimensions which have received medium rating are in Table 1g, with a mix of different types of variables like responsiveness, functionality, usability, empathy etc. Similar is the trend in Table 1h, where safety and security concerns also find place.

Overall, the tables 1a to 1h exhibit a varied picture of the e-SQ dimensions which the online shoppers express preferences for. It can further be deduced that, functional attributes of the shopping site like provision for rectifying a mistake done, ease of cancellation of an order are the most emphasized e-SQ dimensions for the Indian online shoppers. On the other hand, aesthetic features like attractive look of the shopping site is the least sought e-SQ dimension. Similarly, lower prominence is also attached to personalization features like maintaining free homepage, product wishlist etc. It is pertinent to note here that safety and security as well as privacy concerns of the online shoppers are not the ones bearing greatest importance. Rather, some functional attributes of the shopping experience are the most admired e-SQ dimensions in online shopping scene of India. This might be due to the fact that shopping via Internet is quite a new phenomenon for Indian shoppers and hence, their apprehensions regarding success of online transactions are more profound.

I. Preferences for Only a Few e-SQ Dimensions Show Variance across Gender

Table 2: T-test for Gender *(Responses within 1 and 5)*

e-SQ Dimensions		*Female*	*Male*	*T-test p-value*
CCP's ability to solve problems	N	323	472	0.039
	Mean	3.98	3.84	
Presence of security symbols	N	317	468	0.031
	Mean	3.98	3.81	
In transit damage insurance	N	312	464	0.001
	Mean	4.00	3.72	
Follow up confirmation	N	323	470	0.001
	Mean	3.91	3.68	
Correctness of the information	N	323	472	0.014
	Mean	3.59	3.39	
Attractive look of the shopping site	N	325	476	0.003
	Mean	3.02	2.81	
Clear return policy	N	324	472	0.041
	Mean	3.75	3.89	

*Source: Field Survey

Having seen the preferences for e-SQ dimensions in the above analysis, it is further decided to see if there exist any differences across the gender of the shoppers. The following null hypothesis is being tested with the help of Independent Sample T-test.

H_1: The Preferences for Various e-SQ Dimensions do not Vary Across The Gender of The Shopper

The result of the T-test, shows that the preferences expressed by the respondents as regards to 7 (seven) e-SQ dimensions vary across gender. Therefore, the null hypotheses that e-SQ preferences do not vary across gender can be rejected for the above mentioned dimensions. Among these, the assertion of female outweighs the males in case of six variables namely customer contact person's (CCP's) ability to solve customer problems, presence of security symbols and messages, in transit damage

insurance, follow up confirmation, correctness of the information and the attractive look of the shopping site. Only a clear return policy is more sought after by the male shoppers than the females. Hence it seems that female online shoppers are more assertive towards e-Service Quality in case of the dimensions cited in Table 2. It is evident by the higher mean score of the females than that of the males except in case of the variable clear return policy. However, bulk of the e-SQ dimensions do not vary across the gender of the respondent so far as the online shopper' preferences are concerned.

II. Online Shoppers in Guwahati are Less Concerned about Privacy

As the respondents of this study were drawn from five different cities selected from different geographic and cultural zones of the country, it is decided to explore if there is diversity across them so far as importance attached to the e-SQ dimensions are concerned. Do the varied backgrounds of the online shoppers have a bearing on how they assert quality in online shopping? Or, is it same irrespective of the place of residence of the shopper? Therefore, the following hypothesis is formulated to answer this question.

H_2: The Preferences for Various e-SQ Dimensions do not Vary Across The Place of Residence of The Shopper

For addressing this, an analysis of variance (ANOVA) test is done to check whether there exists any difference in the means of the responses for various e-SQ dimensions across the five cities. The ANOVA p-value suggests that the means are significantly different for as many as 31 e-SQ dimensions across the five cities. Further Post Hoc multiple comparison analysis is performed to test if the pair wise significant difference exists between a pair of groups (cities, in this case). The result is being reproduced in the following tables. They are being arranged in sync with the tables 1a to 1h showing preferences in descending order.

It is evident from the ANOVA results that shoppers show diversity in their attaching prominence to the e-SQ dimensions. As for the functionality features of the shopping site like maintaining accurate transaction record, rectifying mistakes done, ease of cancellation etc., the shoppers in Bangalore and Guwahati attach higher prominence as an e-SQ dimension than those of in Kolkata. Inferences from Bonferroni test also implies

Table 3a: Mean of Importance across Cities for Highest Rated e-SQ Dimensions

(Overall Range 4.18 to 4.09)

e-SQ Dimensions	*Bangalore*	*Delhi*	*Guwahati*	*Kolkata*	*Mumbai*	*ANOVA p-value*
Ease of cancellation	4.45	4.15	4.26	3.85	4.09	0.000
Rectification of mistake	4.40	4.06	4.26	3.91	4.16	0.001
Correct refund	4.23	3.99	4.21	3.85	4.23	0.000
Accurate transaction record	4.33	4.07	4.16	3.83	4.01	0.001

*Source: Field Survey

Table 3b: Mean of Importance across Cities for High Rated e-SQ Dimensions

(Overall Range 3.96 to 3.90)

e-SQ Dimensions	*Bangalore*	*Delhi*	*Guwahati*	*Kolkata*	*Mumbai*	*ANOVA p-value*
Clear mention of delivery schedule	4.11	3.84	4.14	3.80	3.84	0.000
Many choices of payment	4.17	3.91	3.96	3.73	3.92	0.001
Product free from damage	4.04	3.98	4.03	3.74	3.79	0.001
CCP's ability to solve problems	3.92	3.85	4.13	3.73	3.90	0.004
Privacy	4.08	4.00	3.60	3.84	4.04	0.001
Presence of security symbols	4.09	3.68	4.07	3.87	3.74	0.001

*Source: Field Survey

that the shoppers in Bangalore, Guwahati and Mumbai attach similar prominence for getting correct refund for their returned product.

Online shoppers in Bangalore emphasize more weight towards many payment choices while those in Guwahati want that the Customer Contact Persons (CCPs) should be able to solve any customer problem. The privacy of the shoppers' information seems to find a lesser footing in case of shoppers in Guwahati than those of Bangalore and Mumbai. Online shoppers in Bangalore, Delhi, and Mumbai express similarly high concern for privacy. Significant differences in the mean of the responses can also be observed among the shoppers of Bangalore and Mumbai with respect to reliability features like presence of security symbols.

Online shoppers in Bangalore, once again, seen to be asserting more weight to having clear return policy and getting compensation for the mistakes done by the site as e-SQ dimensions than the shoppers in Kolkata. Assertions for the above dimension are similar for Delhi and Guwahati on the higher side while Kolkata and Mumbai on the lower side. Respondents in Kolkata seem to be more anxious in tracking the shipment of products once an online purchase is made. However, it fails to show any pair wise differences with other cities in post hoc analysis.

Shoppers in Guwahati express higher prominence for getting follow up confirmation from the shopping site than those in Delhi. Also with regard to the presence of reputed brands, Guwahatians attach higher priority than those in Mumbai. Moderate but similar priority is set by the online shoppers in Bangalore, Delhi, and Kolkata. On the contrary, Mumbaikars vouch for warranty more than those in Kolkata. Rest three cities assign moderate priority for having warranty of the products.

Significant differences can also be observed in the assertions of responding to emergency orders by the shopping site (p=0.000) in case of shoppers from Bangalore and Mumbai. Shoppers in Kolkata attach less priority to having error free transaction (p=0.000) than those in Mumbai and Bangalore.

Online shoppers in Mumbai desire to have provision for searching history of previous dealings the least among the cities (p=0.000) while those in Guwahati realises that the product may not be delivered at the promised time (p=0.009) and the speed of transaction slower (p=0.040). Also, Guwahati seems to express highest prominence for reliability in delivery of the product.

Shoppers in Mumbai are less concerned about having minimum ads and banners in the site, maintaining product

Table 3c: Mean of Importance across Cities for Medium Rated e-SQ Dimensions

(Overall Range 3.87 to 3.85)

e-SQ Dimensions	*Bangalore*	*Delhi*	*Guwahati*	*Kolkata*	*Mumbai*	*ANOVA p-value*
Clear return policy	4.04	3.90	3.88	3.69	3.77	0.020
Compensation for mistakes	4.13	3.76	3.93	3.57	3.84	0.000
In-transit damage insurance	4.06	3.78	4.12	3.64	3.58	0.000
Availability of items in inventory	4.02	3.78	4.03	3.82	3.54	0.000
Tracking the shipments	3.97	3.89	3.68	3.94	3.79	0.032

*Source: Field Survey

Table 3d: Mean of Importance across Cities for Medium Rated e-SQ Dimensions

(Overall Range 3.81 to 3.73)

e-SQ Dimensions	*Bangalore*	*Delhi*	*Guwahati*	*Kolkata*	*Mumbai*	*ANOVA p-value*
Follow up confirmation	3.77	3.67	3.96	3.66	3.84	0.018
Presence of reputed brands	3.80	3.76	3.93	3.77	3.45	0.000
Warranty	3.78	3.83	3.72	3.35	3.95	0.000

*Source: Field Survey

Table 3e: Mean of Importance across Cities for Low Rated e-SQ Dimensions

(Overall Range 3.28 to 3.16)

e-SQ Dimensions	*Bangalore*	*Delhi*	*Guwahati*	*Kolkata*	*Mumbai*	*ANOVA p-value*
Artistic look of the site	3.15	3.14	3.32	3.59	3.13	0.000
Ease of remembering the site URL	3.46	3.13	3.42	3.17	2.97	0.000
Maintaining product wishlist	3.38	3.12	3.34	3.23	3.06	0.036
Minimum ads in the site	3.46	3.21	3.10	3.26	3.08	0.014

*Source: Field Survey

Table 3f: Mean of Importance across cities for Lowest Rated e-SQ Dimensions

(Overall Range 3.02 to 2.93)

e-SQ Dimensions	*Bangalore*	*Delhi*	*Guwahati*	*Kolkata*	*Mumbai*	*ANOVA p-value*
Maintaining free homepage	2.88	3.02	3.02	3.33	2.91	0.009
Attractive look of the shopping site	2.89	2.96	2.90	3.23	2.68	0.000

*Source: Field Survey

wishlist as well as the ease of remembering the site URL. The artistic way of arranging the products and links in the site is most admired by shoppers in Kolkata while it is not so for those in Bangalore, Delhi, and Mumbai.

It emerges from the tables 3g and 3h that shoppers in Kolkata are votaries of aesthetic qualities of the shopping site (like its attractiveness) more than those of Bangalore and Mumbai. At the same time these shoppers like to have their free shopping homepages. Shoppers in Delhi and Guwahati show moderate priority for the look of the site.

The Most and the Least Preferred e-SQ Dimension among the Cities:

Within the individual cities, the highest and the lowest preferences for e-SQ dimensions also vary. The shoppers in Bangalore assert highest importance to ease of cancellation of orders and lowest to personalization features like maintaining free homepage. Likewise, shoppers in Delhi and Guwahati give higher prominence to functionality aspects of the site and very low prominence to aesthetic features. Shoppers in Kolkata like to assign more importance to the provision for tracking the shipment once the product is bought than to the ease of remembering the shopping site URL. Mumbaikars, like the Delhi and Guwahati shoppers, attach least prominence to aesthetics while vouching for correct refund of the returned product as an important e-SQ dimension.

Interesting Findings

The preferences of the online shoppers for various e-SQ dimensions do not vary across their gender except in case of 7 dimensions. On the other hand, their preferences show variance across their place of residence in case of as many as 31 e-SQ dimensions. To go these two important findings, some other interesting findings of this study are noted in Table 4.

Conclusion

The study presents a synthesis of various e-service quality dimensions and how their expectations fare amongst Indian online shoppers. It is also seen that all dimensions of e-SQ are not expected by the shoppers in the same vain. Rather, some are most sought after while some are less. Moreover, prominence attached to the e-SQ dimensions also show variance across the place of residence of the shopper.

As the online shopping industry is growing leaps and bound especially in India over the last couple of years, it is imperative to take note of the shoppers' expectations with regard to the quality experienced in the process. Online practitioners would do a world of good for themselves to pay heed to customers' expectations. However, investment in quality involves cost. Therefore, it is necessary to device strategies for such investment by knowing which area to devote more attention and which area lower. Also,

Table 4: Interesting Findings

Interesting Findings	*Broad Category*
1. Attractive look of the site earns least importance from the shoppers. 2. Shoppers in Kolkata attaches highest priority among other cities for attractiveness of the site as well as artistic arrangement of links, products etc.	Aesthetics
1. Ease of cancellation attracts the highest prominence among all the e-SQ dimensions. 2. Shoppers in Bangalore credit highest importance while those in Kolkata the least to functional features like ease of cancellation, rectification of mistake etc.	Functionality
1. Online shoppers in Guwahati assign highest priority among the cities towards the CCP's ability to solve problems and having follow-up confirmation.	Responsiveness
1. Bangaloreans look for the presence of security symbols and messages more than those in Mumbai. 2. In-transit damage insurance is most sought after by shoppers in Guwahati. 3. Female shoppers also seek in-transit damage insurance more than the males.	Reliability
1. Online shoppers in Kolkata like to have the provision for searching history of previous dealings and maintaining free homepage more than those in other cities.	Personalization
1. Shoppers in Bangalore aspire to have clear return policy and many choices of payment more than the shoppers from other cities. 2. Male shoppers vouch for clear return policy more than the females.	Usability
1. Safety and security concerns are not being attached the highest priority across all the cities. Also, its preferences do not vary across the place of residence of the shoppers. 2. Online shoppers in Guwahati express lesser concern for privacy than those in other cities. Shoppers in Bangalore, Delhi and Mumbai attach high priority for the same.	Safety and security

*Source: Analysis of Primary Data

strategies for improving e-service quality may not be universal for a country as big and diverse as India. Hence, understanding the nuances of region specific dynamics of e-service quality expectations is essential.

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