

# Effectiveness of e-Servqual in e-Tailing - Shoppers Expectations



R. Seranmadevi, S. Muralidhar

**Abstract:** In the recent days, Omni channel retailing is quite famous and gain importance among the customers. The retailers are also expecting some additional source of sales revenue to meet out the hectic competition around globe. This study is made with the intention to evaluate the service quality of online retail services with the sixteen service quality dimensions. The study is describing the intention of the shoppers pertaining to the service quality offered by the retailers in online mode. The primary data was collected from 310 respondents through circulating the structured questionnaire consists of various statements explaining all these sixteen e- service quality dimensions. Appropriate statistical tools have employed to assess the relationship among these variables and its impact on the achievements of the customer's expectations at the end. It was completely depicted through the structural equation model constructed with the help of AMOS v.20.

**Keywords:** Commitment, e-ServQual, e-tail, online retail, Service Quality

## I. INTRODUCTION

In the digital era, invent of internet technology shrinks the entire world in the palm of an individual. It is inevitable in the part of the retail sector, the industry which is directly having network with massive number of customers all over the world. Now, the proximity of retailing is now shrunk to global village. Hence the retailers are started to offer their retailing services in online mode to cover the maximum number of customers beyond the national boundaries and jurisdiction. It is again the ultimate duty of the retailers to offer the services to the customers based on their individual requirements through personal customization. Besides all, the quality of services offered by the retailer when effecting the online retail phase has necessarily be studied to improve the interest of the customers and navigate their needs with improved means of communication technology to personalize their shopping experience. Nevertheless of the industry, when services get offered the quality of services has to be evaluate again the service quality of the online retail services are also need to be evaluated with new form of dimensions. The aspirant level, interest, tastes and preference, approaches, satisfaction grid are completely changed among the millennial customers.

To meet out their expectations with improved level of service quality has to be offered by the retailers to develop their business in online mode, to test the level of service quality offered in e-tailing mode was the scope of this present study.

## II. REVIEWS SUBSTANTIATING THE E-SERVQUAL MEASURES FOR ONLINE RETAIL SERVICES

Various reviews of literatures pertaining to e-ServQual analysis for evaluating the service quality of online retailing or e-tailing services are studied and presented thereunder. Hongxiu and Reima (2009) addresses e-service quality issue in the electronic marketplace. They explores e-service quality dimensions based on a review of the development of e-service quality scales and the SERVQUAL scale. It proposes an 8-dimension scale for measuring e-service quality with rewording and modifying of the SERVQUAL instrument: Website design, reliability, fulfillment, security, responsiveness, personalization, information and empathy. Dabholkar (1996) describe the e-Servqual dimensions are Website designs, reliability, delivery, ease of use, enjoyment and control. Zeithaml et al. (2000) pointed out that Efficiency, reliability, fulfillment, privacy, responsiveness, compensation, and contact are e-ServQual dimensions. Kim, et al., (2006) describes the e-ServQual dimensions are Ease of use, aesthetic design, processing speed, and security. Cox and Dale (2001) listed out Website appearance, communication, accessibility, credibility, understanding and availability are e-ServQual dimensions. Jun and Cai (2001) also added Website design, information, ease of use, access, courtesy, responsiveness, and reliability are the E-ServQual dimensions; Santos (2003) underlines Ease of use, appearance, linkage, structure, content, efficiency, reliability, communication, security, incentive and customer support as e-service quality valuation dimensions. Wolfenbarger and Gilly (2002, 2003) pinpoints that Website design, reliability, security, and customer service. Loiacono et al. (2002) highlights that Information, interactivity, trust, response time, website design, intuitiveness, flow, innovativeness, integrated communication, business process and substitutability are suitable online retail service quality dimensions. Yang and Jun (2002) suggests the following dimension to revive the online retail service quality such as Website design, security, reliability, responsiveness, accessibility and customization. Yang and Fang (2004) also supported the dimensions Responsiveness, reliability, credibility, competence, access, courtesy, communication, information, responsiveness and website design for evaluating the e-ServQual of online retail trading.

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\* Correspondence Author

**Dr.R.Seranmadevi\***, Associate Professor, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, Tamil Nadu, India.

**Dr. S. Muralidhar**, Assistant Professor, Department of Commerce & Management Studies, Jain Deemed – to – be University, Bangalore, India.

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After gone through as many as dimensions which are highlighted by various pioneers in evaluating the online retail services, it was finally conclude that sixteen dimensions categorized under four segments of online retail service, they are

e-ServQual Dimensions of e-tail	ServQual Dimensions	Category of Executions
Coverage Customization Communication Collaboration Contact	Website design Customization Customers Relations Suppliers management Responsiveness	Operations
Convenience Credibility Capability Competence Courteousness	Accessibility Reliability Ability Efficiency Politeness	Transactions
Confidence Caution Concealment	Trust Security Privacy	Security
Completion Compensation Channel	Order Execution Guarantee delivery	Fulfilment

The above mentioned sixteen parameters are studied through statements supporting its nature and functionality. Finally the comprehensive scores of all the statements to respective dimensions are grouped and admitted for the further study.

### III. OBJECTIVES

The study contains the following valid objectives,

- To study the various dimensions of e-ServQual of e-tailing.
- To analyze the impact of these dimensions in evaluating the service quality of e-tailing
- To evaluate the impact of e-ServQual in achieving the customers' expectations

### IV. RESEARCH FRAMEWORK

This research is focussed upon in evolving the service quality rendered by the online retail services. Based on the conceptual framework for understanding e-service quality: Implications for future research and managerial practice defined by the Zeithaml, Parasuraman, and Malhotra (2000), it was adopted totally sixteen dimensions to evolve the service quality of e-tailing services, further it was categorized under four namely, Operations, Transactions, Security and Fulfillment. The entire study is based on descriptive research design, since it is an attempt to describe the quality of services experienced by the online shoppers in e-tail mode. The respondents are selected based on convenience sampling method under non-probability sampling technique, since there are large numbers of online shoppers, so the population is infinite. The respondents those who are readily available to attempt the survey have been included in the construction of sample size of 310 respondents in Bangalore city. The implications of the study

based on the data collected in Bangalore online shoppers may or may not be generalized the society in general.

#### A. Hypothesis

The research on evaluation of e-ServQual of e-tailing services is focussed on the following hypothesis to test with appropriate statistical analysis.

H0 :There is no significant impact of Service Quality Dimensions in achieving the customers' expectation

The aforesaid hypothesis was tested through confirmatory factor analysis and using AMOS V.20 the model was projected to define relationship among the sixteen service dimensions under four different categories, and finally it depicts the impact of these dimensions on achieving the customers' expectation.

#### B. E-ServQual of e-tail Services

The service Quality offered by the retail sector when effecting online transaction are characterized by Operations, Transactions, Fulfillment and Security. Finally the impact of these elements of retail service quality factors on the expectation of the online customers towards their expectation are verified with the help of the model established with the help of statistical tool AMOS V. 20. The model admits as many as sixteen variables as observed and endogenous variables by observing through circulating the structured questionnaire consists of the statement explain the content of these service quality elements of online retail services. The questionnaire have been classified as six different segments, the first segment collects the respondents personal data, the second segment explains the operations of online retail services which in turn further evaluated in detail with the help of the following factors, such as Coverage (Website design), Customization , Communication (Customers Relations), Collaboration (Suppliers management), and Contact (responsiveness), the third segment of the questionnaire intend to collect the respondents opinion towards the transaction connected towards the online retail services, it has been measured with the help of the factors like Convenience (accessibility), Credibility (Reliability), Capability (Ability), Competence (Efficiency) and Courteousness (politeness). The fourth segment addresses about the security issues and challenges in online transaction of retail service, it was evaluated through Confidence (Trust), Caution (Security), and Concealment (privacy). The final part of the questionnaire deliberates the expectation of the customers as in the form of Commit and Conquer. This model admits the five Unobserved, endogenous variables such as Operations, transactions, fulfilment, security and Achievement of the shopper expectations, other than these variables it permits eighteen error variables for all the endogenous variables included in the study.

The measurement model was constructed with all the permitting endogenous and extraneous variables to simulate the relationship between the sixteen service quality dimensions and the relationship between these sixteen service quality dimensions on the customer expectations achievement through commit and conquer. The following

figure (1) depicts the measurement model of e-ServQual of e-tailing services.

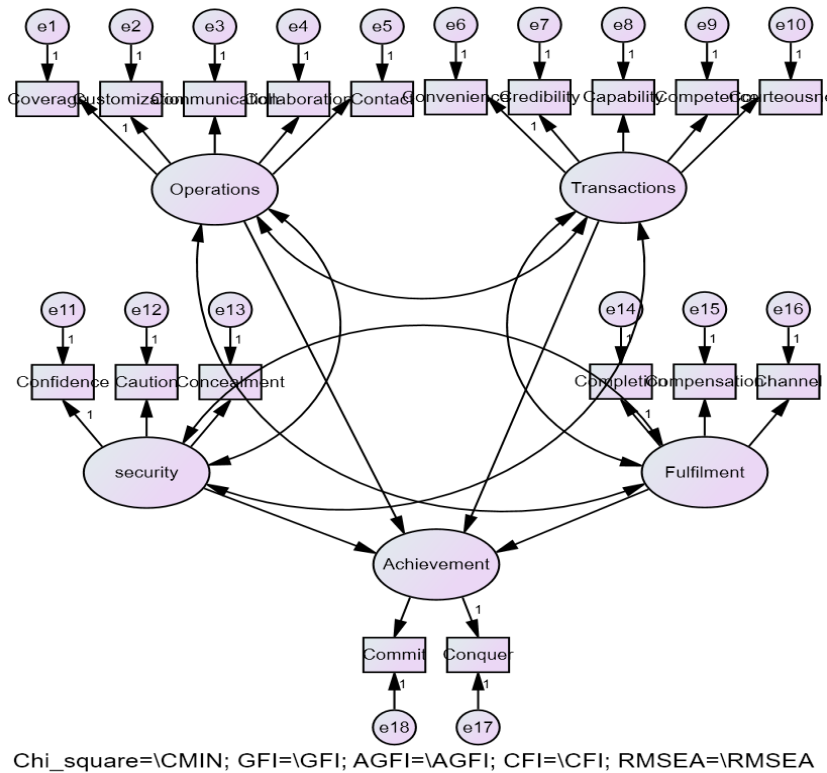


Figure 1 Measurement model for relationship among the dimensions of e-ServQual of e-tail

The above measurement model was including all the sixteen e-ServQual dimensions under four different category and finally it explains the impact of these variables on the achievement of expectations of the online customers as in the form of commitment and conquer. To get better

understanding of the relationship among all the sixteen dimensions under four different category, recommendations given by the modification indices are incorporated after performing the confirmatory factor analysis.

C. Normality test statistics

The test for normality of data are tested through normality analysis and the results was presented in the below table.

Table 1 Results of Normality test statistics

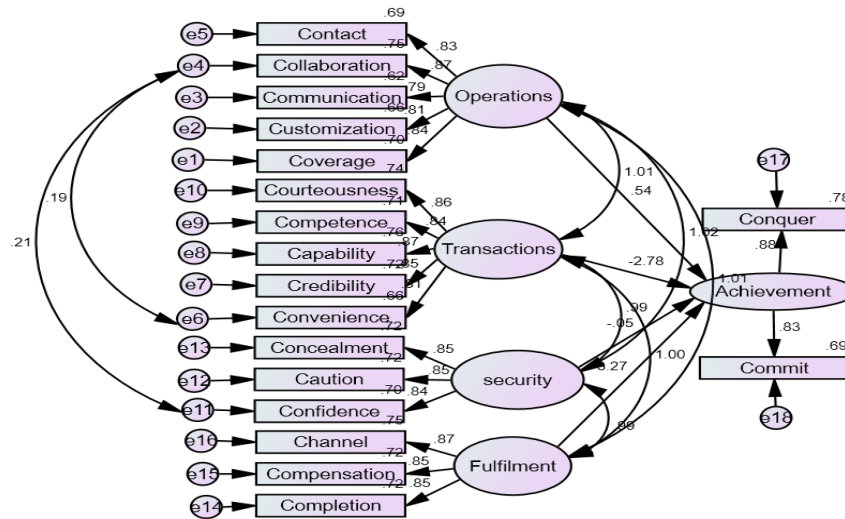
Variable	min	max	skew	c.r.	kurtosis	c.r.
Commit	1.000	5.000	.323	1.473	-.999	-2.280
Conquer	1.000	5.000	.019	.088	-1.288	-2.939
Channel	1.000	5.000	.336	1.534	-1.317	-3.005
Compensation	1.000	5.000	.317	1.447	-1.165	-2.660
Completion	1.000	5.000	.301	1.372	-1.211	-2.764
Concealment	1.000	5.000	.297	1.358	-1.200	-2.740
Caution	1.000	5.000	.314	1.435	-1.230	-2.807
Confidence	1.000	5.000	.419	1.910	-.997	-2.275
Courteousness	1.000	5.000	.255	1.165	-1.264	-2.886
Competence	1.000	5.000	.282	1.287	-1.232	-2.811
Capability	1.000	5.000	.315	1.437	-1.134	-2.589
Credibility	1.000	5.000	.315	1.437	-1.111	-2.536

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Convenience	1.000	5.000	.183	.837	-1.074	-2.450
Contact	1.000	5.000	.325	1.483	-1.070	-2.441
Collaboration	1.000	5.000	.393	1.795	-1.260	-2.875
Communication	1.000	5.000	.159	.726	-1.052	-2.400
Customization	1.000	5.000	.316	1.440	-1.067	-2.434
Coverage	1.000	5.000	.237	1.081	-1.145	-2.612

The normality of all the sixteen dimensions are tested and the statistical results shows that both skewness and Kurtosis statistical results are significant, since the value lies between the acceptable norms of -1.96 to +1.96. Hence, it was

concluded that all the sixteen dimensions taken for the study are completely eligible to admit in to further analysis to perform under confirmatory factor analysis.



Chi\_square=111.282; GFI=.911; AGFI=.878; CFI=1.000; RMSEA=.000

**Figure 2 Structural Equation Model for relationship among the dimensions of e-ServQual of e-tail**

The following table present the results of the confirmatory factor analysis for the structural model of relationship among the dimensions of the e-ServQual of e-tailing.

**Table 2 - Results of Confirmatory Factor statistics**

Model	CMIN	DF	P	CMIN/DF	GFI	AGFI	CFI	RMR	RMSEA
Default	111.282	124	.000	.897	.911	.878	1.000	.040	.000

From the confirmatory factor analysis it was proved that the structural model built for explaining the relationship among the e-ServQual variables and towards the reach of customer satisfaction through conquer and commitment. The statistical result of confirmatory factor analysis after doing Varimax rotation revealed the constructed model is significant. The p value is less than .05 and the Goodness of fit indices GFI and Adjusted GFI also satisfactory. The

confirmed Factor Index (CFI) shows 1.000, it exhibits the no further more combination is possible to define the as best fit as of now. The Root mean Square Error of Approximation shows the lowest possible score and RMR also shows below .05, for the testing condition both RMSEA and RMR is minimal is better for the model good fit. Hence it was agreed that all the factors which are employed as observed variables to predict the latent variable of customer satisfaction is well defined and promptly designed to evaluate the customer satisfaction.

**Table 3 - Results of Regression Estimates**

Variables		Unstd. Estimate	Std Estimate	S.E.	C.R.	P	R2
Achievement	← Operations	.591	.541	2.015	.293	.769	.29
Achievement	← Transactions	-3.232	-2.781	8.627	-.375	.708	7.73
Achievement	← security	-.053	-.048	2.827	-.019	.985	.002
Achievement	← Fulfilment	3.381	3.268	5.964	.567	.571	10.67

<b>Coverage</b>	←	<b>Operations</b>	<b>1.000</b>	<b>.838</b>				<b>.69</b>
<b>Customization</b>	←	Operations	.969	.814	.084	11.491	***	.76
<b>Communication</b>	←	Operations	.905	.788	.083	10.922	***	.62
<b>Collaboration</b>	←	Operations	1.107	.867	.087	12.759	***	.66
<b>Contact</b>	←	Operations	.967	.829	.082	11.849	***	.70
<b>Convenience</b>	←	Transactions	1.000	.813				.74
<b>Credibility</b>	←	Transactions	1.052	.847	.091	11.521	***	.71
<b>Capability</b>	←	Transactions	1.078	.872	.089	12.063	***	.76
<b>Competence</b>	←	Transactions	1.109	.842	.097	11.423	***	.72
<b>Courteousness</b>	←	Transactions	1.136	.862	.096	11.853	***	.66
<b>Confidence</b>	←	security	1.000	.836				.72
<b>Caution</b>	←	security	1.085	.849	.089	12.153	***	.72
<b>Concealment</b>	←	security	1.060	.849	.087	12.141	***	.70
<b>Completion</b>	←	Fulfilment	1.000	.847				.75
<b>Compensation</b>	←	Fulfilment	.968	.848	.078	12.428	***	.72
<b>Channel</b>	←	Fulfilment	1.054	.868	.081	12.946	***	.72
<b>Conquer</b>	←	Achievement	1.000	.884				.78
<b>Commit</b>	←	Achievement	.862	.833	.068	12.724	***	.69

**V. MODEL IMPLICATIONS**

From the regression estimates table it was observed that all the observed variables which are used to construct the latent variables are directly explaining the latent variables with statistical significance. The e-ServQual factors Coverage, Customization, Communication, Collaboration and Contact are significantly contributing to Operations; the factors Convenience, Credibility, Capability, Competence and Courteousness significantly contributing towards the Transactions. The latent variable security was correctly built in through the observed variables Confidence, Caution and Concealment; and the Fulfilment variables are built by Completion, Compensation and Channel with statistical significant. The outcome variables achievement of customers mind also be significantly contributed by

Conquer and commit and proved through the statistical result  $p < .05$ . Further, the variable Achievement also influenced by the variables operations, Transactions, Security and Fulfilment insignificantly. The variables Transactions and security expresses negative relationship with the achievement. If the transactions factors are not good, then it negatively influences the customer mind. Again, if the security portion is tightened, then it attracts more customers towards online retail operations or otherwise it has negative influence over the customer's attractions. Order collection and execution was portrayed as operations and the fulfilment, both are expressing the positive influence on the achievement of customers' expectations. The achievement of customer's expectations will leads to reach the commitment of customers towards the e-retail platform and it again conquer the customers for the same since it results with high positive correlations.

**Table 4 – Testing of Hypothesis**

Variables			Hypothesis	P	Result
Achievement	←	Operations	Operations of the e-tail does not have significant impact on Achievement of customers' loyalty	.769	Not Rejected
Achievement	←	Transactions	Transactions of the e-tail does not have significant impact on Achievement of customers' loyalty	.708	Not Rejected
Achievement	←	Security	Security of the e-tail does not have significant impact on Achievement of customers' loyalty	.985	Not Rejected
Achievement	←	Fulfilment	Fulfilment of the e-tail does not have significant impact on Achievement of customers' loyalty	.571	Not Rejected

The impact of latent variables on the achievement of customers' expectation was tested through the hypotheses. The hypotheses Operations of the e-tail does not have significant impact on Achievement of customers' loyalty; Transactions of the e-tail does not have significant impact on Achievement of customers' loyalty; Security of the e-tail does not have significant impact on Achievement of customers' loyalty; Fulfilment of the e-tail does not have significant impact on Achievement of customers' loyalty was accepted since the statistical results was insignificant with the p value is more than .05. From the statistical results it was clear that neither operations cum fulfilment related service quality factors nor

transactions cum security related service quality factors in online mode influence the achievement of customers' expectations.

It was realized that the e-ServQual factors are not constructed in such a way to meet out the expectations of the customer's time –to-time. In order to conquer more number of customers towards e-tailing, it is mandatory to have very good operational mode, effective transactions and strict security and high value fulfilment. Any online retail shops working under the study region provides and facilitates the service quality to the maximum expectations of the customers have a multiple chance to improve its business opportunity for long term in sustainable manner.



## VI. CONCLUSION

The expectations of any people cannot be sorted out and it is always dynamic in nature. It is important as the part of the online shoppers to hold the prospective buyers and to trace the potential buyers and make some initiative measures to convert them into real time shoppers. In order to achieve that, they have to design, redesign, re-engineer the service quality measures time-to-time. The old and proven model can be considered as the base model for constructing the e-service quality measure, but it cannot be replicate the same. The online retailers have to trace out the new methodology which will attracts a greater number of shoppers from the new livelihood standards and emerging life styles. Collecting order over telephonic conversations is assumed as out-dated techniques, now the order is being collected through just a 'click away'. Likewise, the order execution and planning of delivery to the customers was a long-term network and effective logistics plan in the ancient days, now all these older versions are completely be eroded and new outsourcing technology and network arrangement of ready availability of ordered goods nearby the customers reach are exposure of the day. It is to remain the same very old saying again here is "Change is certain; all the other certain are changeable over the time". To construct and develop good customer base for any online retail shoppers, they have to work very close to their activity and monitor even their everyday transactions to pull them. Creations and retaining customers are not one time job for the retailers but it is considered as every-hour work. Any retailers, who fail to meet out the requirement under this dynamic digital era, cannot taste the fruit of digital marketing privilege. The market is open to all, instead of swimming and hunting in the pre-existing competition under red ocean competition, they have to develop and construct a new creative and novel idea to attract the customers towards them as blue ocean strategy.

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## AUTHORS PROFILE



**Dr.R.Seranmadevi**, Associate Professor, qualified with MBA., M.Com., MCA., M.Phil., Ph.D., UGC-NET(Management), and UGC-NET/JRF (Commerce), having 18.6 years of working experience both Industry and academia, presently contributing service for Vel Tech Rangarajan Dr.Sagunthala R&D Institute of Science and Technology, Chennai under School of Management. Having publication record of various journals including Ten Scopus indexed, thirteen UGC listed, ten international and eleven national journals, presented papers in eighteen international level and twenty national level seminars. Many colleges trusted me as a resource person under different disciplines like exploring knowledge in statistical framework and Research. Extend the services for equipping the Distance education students of Anna University both MBA and MCA, and other regional universities. Serving the society by studying the fundamental issues connected to the environment; enrich them by providing proper solutions.



journals.

**Dr.S.Muralidhar**, is currently working as Assistant Professor, Department of Commerce & Management Studies, Jain Deemed – to – be University, Bangalore. In his academic endeavour he has published more than 10 peer review research papers and 25 research articles for Scopus, and UGC listed journals. He has also been invited as guest lecture and Resource person by various reputed institutions. Along with these He has also working as advisory board member for international