A STUDY ON IMPACT OF ONLINE SERVICE QUALITY ON CUSTOMER SATISFACTION IN E - RETAILING BUSINESS

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Abstract

This paper checks the effect of service quality in the online retail business on customer satisfaction along with the association of the demographic variables through the opinion from the respondents particularly 524 college students in India selected through purposive sampling method. The goodness of model fit was found using Structural equation Modelling (SEM) of AMOS and the relationship between e-service quality and customer satisfaction was analyzed through Inter - correlation and Regression analysis. The results show that e-service quality factors have a positive impact and also highlighted as a significant predictor for customer satisfaction. The study also revealed that service recovery is acting as a mediating factor between service failure and customer satisfaction. The output of this study will support the online retailers to formulate their strategies in view to provide very good and excellent services to their customers.

Keywords: service quality, customer satisfaction, online marketing, customer loyalty, service

1. INTRODUCTION

An overview of past statistics and the data that is available indicated that tremendous sales were done through online retailing by the consumers. In today's context, every business is possible through online and no one can waste their time for purchasing any item physically through retail store. In other words, retailing over internet (E-tailing) is becoming a fashionable trend. Earlier works in this topic especially in online retailing had an evidence towards the emergence of e-marketing especially in Retail domain and it has a great impact in the market as well as among the consumers due to the rapid

technological improvement like internet..etc. This showed the transition of traditional mode to e-tailed marketing for purchasing the products and thereby steps were taken for providing high quality e-services so as to attract, satisfy and retain customers. Through online, various service provider for retailing business is available for B2B and B2C and C2C (Christopher, 983; Jayakrishnan, 2015). It was also pointed out in most of the research that the preference of the consumer through shopping online significantly differed due to the product type because they can easily get the attributes of the product searching for very easily through online.

E service quality mainly confined with the outcome of the service together with the recovery in case of any poor quality in disbursing the services to the customers' identified through their past record and through their perceptions. In every business, the output of the service quality could be evaluated only when the service provider and the customer were separated through some conditions and norms and as pointed out in the research of Yang, (2001) who have pointed out that quality in service is the important factor for online retaining and the success or failure of e-retail businesses is based on the influence of customer's experience through online. In addition, only limited research studies exist in our country about the customer's evaluation towards online retailing business and what are the appropriate e-service quality factors that have an impact on customer satisfaction. Taking into consideration, this research had an attempt to study the impact of service quality in online retailing by considering the service failure, service recovery on customer satisfaction.

2. LITERATURE REVIEW

Parasuraman et al. (2005) developed the e-SERVQUAL model for measuring online service quality with dimensions constituted reliability, efficiency, privacy, fulfilment, responsiveness, contact and compensation along with the model developed an online service quality measure with the factors like information availability, ease of use, privacy/security, graphic style and reliability which was substantiated and agreed by Ribbink et al. (2004) and applied the concept with the examination of online service quality in ordering the book and CD through the book stores and found that e-service quality had complied with assurance, ease of use, e-scape, responsiveness and customisation. Ghosh et al. (2004) highlighted in their studies about the online service as an interactive session where information could be given in a very good manner. Parasuraman et al. (2005) in their study, examined e-service quality in online shopping sites using four dimensions. Also, Trocchia and Janda (2003) informed that customer has evaluated the internet service quality based on five dimensions like performance, access, security, sensation and information. Shaohan and Jun (2003) also pointed out the impact of three dimensions such as website design/content, trustworthiness and communication have significantly impacting the online service quality.

Rowley (2006) pointed out that there was a vast difference between online and normal traditional service delivery. Collier & Bienstock (2006) empirically tested online service quality through the various dimensions like entire process and their outcome along with the recovery factor and concluded that the service found one step

more than the other services. Kim & Lennon (2006) used a modified online and electronic service quality through the framed scale "E-S-QUAL" and identified online facility attributes which is used as objective measures of service performance.

Korgaonkar et al. (2006) investigated the influence of product category and online store with the consumer online patronage and revealed that their preference on product type differs and they were using the online products for searching the variety of the product and the information related to the variety. It is also found that online retailers are not a matter but it is the product available in the online platform to the consumers. Swaid & Wigand (2009) identified online service quality key dimensions of as an information quality, usability through website, reliability and responsiveness together with assurance and personalization. Sita, Mishra and Riya (2013); Philip et al. (2003), attempted to study the online purchasing behaviour among the Indian consumers and revealed that they were facing more predictive risks and having more fear towards purchasing the product through online marketing.

Munir (2016) attempted to study the customer satisfaction in online banking service quality in the State Owned Schedule Bank of Bangladesh" has found that there existed a significant positive relation satisfaction level and the quality in the services through the selected bank and this form the base for their future endurance in the sector. Herington & Weaven (2008) highlighted that the quality in services in the online sector is very significant factor for the satisfaction and loyalty among the banking customer in Australian banks and this result was substantiated and agreed by (Agyapong, 2010) and Luc et al. (2011) where the former

has done the study in the utility service in Ghana and the later has done the studies in modified E-S-QUAL. It was Zeithaml et al. (2002) who were the pioneer in the SERVQUAL studies have stated one of the inevitable strategy for the online marketers is maintaining and delivering a very good service quality which fulfilled the needs and wants of the consumers along with reliable information and affordable cost towards the products than the traditional retailers.

One the findings of Emel (2015) who attempted to study the online service quality informed that many organizations those who want to assessing the service quality may utilize the modified scale of, E-S-QUAL a very good assessment instrument as informed by Rafiq et al. (2012), Ingle & Connoly (2006), Meng & Mummalaneni (2010), Türk et al. (2012), Marimon et al. (2012); Akinci et al. (2010).

Besides this, various literature reviews has witnessed the application of various instruments for measuring the online service quality and the service quality in various important service oriented organizations. Some of the evidences were the research work of Yang et al.(2004), Jun & Cai (2001), Ho & Lin (2010), Siu & Mou (2005), Zhu et al. (2002), Wu et al.(2012), Kayabasi et al. (2013) Jayawardhena (2004), mobile service quality by Ozer et al. (2013), Kuo et al. (2009) Lu et al.(2009); online shopping Ilter (2009), Celik & Basaran (2008) and Li et al. (2012), Seethamraju (2006).

Jennifer (2006) studied the role and nature of e-service and suggested that there must be some communication with regard to the nature, components and boundaries of the e-service experiences for effective utilization by the online consumers. Emel (2015) informed that it is mandatory to have the index for quality in services those who want

to develop the online service quality and this only improve the customer satisfaction through online marketing and enabling them to gain a very good competitive advantage over others in the same market.

Various attempts were made to understand the web interactive service quality in online business. Some of them were the studies done by Aladwani & Palvia (2002), Loiacono et al. (2007), Mishra and Riya (2013), Philip et al. (2003). Despite of that research now available in the market, still there is no direct study about the online service quality and its impact on customer satisfaction among the college students in India. Hence the researcher of this study have made attempt to study the impact of satisfaction on the college students and conducted this research in a positive and informative way.

3. FORMULATION OF HYPOTHESES

H1: E-Service Quality factors have impact on Customer satisfaction

H2: Efficiency affects Customer Satisfaction

H3: Responsiveness affects Customer Satisfaction

H4: Service Availability has an impact on Customer Satisfaction

H5: Reliability has directly and positively affects Customer Satisfaction

H6: Service Failure have an impact on Customer Satisfaction

H7: Service Recovery can directly and positively affect Customer Satisfaction

4. RESEARCH METHODOLOGY

Online shoppers who buy from e-retailers were taken as the population for this study.

600 online shoppers who are college students were selected through purposive sampling in Salem District of Tamilnadu, India during February 2019 to April 2019. Finally, only 524 responses which could be considered for further analysis to the tune 84.72% were taken into consideration in this study. Tools like SEM of AMOS, percentage analysis, Correlation, Regression, One way ANOVA and Paired sample 't' test were applied for testing the hypothesis framed. The overall reliability of the instrument was found to be 0.70 which indicates a very good reliability of the instrument. Adequacy of sample size was also tested through KMO test and the value is 0.812.

5. DATA ANALYSIS AND RESULTS

Validation of the model was done through Structural Equation Modelling (SEM) of AMOS and the model with the values fit for the analysis were depicted in the Table 1 and Figure 1.

In view to confirm the acceptance of the hypotheses, Path analysis through AMOS were carried out. The values of maximum Likelihood unstandardized estimates calculated through SEM was taken and depicted in Table 2.

While analysing the direct and indirect effect between Service failure and satisfaction level among the online customers, it is revealed that there was a negative coefficient of -0.515 through direct effect and 0.953 through indirect effect but the total effects were found to be in a positive mode with the value of 0.438 and 0.953 thereby influencing customer satisfaction and service recovery positively.

Various quality factors taken up for consideration in this study towards online

Table 1. Goodness of Fit Indices for the model

CMIN/DF	CFI	IFI	TLI	RMSR	GFI	AGFI	PGFI
2.294	0.901	0.901	0.899	0.059	0.878	0.858	0.755

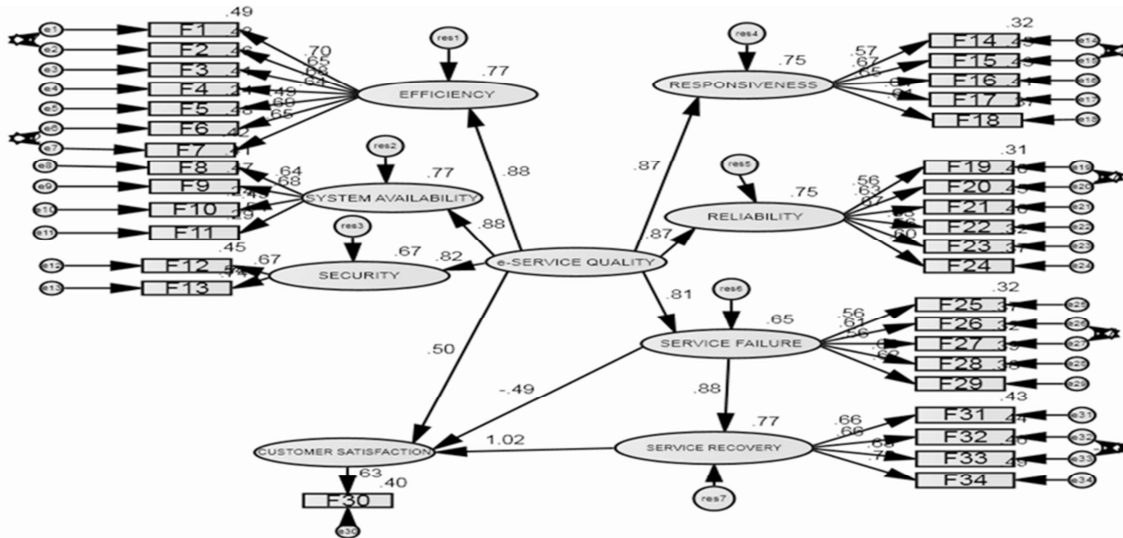| NFI	RFI	PNFI	PCFI	PRATIO	RMSEA	HOELTER (0.05)	HOELTER (0.01)
0.834	0.819	0.762	0.820	0.913	0.050	252	262

Figure 1. Structural Equation Modelling for e-service quality on customer satisfaction

Service quality factors like Efficiency, System Availability, Security, Responsiveness, Reliability and Service failure are having direct effect on Total Service Quality with the coefficient value of 0.877,0.880,0.818,0.868 and 0.869 respectively and there is no indirect effect found among the factors and the e-service quality except the failure noticed in the services on customer satisfaction with the negative coefficient of -0.486 directly and 0.900 indirectly rather the total effects of service failure on customer satisfaction is found as positive to the tune of 0.418 thereby influencing customer satisfaction positively. Regarding its effect on service recovery, it is having a positive influence to the tune of 0.879. At the same time, while noticing the effect of recovery in the failure of the services on satisfaction level among the consumers/customers and the range of impact on the satisfaction was found to be with the value of 1.025 directly and affects service quality to the tune of 0.711 indirectly with the total effect of 0.711 and 1.025 respectively.

5.1. Pearson Correlation Analysis

In view to measure if any correlation that existing among the factors so as to confirm the multi collienarity issues among the factors, Pearson's correlation analysis was conducted and detailed in Table 3.

The correlation co-efficient between Efficiency and System Availability is 0.650 indicating a strong relationship between the two factors and next to this it was as (r-0.60,p<0.01) between the reliability and the responsiveness in the service quality scale,

Table 2. Maximum Likelihood estimates Weights: Standardized &Unstandardized (Group number 1-Default model)

FACTORS	PATH	FACTORS	ESTIMATES		S.E.	C.R.	P	R^2 Values
			Unstandardised	Standardised				
Service Failure	<---	e-service quality	1.521	.809	.447	3.406	***	.654
Service Recovery	<---	Service Failure	.942	.879	.091	10.353	***	.772
Customer satisfaction	<---	e-service quality	1.000	.502				-
Efficiency	<---	e-service quality	1.923	.877	.562	3.421	***	.770
Responsiveness	<---	e-service quality	1.674	.868	.495	3.382	***	.754
Reliability	<---	e-service quality	1.621	.869	.480	3.381	***	.754
System Availability	<---	e-service quality	1.639	.880	.487	3.369	***	.775
Security	<---	e-service quality	2.044	.818	.596	3.427	***	.670
Customer satisfaction	<---	Service Failure	-.515	-.486	.334	-1.543	.123	-

whereas it was found low between System Availability in the online business and the level of satisfaction among the customers .. Overall all the factors have significant positive correlation. In addition it was also noticed that all the values were found between 0.20 and 0.90 indicating that there is no co linearity problem. It is interesting to note that there exists a strong relationship between the recovery in the service failure and the satisfaction level among the customers with the value (($r= 0.544$, $p<0.01$) which has fulfilled the primary objective of this research.

5.2. Antecedents of Customer Satisfaction: Multiple Regression Analysis

In view to find the impact rate of the service quality factors of this study on the

Table 3 . Inter Correlation between the Service Quality factors and Customer Satisfaction

Inter –Correlation values								
	Efficiency	System Availability	Security	Responsiveness	Reliability	Service failure	Service Recovery	Customer Satisfaction
Efficiency	1	.650**	.555**	.569**	.595**	.405**	.567**	0.453**
System Availability		1	.490**	.529**	.516**	.390**	.524**	0.332**
Security			1	.501**	.480**	.383**	.475**	0.401**
Responsiveness				1	.602**	.530**	.554**	0.402**
Reliability					1	.540**	.576**	0.467**
Service failure						1	.586**	0.395**
Service Recovery							1	0.544**
Customer Satisfaction								1
** Significance at 1% level								

Table 4. Impact of Service Quality factors on Customer Satisfaction

	Model	B	Std. Error	Beta	t	Tolerance	Variance Inflation factor (VIF)	Durbin Watson Value	F Value
		Unstandardized Coefficients		**Standardized Coefficients**					
1	(Constant)	0.908	.517		1.756				93.415***
	f1	0.096	.025	0.174	3.782***				
	f2	0.126	.042	0.126	2.977**				
	f3	0.125	.060	0.081	2.092				**R² Value**
	f4	0.077	.033	0.099	2.295	0.48	2.08	1.809	0.520
	f5	0.100	.030	0.144	3.307***				
	f6	0.241	.030	0.305	8.001***				**Adjusted**
	f7	0.125	0.40	0.125	3.567***				**R² Value** 0.515

level of satisfaction, Multiple Regression analysis was carried out and it is seen that there exists a strong impact on Customer Satisfaction (dependent variable) by the Service Quality Factors (independent variables).

From Table 4, it is clear that there have a very good regression results in connection with the antecedents of customer satisfaction. The F-ratio is found to be 93.415 which is statistically significant and also it is revealed that the result of this analysis with a very good 'p' value (P=0.01) and the importance of various factors could also be explained by the Beta value concerned in the table. The unit change and the unit increase in the independent variable(s) considered in this study explain the changes in the dependent variable to increase to the tune of 52% in Customer Satisfaction based on teh value of (R2) value which was found to be as 0.520. All the factors under service quality were highlighted as significant forecaster for satisfaction among the customers as the "t" value is found significant at 1% and 5% level of significance except the factors Security and Responsiveness.

6. DISCUSSION

This study has attempted with the view to analyze the impact of online service quality factors on the level of satisfaction among the customers especially through the mediator of

service recovery. Since the considered model is a new one by deriving the service quality variables and factors through earlier research works, the goodness of fit should be confirmed through Structural Equation modelling (SEM) through Analysis of Modified Structure (AMOS) and very good fit for the model is found in this study. To ascertain the multicollinearity among those factors fixed in this study, Pearson correlation test was done and that revealed that no multicollinerity found among the variables. Next , to find out the factors acting as an antecedent for customer satisfaction, multiple regression analysis was conducted and revealed that all the factors under service quality were highlighted as an important forecaster for level of satisfaction among the customers and this result has substantiated the outcome of the research of Munir (2016) who found the direct and positive association between satisfaction level and banking service quality for the survival of the banking industry and (Agyapong, 2010) who highlighted that there exists a direct and affirmative relationship between the satisfaction level and the quality in services and thereby accepted the Hypothesis (H1).

Since we have considered recovery in services which happened due to the service failure as a mediating factor, it is revealed that the service recovery has an affirmative association with level of satisfaction among them and thereby accepted the hypothesis (H7) which has coincide with the findings of Holloway & Beatty (2003). (Collier & Bienstock, 2006) whose studies and result revealed that a majority of customers were found not satisfied even though recovery task were done for repatronizing the online retailer website and thereby accepted the Hypothesis (H6).

7. CONCLUSION

The result of this study will support towards the service quality literature of the online business, by demonstrating empirical support towards the dimensions of online service quality. Future research can apply the framework used in the study for other online e-services. Based on the results, online retailers can identify the problem areas and formulate strategies to underperforming or important factors pertaining to the online service quality so to improve the level of happiness among the consumers and customers. This research outcome will definitely help the online retailers for considering excellent services to online shoppers.

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СТУДИЈА О УТИЦАЈУ КВАЛИТЕТА ОНЛАЈН УСЛУГА НА ЗАДОВОЉСТВО КУПАЦА У Е-ТРГОВИНИ НА МАЛО

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Извод

Овај рад проверава ефекат квалитета услуге на задовољство купаца у онлајн малопродајном пословању заједно са повезивањем демографских варијабли кроз мишљење испитаника, посебно 524 студента у Индији одабраних методом наменског узорковања. Доброта уклапања модела је пронађена коришћењем моделирања структурних једначина (СЕМ) АМОС-а, а однос између квалитета е-услуге и задовољства корисника је анализиран кроз међукорелацију и регресиону анализу. Резултати показују да фактори квалитета е-услуга имају позитиван утицај и такође су истакнути као значајан предиктор задовољства корисника. Студија је такође открила да опоравак услуге делује као посреднички фактор између неуспеха услуге и задовољства корисника. Резултат ове студије ће подржати онлајн продавце да формулишу своје стратегије у циљу пружања веома добрих и одличних услуга својим купцима.

Кључне речи: квалитет услуге, задовољство купаца, онлајн маркетинг, верност купаца, опоравак услуге, грешка услуге

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