

Impact of Electronic service Quality on Customer Satisfaction: An Empirical Assessment

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Abstract

Ensuring a good electronic service quality is top priority of all e-retailer platforms as it plays a significant role in achieving customer satisfaction which is the ultimate objective of all efforts of e-retailers. This study delves into the aspect of e-service quality considering its seven dimensions to study the impact of e-service quality on customer satisfaction in online shopping environment. A well-structured questionnaire was designed to seek the opinion of respondents about their perception towards e-service quality and their level of satisfaction. The data obtained from 610 respondents confirmed that e-service quality has a positive and significant impact on customer satisfaction. The study also revealed that contact and privacy have the highest impact on customer satisfaction followed by system availability and efficiency. The study recommends that e-retailers should ensure that their services align with customer needs and preferences by focusing on critical e-service quality dimensions. The study has also identified areas of improvement to achieve higher levels of customer satisfaction to ensure long-term success.

Keywords: E-service Quality, E-service Quality Dimensions, Customer Satisfaction E-retailers

Introduction

The rapid growth of e-commerce has revolutionized the way consumers shop, providing them with the convenience and flexibility to make purchases anytime and anywhere. As online shopping continues to expand, businesses are increasingly recognizing the significance of customer satisfaction as a key driver for success in the competitive online marketplace. One crucial determinant of customer satisfaction in the online context is the quality of e-services provided by retailers. With continuing competition in the market, the quality of service has become essential to maintain competitive advantage (Zeithaml, et. al., 2000) and to establish and maintain customer satisfaction (Kalia, et. al, 2007). According to Asse (2020) service quality is the entrance key to total quality management (TQM) and should focus on customer satisfaction to meet their expectations. In the current era developments in services related to the wireless revolution has reduced the direct connection between service providers and customers (Hawary, et. al., 2017) which led to the emergence of electronic service as corporate strategies especially in e-commerce activities. Electronic service is focused on achieving more accuracy, speed and protection (Shahin, et. al., 2011; Zhang and Prybutok, 2005) to meet the needs of existing customers and to achieve higher levels of customer satisfaction. The importance of electronic service as strong source of competitive differentiation through customer involvement in product development process through quick feedback and enhance customer relationships is in addition to the e-service help at lower cost, as it achieves excellence in quality (De Ruyter et. al., 2001). As a result, the use of technology in customer service are important for access to the most basic survival goals of organization (Mahmoud et.al., 2108; Wilson and Frimpong, 2004).

Parasuramn, et. al., (2005) noted that high service quality leads to increase in customer satisfaction. Customer satisfaction is more important in case of electronic service because it's hard to maintain customers in the virtual world, (Zavareh, et. al., 2012). To ensure the survival of online business, retailers try to fulfill customer expectations by presenting new services (Sharma and Das 2017), providing high service quality like presentable websites and lower prices (Hung, et. al., 2014). E-service quality refers to the overall quality of services provided by businesses through their online platforms, including website design, responsiveness, reliability, security, and fulfillment process (Paraskevas and Papadopoulou, 2016). The design and functionality of a website play a vital role in creating a positive user experience (Zeithaml et. al., 2002). A visually appealing and user-friendly website design helps customers navigate the online store easily, find desired products, and complete transactions smoothly. In addition to website design, responsiveness to customer inquiries is crucial in online interactions. Prompt and helpful responses to customer queries contribute to a positive perception of service quality (Kuo et. al., 2009). Customers expect efficient and reliable transaction processes, including secure payment gateways, order processing, and timely delivery (Yang, Jun, & Peterson, 2004). Any shortcomings in these areas can negatively impact customer satisfaction and trust in online shopping. Guo, et. al., (2012) holds the view that service quality helps the online retailers in providing an efficient, as well as effective shopping, purchasing and delivery of goods and services and is, therefore, a determinant of competitive advantage and an important factor in the long-term success of firms (Parasuraman et. al., 2005).

Objective of the Study

In light of the above research studies and also keeping in view the growing importance of e-service quality on customer satisfaction, present study aims to investigate the impact of e-service quality on customer satisfaction with a view to offer suggestions to e-retailers for maintaining a loyal customer base.

Literature Review

E-service Quality

E-service quality can be described as electronic-based service that has reliability and assurance in making purchases and services as well as delivery of a product (Zeithaml et. al., 2002). Parasuraman, et. al., (2005) defined e-service quality as “the extent to which a website of different online companies facilitates effective and efficient shopping, purchasing, and delivery of goods and services.” Santos (2003) holds the view that e-service quality is the “overall customer judgment and evaluation in relation to distinction and quality of e-service provided in the virtual marketplace”. According to Yen and Lu (2008), e-service quality is described as an overall customer evaluation and assessment of the excellence and quality of delivery regarding the excellence and quality of electronic delivery services in cyberspace markets. Parasuraman, et. al., (2005) holds the view that e-service quality is the measure of efficient and effective shopping of web site activities, procurement and the delivery of the product and services. They believe that electronic service quality is a facility in a website designed to be effective and efficient in making online purchases. However, Santos (2003) believes that electronic-service quality is the customer assessment and judgment regarding the excellence and superiority of electronic-service delivery on virtual shopping sites. E-service quality is generally defined as the difference between expected service and the perceived service (Gronroos, 2001). According to Zeithaml, et. al., (2002) e-service quality is defined as the extent to which website facilitates efficient and effective shopping, purchasing and delivery of products and services. Generally, online customers expect equal or higher level of service quality than traditional channel customers (Lee and Lin, 2005).

The most distinctive difference between electronic service quality and traditional service quality is that interpersonal contact is replaced by human-machine interaction. This simple difference has led to the

necessity of evaluating various dimensions in order to assess service quality in terms of e-commerce (Hapenciuc and Condratov, 2007). Long and McMellon (2004) developed a measurement tool to judge the perceived online service quality. They identified five dimensions of online service quality as assurance (trust and confidence), tangibility (physical evidence of service), reliability (performance and dependability), purchasing process, responsiveness (individualized attention) as dimensions. Chen, et. al., (2013), however, identified three dimensions of e-service quality as interaction quality (ease of use, responsiveness, information quality), environmental quality (visual, significance) and product quality (the realization of the order, reliability and emotional benefits). Roman, et. al., (2013) also identified three dimensions of e-service quality as recovery quality, outcome quality and process quality. Swaid and Wigand, 2009, however, in their study identified four dimensions of e-service quality as information quality, website usability, reliability, and responsiveness. Parasuraman, et. et., (2005) developed a measurement scale of e-service quality consisting of thirty items (30), known as E-SQUAL, has seven dimensions as listed below:-

1. Efficiency: Measures the usage of the site, access speed and facilitation.
2. Fulfillment: Consists of the dimensions of the fulfillment of the goods and services executed and delivered by the site.
3. System Availability: Contains the appropriate technical functions of the site.
4. Privacy: Involves the level of protection provided by the site in terms of security and customer information.
5. Responsiveness: Measures the ability to handle problems effectively and provide feedback through the site.
6. Compensation: Measures the level of compensation to customers because of problems.
7. Contact: Measures the ability to support through telephone or online customer representatives.

E-SQUAL, has been widely reported in many research studies (Zavareh, et. al., 2012; Sheng and Liu, 2010; Hasman, et. al., 2019; Santika and Parmudana, 2018) and the same has been adopted in the present study.

Customer Satisfaction

Rust and Oliver (1994) have suggested that customer satisfaction reflects the degree to which a consumer believes that the possession or use of a service evokes positive feelings. It is important to note that satisfaction could be further conceptualized in two broad ways. When satisfaction is seen as an emotional response to performance on specific attributes of a service encounter, it is conceptualized as transaction specific satisfaction. Alternatively, when satisfaction is more likely to depend on factors that occur over repeated transactions, it is conceptualized as a cumulative outcome or overall satisfaction (Shankar et al., 2003). Hence, in an online context, when consumers make one time purchases from a new service provider, such as making a hotel reservation at a holiday resort, website satisfaction is likely to be transaction specific; whereas, in the case of repeat purchasing, satisfaction is likely to be a cumulative outcome. Chang (2005), Cronin and Taylor (1994), Parasuraman et al. (1988) and van Riel et al. (2004) consider overall satisfaction to be primarily a function of perceived service quality. Compared to transaction specific satisfaction, overall satisfaction reflects customers' cumulative impression of a firm's service performance. In turn, it may serve as a better predictor of customer loyalty. Oliver (1981) states that satisfaction is a summary of psychological state originating when the emotion surrounding disconfirmed expectations is coupled with the consumer's prior feelings about the consumption experience. Kotler (2000) also expresses that satisfaction is a person's feelings of pleasure or disappointment resulting from comparing a product's perceived performance (or outcome), in relation to his or her expectations.

Customer satisfaction generally means customer reaction to the state of fulfilment, and customer judgement of the fulfilled state (Oliver, 1997). Customer satisfaction, meanwhile, is defined as an overall positive or negative feeling about the net value of services received from a supplier (Barnes et al., 2004; Schmit and Allscheid, 1995; Woodruff, 1997). Anderson and Srinivasan (2003) have defined customer satisfaction as the contentment of the customer with respect to his or her prior purchasing experience with a given e-commerce firm. Wangenheim (2003) also has the similar definition of customer satisfaction as the outcome of a comparison between expected and perceived performance throughout the customer relationship.

Development of Research Hypotheses

E-service quality is the quality perceived by customers for purchases or services electronically (Zeithaml et al., 2002). This means that electronic service quality is important to provide quality fulfillment that exceeds customer needs to provide a level of customer satisfaction. Kabir and Carlsson (2010) opined that E-service quality is linked with customer perceptions and expectations and is essential for generating satisfaction. Good electronic service can prompt customers to spend more than they had planned. Customer satisfaction is the ultimate result of meeting a consumer's expectation from the performance of products as well as service rendered by the e-retailer.

Previous research has confirmed that there is a positive and significant influence of e-service quality on customer satisfaction (Saodin et al., 2019; Rita et al., 2019; Hasman et al., 2019); Santika and Pramudana, 2018). Research from Lestari and Ellyawati (2019) also state that e-service quality has a positive and significant effect on customer satisfaction. The results of previous research prove that e-service quality has a positive and significant effect on online repurchase intention (Hasman, et. al., 2019; Santoso and Aprianingsih, 2017; Zainul, 2019). Research from Lestari and Ellyawati (2019) shows that ease of use, website design, responsiveness, and personalization have a positive and significant effect on repurchase intention. Service quality has a great effect both on customer satisfaction and customer repurchase intention and is a significant factor in determining the performance of an online business by influencing online customer shopping experiences (Tung Hsuan Liu, 2012).

The above research findings suggest that a high electronic service quality leads to increased consumer satisfaction which in turn could lead to increased repurchase intention of customers. Based on the above-mentioned literature, it is hypothesized that: -

H1: There is positive relationship between E-service quality and customer satisfaction

Moreover, studies (Saodin et al., 2019; Rita et al., 2019; Hasman et al., 2019; Lestari and Ellyawati, 2019; Santika and Pramudana, 2018) are evident that seven e-service quality dimensions, viz., Efficiency, System Availability, Fulfillment, Privacy, Responsiveness, Compensation, Contact have direct relationship with consumer satisfaction. Hence, in view of these evidences, following corresponding sub-hypotheses were formulated: -

H1a: There is a positive relationship between Efficiency and Customer Satisfaction.

H1b: There is a positive relationship between System Availability and Customer Satisfaction.

H1c: There is a positive relationship between Fulfillment and Customer Satisfaction.

H1d: There is a positive relationship between Privacy and Customer Satisfaction.

H1e: There is a positive relationship between Responsiveness and Customer Satisfaction.

H1f: There is a positive relationship between Compensation and Customer Satisfaction.

H1g: There is a positive relationship between Contact and Customer Satisfaction.

Research Methodology

This study delves into the aspect of e-service quality considering its seven dimensions, namely, efficiency, System Availability, Fulfillment, Privacy, responsiveness, compensation, and contact, with the objective being to evaluate the impact of e-service quality on customer satisfaction. To establish the scale items for e-service Quality, a literature review was conducted which led to the identification of 30 items sourced from previous research by Parasuraman, et.,(2005). To measure customer satisfaction, seven scale items were adapted from the work of Srinivasan, et al., (2002) and modifications were made to the measurement scales to enhance their validity and reliability. The questionnaire was divided into three sections: the first focused on the demographic profile of participants, including their age, gender, education level, income, and occupation. The second section evaluated e-service quality, and the third assessed customer satisfaction. Respondents were asked to rate their assessment on a 5-point Likert scale, with choices ranging from strongly disagree (1) to strongly agree (5). The study was conducted in Jammu and Kashmir. However, the study was limited to ten most populous districts, with five from Jammu i.e., Jammu, Rajouri, Kathua, Udhampur, Poonch and five from Kashmir i.e., Srinagar, Anantnag, Baramulla, Kupwara and Budgam. Owing to paucity of time and financial resources, present study has used non-probability sampling in the form of judgmental sampling. Every person who is online shopper encountered in common areas such as shops, educational institutions and other offices were selected for the survey, and a total of 610 participants were found suitable for data analysis. The researcher conducted the survey personally in four months' time starting from November 2022 to February 2023. The data was analysed and processed using the help of SPSS and Smart-PLS software.

The present study constitutes a sample where majority respondents (59%) were males followed by females (41%). In terms of age, heavy participants (37.70%) belonged to the age group of 31-40 years followed by the age group of 21-30 years (32.79%). Below 20 years were the least participants (13.11%) followed by above 41 age group (16.39%). With respect to educational qualifications, post-graduates respondents were highest participants (46.39%) followed by graduates (40.98%). 10+2 were least participants (12.62%). Majority respondents (29.51%) belonged to the monthly income group of Rs above 90k, followed by (27.87%) the income group of (Rs 61k-90k), 24.59% (31k-60k) and below the income group of above 30k per month were the least (18.03%). In terms of occupation, majority respondents (60.16%) were employed followed by self-employed (23.44%) while as unemployed/other were least participants (16.39%). The effort was made to give a balanced representation to all demographic characteristics to make the sample representative.

Exploratory Factor Analysis (EFA)

E-service quality

Exploratory factor analysis (EFA) using the principal component analysis method (PCA) was carried out on 30 scale items to determine scale dimensionality. The construct validity was tested by applying Bartlett's Test of Sphericity and the Kaiser–Mayer– Olkin Measure of sampling adequacy to analyze the strength of association among variables. The findings of KMO test are 0.810, which exceeds satisfactory value of 0.50 (Kaiser, 1974). The value of Bartlett's test of Sphericity is 0.000, which meets the criteria of value lower than 0.05.

Table: 1.1 Communalities, Total Variance Explained and Rotated Component Matrix of E-service Quality

Table 1.1 Rotated Component Matrix								
Scale Items	Communalities	Factors						
		1	2	3	4	5	6	7
EFF1	0.703	.801						
EFF2	0.746	.823						
EFF3	0.729	.811						
EFF4	0.734	.813						
EFF5	0.689	.798						
EFF6	0.657	.753						
EFF7	0.631	.748						
SYS1	0.512		.677					
SYS2	0.712		.813					
SYS3	0.769		.856					
SYS4	0.686		.768					
FUL1	0.694			.768				
FUL2	0.741			.817				
FUL3	0.750			.825				
FUL4	0.656			.767				
FUL5	0.656			.707				
PRI1	0.771				.805			
PRI2	0.851				.883			
PRI3	0.767				.815			
RES1	0.745					.667		
RES2	0.772					.802		
RES3	0.737					.825		
RES4	0.700					.819		
RES5	0.777					.756		
COM1	0.799						.831	
COM2	0.790						.879	
COM3	0.794						.854	
CON1	0.851							.818
CON2	0.753							.869
CON3	0.679							.797
Eigen Values		8.782	3.584	2.429	2.256	1.838	1.579	1.356
Cumulative Variance		16.623	28.238	39.659	48.691	56.960	64.913	72.749

The results of principal component analysis show the eigen value is more than 1, which extracted thirty items (30) grouped into seven factors with explained variance of 72.749 percent in the data. The communalities of thirty-two (30) items ranged from 0.512 to 0.851 indicating that a large amount of variance has been extracted by the factor solution. The seven factors were labelled as F1- Efficiency, F2- System Availability, F3 -Fulfilment, F4 – Privacy, F5 – Responsiveness, F6 – Compensation, F7 – Contact.

Customer Satisfaction

Exploratory factor analysis (EFA) with a principal component method was again conducted on customer satisfaction construct in order to detect the scale's dimensionality.

Table: 1.2 KMO and Bartlett's Test, Communalities, Total Variance Explained and Rotated Component Matrix of Customer Satisfaction

Construct	Item No.	Elements	Communalities	Rotated Component Matrix
Customer satisfaction	CS1	I am satisfied with the quality of products offered by this E commerce company.	0.594	Only one component was extracted
	CS2	Online shopping is a satisfying experience as it offers customized product at my convenience.	0.683	
	CS3	I am satisfied with cash-on-delivery mode of payment offered by this company.	0.699	
	CS4	My choice to purchase from this E-commerce company was right.	0.725	
	CS5	I have truly enjoyed purchasing from this E-commerce company.	0.642	
	CS6	I am satisfied with my most recent decision to purchase from this E-commerce	0.620	
	CS7	I think I did the right thing by buying the products from this E-commerce company.	0.601	
Eigen value		4.565		
Explained variance		65.220		

Extraction Method: Principal Component Analysis

The Bartlett's Test of Sphericity yielded a result of 0.000 (Bartlett, 1950) and satisfies the requirement of a value less than 0.05 for the factor analysis to be accepted as adequate. The measure of Sampling Adequacy by Kaiser-Meyer-Olkin (KMO) is 0.875 which is above the minimum value of 0.6 (Hoque et al., 2018). The study applied Principal Component Analysis (PCA) with a Varimax Rotation and Eigen value equal to or more than 1. The results extracted all seven items (7) with an explained variance of 65.220 percent (Table 1.2). Communalities of five (7) items values above 0.50 ranged from 0.594 to 0.725, indicating a moderately good correlation between the individual items. No factor was extracted from the analysis (Table: 1.2).

Measurement Model Assessment (Confirmatory Factor Analysis)

Reliability and validity of the construct is assessed through Cronbach's alpha, composite reliability and average variance extracted (AVE). The Fornell-Larcker criterion, and heterotrait-monotrait (HTMT) ratio of correlations is used to examine discriminant validity (Hair et al, 2017). The reliability of the scales was established as the two scales registered their values above 0.7 threshold (Table: 1.3) for Cronbach's alpha coefficient (Cronbach, 1970). Convergent validity was assessed based on average variance extracted (AVE), composite reliability values (CR) (Fornell and Larcker, 1981). Based on the results presented in Table 1.3, both AVE and CR values exceed the acceptable thresholds of 0.5 and 0.7 (Fornell and Larcker, 1981; Bagozzi and Yi, 1988). Hence Construct reliability is established.

Table 1.3 Construct Reliability and Validity

Construct	Dimensions	Cronbach's Alpha	Average Variance Extracted (AVE)	Composite Reliability (>0.6 or 0.7)
E-service Quality	Efficiency	0.925	0.690	0.940
	System Availability	0.818	0.646	0.878
	Fulfilment	0.880	0.676	0.912
	Privacy	0.876	0.802	0.924
	Responsiveness	0.888	0.691	0.918
	Compensation	0.857	0.774	0.911
	Contact	0.871	0.794	0.920
Customer satisfaction		0.921	0.678	0.936

Discriminant Validity

Discriminant validity was established through Fornell and Larcker Criterion and HTMT Ratio. The Fornell and Larcker criterion results in Table 1.4 clearly shows that the square root of AVE (in bold) for all the constructs is higher than its highest correlation with any other construct (Fornell-Larcker criterion, 1981). The results displayed in Table 1.5 indicate that the HTMT criterion was met as all the values in the table are less than 0.85 (Henseler et al., 2015). All model evaluation criteria for the measured constructs have been met, providing support for their discriminant validity.

Table: 1.4 Fornell and Larcker Criterion

	COM	CON	CS	EFF	FUL	PRI	RES	SYS
COM	0.88							
CON	0.222	0.891						
CS	0.208	0.402	0.823					
EFF	0.121	0.368	0.345	0.831				
FUL	0.086	0.416	0.32	0.413	0.822			
PRI	0.329	0.231	0.371	0.219	0.24	0.896		
RES	0.157	0.384	0.319	0.504	0.385	0.215	0.831	
SYS	0.277	0.07	0.272	0.185	0.194	0.403	0.1	0.804

Table: 1.5 Heterotrait-Monotrait Ratios (HTMT)

	COM	CON	CS	EFF	FUL	PRI	RES	SYS
COM								
CON	0.262							
CS	0.223	0.436						
EFF	0.127	0.408	0.368					

FUL	0.098	0.471	0.356	0.458				
PRI	0.37	0.263	0.409	0.243	0.282			
RES	0.171	0.439	0.35	0.555	0.435	0.236		
SYS	0.328	0.09	0.298	0.215	0.218	0.475	0.119	

Note; COM: Compensation; CON: Contact; CS: Customer Satisfaction; EFF: Efficiency; FUL: Fulfillment; PRI: Privacy; RES: Responsiveness; SYS: System Availability;

Structural Model Assessment

The results of significance of path coefficients with t-statistics, standard deviation and p-values are shown in below Table 1.6. Additionally, the model's performance was evaluated using the standardized root mean square residual (SRMR) metric. The obtained value of SRMR was 0.051, which is below the threshold of 0.10, indicating that the model has an acceptable fit (Hair et al., 2016). Furthermore, the coefficient of determination (R^2) explains the explanatory power of the model. R^2 is a measurement of in-sample predictive power since it takes into account all the data used for model estimate and indicates the squared correlation of actual and predicted values (Rigdon, 2012; Hair et al., 2014).

The R^2 value ranges from 0 to 1, with higher levels indicating higher levels of predictive accuracy. Higher values denote higher degrees of predicting accuracy, and the R^2 number ranges from 0 to 1. Rule of thumb for appropriate R^2 values are difficult to provide because they depend on the model's complexity and the field of study. For endogenous latent variables, R^2 values of 0.75, 0.50, or 0.25 can be characterized as considerable, moderate, or weak, respectively (Hair et al., 2011; Henseler et al., 2009), although R^2 values of equal or above 0.10 are regarded high in areas like consumer behaviour (Falk and Miller, 1992; Hair et al., 2014). R square value of Customer satisfaction is (0.297), shows that 29.7% variance in customer satisfaction is attributed to e-service quality.

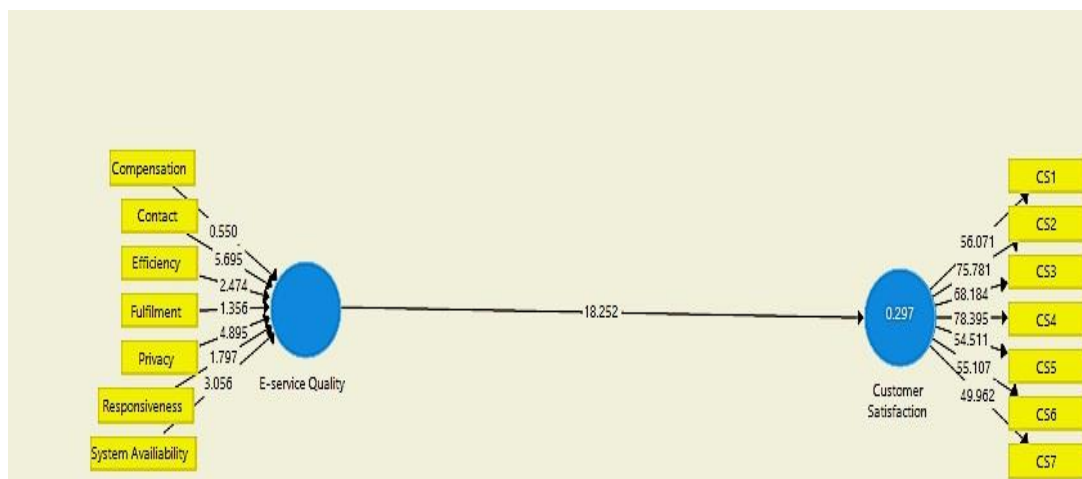


Fig 1.1 Structural Model of E-service Quality and Customer Satisfaction

Results, Discussion and Suggestions

The major focus of the research objective was to study the impact of product quality on customer satisfaction. The corresponding hypothesis for the study objective was that there is a positive relationship between E-service quality and customer satisfaction. The study results revealed that there is a positive and significant ($\beta=0.545$; Tvalue=18.252; pvalue= 0.000) relationship between e-service quality and customer satisfaction. These findings align with other research studies ((Alwafi & Magnadi, 2016; Saodin et al., 2019; Rita et al., 2019; Hasman et al., 2019; Santika & Pramudana, 2018; Lestari & Ellyawati, 2019).

This implies that an improvement in e-service quality will raise consumer satisfaction because it directly impacts an e-retailer ability to retain customers and attract new ones. When a product meets or exceeds customer expectations in terms of quality, customers are more likely to be satisfied with their purchase and have a positive experience. In other words, it results in repeat purchases, recommending the product to others and spreading positive word of mouth communication. A high- e-service quality can differentiate a particular e-retailer from competitors and create a competitive advantage. Improving the service quality also generate cost savings for the business in the long-term, as it can reduce product defects, warranty claims, and customer service costs. Furthermore, product quality is often a deciding factor in customer decision-making. In a competitive market, customers have multiple options and are more likely to choose a company that has a proven track record of delivering high-quality products. Therefore, companies that prioritize product quality have an advantage over those that do not.

Additionally, the bootstrapping technique was used to test the statistical significance of the seven dimensions of e-service quality on customer satisfaction which revealed that hypotheses H1a (Efficiency-> Customer Satisfaction), H1b (System Availability ->Satisfaction), H1d (Privacy ->Satisfaction) and H1g (Contact ->Satisfaction) are supported and are in line with the other studies (Lee and Lin , 2005; Wu ,2011; Paschaloudis (2014). It was observed in online shopping; Contact and privacy have the highest impact on customer satisfaction, followed by system availability and efficiency.

The results (Table 1.6) revealed that there is a positive and significant ($\beta = 0.197$; t-value =4.779; p-value= 0.000) relationship between the Privacy dimension of e-service quality and customer satisfaction. This suggests that e-customers' want a privacy during the processes of e-shopping from a particular e-retailer platform, so e- retailers should protect all information which is related to an e-customers. The results also infer that there is a positive and significant ($\beta = 0.119$; t-value = 2.453; p-value= 0.014) relationship between the Efficiency dimension of e-service quality and customer satisfaction. This suggests that proper usage of the site and its access speed/facilitation have positive impact on the perception of e-customers towards a particular e-retailer. Further, results also showed that there is a positive and significant ($\beta = 0.127$; t-value =3.074; p-value= 0.002) relationship between the System availability dimension of e-service quality and customer satisfaction. From these findings, it is evident that customers are satisfied when site of an e-retailers contains the appropriate technical functions. This study also demonstrates that there is a positive and significant ($\beta = 0.240$; t-value =5.303; p-value= 0.033) relationship between the contact dimension of e-service quality and customer satisfaction. The findings of this study imply that if the ability of e-retailers to support through telephone or online customer representative is better, then e-customers feel more satisfied in an online environment.

Table 1.6 Hypotheses Results

Hypotheses	Paths	Beta	(STD)	T Stat	P Values	Results
H1	E-service quality -> Customer Satisfaction	0.545	0.030	18.252	0.000	Supported
H1a	Efficiency -> Customer Satisfaction	0.119	0.048	2.453	0.014	Supported
H1b	System Availability -> Customer Satisfaction	0.127	0.041	3.074	0.002	Supported
H1c	Fulfillment -> Customer Satisfaction	0.065	0.047	1.370	0.171	<i>Rejected</i>
H1d	Privacy -> Customer Satisfaction	0.197	0.041	4.779	0.000	Supported

H1e	Responsiveness -> Customer Satisfaction	0.084	0.046	1.827	0.068	<i>Rejected</i>
H1f	Compensation -> Customer Satisfaction	0.022	0.038	0.574	0.566	<i>Rejected</i>
H1g	Contact -> Customer Satisfaction	0.240	0.045	5.303	0.000	Supported

In addition, the results also indicate that H1c (Fulfillment ->Satisfaction), H1e (Responsiveness ->Satisfaction) H1f (Compensation ->Satisfaction) are not supported as the calculated p-values are more than 0.05. Therefore, hypotheses H1c(Fulfillment have positive and significant impact on customer satisfaction) was rejected which is in line with the research finding of Hasman et al.,(2019); H1g (Responsiveness has positive and significant impact on customer satisfaction) was rejected and falls in line with the study of Santoso & Aprianingsih, (2017) and H1f (Compensation have positive and significant impact on customer satisfaction) was also rejected. This relationship has not been examined in the extant literature so far.

Suggestions

The research findings indicate that the quality of e-services has a direct influence on customer satisfaction, underscoring the need for e-retailers to continuously enhance their services to meet the evolving demands of online shoppers. A detailed examination of the dimensions of e-service quality has identified Contact, Privacy, Efficiency, and System availability as the most significant factors. Consequently, it is imperative for e-retailers to adapt their offerings and strategies in accordance with customer preferences in these specific areas. By prioritizing these critical dimensions, online platforms can effectively allocate resources to improve e-service quality. Despite the absence of a direct correlation between the fulfillment dimension and customer satisfaction, e-retailers should adopt a comprehensive approach to e-service quality, which encompasses efficient delivery of goods and services, clear protocols for addressing customer complaints and inquiries, effective training for customer service representatives, provision of multiple communication channels (e.g., phone, email, live chat, and social media), the establishment of a knowledge base and FAQ section, and implementation of a self-service platform where customers can find solutions independently. Furthermore, the research findings reveal that the responsiveness dimension does not have a significant impact on customer satisfaction. Therefore, e-retailers should focus on streamlining user interfaces and navigation, enhancing user-friendliness, and delivering concise and explicit instructions during the online shopping process. Integration of technologies such as Artificial Intelligence (AI) and chatbots can be beneficial in assisting customers with any issues or queries related to the usage of e-services.

Limitations and Directions for Future Research

The present study has certain limitations that require attention in forthcoming research. Firstly, the research was carried out solely on individuals who engage in online shopping, thereby, restricting the generalizability of the outcomes to other categories of customers. Secondly, the research solely examined the influence of e-service quality on customer satisfaction and did not scrutinize other aspects that may impact customer satisfaction, for instance, product quality or price. Lastly, the research utilized a cross-sectional design which cannot establish causality. In the future, it would be better to investigate the effect of e-service quality on diverse customer segments, including but not limited to new customers, or loyal customers. Finally, longitudinal studies could be conducted to establish causality between e-service quality and customer satisfaction.

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