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## The Influence Of Electronic Service Quality Dimensions On Consumer E-Trust: An E-Commerce Perspective

### Abstract

A research model has been developed to study the relationship between e-service quality domains and consumer e-trust. A survey method was used to gather data. The online consumers were the unit of analysis. For checking reliability and measurement model validity, we go through confirmatory factor analysis. The technique of structural equation modelling was also used. The result presented that e-trust has been affected by all the e-s-qual dimensions. Some recommendations for further studies are to use distinct methodologies, such as focus groups and interviews. Study the e-trust in online contexts from other perspectives too. Practical implications suggest that marketers should take emphasis on enhancing customer e-trust by providing good website service qualities. Better marketing strategies should be developed by online stores so as to address consumer e-trust. Likewise, the study result provides valuable information to marketing managers, especially dealing with online stores. This study provides interesting internet marketing knowledge to researchers as well.

**Key Words:** E-Trust, Electronic Service Quality, E-Commerce

### Introduction

The consumer numbers are increasing day by day in the online shopping environment. E-retailers face some challenges in building online consumer trust. For vendors to succeed over internet, the element of trust can't be ignored. The discouragement of consumer's online purchases increases in the absence of trust factor. Thus, a need arises to examine consumer e-trust. The context of e-commerce was considered in the current study.

A relationship of a company with their customer could be strengthened through the elements of consumer satisfaction and trust (Kim et al. 2009). The element of trust can minimise the risk. It is hence essential for commerce so to minimise consumers' uncertainties and fear of deception (Jiang et al. 2008).

For a cooperative relationship, trust must be established (Das and Teng 1998). Thus, the role of

trust is important in the relationship between consumer and business. Similarly, in the e-commerce environment, a fair mutual interaction is also needed (Rutter 2001). Therefore, the role of e-trust cannot be ignored in e-commerce advancement.

Contrasting the e-commerce environment with the traditional marketplaces, this also includes some elements that may influence trust of the buyer to purchase online (Ha 2004). The trust of the consumer in the online context can be influenced by many factors, including the website characteristics (Gefen and Straub 2004). So, it is needed to study the electronic service quality (E-S QUAL) scopes that may affect consumer e-trust. Many previous studies focus on online purchase intention with respect to E-S QUAL. Some studies highlight the importance of trust in online business. Trust of consumers towards the website was not explored earlier in the context of E-S QUAL dimensions. So, there is

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a need to answer how the scopes of electronic service quality can affect consumer trust in e-commerce. The aims of the study are; (1) "To study the influence of e-s-quality dimensions on consumer e-trust". (2) "To examine the role of efficiency, system availability, fulfilment, privacy and e-trust in e-commerce context".

## Literature Review

### Trust

Trust as a driver of e-commerce is emerging in academic studies. Trust is "a willingness to rely on an exchange partner in whom one has confidence" ([Moorman et al. 1993](#)). Building trust in online purchases is considerably different than in the offline market ([Gefen 2000](#)). A need arose to understand trust, its background, and its significance. In facilitating e-commerce, trust plays a vital role, as recognised by academicians and industry ([Gefen and Straub 2004](#); [Komiak and Benbasat 2006](#)).

Trust is "a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another" ([Rousseau et al. 1998](#)). The definition of online trust is developed as follows "an attitude of confident expectation in an online situation of risk that one's vulnerabilities will not be exploited" ([Beldad et al. 2010](#)).

Mayer, Davis, and Schoorman (1995) explained that trust has three attributes namely competence, compassion, and honesty. Competence means the trustor believes in the trustee and that he can do what the trustor needs. Secondly, Benevolence is the trustor who believes in the trustee that he will do well, besides any personal intention. Lastly, integrity relates to trust or belief in the trustee that he makes the pledge was fulfilled, is honest and ethically acts in a relation ([Doney and Cannon 1997](#)). Trust is "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" ([Mayer et al. 1995](#)).

### E-trust

Now a day's, the consumer has found the internet as a different source for their purchases. Thus, for a continuous relationship on this medium, it is essential to build e-trust. Yet, most of the websites don't focus on building e-trust and act simply as self-service logs. As a result, they couldn't retain many of the customers and also failed to convert website visitors into purchasers. This is due to a lack of e-trust.

If a website wants to retain customers, then they need to work on improving its relationship strategies. Trust is one of the main variables in relationship marketing strategies. It would directly affect consumer behaviour. The trust role in the online context cannot be ignored as it enhances customer satisfaction and creates expected outcomes ([Pavlou 2003](#); [Yousafzai et al. 2003](#); [Gefen and Straub 2004](#); [Wu and Chang 2005](#); [Flavián and Guinaliú 2006](#)).

Rendering to the firm's view, market share is influenced by effectively managing quality online and thus, trust developed that help to encourage repurchases online ([Palvia 2009](#)). To be successful in e-commerce, websites must focus on building e-trust as it contributes to meeting consumers' expectations as well as removing the uncertainties of online dealings ([McKnight and Chervany 2001](#); [Pavlou 2003](#)).

The vital role of e-trust has been established by researchers ([Pavlou 2003](#); [Gefen and Straub 2004](#)). Because of anonymity and the product's physical absence, e-trust surely plays a vital part in the online environment. As described by [Yoon \(2002\)](#), "the online trust mechanisms as security declaration, status, web searching, fulfilment (willingness to customise), performance (web quality), technology, and interactions (e-forums)" ([Yoon 2002](#)).

The website can overcome uncertainty by providing accurate information. Thus, this can construct trust on a website ([Reichheld and Schefter 2000](#)). Specifically, in an online environment, trust is important because online interactions are diverse and complex, which possibly results in volatile behaviour ([Gefen and Straub 2004](#)). There must express trust between

buyers and sellers. The websites should not distort consumer information as well as try their most to avoid unfair pricing, security, and privacy violations so as to maintain long-term trust in the relationship. One study has discussed numerous survey results, which indicated that consumers purchase from trusted websites and from those websites where they can recognise e-vendors credibility (Jiang et al. 2008). This mechanism of trust has the ability to increase buyers' confidence in internet purchases (Angriawan and Thakur 2008).

### **Electronic Service Quality (E-S Qual)**

An online service quality scale was developed by Parasuraman, Zeithaml and Malhotra (2005). This scale was named electronic service quality (E-S QUAL). To measure the online service quality, different attributes of service have been provided by this scale. Efficiency, system availability, fulfilment and privacy are the four dimensions of this scale. The firms could be successful by improving their service quality. The customer makes a comparison between the company's actual service performance and what they feel the company should offer (Parasuraman et al. 2005). Electronic service quality is a multiple-item scale that investigates a quality service that has been provided by the websites to online shopping consumers.

The E-S-Qual model was studied from customers' perspectives in internet banking (Ali 2012). The dimensions of the electronic service quality model (Parasuraman et al. 2005) were described as follows:

1. Efficiency: the ease of using the website.
2. System availability: the website's right functioning and technical adjustment.
3. Fulfillment: the item availability and order delivery of the website.
4. Privacy: the safety of customer information on the website.

### **E-S Qual and Trust**

The competition expansion and consumers easy moving from one to another website have forced

on improve quality service. The quality of service in an online environment is a potential precursor of trust as it relates to consumers' expectations. On the better business bureau website, it is indicated that over the internet a need to endorse trust and confidence. Thus measures should be taken toward constructing the e-trust (Chen et al. 2004).

The dimensions of e-service quality could affect e-trust as they represent the site's trustworthiness. Trust is confidence in the integrity of the supplier. The e-service dimensions' effect on trust was investigated by Gefen and Straub (2004) and resulted that the e-service dimensions predicting the e-trust. One study establishes the fact that the website structure and website characteristics stimulate people's trust when they visit the website (Chen et al. 2004). Here this study also argues that the different dimensions of the website can excite the motivation of consumers to purchase online.

### **Efficiency and Trust**

Website design improves efficiency. The efficiency components are based on the consumer's website experience, such as pursuing information, product availability, order booked, tracking the order, and product and price offerings (Holloway and Beatty 2008; Parasuraman et al. 2005; Wolfinbarger and Gilly 2003). So, when the website information is well organised, and the consumer can complete a transaction quickly and easily find what they need so, this may lead to building their trust in a particular website. So the hypothesis developed as follows:

**H1:** "There is a significant relationship of website efficiency with consumer e-trust".

### **System Availability and Trust**

When the website achieves efficiency, this indicates system availability. The businesses can be run through a website, and that website does not crash (Holloway and Beatty 2008). So, it can also be hypothesised that;

**H2:** "There is a significant relationship between website System availability with consumer e-trust".

### Fulfilment and Trust

Customers expect to receive the same product that they have ordered from the website; also, the correct time delivery of the product in good condition is promised (Holloway and Beatty 2008). Some factors of fulfilment include the good condition of a product, correctness of order and timely transport (Holloway and Beatty 2008; Parasuraman et al. 2005; Wolfenbarger and Gilly 2003). Thus, a hypothesis may be developed as follows:

**H3:** There is a significant relationship between website fulfilment with consumer e-trust.

### Privacy and Trust

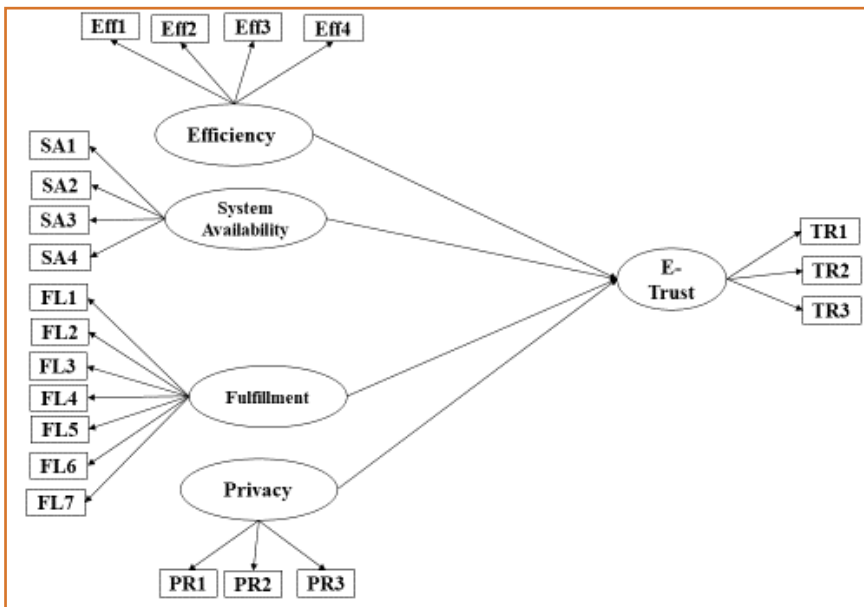
Privacy over the internet is "the customer's

perception regarding their ability to monitor and control the information about themselves" (Goodwin 1991). Many disciplines such as marketing, information system and organisation emphasise privacy as a mechanism of information control (Goodwin 1991). Trust over the internet plays a vital part to reduce the risk level of transactions linked with privacy (Pavlou 2003; Koufaris and Hampton-Sosa 2004). Consumers give their information on reliable websites and thus reduce the privacy concerns that subsequently help to form e-trust (Culnan and Armstrong 1999). In terms of hypothesis:

**H4:** There is a significant relationship between website privacy with consumer e-trust.

### Conceptual Framework

The figure shows a conceptual framework of the model. The four basic scopes of "E-S QUAL, namely, efficiency, system availability, fulfilment and privacy", could stimulate e-trust.



**Figure 1:** Conceptual framework of the research model

### Research Methodology

#### Study Setting

A quantitative research type was used for collecting the data based on a cross-sectional

study, and a primary data collection technique was used.

#### Study Population

The population of the study was internet users

and they were chosen based on convenience sampling from different universities.

### Measures

To empirically examine the conceptual model, this study adopted an e-service quality scale from [Parasuraman et al. \(2005\)](#). The service quality scale consists of four scopes of e-service quality which include efficiency (4 items, alpha=.80), system availability (04, (Four) items, alpha=.79), fulfilment (07 (seven) items, alpha=.71) and privacy (03 (Three) items, alpha=.87). The three items of e-trust (alpha=.84) were adopted from [Gefen 2000](#).

### Procedure

The approach used in this research was deductive in design. The technique used was primary data collection to address the research question of the study. Data collection was done through an adopted questionnaire ([Parasuraman et al., 2005](#); [Gefen, 2000](#)). The questionnaire has the Likert scale of five-point, i.e., "1=strongly disagree to 5=strongly agree". The population of the study was internet users, and they were chosen based on convenience sampling from different universities. Data was analysed through AMOS.

## Results

### Demographic Characteristics

Among 213 samples, the males were 110, while the

females were 103. With the percentage of 51.6 and 48.4, respectively. It is observed from the data collected that the ages of respondents were mostly lies between 20-30 (69%), while only 9.9% were above 30 and 21,1% were below 20. Of the total sample size, mostly, respondents were Bachelors 47.9% (102), while Master's degrees were accomplished by 46.5% (99) respondents while only 5.6% (12) respondents marked as other in their education level. The next demographic characteristic was the online buying experience of respondents comprised, with 51.2% having less than 1 year of experience and 26.3% (56) having more than one year of online buying experience. However, 48% (22.5) of candidates were also marked as never, which means they do not have an experience in online purchasing.

### Statistical Analysis

Correlation is run to measure the strength or degree to which two variables are related. Table1 explain that the resulted means and standard deviation of the construct are Efficiency 3.51 (0.86), System Availability 3.77 (0.51), Fulfilment 3.41 (0.64), privacy 3.53 (0.81) and e-trust 3.90 (1.12). It is indicated that e-trust has the lowest mean while system availability has the highest.

**Table 1.** "Mean, Standard deviation and correlation among variables"

Construct	Mean	S.D	Efficiency	System Availability	Fulfilment	Privacy	E-trust
Efficiency	3.51	.86	1				
System Availability	3.77	.51	.732**	1			
Fulfilment	3.41	.64	.518**	.440**	1		
Privacy	3.53	.81	.734**	.733**	.460**	1	
E-trust	3.09	1.12	.691**	.658**	.488**	.668**	1

N= 213 \*\* Correlation is significant at the 0.01 level (2-tailed)

### Measurement Model

It was stated by Carmines et al. that the ratio should be less than 3.0 between chi-square "to the

degree of freedom (x2/df) to determine model with good fit ([Carmines 1981](#)), and RMSEA should be lower than 0.05 ([Browne and Cudeck 1993](#)). GFI, and CFI, should exceed 0.9 ([Hair et al.](#)

1998). The value of  $\chi^2/df$  is 2.4, GFI is 0.87, CFI is 0.93, and RMSEA is 0.06. The overall results suggested that the research model provided an adequate fit to the data".

**Table 2.** Measurement model of CFA

	Cut off	Values
CMIN/DF	>0.05	2.007
GFI	>0.90	0.87
CFI	>0.9	0.93
RMSEA	0.03 - 0.08	0.06

Table 3 shows the construct and their loadings. All loadings exceeded 0.50. The construct composite reliabilities ranged from 0.82 to 0.94, indicating to exceed the criteria of model fit. For

all constructs, average variance extracts (AVEs) remained larger than or equal to 0.5, which indicates more variance than that attributable to measurement error of the items captured in the underlying construct. By taking the square root of AVEs, the Convergent validity was assessed; entirely, the indicators exceeded 0.7. The evidence of convergent validity was defined as a factor loading exceeding 0.5 by (Bagozzi and Yi 1988). The composite reliabilities and AVEs values satisfied the research instruments' reliability and validity. Figure II shows the factor loadings for all concepts and that all exceeded the recommended level of 0.5, indicating acceptable item convergence on the intended constructs.

**Table 3.** Composite reliabilities and convergent validity of measurement model

Construct and Indicator	Loading	CR	AVE	Square Root of AVE
<b>Efficiency</b>				
EFF1	1.02			
EFF2	0.73	0.86	0.51	0.86
EFF3	0.66			
EFF4	0.71			
<b>System availability</b>				
SYS1	0.75			
SYS2	0.71	0.91	0.72	0.91
SYS3	0.65			
SYS4	0.68			
<b>Fulfilment</b>				
FUL1	0.57			
FUL2	0.61			
FUL3	0.57	0.94	0.61	1.04
FUL4	0.54			
FUL5	0.56			
FUL6	0.57			
<b>Privacy</b>				
PRI1	0.80			
PRI2	0.86	0.93	0.80	0.92
PRI3	0.86			
<b>Trust</b>				
TR1	0.75			
TR2	0.89	0.82	0.61	0.91
TR3	0.78			

Abbreviations: CR: composite reliability; AVE: average variance

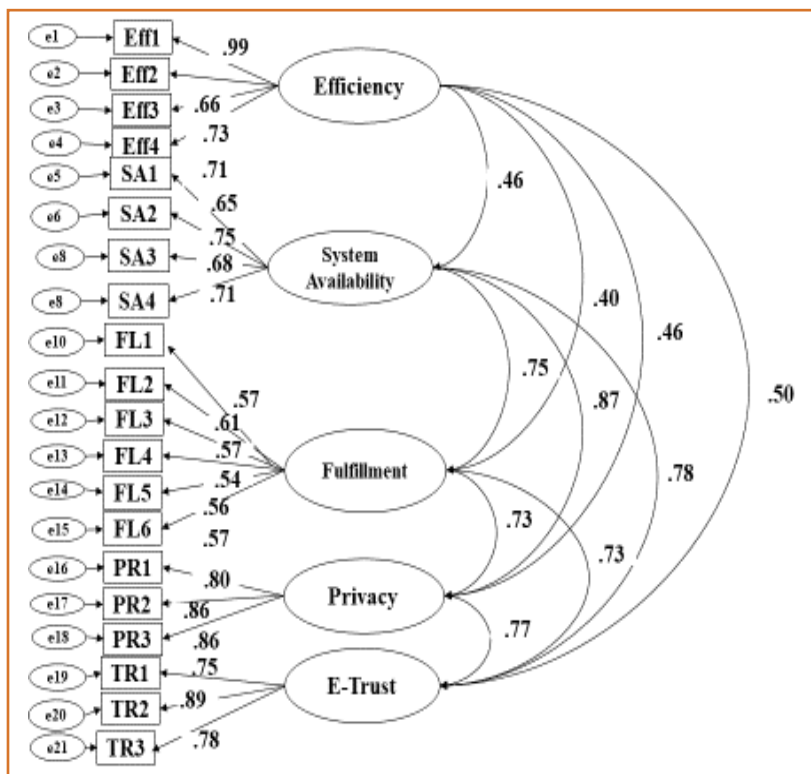


Figure 2: Factor Loading of Confirmatory Factor Analysis

The Good Fit index for the measurement model specified that GFI is 0.91, which is acceptable in accordance with the cut-off value as recommended by (Jöreskog and Sörbom 1996). Furthermore, the recommended cut-off level of 0.9 was taken for the comparative fit index (CFI). The current study showed that "CFI is 0.91, exceeding the recommended cut-off level (Bagozzi and Yi 1988). Finally, the root means a square error of approximation (RMSEA) is 0.07, which is also acceptable as it suggests a good fit to the data (Bagozzi and Yi 1988). In sum, the measurement model showed a fairly good fit with the data collected".

Table 4. Measurement Model for Path Analysis

Measurement	Cut off	Values
CMIN/DF	>.05	28.29
GFI	>.90	0.91
CFI	>.9	0.91

RMSEA	<.05(.03-.08)	0.07
NFI	>.9	0.90

The study used SEM to analyse H1 to H5. From the results, it is indicated that "efficiency (H1), system availability (H2), Fulfillment (H3) and privacy (H4) all have positive relationships with consumer e-trust". These variables are statistically tested, and thus all the hypotheses were supported. Further, system availability ( $\beta=0.345, p < 0.01$ ) and privacy ( $\beta=0.327, p < 0.01$ ) were more influential on building consumers e-trust than other determinants.

H1 posited that efficiency would positively affect consumer e-trust, which is proved statistically as well (Beta = 0.287,  $p < 0.01$ ). The outcome showed that system availability of website positively influenced customer e-trust "( $\beta =0.345, p < 0.001$ ), providing support for H2. The results also provided support for hypotheses H3 and H4.

Fulfilment were positively related to customers e-trust ( $\beta = 0.101$ ,  $p < 0.001$ ) accepting H3 and

website privacy significantly influence consumer e-trust ( $\beta = 0.327$ ,  $p < 0.01$ ) approving H4".

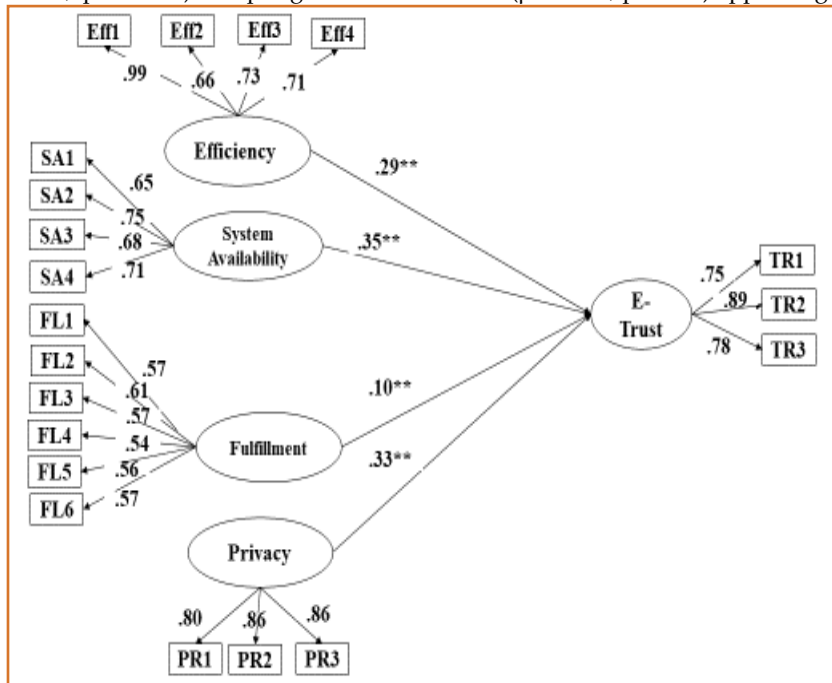


Figure 3: Hypotheses testing results

### Discussion

This study's objective was to examine the influence of e-s-qual dimensions on consumer e-trust. The dimensions were adopted as "Efficiency, system availability, fulfilment and privacy (Parasuraman et al. 2005)" all influencing the consumers' e-commerce involvement. These dimensions cover all the aspects of information, such as financial and personal, that consumer submits on the website. The buyer confidence in the online marketplace to provide their details is strongly influenced by e-trust, which was the foremost emphasis of the current study.

Firms find it challenging to create trust in an e-commerce context. But it is necessary to distinguish them in a competitive online environment. E-Trust creates more loyal customers and brings long-term profitability. This study proposes a model of consumer e-trust with the website service quality dimensions

including but not limited to fulfilment and privacy, efficiency and system availability.

This study tests the relationship of e-service Qual dimensions with e-trust and comes up with the findings that each dimension has an influence on building consumer e-trust, which is in line with the past studies of researchers (Yoon 2002; Park and Kim 2003). Such results confirm that the efficiency of the website directly leads to consumer e-trust (Holloway and Beatty 2008; Wolfenbarger and Gilly 2003) in an online context. The trust in an online environment is also determined by the system availability of the website as well as the fulfilment of promises made by the website to the consumer (Holloway and Beatty 2008). From the e-service qual dimensions, privacy directly influence the e-trust of consumer, which is linked with the previous findings (Pavlou 2003; Koufaris and Hampton-Sosa 2004).

## **Conclusion**

The study's conclusions contribute to the literature on e-commerce. The e-service quality dimensions predicted the e-trust. Second, this study demonstrates the significance of consumer e-trust that marketers should focus on.

In different academic disciplines, research on trust has been done. This study also focused on trust but in an online context. Electronic service quality dimensions were related to trust, and their relationship was highlighted based on empirical findings. In the background of e-commerce, this paper expands the knowledge of trust.

Although e-commerce has many uncertain aspects but significantly trust development is important. It is difficult to develop trust in the online context as compared to in the physical world. As the online buyer does not have the tangibility of the product so building their trust is a challenging task. The consumer usually perceives fewer positive outcomes from the online buying environment, and fear of facing negative consequences may result in withdrawing their online participation. Therefore a need arises to explore trust and its antecedents in an online context that can motivate buyers to purchase from e-commerce.

## **Managerial Implications**

These outcomes have some consequences for the firms that wish to compete on the World Wide Web. The e-services quality dimensions take a direct impact on maintaining consumer e-trust. This shows the better-provided website e-service excellence, the consumer e-trust on internet purchases will also be good. Further, e-trust will not only help to capture more consumers

towards internet shopping but will also maintain a long-term profit.

The current study stated the significance of e-trust to capture more consumers over the internet. Therefore, if firms over the internet can successfully build consumer e-trust, it would enhance users' frequency of purchases in the e-commerce framework. This would also help to develop more recommendations of consumers to others as well as the increased probability of their own repurchases from the internet in future. Hence the manager should take e-service quality into consideration for building online trust.

Managers should pay attention to different aspects that can influence the e-trust of consumers so as to develop a strategy plan efficiently. The managers should focus on the e-commerce factors that caused increased distrust of consumers as well as discourage them from buying online. The management should also focus on building credibility by fulfilling their promises to the consumers and thereby increasing buyer confidence and trust.

## **Limitations**

The study incorporates some limited variables in the e-commerce context. Researchers should study the other factors that cause to discourage the consumer from online shopping. Further studies should capture the rest of the dimensions that can influence marketing strategies, such as technical as well as nontechnical aspects. The trust domain in an online environment should be explored more. For a long-term relationship in an online environment, trust and other elements such as commitment, loyalty etc., may be researched further.

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