

E-Commerce Service Quality and Customer Loyalty: The Mediating Role of Customer Trust

Received: 23-05-2026	Revised: 18-06-2026	Accepted: 09-07-2026	Published: 19-07-2026
-----------------------------	----------------------------	-----------------------------	------------------------------

Hira Nawaz¹

¹Research Scholar, University of Peshawar, Pakistan

Email: hiranawaz11@gmail.com

Corresponding Author: hiranawaz11@gmail.com

ABSTRACT

In ecommerce, customers can click away to another retailer, so it's essential that they find the service they provide to be of high quality and that their platform can be trusted. Primary focus of this study was to find the impact of the service quality of ecommerce on customer loyalty and to check whether customer trust acts as a mediator between them or not. It was a quantitative research design and data was gathered from the 300 consumers who had been purchasing products via online shopping platforms over last six months on a structured questionnaire. The following factors were used to measure service quality: website usability, delivery reliability, responsiveness, security, customer support. Descriptive statistics were used for data analysis, the Cronbach alpha was used to assess the internal consistency of the scores, correlation analysis was performed to determine the association between the two variables, multiple regression analysis was performed to examine the influence of both variables, and mediation analysis with Hayes' PROCESS Model 4 and bootstrapping was used to determine the mediating role of the two variables. The findings indicated that service quality of e-commerce had a significant positive influence on customer loyalty and those of customer trust on customer loyalty and trust on customer loyalty had a significant positive influence. The influence of service quality on loyalty was partially mediated by customer trust. The study indicates that online retailers can create loyalty through delivering reliable service, and that they can turn that service into trust, and provides practical advice on where to put the money.

Keywords: e-commerce service quality; customer trust; customer loyalty; mediation; online shopping



2026 by the authors; Journal of Academia International Research (Multidisciplinary). This is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY) license (<http://creativecommons.org/licenses/by/4.0/>).

INTRODUCTION

Consumers are no longer able to examine products, interact with sellers or witness fulfillment before purchasing via the mainstream channel of online shopping. In this environment, the quality of the electronic service and the credibility of the seller is given special significance. Several instruments have been created in the research field of electronic service quality, such as the multiple-item scale that differentiates efficiency, system availability, fulfillment, and privacy (Parasuraman et al., 2005) and an e-retailing scale that incorporates additional dimensions like website design, customer service, and reliability (Collier & Bienstock, 2006). The literature review reveals that e-service quality is multi-dimensional and context-

specific (Ladhari, 2010) and that a meta-analysis indicates that e-service quality is a key factor which influences customer satisfaction, loyalty, and other variables of customer outcomes (Blut et al., 2015).

The findings of this study also point to the key dimensions of service quality that have been found in online shopping, which are website usability, reliability, responsiveness, security and support (Lee & Lin, 2005). But, high quality does not equal loyalty. The customers must have a sense of confidence in the seller, and they must feel that the transaction is safe, before they choose to repeat purchase. Research into online consumers has shown that quality, trust and loyalty are closely related, and that providing comfort to customers by quality service creates trust and hence loyalty (Ribbink et al., 2004).

The uncertainty and the possibility of opportunistic behaviour make trust a crucial element in electronic commerce. The social presence of the website (Gefen & Straub, 2004) and the motivation and nature for which consumers trust the online vendors (Bart et al., 2005) are all considered factors. Besides perceived risk and its antecedents, trust has been modeled as a core part of consumers' decision-making process (Kim et al., 2008), and has been described, along with satisfaction, as a stepping stone in successful e-commerce relationships (Kim et al., 2009). Furthermore, trust also has a significant impact on repeat purchase intention (Chiu et al., 2012), and trust and perceived risk were found to mediate online store cues—repeat purchase intentions relationship (Chang & Chen, 2008).

Loyalty, which includes the desire to repurchase, recommend and prefer the same platform, is the most valuable result for online retailers. A meta-analysis of the antecedents of customer loyalty to commercial websites revealed that satisfaction and trust are two of its main factors (Toufaily et al., 2013). If service quality leads to trust and trust leads to loyalty, then trust helps to account for the link between service quality and loyalty.

Although the evidence exists, research that examines the full chain of multidimensional service quality, customer trust, and customer loyalty, employing bootstrapped indirect effects (Preacher & Hayes, 2008), is less prevalent, especially in emerging markets where online purchases are rapidly increasing and trust issues are high. In this study, this was done by studying the relationship between service quality and loyalty, service quality and customer trust, and mediating effect of customer trust between service quality and loyalty. It helps by measuring the extent to which the quality–loyalty connection is mediated by trust, and by offering some guidelines for e-commerce managers.

LITERATURE REVIEW

Conceptual background

E-commerce service quality is the customers' perceptions of the overall quality of the service provided through the electronic channel (Parasuraman et al., 2005). It was operationalized in this study across five dimensions - website usability, delivery reliability, responsiveness, security and customer support (Collier & Bienstock, 2006; Lee & Lin, 2005). Customer trust is the degree to which customers are willing to trust the Internet seller and platform, which includes their trust of the Internet sellers' transactions, the reliability of the Internet sellers, and their confidence in Internet sellers' services (Gefen & Straub, 2004; Kim et al., 2008). In terms of customer loyalty, the authors of Toufaily et al., (2013) indicated that it involves repurchase intention, recommendation intention, and preference for the same platform. These ideas form a chain that underlies the chain of service quality – trust – loyalty (Kim et al., 2009; Ribbink et al., 2004).

E-Commerce Services and Customer Loyalty

A website that is easy to use, delivers as promised, responds to inquiries within a reasonable amount of time, collects secure information, and provides support services, will encourage customers to return to the site, in addition to their feeling good about their effort and low risk. According to a meta-analysis on the impact of e-service quality on satisfaction and loyalty-related outcomes, positive results were obtained (Blut et al., 2015). As online shopping becomes more popular, the importance of web design, reliability, responsiveness, trust, and personalization on customer perceptions of service quality and customer satisfaction in online shopping was demonstrated by Lee and Lin (2005), and Ribbink et al. (2004) indicated that customer satisfaction with the quality of the online service was positively related to customer loyalty in online environment. Other dimensions noted in reviews are also frequently significant, such as fulfillment and reliability (Collier & Bienstock, 2006; Ladhari, 2010). Accordingly:

H1: The higher the service quality of e-commerce, the higher the customer's loyalty.

Service quality in e-commerce and trust of customers

A customer can't see the product and can't see the seller and so they take the service as proof of credibility. Security of payment and protection of privacy conveys a sense of safety, reliable delivery conveys a sense of competence, and accepting help conveys a sense of goodwill (Parasuraman et al., 2005). Online stores serve as cues to increase trust and decrease perceived risk (Chang & Chen, 2008) and that the website's social presence and design affect consumers' trust (Gefen & Straub, 2004). Online trust was found to be related to quality in studies of online customers (Ribbink, et al., 2004), and the factors that affect online trust vary from customer to customer and site to site, but tend to involve site quality factors (Bart, et al., 2005; Kim, et al., 2008). Hence:

H2: E-commerce service quality has a significant positive effect on customer trust.

Customer trust and customer loyalty

Trust diminishes perceived risk in online transactions and fosters commitment. In a longitudinal study, Kim et al. (2009) demonstrated that trust and satisfaction contribute to relationship continuation in e-commerce, while Chiu et al. (2012) revealed that trust has an impact on online repeat purchase intention. Based on the results of the meta-analysis, the researchers found that among the key antecedents of loyalty toward commercial websites, trust is the most important factor (Toufaily et al., 2013), and trust is an important factor in consumers' decision-making process in electronic commerce (Kim et al., 2008). Therefore:

H3: Customer trust positively impacts customer loyalty.

Mediating role of customer trust

Based on the assumption that service quality can be used as a source of trust and trust can be a basis for loyalty, a portion of the influence of service quality on loyalty would go through the channel of trust. This is in line with studies of trust as a mediating mechanism in online consumer behavior (Chang & Chen, 2008; Kim et al., 2009) and evidence of a sequence of quality, trust and loyalty (Ribbink et al., 2004). Since the indirect effect was produced by two coefficients that did not have the same sampling distribution,

mediation was examined using bootstrapped confidence intervals within the PROCESS framework (Hayes, 2018; Preacher & Hayes, 2008). Thus:

H4: Trust in the e-commerce service positively influences customer loyalty, and this influence is mediated by customer trust.

Conceptual framework

The conceptual model in this study is that the service quality of e-commerce is an independent variable, customer loyalty is a dependent variable, and customer trust is the variable that acts as a mediator in transmitting the effect of the independent variable on the dependent variable (PROCESS Model 4).

METHODOLOGY

Research design

The study was conducted with a quantitative research design to examine the influence of e-commerce service quality on customer loyalty as well as to investigate a possible mediating role of customer trust. A quantitative method was chosen as the study was based on theory testing hypothesis and numerical data used to estimate the size and significance of the direct and indirect effects. The design was cross sectional (all measurements taken at one time).

The data were gathered from 300 consumers who bought products online in the last six months. This recency criterion was used because the respondents were asked to provide their assessment of the service quality, trust and loyalty based on their recent experiences. The survey was voluntary, anonymous and questionnaires were sent via online platforms and personal contacts. The sample size was large enough for regression based mediation analysis (Hair et al., 2019)

Instrument and measurement

The study variables were measured by using a structured questionnaire. The dimensions identified in the e-service quality literature (Collier & Bienstock, 2006; Lee & Lin, 2005; Parasuraman et al., 2005) were used to measure the website usability, delivery reliability, responsiveness, security, and customer support of e-commerce services. The level of customer trust was measured by the customer's perceptions of transaction security, seller reliability, and confidence in online services (Gefen & Straub, 2004; Kim et al., 2008). The measurement of customer loyalty was based on three criteria: repurchase intention, recommendation intention, and preference for the same platform (Toufaily et al., 2013). Each item was scored on a 5-point Likert scale (1-strongly disagree; 5-strongly agree). Demographic data was also gathered on gender, age, level of education, shopping frequency, platform type. A small group of online shoppers was used to pilot test the questionnaire and items which were unclear were reworded.

Reliability and common method bias

The results of the Cronbach's alpha were used to evaluate reliability, where α values greater than or equal to 0.70 were considered acceptable (Tavakol & Dennick, 2011). All variables were self-reported by the same respondents, so that procedural remedies were used (e.g., anonymity, clear wording) and common method bias was a limitation (Podsakoff et al., 2012).

Data analysis

Descriptive statistics, Cronbach's alpha, correlation analysis and multiple regression were used to analyze the collected responses. Before interpreting, bivariate relationships were tested using Pearson correlations and regression assumptions such as linearity, normality of residuals, homoscedasticity and multicollinearity were examined (Hair et al., 2019). Hayes' PROCESS Model 4 with bootstrapping was used for mediation analysis to estimate the effect of service quality on trust (path a), the effect of trust on loyalty controlling service quality (path b), the direct effect (path c') and the total effect (path c). The indirect effect ($a \times b$) was assessed using 5,000 bootstrap samples and 95% confidence intervals, and significant when the confidence interval did not cover zero (Hayes, 2018; Preacher & Hayes, 2008).

ANALYSIS AND RESULTS

Demographic profile

The 300 respondents are summarized in table 1. This was a gender balanced sample and, most of the respondents were young adults who make online purchases a few times a month, meaning they had ample recent exposure to evaluate the platforms.

Table 1. Demographic profile of respondents (N = 300)

Characteristic	Category	Frequency	Percentage
Gender	Male	148	49.3
Gender	Female	152	50.7
Age	Under 25 years	88	29.3
Age	25–34 years	131	43.7
Age	35 years and above	81	27.0
Education	Bachelor's or below	128	42.7
Education	Master's	138	46.0
Education	MPhil/PhD	34	11.3
Purchases per month	1–2 times	109	36.3
Purchases per month	3–5 times	124	41.3
Purchases per month	More than 5 times	67	22.3
Platform type	Marketplace platforms	168	56.0

Characteristic	Category	Frequency	Percentage
Platform type	Brand websites	83	27.7
Platform type	Social commerce	49	16.3

Reliability and descriptive statistics

The items, factor loadings, means and standard deviations for each scale, as well as the Cronbach's alpha, are presented in Table 2. The alpha values were > 0.70 , signifying good internal consistency (Tavakol & Dennick, 2011). Overall, mean scores were above the scale midpoint indicating positive views of service quality, trust and loyalty.

Table 2. Reliability and descriptive statistics

Variable	Items	Loadings range	Mean	SD	Cronbach's α
E-commerce service quality	15	0.62–0.84	3.88	0.61	0.92
Customer trust	8	0.68–0.85	3.74	0.66	0.89
Customer loyalty	8	0.67–0.83	3.81	0.64	0.90

Correlation analysis

The Pearson correlations are given in Table 3. All three variables were found to be positively and significantly associated with each other; the highest correlation was between customer trust and loyalty. There were no concerns with multicollinearity since all the correlations were less than 0.80.

Table 3. Pearson correlations among study variables

Variable	1	2	3
1. E-commerce service quality	1		
2. Customer trust	0.62**	1	
3. Customer loyalty	0.58**	0.66**	1

Note. N = 300. ** $p < .01$ (two-tailed).

Regression and mediation analysis

The results of the PROCESS Model 4 are given in Table 4. In terms of customer trust, the results indicated that service quality had a significant positive effect ($a = 0.67$, $p < .001$; $R^2 = .38$), supporting H2. For the model predicting loyalty, trust significantly and positively affected the loyalty ($b = 0.47$, $p < .001$),

supporting H3, and service quality had a significant direct effect ($c' = 0.29$, $p < .001$). The overall service quality—loyalty relationship was found to be significant ($c = 0.61$, $p < .001$) and thus confirmed H1. The indirect effect via trust was 0.32 (95% bootstrap CI: [0.24, 0.40], which is statistically significant from zero supporting H4. The partial mediation of the relationship by customer trust explained 52% of the total mediation effect and was statistically significant.

Table 4. PROCESS Model 4 results (unstandardized coefficients; 5,000 bootstrap samples)

Path	B	SE	t	p	LLCI	ULCI
Service quality → Trust (a)	0.67	0.05	13.40	< .001	0.57	0.77
Trust → Loyalty (b)	0.47	0.05	9.40	< .001	0.37	0.57
Service quality → Loyalty, direct (c')	0.29	0.05	5.80	< .001	0.19	0.39
Service quality → Loyalty, total (c)	0.61	0.04	15.25	< .001	0.53	0.69
Indirect effect ($a \times b$)	0.32	0.04			0.24	0.40

Note. $R^2 = .38$ (trust model); $R^2 = .48$ (loyalty model with mediator); $R^2 = .34$ (total-effect model). LLCI and ULCI are lower and upper limits of the 95% confidence interval.

DISCUSSION

The findings indicated that service quality in e-commerce is an important factor in customer loyalty. It is consistent with the meta-analysis results showing that e-service quality has a positive effect on e-service satisfaction and e-service loyalty among online customers (Blut et al., 2015) and results of previous studies showing that e-service quality is positively related to the overall evaluation of e-service by online customers (Lee & Lin, 2005; Ribbink et al., 2004). Users who have an easy-to-navigate website, can order products easily, get a response quickly, feel safe on the site, and have the ability to contact customer service are more likely to buy again, recommend the site, and prefer it over another.

In addition, service quality had a significant influence on customer trust, further supporting the notion that when goods and/or sellers are not visible to the customer, the quality of service becomes a sign of credibility (Chang & Chen, 2008; Gefen & Straub, 2004; Kim et al., 2008). As in the studies by Chiu et al. (2012), Kim et al. (2009), and Toufaily et al. (2013), which showed that trust leads to continued e-commerce relationships and repeat purchases, this study found that trust predicted loyalty.

Partial mediation suggests that the channel of trust is significant, but not the only channel. Over half of the impact of service quality on loyalty was via the channel of trust, while the other half of the impact on loyalty was likely due to functional benefits, like convenience and efficiency, which would encourage return even in the absence of trust. The findings indicate that the highest value of customer loyalty can be gained, when the customers view the investments as tangible indications of reliability and safety. It also aligns with the research findings that drivers and the role of trust varies between sites and consumers (Bart et al., 2005) making trust a more direct measure that the retailer must take rather than quality producing trust.

CONCLUSION AND RECOMMENDATIONS

This study investigated how e-commerce service quality affects customer loyalty and how customer trust acts as a mediator for the online shoppers. The results of the evidence revealed that the improvement in service quality leads to an improvement in loyalty, directly and indirectly, and that service quality increases trust among which a part of the benefit also reaches loyalty. It adds to the literature by quantifying the role of the trust pathway in the quality–loyalty relationship and by demonstrating that more than half of the effect went through trust.

Based on these insights, ecommerce businesses are encouraged to prioritize service quality elements that best communicate reliability and safety, such as secure payment and privacy protection, accurate delivery guarantees that are actually fulfilled, clear order tracking, hassle-free returns, and quick, informative customer assistance. Retailers should communicate these quality signals to the customers in a visible way through verified reviews, unambiguous policies and consistent communication to turn service quality into trust. They should also monitor trust and loyalty metrics continually, including repurchase rates and recommendation scores, and leverage loyalty initiatives to enhance – but not supplant – trust. Platform operators and regulators could help these efforts by putting measures in place to protect consumers, establishing secure payment systems, offering dispute resolution features and setting standards for delivering and refunding goods to gain trust in online purchases.

There are a few points that need to be noted. There are limitations in causal inference due to the cross sectional design and over time, loyalty can further foster trust. Self-reported intentions can vary from repurchase behavior, and even with the use of the procedural remedies (Podsakoff et al., 2012), there is always a potential for common method bias. No attempt was made to make a distinction between the type of platform or categories of products in the study. Longitudinal designs or data from platforms could be used in future studies, along with a comparison of marketplaces, brand websites, and social commerce, and the inclusion of moderators, including perceived risk, shopping experience, and product type.

REFERENCES

- Bart, Y., Shankar, V., Sultan, F., & Urban, G. L. (2005). Are the drivers and role of online trust the same for all web sites and consumers? A large-scale exploratory empirical study. *Journal of Marketing*, 69(4), 133–152. <https://doi.org/10.1509/jmkg.2005.69.4.133>
- Blut, M., Chowdhry, N., Mittal, V., & Brock, C. (2015). E-service quality: A meta-analytic review. *Journal of Retailing*, 91(4), 679–700. <https://doi.org/10.1016/j.jretai.2015.05.004>
- Chang, H. H., & Chen, S. W. (2008). The impact of online store environment cues on purchase intention: Trust and perceived risk as a mediator. *Online Information Review*, 32(6), 818–841. <https://doi.org/10.1108/14684520810923953>
- Chiu, C.-M., Hsu, M.-H., Lai, H., & Chang, C.-M. (2012). Re-examining the influence of trust on online repeat purchase intention: The moderating role of habit and its antecedents. *Decision Support Systems*, 53(4), 835–845. <https://doi.org/10.1016/j.dss.2012.05.021>
- Collier, J. E., & Bienstock, C. C. (2006). Measuring service quality in e-retailing. *Journal of Service Research*, 8(3), 260–275. <https://doi.org/10.1177/1094670505278867>

- Gefen, D., & Straub, D. W. (2004). Consumer trust in B2C e-commerce and the importance of social presence: Experiments in e-products and e-services. *Omega*, 32(6), 407–424. <https://doi.org/10.1016/j.omega.2004.01.006>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning.
- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). Guilford Press.
- Kim, D. J., Ferrin, D. L., & Rao, H. R. (2008). A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk, and their antecedents. *Decision Support Systems*, 44(2), 544–564. <https://doi.org/10.1016/j.dss.2007.07.001>
- Kim, D. J., Ferrin, D. L., & Rao, H. R. (2009). Trust and satisfaction, two stepping stones for successful e-commerce relationships: A longitudinal exploration. *Information Systems Research*, 20(2), 237–257. <https://doi.org/10.1287/isre.1080.0188>
- Ladhari, R. (2010). Developing e-service quality scales: A literature review. *Journal of Retailing and Consumer Services*, 17(6), 464–477. <https://doi.org/10.1016/j.jretconser.2010.06.003>
- Lee, G.-G., & Lin, H.-F. (2005). Customer perceptions of e-service quality in online shopping. *International Journal of Retail & Distribution Management*, 33(2), 161–176. <https://doi.org/10.1108/09590550510581485>
- Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). E-S-QUAL: A multiple-item scale for assessing electronic service quality. *Journal of Service Research*, 7(3), 213–233. <https://doi.org/10.1177/1094670504271156>
- Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, 63, 539–569. <https://doi.org/10.1146/annurev-psych-120710-100452>
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879–891. <https://doi.org/10.3758/BRM.40.3.879>
- Ribbink, D., van Riel, A. C. R., Liljander, V., & Streukens, S. (2004). Comfort your online customer: Quality, trust and loyalty on the internet. *Managing Service Quality*, 14(6), 446–456. <https://doi.org/10.1108/09604520410569784>
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53–55. <https://doi.org/10.5116/ijme.4dfb.8dfd>
- Toufaily, E., Ricard, L., & Perrien, J. (2013). Customer loyalty to a commercial website: Descriptive meta-analysis of the empirical literature and proposal of an integrative model. *Journal of Business Research*, 66(9), 1436–1447. <https://doi.org/10.1016/j.jbusres.2012.05.011>