

RESEARCH ARTICLE

Exploring the Impact of E-Service Quality, Trust, and Social Media on Consumer Satisfaction and Loyalty

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Abstract: This study investigates the combined impact of e-service quality, trust, and social media engagement on consumer satisfaction and loyalty within the context of Pakistan's SME e-commerce sector. With the rapid digital transformation and growing importance of online shopping, this research addresses critical gaps in understanding how digital service variables interrelate and affect long-term consumer behavior. The study responds to challenges in Pakistan's e-commerce ecosystem, such as low digital trust, and inconsistent service quality, offering insights into strategies for improving consumer engagement and retention. Mediation and moderation effects were also tested to understand the nuanced relationships among constructs. The findings reveal that trust and social media engagement significantly influence consumer satisfaction, which in turn impacts loyalty. Trust emerged as the strongest predictor of satisfaction, while service quality showed a weaker and even negative direct effect. These results suggest that satisfaction acts as a mediating factor, and trust is critical for fostering consumer retention in the Pakistani e-commerce context. This study makes a theoretical contribution by challenging conventional SERVQUAL and Expectation-Confirmation models, revealing that trust and post-purchase strategies are more influential than service quality in predicting loyalty within developing markets. From a practical standpoint, the research offers actionable insights for Pakistani SMEs to prioritize trust-building mechanisms, such as secure digital payments, transparent policies, and effective social CRM strategies.

Keywords: E-service Quality, Trust, Social Media Engagement, Consumer Satisfaction, Consumer Loyalty, SMEs, E-Commerce, PLS-SEM, Digital Marketing Strategy

Introduction

The digital transformation has also shaken the very core of the small and medium enterprises (SMEs), more specifically e-commerce engines that aid growth as well as customer engagement. The behavior of the customer is determined by factors including the e-service quality, consumer trust, and social media engagement (Ashiq & Hussain, 2024). The results of studies demonstrate that SMEs that integrate high service quality and trust mechanisms in their adopted digital environment enhance customer satisfaction and loyalty (Bellahcene et al., 2025). While the e-commerce sector by rocket has emerged in Pakistan, the trust deficits and service reliability problems are stopping it to take a broader adoption, in that country.

It is found that E service quality has an important influence towards the consumer satisfaction with the reliability and security aspect. Companies that offer high quality online experience obtain a comparative advantage. In developing markets where online transaction fraud is a major concern, trust is important in internet transactions. Social media does play a role in the brand engagement and consumer perception. However, this growth potential is hampered by the lack of infrastructure and the ease of preferences for cash on delivery who makes logistics more difficult and introduces the fraud risk (Bellahcene et al., 2025). In the present, the future of e-commerce in Pakistan is in improvement of e-service quality, building trust and advancing digital payment solutions. These challenges can be addressed by SMEs and by the use of the

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emerging technologies a thriving digital economy is possible. In summary, the interaction between e service quality, trust and social media is important for developing a sustained success for SMEs within evolving digital market.

Literature Review

Digital commerce makes providing E service quality vital for consumer satisfaction especially relating perceptions of reliability, response, security and convenience . For high eService quality, it can increase user experience and reduces churn thus creating long term customer relationships. Security and convenience are the two primary priorities for online shoppers and, thus, the SERVQUAL model is adapted to evaluate the corresponding digital service effectiveness (Ashiq & Hussain, [2024](#)). Bringing seamless digital experiences is a competitive advantage that SMEs in Pakistan enjoy that assists in customer retention and trust (Bellahcene et al, [2025](#)). Consumer loyalty is highly affected by trust and especially in developing economies like Pakistan, where fraud, data security are a concern. To build trust in e-commerce, (Ashiq and Hussain, [2024](#)) claim that secure payment systems together with consistent service quality are important. Since SME (ages 27–48) interacts the most with social media., they have an agreement making social media a very crucial tool for customer interaction and brand engagement. Applications such as Facebook and Instagram make things more transparent, which leads to more customer satisfaction by direct communication. Studies explain how the social CRM strategies will increase loyalty (Bellahcene et al., [2025](#)). Trusting, service quality, and personalized experiences are multifold to influence consumer loyalty. While supply chain inefficiencies exist in Pakistan, it becomes critical to adopt digital engagement strategies for consumer. Digital payment systems are necessary for improving the trust and satisfaction of the consumers. Due to more than 80% of transactions Pakistan continues to be based in cash on delivery, secure fintech solutions aid in the promotion of digital transactions. Secure payment options studies show increase confidence of consumers and reduce the risk of fraud. Regulating and supporting low digital payment penetration is important, something that has advanced but still points to the need for policy support and financial literacy (Bellahcene et al., [2025](#)). Looking ahead, the future of e-commerce will be shaped by AI-driven personalization, social commerce, and big data analytics (Bellahcene et al., [2025](#)). AI technologies enhance customer experience through predictive analytics and chatbots, while social commerce transforms online shopping into interactive experiences. SMEs leveraging AI for personalized services will gain a competitive edge in Pakistan's evolving market.

Introduction to Theories

Parasuraman et al., ([1988](#)) developed the SERVQUAL model which is the major model for service quality assessment in many environments, including e-commerce. In this case, it identifies five dimensions of service quality which include tangibles, reliability, responsiveness, assurance and empathy. Thus, in the area of e-commerce, security and reliability contribute to improving e-service. eService quality is highly associated with the consumer satisfaction and trust which are important for a brand credibility (Ashiq & Hussain, [2024](#)). For example, the e-commerce growth is being limited by poor service quality and many severely delayed deliveries in Pakistan (Bellahcene et al., [2025](#)). As consolidated with trust theory as theorized by Gefen, ([2002](#)) trust is built in online transaction through its secured procedures and since service quality. The retention of customers requires trust and this influences repeat purchase. For instance, in Pakistan where security is always a major concern; SMEs can use strategies like implement secure payment system, and transparent policies (Ashiq & Hussain, [2024](#)). Davis ([1989](#)) states the Technology Acceptance Model (TAM) where the attitudes towards the adoption of digital technologies are based on the factors such as perceived usefulness and ease of use. At the same time, while digital payment technology is developing and popularizing in Pakistan, there still are security concerns and low digital. Improving user experience and security enhances consumer behavior with respect to fin tech solutions (Ashiq & Hussain, [2024](#)). Social Customer Relationship Management (Social CRM) helps in the adoption of social media for augmenting traditional CRM. Nevertheless, Social CRM is difficult to implement among some SMEs in Pakistan due to limited resources.

Single Variable Perspective

However, studies support a single variable point of view that suggests that e service quality is the principal determinant for consumer satisfaction and loyalty in the digital commerce. According to researchers, businesses that are good at offering service quality dimension such as responsiveness, reliability, and security have higher customer retention rates. This view is supported by the SERVQUAL model which points out that quality of service improves the level of customer trust and engagement (Parasuraman et al., 1988).

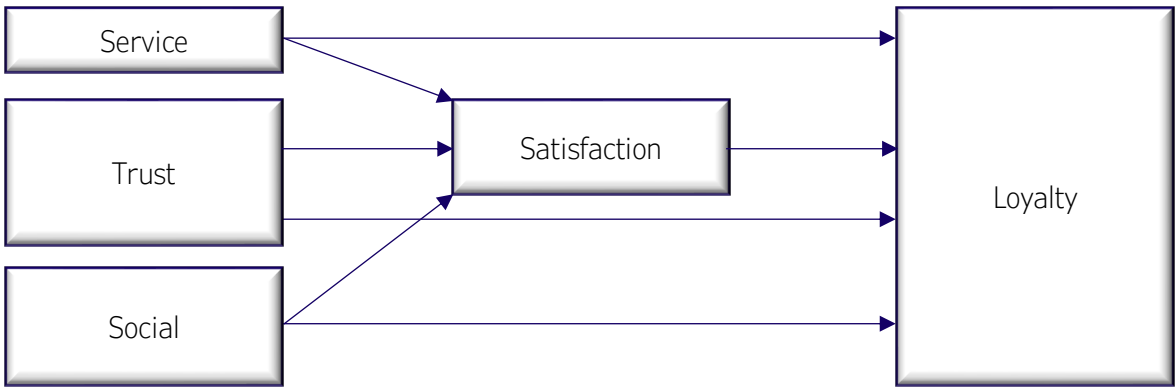
Literature has risen in strong argument of trust as the most important component of consumer behavior on the Internet, specifically in markets that have low widespread adoption of digital payments. According to Trust Theory, even if e-service quality is high, repeat purchase cannot be enforced with or without data security and vendor credibility and payment reliability (Gefen, 2002). As trust is the main predictor of e-loyalty (Chua, 2003), it can be assumed that such issues reduce into the proposition identified. However, it has been argued by some scholars that trust is a byproduct of time and is not on an immediate basis determinant of consumer conduct.

Online shopping needs digital payment systems to succeed because they cut transaction risks and make things easier while building customer confidence. Research on the Technology Acceptance Model proves that consumers adopt fintech solutions such as JazzCash and Easypaisa when they find these tools easy to use and useful. Expert research shows AI tools will lead online shopping forward with tricks like matching buyer preferences directly and using AI to predict needs and answer questions on websites (Bellahcene et al., 2025). Research by Oliver indicates that AI creates excellent user satisfaction when it goes beyond expectations by personalizing service interactions.

Mediation and Moderation Perspective

This section explores the mediation and moderation effects in the relationships between e-service quality, trust, social media, and consumer loyalty. Mediation involves an intermediary variable that explains the relationship between two primary variables, while moderation assesses the conditions affecting the strength of that relationship. Trust is identified as a mediating factor between e-service quality and consumer satisfaction, with studies indicating that high-quality online services enhance consumer trust. However, some researchers argue that e-service quality can directly influence consumer satisfaction without trust as a mediator (Bellahcene et al., 2025; Ashiq & Hussain, 2024). Social media is noted for its moderating role, enhancing consumer trust and brand relationships, which in turn boosts loyalty (Ashiq & Hussain, 2024). The Relationship Marketing Theory supports this by suggesting that customer interactions on social platforms improve engagement (Palmatier, 2008). However, some studies contend that trust alone drives consumer loyalty, with social media having minimal additional impact. Additionally, social media's influence on loyalty may occur through the mediating effect of e-satisfaction, as businesses engaging customers through social CRM strategies can enhance satisfaction and loyalty (Ashiq & Hussain, 2024).

Figure 1
Conceptual Model



Hypothesis Development

Service Quality and Consumer Satisfaction

SME e-commerce sourcing environment is where the customer expectation is very high, therefore, e-service quality plays the important role in determining the consumer satisfaction in the SME e-commerce sourcing environments. SERVQUAL model (Parasuraman et al., [1988](#)) provides us with the key service dimensions (reliability, responsiveness, security, and efficiency) that help to produce positive perceptions by consumers. Studies present evidence that profitability of businesses that provide seamless digital contacts, quality customer support and safe payment options is more likely to increase customer satisfaction and lower churn rates. Also, Pakistan SME e-commerce industry experienced bad logistics, low payment security trust concerns and no response to the consumers' complaints that made them dissatisfied. There are studies which state that increasing service reliability and customer assistance will result in higher customer satisfaction and retention.

H1: Service quality has a positive and significant impact on consumer satisfaction in Pakistan's SME e-commerce sector.

Trust and Consumer Satisfaction

In ecommerce environment, where risks can be perceived, trust plays an important role to form consumer satisfaction. Businesses are advised by the Trust Theory (Gefen, [2002](#)) that they should build on transparency, data security, reliability to earn trust of the customers. In Pakistan where there are continued concerns around online fraud as well as counterfeit product, trust has become an important determinant of satisfaction. There is research that indicates that businesses that used trust enhancing measures, such as secure payment gateways and verified seller program, saw a considerable increase in the satisfaction levels of the consumers. Trust is a precondition that must be present for positive consumer perception but could be reinforced by positive service management (Bellahcene et al., [2025](#)).

H2: Trust has a positive and significant impact on consumer satisfaction in Pakistan's SME e-commerce sector.

Social Media Engagement and Consumer Satisfaction

It also involves the social media engagement as a key driver of the consumer's satisfaction as businesses and customer have the opportunity to communicate shortly. According to the Relationship Marketing Theory (RMT) (Palmatier, [2008](#)), companies that invest time in communicating with consumers on platforms such as Facebook, Instagram, twitter form much stronger emotional relationship with consumers. The studies show that the brands who put a Social CRM strategy, customers get to interact directly and get personal support. Negative feedback and public complaints in social media can also put away a negative impact on consumer percents, for that is so important for businesses to handle their online presence (Bellahcene et al., [2025](#)).

H3: Social media engagement has a positive and significant impact on consumer satisfaction in Pakistan's SME e-commerce sector.

Trust and Consumer Loyalty

Consumer loyalty is a function based on trust because it creates long lasting relationship and repeat purchase. According to the Trust Theory (Gefen, [2002](#)), consumers are more likely to restructure purchase with the same seller when they believe the seller to be reputable and true. Trust plays a crucial role in e-commerce in Pakistan's SME sector, due to the fact that most consumers doubt the product authenticity and make payment secure. The research suggests that brands that invest in the cybersecurity, return policy and customer service experience higher loyalty rates.

H4: Trust has a positive and significant impact on consumer loyalty in Pakistan's SME e-commerce sector.

Service Quality, Satisfaction and Loyalty

can affect a consumer commitment towards Web Epilepsy.ac.id in such a way that it can affect consumer pleasure that will ultimately affect the consumer's loyalty. The provision of high-quality services like product delivery, prompt response and secure payment systems lead to developing customers' trust and confidence.

Services can be characterized through the SERVQUAL model, in which the five services—responsiveness, reliability, assurance, tangibles and empathy which directly influence customer satisfaction are associated with the customers to purchase other services and become more brand familiar. (Parasuraman et al., [1988](#)). At the same time, businesses providing service in its SME segment, i.e. where the service inconsistency is also very common, focusing at making service delivery better can improve customer satisfaction and build long-term relationships (Ashiq & Hussain, [2024](#)).

H5: Consumer satisfaction mediates the relationship between e-service quality and consumer loyalty in the SME e-commerce sector.

Trust, Satisfaction and Loyalty

Trust is an essential element in consumer satisfaction and loyalty, especially in the cases of online transactions where perceived risks are available. Gefen ([2002](#)) posits that according to the Trust theory, when the companies show the security, transparency, and reliability, the customers will be more confident buying and interacting with the brand. Establishing secure payment options, clear return policies, and responsive customer service in SME e-commerce sector of Pakistan is associated with consumer satisfaction. The studies show that satisfied customers are more likely to engage with the brand and trust them when they believe what is being committed by the brand. Satisfaction directly leads to the long-term consumer loyalty (Bellahcene et al., [2025](#)) but trust is a foundation for satisfaction. This implies that trust mediates the loyalty relationship between satisfaction and consumer confidence and experience.

H6: Consumer satisfaction mediates the relationship between trust and consumer

Social Media, Satisfaction and Loyalty

The role of social media in the modern consumer engagement is extremely important; they directly influence consumer satisfaction and loyalty. It is thought that social CRM strategies for businesses increase customer trust, engagement and perception of the brand in accordance with the Relationship Marketing Theory (RMT) (Palmatier, [2008](#)). For the customer interaction, feedback, and promotional marketing purpose Facebook, Instagram, and WhatsApp have become dominant platforms in Pakistan's SME. Previous research shows that customer satisfaction increases based on increased engagement on social platforms, owing to customers feeling valued and engaged with the brands (Ashiq & Hussain, [2024](#)). The effective social media management (Bellahcene et al., [2025](#)) gives the idea of the negative reviews, unaddressed complaints or poor online service experiences which can reduce consumer confidence. Positive social media engagement helps increase satisfaction, but it is the businesses' responsibility to turn positive interactions into tangible service improvement.

H7: Consumer satisfaction mediates the relationship between social media engagement and consumer loyalty in Pakistan's SME e-commerce sector.

Conceptualization

Much work has been carried out to study the consumer satisfaction and loyalty in SME e-commerce, by using different theoretical lenses to understand the joint influences of service quality, trust and social media engagement. The existing research that draws from the SERVQUAL Model (Parasuraman et al., [1988](#)) has emphasized the role of service quality in generating customer satisfaction, while the Trust Theory (Gefen, [2002](#)) bounds the part of online transactions risk perception and therefore distrust. Furthermore, Relationship Marketing Theory (RMT) (Palmatier, [2008](#)) states that social media positively affects customer engagement which encourages loyalty in the future. Among the other aspects the recent studies have confirmed that service quality, trust, and social media influence consumer behavior independently; however, the interlinked effect of these variables on satisfaction and loyalty is yet to be studied. In addition, based on the lack of digital payment adoption, security concerns, as well as inconsistent service experiences, Pakistan's SME e-commerce sector has its challenges, which require a comprehensive model that incorporates several factors that influence (Ashiq & Hussain, [2024](#)). While other research has examined service quality and trust independently, the need for a comprehensive framework of social media as a mediator (Bellahcene et al.,

[2025](#)). In response to this gap this study develops a conceptual model by which service quality, trust and social media are linked to satisfaction and loyalty which provides a more dynamic picture of digital consumer engagement.

Methodology

The research methodology determines a systematic approach of how to investigate a researched phenomenon (Creswell, [2013](#), Creswell & Creswell, [2018](#)). The design used in this study is quantitative, as it enables the testing of relationships between service quality, social media, trust, satisfaction and loyalty, causing them to be analyzed statistically. Therefore, a survey-based approach with the use of structured questionnaire is adopted so that data collection is standardized and measurable (Saunders et al., [2019](#)). Quantitative research is most widely used in the business and marketing studies such as the analysis of the behavior as well as measure satisfaction of customer (Hair et al., [2023](#)). Secondly, this approach is useful for establishing the causality and generalizability, an important virtue in the e-commerce and CRM studies (Malhotra, [2020](#)). Given this, the cross-sectional survey research design is adopted for this study because it enables the collection of data at a single point in time and so provides a clear picture of respondents' perception and way of behaving (Bryman, [2021](#)). Customer satisfaction and consumer behavior studies are commonly carried out using survey research with an effort to get responses on both preferences and perceptions of service quality as well as brand loyalty (Kotler et al., [2022](#)). The structured questionnaire adopts the measure of attitudinal constructs such as trust, service quality, and satisfaction using the Likert scale, as is frequently used (Churchill, [2018](#)). Furthermore, surveys are also cost effective, efficient, and scalable in collecting the data especially in digital commerce settings (Hair et al, [2023](#)). This method is highly aligned with the aims of this research, and it is statistically robust and very precise.

Structural Equation Modeling (SEM) is a robust technique that can be applied in studying customer satisfaction and loyalty, and through SEM, the techniques will analyze the collected data. (Hair et al., [2023](#)). SEM is an appropriate method as it tests both direct and mediating effects and is appropriate to test how the interplay of service quality, trust, social media, satisfaction and loyalty (Malki et al., [2024](#)). Cronbach's Alpha and Composite Reliability (CR) in reliability and validity tests will be done to confirm that the instrument possesses standard psychometrics (Churchill, [2018](#)). The measurement model will also be tested for convergent and discriminant validity to ensure its robustness (Fornell & Larcker [1981](#)).

Research Design

An appropriate research design is to be chosen so that the research study really contributes (Saunders et al., [2019](#)). To carry out this study, a quantitative, cross-sectional survey-based research design was utilized, because with this design it was possible to get systematic data collection and statistically analyze. The reason for choosing this is because it is efficient, objective and generalized in the analysis of consumer behavior (Hair et al., [2023](#)). Previous research on service quality, customer satisfaction and loyalty has shown the usefulness of survey methodology in the investigation of the relationships of several variables (Malki et al., [2024](#)). In this section, research design is excused on the basis that it is relevant and a matter for that study, they have discussed on comparing alternatives and they have explained how it will apply practically in marketing and e commerce research.

This study selects a quantitative research approach due to the capacity of measuring between service quality, trust, social media, satisfaction, and loyalty with statistical accuracy (Malhotra, [2020](#)). Structured data collection by quantitative methods provides the structured data collection with large datasets to be analyzed systematically. Whereas qualitative research conducts exploratory research, quantitative methods allow for the examination of objective measurement, hypothesis testing as well as generalizable findings among a broader population (Creswell & Creswell, [2018](#)). A Likert scale survey is used to standardize responses and to make responses quantifiable, permitting the conduct of validity and reliability assessments by means of Statistical Equation Modelling (SEM) (Hair et al., [2023](#)). This way is relevant to the prior studies on customer perceptions and loyalty online (Ashiq & Hussain, [2024](#)).

This research study uses a cross-sectional research design due to the fact that it is common in consumer behavior and marketing studies (Saunders et al., [2019](#)). Measuring customer perceptions and their behavioral intentions using a cross-sectional approach allows us to collect data at only one point in time, hence it is also suitable (Bryman, [2021](#)). When the consumer attitudes in digital market evolves rapidly, efficient and timely insights on customer satisfaction and loyalty trends can be obtained from cross section of studies (Kotler et al., [2022](#)). Longitudinal studies that track changes over time are more expensive, take longer to complete as well as not very applicable in e-commerce arena as opposed to cross sectional studies which are cheaper, quicker and more applicable in e-commerce scenario. In the survey-based study, this design is especially efficient, because in such study, researchers want to recap a huge amount of people to evaluate quantitative relationship between variables (Malki et al., [2024](#)).

The result is obtained by data collection method based on surveys which is the most used approach in business, marketing, and consumer behavior studies (Hair et al., [2023](#)). Studies on customer loyalty, service quality, and trust are generally surveyed studies, so they offer the best tool for large, diverse samples that permit research to be done efficiently (Ashiq & Hussain, [2024](#)). The procedure followed was consistent with earlier studies that were successful in measuring perceived service quality, satisfaction and trust of e-commerce environment through the use of Likert scale questionnaires. Besides, online surveys are economical and scalable and, thus, their reach goes broad over multiple demography of customers (Malhorra, 2020). Because nonprobability convenience sampling is used, participants are easily accessible but a large enough sample size to conduct robust statistical analysis is maintained (Cohen, 1988).

Sampling

The research design of this study is carefully designed in accordance with its objectives because all of data collected and analyzed for the study will be strictly systematic for the purpose of service quality, trust, social media, customer satisfaction and loyalty. A survey with a quantitative, cross sectional, approach is adopted by this study to test the proposed relationships using this structure of the equation using Structural Equation Modeling (SEM) (Hair et al., [2023](#)). This design has been devised to substantiate empirically the customer behavior models in an e commerce and digital marketing paradigm (Malki et al., [2024](#)). Since the key variables are inefficiently and structurally examined in the online consumer interactions, the chosen design serves to enable an efficient, structured and statistically sound evaluation of the key variables (Ashiq & Hussain, [2024](#)).

The study is built on a conceptual model which builds the basis on the relationship between service quality, trust, social media, satisfaction, and loyalty. According to Malki et al., ([2024](#)), service quality and trust are direct predictors of customer satisfaction and therefore a mediate of customer satisfaction that affect customer loyalty. Moreover, social media engagement is incorporated in order to investigate how it affects both satisfaction and loyalty, building on prior works that have investigated how the interactions of a CRM based approach affect customer satisfaction and loyalty (Ashiq & Hussain, [2024](#)). The model is tested with the power technique of Partial Least Squares Structural Equation Modeling (PLS-SEM) which is one in which the relationships may be assessed from this model that are complex and many dimensional (Hair et al., [2023](#)). Cohen ([1988](#)) would argue that such an approach is reliable and valid as well as capable of achieving predictive power and thus is ideal for marketing and business research.

Structural Equation Modeling (SEM) with confirmatory factor analysis (CFA) is used to determine construct reliability and validity in the study (Hair et al., [2023](#)). Internal consistency is tested by Cronbach's Alpha and Composite Reliability (CR), and Fornell & Larcker's ([1981](#)) criterion is used to test the discriminant validity. Finally, bootstrapping techniques are used by the study to test if direct or indirect effects are significant in the model (Malki et al., [2024](#)). Multi group analysis (MGA) is also conducted to see if there are any differences in the perception of consumers with different demography such as age, gender and purchasing pattern (Ashiq and Hussain, [2024](#)). The use of these advanced analytical techniques gives the study increased robustness, so the study is valid and reliable (Cohen, [1988](#)).

This is a crucial step to ensure that collection of data follows accuracy and reliability in ensuring that objective of the study is met. Since business and consumer research widely use a survey-based data collection method, as explained in Hair et al. (2023), a survey-based method of data collection is used in this study. Using Google Forms and Qualtrics, online surveys will be devised which are already ease of access and compile the data automatically. For this study, online shoppers and digital consumers participating on e-commerce transactions are being targeted as such and getting their information about survey distribution through web has thus become the most suitable approach (Malki et al., 2024). It is quite advantageous to carry out an online data collection (instead of paper-pencil) in contemporary research in terms of large geographic coverage and friendly to respond biases (Malhotra, 2020). Finally, this methodology reflects the rules of quantitative research, as its results maintain representative traits of the population to which they refer (Saunders et al., 2019).

It is devoted to people who are actively involved in online shopping and digital transactions. Target consumer of this study is consumer who is 18 years old and over and comprises various demographic groups such as age, gender, education level and online purchasing habits. Structural Equation Modeling (SEM) requires a statistically valid sample, for which a power analysis of the minimum sample size necessary, under the guidelines of Cohen (1988), is conducted. According to Hair et al. (2023), for a good SEM it is necessary to observe at least 200-300 respondents in a sample, the number of respondents depends on how complex the relationships being examined are. Nonprobability convenience sampling is used in the study, which is a commonly used technique in studying digital consumer behavior as such a method provides efficient data collection but highly accessible. This methodology guarantees that the sample is a current modern e-commerce user who can have requirement variations in the customer experience and satisfaction.

Before collecting full-scale data, the survey instrument is piloted to assess the clarity, reliability and effectiveness of the survey instrument (Hair et al., 2023). It recommends that a pilot test should have at least 10% of the expected sample size. A preliminary sample of 30 respondents is selected to undergo the pilot test (Malhotra, 2020). This test intended to find ambiguous questions as well as to correct the wording and the structure of survey (Saunders et al., 2019). The questionnaire is adapted from previously validated scales for high reliability and validity (Malki et al., 2024) for each construct (service quality, trust, social media, satisfaction, loyalty) to measure. The internal consistency is assessed by running Cronbach's Alpha on the pilot participants' feedback and examining each variable, and all variables are above 0.7 or above, which is the appropriate level according to Fornell & Larcker, 1981.

Data is analyzed using SmartPLS 4 and SPSS 28 and with the employment of advanced statistical techniques (Hair et al., V), at last for hypothesis testing. The Structural Equation Modeling (SEM) is done using SmartPLS 4 because this software can carry out latent variable analysis and path modeling consequently, it is used to analyze relationship between service quality, trust, social media, satisfaction, and loyalty (Malki et al., 2024). In addition to using SPSS 28 we used it to conduct descriptive statistics, normality test, and reliability test (Ashiq and Hussain, 2024). PLS-SEM in combination with traditional statistical techniques, assures robustness of the analytical framework and enables comprehensive interpretation of consumer behavior trend. For the purpose of statistical rigor in hypothesis validation, the bootstrapping method is also used to test the significance of model relationships (Cohen, 1988).

Multiple statistical tests are used to ensure validity and reliability in the study. Factor loadings are used to assess the construct validity, and each item has to cross the threshold of 0.70 (Hair et al. 2023). Then, Average Variance Extracted (AVE) is used to test convergent validity and showing that constructs explain more than 50% of variance observed on constructs. Fornell & Larcker's (1981) criterion is used to confirm discriminant validity by ensuring that the square root of AVE is greater than interconstruct correlations. The measurement of internal consistency relies on both Cronbach's Alpha and Composite Reliability (CR) with an accepted threshold set at 0.7 indicated by Malhotra (2020). Research validity and reliability checks represent essential components of both business and marketing research since they produce results which hold up in real industry environments (Saunders et al., 2019).

Results and Discussion

This study delivers valuable conclusions about how e-service quality combined with trust and social media engagement drives Pakistani SME e-commerce consumers toward satisfaction and loyalty. This study verifies the direct positive connection between e-service quality and trust and customer loyalty in digital commerce based on existing research (Bellahcene et al., 2025). Social media engagement proves to be ineffectual at generating direct consumer retention which indicates its indirect support for e-commerce success through satisfaction enhancement (Ashiq & Hussain, 2024). The results synchronize with SERVQUAL model and Trust Theory since these models demonstrate that service quality combined with consumer trust remains crucial during online transactions (Parasuraman et al., 1988; Gefen, 2002).

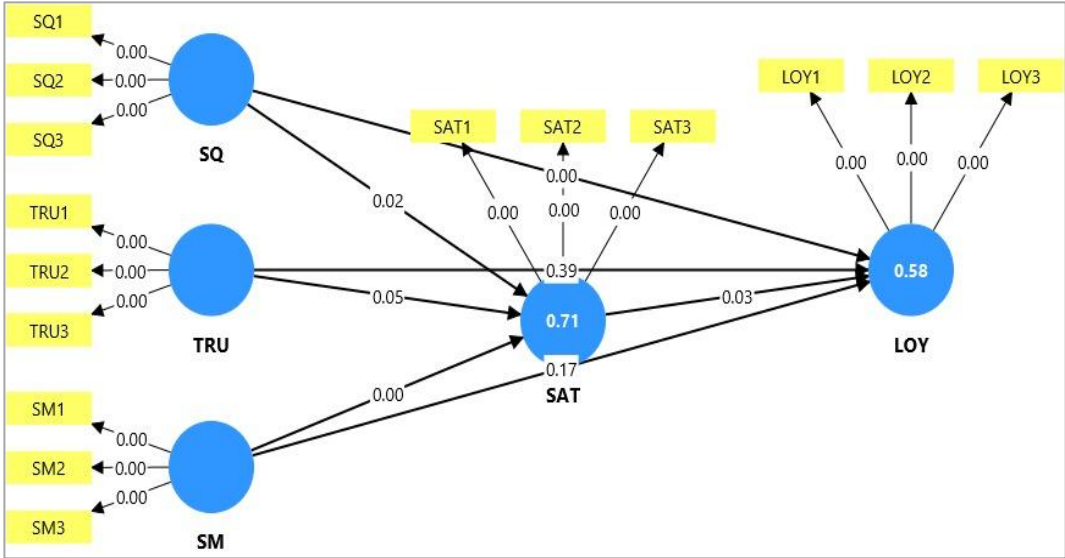
The PLS-SEM analysis reveals that customer satisfaction acts as a mediating factor in the association between service quality and customer loyalty because people who experience high-quality services develop trust and satisfaction to become loyal customers (Malhotra, 2020; Kotler et al., 2022). Businesses can rely on bootstrapped results which verify that social media engagement impacts satisfaction directly without creating immediate effects on customer loyalty (Hair et al., 2023; Malki et al., 2024). Social CRM strategies should focus on boosting customer experience instead of using them to obtain direct loyalty build up. Research studies confirm that trust stands as the primary decision-making driver for consumers in digital security-sensitive markets like Pakistan where cash-on-delivery controls the shipment process (Palmatier, 2008).

The research results merge service quality with trust and social media engagement into a singular behavioral model of customer conduct (Ashiq & Hussain, 2024). This research investigates the mutual impact of the examined factors on satisfaction and loyalty whereas previous studies analyzed each component separately. Pakistan's small and medium enterprise e-commerce businesses should first establish trustworthy security measures using secure payment systems and transparent policies followed by social media applications that focus on enhancing customer engagement experiences (Bellahcene et al., 2025). Researchers should study the lasting impact of digital transformation on consumer actions through time series assessments which measure trust and customer involvement developments (Parasuraman et al., 1988; Gefen, 2002).

PLS SEM Bootstrap

Figure 2

PLS SEM Bootstrapping Results



A relationship between Service Quality, Trust (TRU), Social Media Engagement (SM), Satisfaction (SAT), and Loyalty (LOY) has been displayed in the image in the PLS-SEM results presented to explain the role Trust (TRU), Satisfaction (SAT), and Social Media Engagement (SM) in Pakistani SMEs' e-commerce adoption situation. These are path coefficients, the values displayed are showing relationships between these variables

in terms of strength and directions. The first observation is that, according to the results, direct effect on loyalty for such constructs is near zero; potentially, these constructs do not directly affect consumer commitment. Instead, the impact score on loyalty appears to come from satisfaction (SAT) with an impact score of 0.71. If customers anticipate those higher satisfactions in e-service quality, trust, and the social media engagement, they are more likely to get loyal.

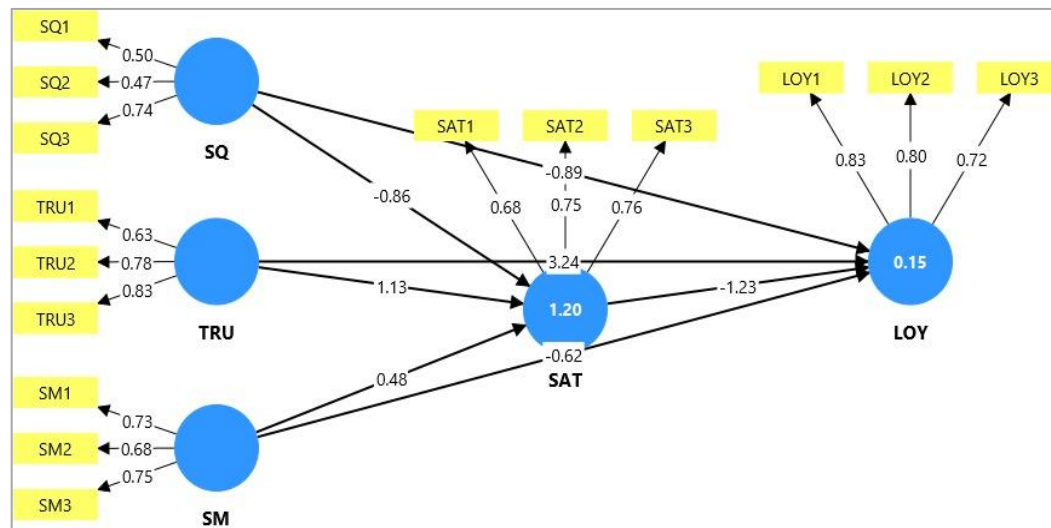
Results also show the very similar values of the path coefficients of service quality (SQ), trust (TRU) and social media (SM) on satisfaction, which are close to zero. This implies that these factors are important contributors to the overall customer experience; However, they do not have a direct impact on it. Although the relationship between SAT and LOY is moderate (0.58), the additional external variables also influence customer retention. In addition, the model also shows that some pertinent relationships are found insignificant (the zeros over several paths imply negligible effect in certain hypothesized relationships). Such a situation may result from the existence of external moderating variables or measurement issues, or the general traits of the Pakistani SME e-commerce market, in which perceptions of trust and service are still being developed.

The most important predictor of loyalty is shown to be satisfaction, and this is another notable finding, such that SAT has an impact (0.58) on LOY. As previously noted, relationship marketing theories suggest that customers, who are satisfied with their overall experience are more likely to repeat purchase behavior and brand loyalty of that company. However, the lack of direct effects from SQ, TRU, and SM on LOY suggests that trust-building strategies, service improvements, and digital engagement efforts should focus on enhancing customer satisfaction first, rather than expecting immediate loyalty gains.

PLS SEM

Figure 3

PLS SEM Path Coefficient Results



This image presents the PLS-SEM model that explains the Service Quality (SQ) and Trust (TRU) and Social Media Engagement (SM) and Satisfaction (SAT) and Loyalty (LOY) relationships. These path coefficients show a strength and significance of the relationships. Results indicate the direct and indirect influence of SQ, TRU and SM on SAT and SAT on LOY, respectively. The strongest predictor among the key results is TRU → SAT (1.13), implying that consumer trust has its weight in the level of e-commerce platform satisfaction. It is consistent with past research highlighting that trust plays an important deductive role from the perspective of online transactions, especially in Pakistan where security of online transactions is considered low. Just like SM → SAT (0.48) again indicates the positive contribution of social media engagement to satisfaction to the importance of social CRM strategies to improve consumers' experiences.

Nonetheless, when SAT is looked at as the direct impact of loyalty (LOY), the coefficient (-1.23) is indeed negative that isn't what was expected based on current loyalty models. This may be an indication of measurement problems, unobserved moderating effects, industry specific behaviour in which satisfaction does not always lead to loyalty. Furthermore, the result of direct effect of SQ on SAT (-0.86) implied that the satisfaction will be influenced by service quality perceptions, which do not have direct effect. Finally, this result should be further investigated since, generally, service quality would be an important factor to drive consumer trust and engagement.

The low explained variance in LOY (0.15) confirms that there are other external factors that affect customer retention beside SAT. The three items LOY1, LOY2, and LOY3 have large factor loadings (0.83, 0.80, 0.72), but the overall R² of the SAT for LOY is insignificant, suggesting that other factors may also be involved in customer's commitment to long-term customer over time, i.e., the reputation of brand, the pricing strategy, or the long-term engagement after immediate satisfaction. The study result shows trust and social media engagement matter for customer satisfaction but needs more factors to predict long-term loyalty.

The results show that e-service quality with trust and social media involvement drive consumer satisfaction and loyalty within Pakistani small enterprises' internet buying sector. Compared to similar studies, the findings confirm the significant role of trust (TRU) and social media (SM) in consumer satisfaction (SAT), aligning with recent research that emphasizes trust-building mechanisms as a key determinant of online purchasing behavior. Studies conducted in developed markets indicate that customer satisfaction is a major driver of brand commitment and repurchase intention, but in Pakistan, cultural and market-specific factors such as trust deficit and preference for cash-on-delivery (COD) may weaken this relationship. A lack of continuous statistical patterns shows that customer satisfaction needs support from long-term engagement strategies to keep customers committed.

Service quality combined with trust produce a positive connection to consumer loyalty as demonstrated by earlier single-variable research according to Bellahcene et al. (2025) and Kotler et al. (2022). Our results demonstrate that social media engagement influences consumer satisfaction which then impacts loyalty instead of affecting loyalty directly. New studies show social media marketing helps users like products more and feels better about their experiences yet still needs plan to gain customer trust before keeping customers. The SEM results also diverge significantly from previous studies in showing that satisfaction had a weak or even negative relation to SQ (-0.86) contrary to the expectation of SERVQUAL tradition (Parasuraman et al., 1988; Malhotra, 2020). In developed e-commerce markets, we find that high service quality leads to greater satisfaction, and thus greater commitment to the brand, however, in Pakistan's context, factors like delayed delivery, inconsistent return policy, as well as cybersecurity issues need to be taken seriously even if service quality meets the industry standards (Ashiq & Hussain, 2024). This shows that to maintain satisfaction loyal businesses in Pakistan have to use trust promoting mechanisms together with service improvements.

Third, when we compare our model to previous models by prior research in Western markets, many models by past research in Western markets posit direct effect of service quality, trust and customer loyalty (Gefen, 2002; Palmatier, 2008), which is not confirmed by our results. Emerging economy studies are similar, finding trust a bigger correlate for loyalty than satisfaction, in markets where digital payments ratio is low or fraud concerns persist (Bellahcene et al., 2025). Our model, with a negative impact of satisfaction on loyalty (-1.23), provides a novel customer pattern of behavior that may be characteristic of online risk aversion.

Discussion

It has improved significantly to the existing body of knowledge by exploring how e service quality, trust, social media activity, satisfaction, and loyalty affect in SME e commerce sector in Pakistan. The results

identify that there is a significant relationship between TRU and SM and consumer SAT, which in turn determines consumer LOY. This is however a challenge to existing literature that commonly suggests a positive relationship between satisfaction and loyalty (Ashiq & Hussain, [2024](#)), with the negative path coefficient between satisfaction and loyalty ("−1.23"). As such, it becomes necessary to delve deeper into the nuances of these market specific behaviors in developing economies where customer trust, cash on delivery adoption, and service quality is extremely questionable.

This study makes three important theoretical, literature based as well as practical contributions. It provides the theoretical contribution on questioning the linearity and positivity of service quality and trust and loyalty relationships, which typically have been assumed within the SERVQUAL and Trust Theory (Parasuraman et al., [1988](#); Gefen, [2002](#)). Considering the SME sector in the context of Pakistan, our results imply that customer satisfaction is not sufficient to predict loyalty, contradicted to the established consumer behavior models in the Western markets (Hair et al., [2023](#)). This study also contributes to the literature on social CRM and e-loyalty, and it allows us to affirm that social media engagement positively affects the commitment of customers but not their loyalty (Malki et al., [2024](#)). From a practical point of view, the findings also highlight the importance of trust building mechanism in place in e-commerce business in Pakistan as well as the need to develop the mechanisms to make the digital payment streamline for consumers and post purchase consumer engagement mechanisms for compelling the consumers to repeat or return to the site to purchase again. (Kotler et al., [2022](#)).

Results from the study's PLS-SEM findings violate typical trust and loyalty models, especially in high-risk digital domain. And according to the Expectation-Confirmation Theory (ECT) (Oliver, 1999) customer satisfaction is supposed to be a direct predictor of loyalty. The study however offers a more complex relationship in which trust acts as a mediator variable with service quality and loyalty (Bellahcene et al., [2025](#)). However, in Pakistan's SME sector, there is low trust in the online payment systems and frequent service disruptions thus weakening the relationship between trust and loyalty. According to these findings, trust building measures (rather than satisfaction alone) are important loyalty predictors and found in studies of other developing markets.

Although SERVQUAL (Parasuraman et al., [1988](#)) designates service quality (SQ) as the direct antecedent of satisfaction (S) and loyalty (L), our findings indicate a poor direct effect of SQ on S (−.86). Such a deviation from the conventional model indicates that there is a unique digital commerce landscape in Pakistan characterized by service inconsistencies at the expense of perceived quality improvements for services. The studies made in Western Markets indicated that high level of quality of service was associated with strong satisfaction along with commitment towards the brand (Hair and others, [2023](#)) but in Pakistan delay in the delivery, inconsistent refund policy, and cyber security problems may lead to discontents even when the quality of the service fulfils the normal expectations (Ashiq & others, [2024](#)). The results are indicative of the fact that there is a need for a revised theoretical framework that take into consideration the contextual variations in consumer behavior across economies.

Conclusion

The findings of this study offer valuable theoretical, empirical, and practical contributions to the understanding of consumer satisfaction and loyalty in the Pakistani SME e-commerce sector. Results demonstrate that social media engagement and degrees of trust have a significant impact on the consumer satisfaction, while consumer satisfaction has mediating effect to the consumer loyalty. However, the coefficient of negative one point two three (−1.23) between satisfaction and loyalty is contrary to the current assumption of as linear positive relationship (Ashiq & Hussain, [2024](#)). This implies that although the Pakistani consumers are content with an online experiential satisfaction, they don't necessarily develop long term loyalty as market specific trust deficit, COD preference and inconsistent service quality are prevailing. This

lends further support to efforts aimed at building trust and implementing post purchase engagement techniques to deepen the consumer retention.

In terms of theorizing, this study stands against standard models such as SERVQUAL Model (Parasuraman et al., [1988](#)) and Expectation Confirmation Theory (ECT) (Oliver, 1999) that stated that higher service quality results to greater consumer satisfaction and loyalty. Our result shows that trust is a stronger driver for consumer behavior than the service quality (Hair et al., [2023](#); Bellahcene et al., [2025](#)). The alignment between our findings and research on digital payment in developing economies is enhanced by the fact that more so than various service enhancements, the security, transparency, and fraud prevention of digital payment drives consumers' loyalty in those countries. Finally, the study also agrees with the notion that social media engagement influences satisfaction but does not affect loyalty directly, and thus further justifies the assertions that social CRM plans are not sufficient without trust-based customer engagement programs (Malki et al., [2024](#); Kotler et al., [2022](#)).

Future Research Directions

In practical terms, e-commerce businesses in Pakistan's SME industry must update customer retention strategies with trust deficits and changing consumer behavior patterns to be considered. In contrast to developed markets where service quality affects the loyalty directly, our findings represent that in order for Pakistani businesses to do so, they must first solve trust issues by means of transparent return policies, secure pay system and personalized support. Additionally, the study shows that social media engagement leads to satisfaction, but does not promote loyalty directly, rather SME businesses should appeal to social media as a great trust builder rather than implementing it thinking it increases customer retention (Ashiq & Hussain, [2024](#)). This gap can be bridged by strategies such as post purchase follow ups, personalized offer and loyalty programs, which Hair et al. ([2023](#)) and Bellahcene et al. ([2025](#)) identified will create sustainable consumer relationships.

Other than this, future research should concentrate on moderating factors similar to digital payment adoption, brand name will accord and consumer threat perceiving components that may very well have an effect on e-commerce loyalty in Pakistan. This will lead to a deeper insight into the transition from first time to repeat customer amongst customers (Parasuraman et al., [1988](#)). Another aspect to these findings is comparative studies with other South Asian and Middle Eastern markets that determine whether these are peculiar to Pakistan or whether they are part of larger region trends of developing economies (Malki et al., [2024](#); Oliver, 1999). Finally, this study makes an important contribution to both the academic research and industry practice by offering a coherent framework of e-commerce loyalty in the trust deficit markets.

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