

E-SERVICE QUALITY AND CUSTOMER TRUST IN INDIAN E-COMMERCE PLATFORMS: A LONGITUDINAL SECONDARY DATA ANALYSIS

Dr. Mandar M. Kulkarni¹ and Mr. Parth S. Joshi²

¹Assistant Professor, Smt. S.M. Agrawal Institute of Management, Chalisgaon, Maharashtra, India

²Research Scholar, CES B.P. Arts, S.M.A. Science, K.K.C. Commerce College, Chalisgaon, Maharashtra, India

ABSTRACT

India's rapidly expanding e-commerce sector has transformed retail consumption, yet sustaining customer trust remains a persistent challenge in digital marketplaces. Unlike physical retail, online platforms must establish trust through technology-mediated service delivery rather than face-to-face interaction. This study examines the evolving relationship between e-service quality and customer trust in Indian e-commerce platforms using a longitudinal secondary data approach. Drawing on data from industry reports, government publications, and academic studies spanning 2014–2024, the paper analyses how improvements in key e-service quality dimensions—such as usability, reliability, responsiveness, security, and fulfillment—shape customer trust over time. The findings indicate that trust develops cumulatively through consistent service performance rather than isolated improvements. By adopting a longitudinal perspective, the study extends e-service quality and trust literature in emerging market contexts and offers strategic insights for Indian e-commerce firms seeking sustainable competitive advantage.

Keywords: E-service quality, customer trust, Indian e-commerce, longitudinal analysis, digital platforms, online consumer behavior

1. INTRODUCTION

The Indian e-commerce sector has witnessed unprecedented growth over the past decade, supported by expanding internet access, smartphone penetration, and the rapid diffusion of digital payment systems. While market size and transaction volumes continue to increase, sustained platform usage depends less on adoption incentives and more on customers' confidence in digital service delivery. In online environments where physical inspection and direct interpersonal interaction are absent, customer trust becomes a central determinant of repeat usage and long-term engagement.

Unlike traditional retail settings, trust in e-commerce must be cultivated through system reliability, secure transactions, transparent policies, and effective post-purchase support. Failures in any of these dimensions can amplify perceived risk and undermine consumer confidence. As a result, e-service quality has emerged as a strategic mechanism through which platforms signal credibility and operational competence.

Although prior research establishes a positive association between e-service quality and trust, much of the existing literature relies on cross-sectional survey designs that capture perceptions at a single point in time. Such approaches are limited in their ability to explain how trust evolves as platforms improve service infrastructure and regulatory frameworks mature. Addressing this gap, the present study adopts a longitudinal secondary data approach to examine how sustained improvements in e-service quality influence customer trust in Indian e-commerce platforms over time.

2. LITERATURE REVIEW

2.1 E-Service Quality in Online Commerce

Research on e-service quality evolved from traditional service quality models, particularly the SERVQUAL framework proposed by **Parasuraman, Zeithaml, and Berry**, which emphasized reliability, responsiveness, and assurance. However, scholars later questioned its suitability for technology-mediated environments due to the limited role of interpersonal interaction.

Addressing this gap, **Zeithaml, Parasuraman, and Malhotra (2002)**, in *Service Quality Delivery Through Web Sites*, reconceptualized service quality for online contexts by introducing dimensions such as efficiency, system availability, fulfillment, and privacy. Their work marked a shift from human-centric service delivery to system-centric performance evaluation. Extending this framework, **Parasuraman et al. (2005)** developed the E-S-SERVQUAL scale, highlighting that online service failures—especially related to fulfillment and system reliability—have a stronger negative impact on customer perceptions.

Empirical studies further demonstrate the strategic relevance of e-service quality. **Swaid and Wigand (2009)** and **Lin and Chang (2011)** found that higher e-service quality enhances customer satisfaction and loyalty,

primarily through the development of trust, positioning service quality as a foundational determinant of long-term platform success.

2.2 Customer Trust in E-Commerce

Trust is widely recognised as a critical construct in online consumer behaviour. **Gefen (2002)** defined online trust as a consumer's belief in the reliability and integrity of an e-commerce vendor, emphasizing its role in reducing perceived risk in digital transactions. His findings suggest that trust significantly influences consumers' willingness to engage with online platforms, particularly during early adoption stages.

Building on this perspective, **Chiu et al. (2014)** demonstrated that trust plays a decisive role in repeat purchase intention, even when customers report high satisfaction levels. This highlights trust as a distinct and indispensable outcome of online service experiences rather than a by-product of satisfaction alone.

In the Indian context, **Hoque and Lohse (2013)** identified privacy and security concerns as major barriers to trust formation. Their study revealed that apprehensions related to data misuse, payment security, and lack of transparency significantly deter Indian consumers from sustained online engagement.

2.3 Relationship Between E-Service Quality and Trust

The relationship between e-service quality and customer trust is well established in prior literature. **Shankar, Urban, and Sultan (2002)** argued that trust emerges from consistent and reliable service delivery across digital touchpoints, particularly through website usability and system reliability. Similarly, **Swaid and Wigand (2009)** found that responsiveness and reliability directly strengthen trust, which subsequently influences satisfaction and loyalty.

Focusing on India, **Kaur and Saini (2017)** empirically demonstrated that secure payment systems, efficient grievance redressal, and responsive customer support are critical determinants of trust, reflecting the heightened risk perceptions prevalent among Indian consumers.

2.4 Research Gap

Despite extensive research linking e-service quality and customer trust, most studies rely on cross-sectional primary data and treat trust as a static outcome. Limited attention has been paid to how trust evolves through sustained improvements in service quality, particularly in emerging markets. Indian e-commerce studies largely overlook longitudinal perspectives that capture infrastructural, regulatory, and technological changes over time. Addressing this gap, the present study adopts a longitudinal secondary data approach to examine the dynamic relationship between e-service quality and customer trust in Indian e-commerce platforms.

3. RESEARCH METHODOLOGY

This study adopts a longitudinal secondary data research design to examine temporal changes in e-service quality and customer trust. Secondary data were sourced from industry reports, government publications, academic journals, and market research databases covering the period from 2014 to 2024. This timeframe captures significant technological, regulatory, and behavioral shifts within India's digital commerce landscape.

Given the absence of direct trust measures in secondary datasets, customer trust was operationalized using theoretically grounded proxy indicators, including repeat purchase trends, net promoter scores, consumer satisfaction indices, and reductions in grievance frequency. E-service quality dimensions were assessed through indicators related to website usability, delivery reliability, customer support responsiveness, data security practices, and fulfillment performance.

Trend analysis and comparative period analysis were employed to identify patterns and structural shifts over time. Rather than testing short-term causal relationships, the analysis focuses on identifying consistent associations between service quality improvements and trust outcomes across different phases of market development.

4. FINDINGS

The findings demonstrate that customer trust in Indian e-commerce platforms develops incrementally through consistent improvements in service quality rather than isolated enhancements. Improvements in usability and payment security appear to reduce entry-level risk perceptions, while reliability and responsiveness play a more pronounced role in sustaining trust over repeated transactions.

The longitudinal perspective highlights that trust formation is path-dependent: early service failures have lingering effects, whereas sustained reliability strengthens confidence over time. This observation challenges static models of trust and underscores the importance of consistency in service delivery. The results also suggest

that regulatory interventions and infrastructural improvements amplify the trust-building effect of e-service quality by reducing systemic uncertainty.

4.1 Growth Trends in Indian E-commerce

Between 2014 and 2024, India's e-commerce market experienced robust growth: E-commerce revenue grew from approximately USD 27 billion in 2014 to an estimated USD 110+ billion in 2024 (Statista, 2023). Smartphone users increased from ~215 million to over 750 million, expanding the digital customer base (IAMAI, 2023). Digital payment adoption surged with platforms such as UPI, Paytm, and Google Pay facilitating secure transactions. These macro trends created an environment where ESQ and trust became strategic imperatives for platform competitiveness.

4.2 E-Service Quality Components and Trust Outcomes

Using secondary insights from multiple datasets, the relationship between ESQ dimensions and customer trust in Indian e-commerce over time is summarized below.

4.2.1 Website Usability and Trust

Studies consistently show that easy navigation, fast loading speeds, and intuitive design are positively linked to consumer trust (Shankar, Urban, & Sultan, 2002). Indian e-commerce players such as Amazon India and Flipkart invested heavily in mobile app optimization and simplified checkout processes, reflecting a broader industry focus on usability improvement.

Longitudinal data indicates that platforms with higher usability ratings (measured by consumer surveys) also exhibit higher customer retention rates.

4.2.2 Reliability and Platform Confidence

Reliability — defined as the ability to consistently fulfil orders accurately and deliver as promised — emerged as a strong predictor of trust. According to a Deloitte India report (2022), platforms that maintained >90% on-time delivery rates and minimal order errors recorded stronger repurchase intentions. Conversely, spikes in customer complaints over late or incorrect deliveries corresponded with dips in trust indices.

4.2.3 Security and Privacy Assurance

Privacy concerns have historically inhibited Indian consumers from engaging in high-value online transactions (Hoque & Lohse, 2013). Over the 2014–2024 period, regulatory initiatives such as the Personal Data Protection Bill and security standards for payment gateways improved consumer confidence. Research by Kaur and Saini (2017) noted that enhanced data protection protocols and transparent privacy policies significantly increased perceived trustworthiness.

4.2.4 Responsiveness and Customer Support

Responsive customer support — including live chat, 24/7 helplines, and proactive communication — strengthens trust by reducing post-purchase anxiety. Secondary data from consumer satisfaction surveys shows that platforms that handled service issues promptly were rewarded with higher NPS and repeat purchase metrics (McKinsey, 2021). This effect intensified during the COVID-19 pandemic as digital support became essential.

5. CROSS-SECTIONAL AND TEMPORAL PATTERNS

5.1 Period 2014–2017: Early-Stage Growth and Trust Barriers

During the early phase of Indian e-commerce growth, customers exhibited skepticism towards online shopping due to concerns over fraud, payment security, and unreliable logistics (Negi, 2018). ESQ was still evolving, with many platforms focusing more on expansion than customer experience. Secondary data indicates relatively low trust scores despite rising e-commerce adoption.

5.2 Period 2018–2020: Regulatory Reforms and Enhanced Trust

This period saw improvements in e-service infrastructure and policy frameworks. Payment security standards tightened, return policies were standardized, and customer support systems were professionalized. Surveys from this period show a significant uptick in customer trust scores — particularly among first-time users transitioning to repeated purchasing behaviors.

5.3 Period 2021–2024: Maturity and Trust Consolidation

By 2024, Indian e-commerce matured substantially, with e-service quality becoming a core differentiator. Platforms achieved higher fulfilment accuracy, advanced personalization through AI/ML, and increased transparency in pricing and delivery. Consumer trust measures — such as satisfaction indexes and brand loyalty scores — showed sustained improvement, reflecting long-term confidence growth.

6. DISCUSSION

The findings demonstrate that customer trust in Indian e-commerce platforms develops incrementally through consistent improvements in service quality rather than isolated enhancements. Improvements in usability and payment security appear to reduce entry-level risk perceptions, while reliability and responsiveness play a more pronounced role in sustaining trust over repeated transactions.

The longitudinal perspective highlights that trust formation is path-dependent: early service failures have lingering effects, whereas sustained reliability strengthens confidence over time. This observation challenges static models of trust and underscores the importance of consistency in service delivery. The results also suggest that regulatory interventions and infrastructural improvements amplify the trust-building effect of e-service quality by reducing systemic uncertainty.

7. LIMITATIONS AND FUTURE RESEARCH

7.1 Scope of Secondary Data

While the longitudinal approach offers broad insights, reliance on secondary data limits the ability to capture real-time customer sentiments or granular behavioral drivers. Future research should integrate primary data analysis and experimental designs to validate causality more strongly.

7.2 Evolving Consumer Expectations

Customer trust dynamics evolve rapidly in response to new technologies (e.g., AI assistance, virtual try-ons). Longitudinal data must be updated continuously to reflect these trends. Further studies may focus on emerging markets within India such as tier II and tier III cities where trust dynamics differ from urban centers.

8. CONCLUSION

This study advances understanding of e-service quality and customer trust by adopting a longitudinal secondary data approach in an emerging market context. The findings confirm that trust in Indian e-commerce platforms is not an immediate outcome of service quality but a cumulative result of sustained performance across multiple dimensions. By extending service quality theory to a dynamic trust formation framework, the study offers both theoretical and practical insights relevant to digital platforms operating in developing economies.

REFERENCES

- Chiu, C. M., Wang, E. T. G., Fang, Y. H., & Huang, H. Y. (2014). Understanding customers' repeat purchase intentions in B2C e-commerce: The roles of utilitarian value, hedonic value and perceived risk. *Information Systems Journal*, 24(1), 85–114.
- Deloitte India. (2022). E-commerce trends and delivery performance report. Deloitte.
- Gefen, D. (2002). Reflections on the dimensions of trust and trustworthiness among online consumers. *ACM SIGMIS Database*, 33(3), 38–53.
- Hoque, R., & Lohse, S. (2013). Consumer trust in Indian e-commerce: The role of perceived privacy and security. *International Journal of Information Management*, 33(5), 827–835.
- IMAI & Nielsen. (2023). India internet 2023 report. Internet and Mobile Association of India.
- Kaur, G., & Saini, R. (2017). Factors affecting Indian online consumer trust: A structural equation modelling approach. *Journal of Retailing and Consumer Services*, 37, 23–37.
- Lin, J., & Chang, H. (2011). Exploring the importance of trust and satisfaction on customers' loyalty in e-commerce contexts. *Journal of Electronic Commerce Research*, 12(4), 234–241.
- McKinsey & Company. (2021). Customer experience and digital support in Indian e-commerce. McKinsey Global Institute.
- Negi, P. (2018). Determinants of customer trust in e-commerce: A study of Indian consumers. *International Journal of Business Insights & Transformation*, 10(2), 51–59.
- Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). E-SERVQUAL: A multiple-item scale for assessing electronic service quality. *Journal of Service Research*, 7(3), 213–233.
- Shankar, V., Urban, G. L., & Sultan, F. (2002). Online trust: A stakeholder perspective, concepts, implications, and future directions. *Journal of Strategic Information Systems*, 11(3–4), 325–344.
- Statista. (2023). India e-commerce market size forecast. Statista Research.

-
- Swaid, S. I., & Wigand, R. T. (2009). Understanding e-service quality and its impact on customer trust and satisfaction. *Journal of Services Marketing*.
 - Zeithaml, V. A., Parasuraman, A., & Malhotra, A. (2002). Service quality delivery through web sites: A critical review of extant knowledge. *Journal of the Academy of Marketing Science*, 30(4), 362–375.