

Digital Engagement and Customer Loyalty in Retail: The Mediating Role of Perceived Service Quality

¹Dr. R. Arun Prasad, ²Dr. K.R. Ramprakash, ³Prof. Kishore Kunal*, ⁴Dr. C. Joe Arun

^{1,2}Assistant Professor, Loyola Institute of Business Administration

³Professor & Dean, Loyola Institute of Business Administration

⁴Director, Loyola Institute of Business Administration

*Corresponding Author: kishore.sona@gmail.com

Abstract

Purpose: In this study, the mediating role of perceived service quality (PSQ) in the relationship between digital engagement (DE) and customer loyalty (CL) in retail commerce is assessed, particularly in the context of omnichannel shopping settings.

Design/methodology/approach: Using data from 350 Indian retail customers who shop both online and offline, this research uses Partial Least Squares Structural Equation Modeling (PLS-SEM) to analyze the interconnections among DE, PSQ, and CL.

Findings: Digital engagement positively influences perceived service quality in a significant manner ($\beta = 0.633$, $p < 0.001$) and customer loyalty ($\beta = 0.453$, $p < 0.001$). Perceived service quality further has a beneficial effect on customer loyalty ($\beta = 0.467$, $p < 0.001$). Mediation assessment verifies that PSQ partly bridges the interconnection between DE and CL ($\beta = 0.295$, $p < 0.001$), accounting for a 69.1% variance in customer loyalty ($R^2 = 0.691$).

Implications: Retailers should focus on providing uniform and superior service encounters across digital and physical platforms to enhance customer loyalty. Investments in digital tools must be complemented by improvements in service responsiveness, reliability, and personalization.

Originality/value: This study bridges traditional service quality models with digital retail strategies, providing theoretical and practical insights into how digital engagement and perceived service quality collectively shape customer loyalty in today's omnichannel retail landscape.

Keywords: Retail, Customer Loyalty, Perceived Service Quality, Digital Engagement.

1. Introduction

Customer loyalty (CL) reflected in repeated purchases, brand preference, and favorable word-of-mouth has long served as a foundation for sustained success in the retail industry (Zeithaml et al., 1996). Perceived service quality (PSQ) is an important focus of loyalty in the current digital environment, where customers are increasingly demanding a smooth experience with both a digital and an offline platform. The growing intricacy of customer journeys, enabled by multichannel and omnichannel strategies, has transformed how retailers interact with their clientele (Flavian et al., 2021; Gao et al., 2021).

Retailers must now coordinate numerous digital and physical touchpoints to ensure reliable and superior service encounters (Herhausen et al., 2019; Ratchford et al., 2022). Previous research has highlighted several variables influencing loyalty in digital settings such as customization, interface

design, engagement, content credibility, and perceived value (Srinivasan et al., 2002; Casaló et al., 2008; Kathuria et al., 2024). In mobile commerce, elements like satisfaction, ease of use, and emotional bonding also influence customer behavior and loyalty decisions (Omar et al., 2021; Tseng et al., 2022).

Despite the growth of research on digital engagement and loyalty, there is still a notable gap in grasping how PSQ mediates the connection between digital engagement (DE) and CL, particularly in omnichannel retail environments. Existing research often evaluates loyalty to individual platforms (apps, websites, etc.) but falls short of adequately capturing the broad-level influence of digital engagement across channels (Molinillo et al., 2022; McLean et al., 2020).

To bridge this gap, this study explores the following research questions:

- RQ1: How does digital engagement influence perceived retail service quality?
- RQ2: How does PSQ affect CL?
- RQ3: What is the direct effect of digital engagement on customer loyalty?
- RQ4: Does perceived service quality mediate the connection between digital engagement and customer loyalty?

This research contributes by bridging traditional service quality frameworks with emerging digital engagement strategies. It offers both theoretical and managerial insights by identifying how PSQ enhances the effects of digital engagement on loyalty. These findings are relevant for academics studying consumer behavior in the digital era and for industry professionals seeking to optimize loyalty through integrated service and technology strategies.

2. Theoretical background and Research model

2.1. Digital Engagement and Perceived Service Quality

In today's digital world, digital technologies have triggered a revolution in the retail ecosystem. They have an impact on improving service and creating a competitive advantage through multi-channel strategies (Jiang & Stylos, 2021). The rise of digital platforms such as online stores, apps for phones, and social media has allowed retailers to build more vibrant and two-way connections with their customers. These digital interactions help to connect different touchpoints. This allows retailers to fulfill consumers' wishes while increasing the efficiency of their stores (Willems et al. 2021; Pantano & Willems 2022; Hellemans et al. 2022).

COVID-19 accelerated the adoption of digital solutions. The pandemic increasingly pushed customers to rely on online and mixed offline-online buying of services and goods. Electronic platforms played a key role during this period in maintaining customer relationships and facilitating the smooth provision of services within the framework of disruption of conventional retail operations, as noted by Kabadayi et al. (2020), and Jiang & Stylos (2021). In such activities, increased digital interaction, along with facilitating technologies such as mobile payment systems, customer service through artificial intelligence, and omnichannel retailing strategies, has greatly assisted in consolidating consumer attitudes towards SQ through the mitigation of concerns regarding accessibility, dependability, and convenience (Dolata, 2009; 2013).

Besides, factors such as tailored advice, timely information, and computerized support in web portals have improved the reactivity of the service. The above technological innovation ensures prompt and

accurate services tailored to improve consumer trust and fulfillment (Ameen et al., 2021; Taufiq-Hail et al., 2023). Order tracking, personalized promotional offers, and easy-to-use mobile applications, for example, improved customer happiness and transparency and influenced how customers evaluated the level of service they were offered (Hagberg et al., 2016; Brem et al., 2021). Increased digital interaction enables customer feedback loops to be constructed through which the retailer can learn and evolve their services in response to changing consumer needs. Not only does this build trust, but it also enables the retailer to continue quality services even in such adversity, such as global crises (Willems et al., 2021).

Digital technologies like e-commerce platforms, mobile applications, and AI-enhanced customer interactions, retailers can now deliver services that are more convenient, reliable, and responsive to their customers. These technologies effectively enhance the three essential aspects of SQ: consistency, responsiveness, and convenience. Their adoption is required to improve CS and establish trust (Dolata, 2009; Jiang & Stylos, 2021). Digital technologies help businesses tackle operational and logistical challenges, allowing them to deliver uninterrupted service, especially in emergencies. For example, during the COVID-19 pandemic, digital platforms provided customers with alternative ways to obtain essential items, which reduced stress and improved the business's image (Kabadayi et al., 2020; Willems et al., 2021). These interactions enhance customer value and, in turn, perceived SQ through predictability, transparency, and convenience in service delivery (Ameen et al., 2020; Hagberg et al., 2016). The argument made above serves as the foundation for the following hypothesis:

H1: Digital engagement positively influences perceived SQ.

2.2. Perceived Service Quality and Customer Loyalty

Perceived SQ was considered a key factor influencing customer loyalty. It indicates the customer's broad assessment of the service provider's performance (Zeithaml, Bitner, and Gremler, 2018). High SQ builds trust, satisfaction, and emotional bonding, which ultimately leads to customers making repeat purchases and referring others to the service supplier (Bansal and Taylor, 1999; Chang et al., 2021; Singh et al., 2023).

As suggested by Parasuraman et al. (1985, 1988), perceived SQ is indeed multifaceted. The service provider is composed of five different factors, which include tangibility, reliability, responsiveness, assurance, and empathy. Each of these dimensions is capable of creating perceptions that, in turn, drive customer attitudes and subsequent loyalty behaviors. Thus, when the reliability and empathy offered are higher, for instance, positive referrals, representing loyalty to the brand, may be cultivated and expressed to a greater extent (Markovic et al., 2018; Bahadur et al., 2020).

Perceived service quality strongly affects customers' predicted consumer actions, including repurchase intent and readiness to offer favorable customer referrals (Liu & Lee, 2016; Tuncer et al., 2021; Do et al., 2023; Ginting et al., 2023). According to Meilatinova (2021), customer action tendencies include favorable customer referrals, the likelihood of making repeat purchases, and the willingness to recommend the service provider to others. Studies have established that clients who trust in the quality of the service are likely to exhibit favourable behavioral intentions, thus strengthening the relation between SQ and CL (Pang & Zhang, 2024; Sharma et al., 2024; Irshad et al.,

2024; Kosasih et al., 2024). Perceived SQ boosts CL through trust, satisfaction, and positive behavioral intentions. Thus, the following hypothesis is established:

H2: CL is positively impacted by perceived SQ.

2.3. Digital Engagement and Customer Loyalty

What is remarkable about the rapid adoption of digitalization in response to crises like COVID-19 is the importance of digital engagement for CL. Consumers relied much more heavily on the use of digital tools to fulfill their purchasing needs. They shied away from shopping in physical stores due to perceived safety issues and instead took advantage of online channels that were easily accessible and convenient to use (Pantano et al., 2020; Roggeveen et al., 2020; Jiang & Stylos, 2021). Improvements in digital contact points, especially personalized mobile interfaces, efficient logistic delivery, and user-friendly service online, directly relate to customers' higher perceptions of satisfaction and trusting feelings, all of which lead to loyalty for customers (Frishammar et al., 2018; Veisdal, 2020; Zhu, 2021; Rane et al., 2023).

Digital engagement creates a sense of connection and engagement through personalized offers, interactive content and integrated loyalty programs, which ultimately results in recurring purchases and sustained customer loyalty. The capability of digital technologies to offer instant communication, transparency in transactions and customized solutions strengthens the relationship between retailer and customer (Reinartz et al., 2019; Saura et al., 2014; Omar et al., 2021). Those retailers that can successfully exploit these digital tools to develop harmonious omnichannel experiences are likely to find a competitive advantage in alignment with customer expectations of convenience and reliability (Verhoef, 2020).

Digital engagement has a direct impact on CL by improving their retail experience, convenience and trust. In addition, the digital platform provides the opportunity to interact in real-time and with personalization, which helps customers build an emotional connection with retailers and leads to greater degrees of satisfaction and loyalty (Gupta et al., 2024). Also, other digital channel customization opportunities that leverage targeted promotions and loyalty rewards for seamless navigation across online and offline environments are highly effective in enhancing digital engagement for improved loyalty (Saura et al., 2014). Digital engagement promotes transparency and accountability, two key elements for trust and a sustainable customer relationship (Verhoef, 2020).

The role of digital engagement intensifies during crises. Due to the COVID-19 outbreak, consumers began using online platforms or even on mobile apps to engage with goods and services while avoiding physical contact. This shows how 'internet interaction is vital in maintaining client confidence and loyalty' (Jiang & Stylos, 2021). For a retailer who integrates the appropriate strategy of digital engagement during this time, resilient relationships with customers could be developed through positive correlations established between digital engagement and loyalty within the retail environment. As a result, a hypothesis is put forth:

H3: Digital engagement positively impacts CL.

2.4. Mediating Role of Perceived Service Quality

Perceived SQ plays a crucial part in increasing the impact of digital engagement on CL. When customers engage with retailers via digital platforms, they determine their level of satisfaction and loyalty based on their assessment of SQ. High-quality service, reliability, responsiveness, and security improve the interaction between digital engagement and loyalty by establishing confidence and favorable perceptions of the retailer (Anser et al., 2023; Fan et al., 2022; Alzaydi, 2023). Consumers who feel that the quality of service offered by companies is above average tend to show loyalty-oriented actions like making purchases and offering recommendations (Shahzad et al., 2021; Naz et al., 2021; Shi et al., 2018; Kumar, 2017). In addition, digital engagement ensures the quality of services so that the convenience and interactivity of digital media translate into behavioral intentions, word of mouth, advocacy, and repeat business (Khan et al., 2023; VO et al., 2020; Levy, 2022; Fan et al., 2022). Thus, perceived SQ serves as a transformation mechanism that mediates the connection between digital engagement and CL by enhancing the value and satisfaction derived from digital interactions, ultimately leading to stronger loyalty outcomes.

H4: The association between CL and digital engagement is mediated by perceived SQ.

Fig. 1 displays the research framework, containing the hypotheses.

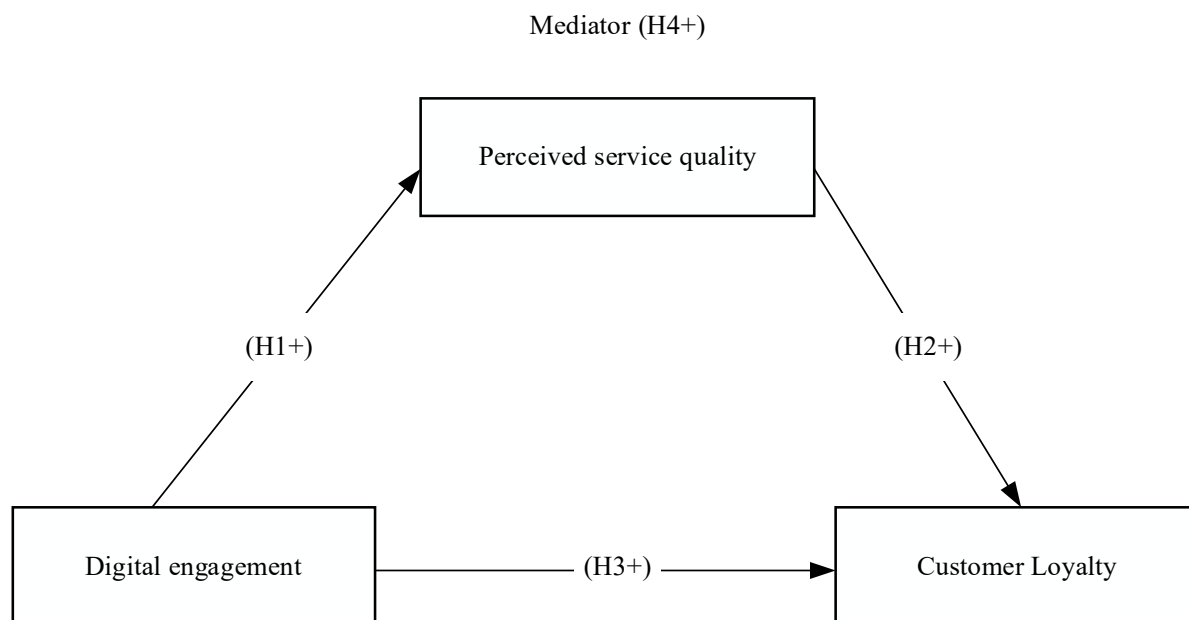


Figure 1. Framework for Research

3. Method

3.1. Data gathering

Details were gathered through an online survey. Three professionals looked over the questionnaire beforehand and offered suggestions that made it flow better. After that, a sample of college students participated in a pre-test to validate the measurement tool. Following confirmation of the scales' validity and reliability, we used convenience sampling to gather information from users of the retail app (October–November 2019) to assess the study methodology. To manage this function, we

employed screening questions. We invited to participate in the study through a mailing list of clients and social media who had previously consented to take part in studies of this nature. Participants could fill out the online survey after accepting the invitation. There were no incentives provided, and involvement was completely optional.

The sample comprised a total of 350 respondents, all of who were retail customers who regularly shopped both online and offline. The sample's attributes (see Table 1) fit with the description of frequent retail shoppers in India: 56% were female, 60% was aged between 25 and 40, 58% possessed a university degree, and 64% were employed in various professions. Every participant responded to the research model's inquiries regarding the retail platforms they most commonly utilize. The most famous retail platforms included those specializing in apparel/shoes, electronics, groceries, home textiles, and multi-category e-commerce stores.

Table 1: Respondents Profile

Factor	N	%
Gender		
Male	152	43.4
Female	198	56.6
Age (years)		
<18	25	7.1
18-24	110	31.4
25-34	132	37.7
35-44	58	16.6
45-54	20	5.7
>54	5	1.4
Level of Studies		
Lack of studies	3	0.9
Primary school	20	5.7
Secondary school	50	14.3
High school diploma	98	28
Professional training	65	18.6
University studies	114	32.6
Status of Employment		
Self-employed or employed	190	54.3
Unemployed	30	8.6
Student	120	34.3
Housekeeper	8	2.3
Retired	2	0.6
Shopping Preference		
Online shopping	230	65.7
Offline shopping	120	34.3

3.2. Measures

Likert-type scales were employed to assess model parameters that have been confirmed in prior studies. The digital engagement was assessed using four items that were sourced from Verhoef et al. (2020) and Pantano et al. (2020), focusing on the frequency, depth, and interactivity of customer interactions with retail platforms. Customer loyalty was evaluated using five indicators from Bowen and Shoemaker (1998) and Zeithaml et al. (1996), which captured dimensions including plans to repurchase, favorable word-of-mouth, and willingness to recommend. Six items that were derived from Parasuraman et al. (1988) were used to measure perceived SQ, and Cronin and Taylor (1992) concentrated on very important service quality factors including reliability, timely service, trustworthiness, understanding, and tangible factors. The wording of all items was needed; the scale was modified to ensure alignment with the retail context of the research.

3.3. Analysis of Data

The present investigation evaluated the suggested model utilizing PLS-SEM using SmartPLS. This approach is suitable for small samples and less restrictive than SEM and circumstances in which data normality cannot be verified (Hair et al., 2021). In this case, the data's normal distribution could not be guaranteed (all p-values <0.05) based on the findings of the Kolmogorov-Smirnov test for normality utilizing SPSS. Hair et al. (2019) suggest that PLS-SEM is thought to be superior to regression analysis based on covariance, according to current proposals, when it comes to assessing mediation.

The data analysis primarily involved two steps: first, examining the accuracy and consistency of the measurement model; and second, evaluating the proposed framework. A bootstrapping process with 5000 subsamples was used to make sure the data was reliable and consistent (Roldán & Sánchez-Franco, 2012). Before the model evaluation, "common-method bias (CMB) was checked using Harman's single-factor examination". The findings corroborated the lack of CMB: each component's total variance is 40%, which is below the recommended upper threshold of 50% (Eichhorn, 2014). As a result, CMB does not have any detrimental effects on the dataset.

4. Findings

4.1. Assessment of Reliability and Validity

According to Henseler et al. (2016), the measurement model whether it fits well or not is a necessary requirement in conducting any analysis thereof. The value of SRMR of the saturated model was (0.036) that is less than 0.08 and the d_{ULS} , d_G and SRMR were less than the suggested values (Dijkstra and Henseler, 2015).

The model's reliability was assessed using three key indicators: composite reliability (CR), loadings, and Cronbach's alpha (CA). First, the factor loadings of each item on its corresponding construct were evaluated; values ≥ 0.7 were required (Barclay et al., 1995). The outcomes for CL1 and DE2 did not satisfy this criterion (with values of 0.492 and 0.501, respectively) and were therefore excluded from the analysis to enhance the model's reliability. Following this, we evaluated CA and CR, both of which need to exceed 0.7 (Nunnally and Bernstein, 1994; Cronbach, 1951). With CA values of 0.83, 0.777, and 0.93, the constructs of CL, digital engagement (DE), and perceived SQ (PSQ) all successfully

fulfilled the required standards. Similarly, all constructs' CR were >0.7, indicating internal consistency (as shown in Table 2). As stated by Fornell and Larcker (1981), AVE, which has a ≥ 0.5 was used to evaluate convergent validity. This cutoff was exceeded by the AVE values for CL (0.673), DE (0.624), and PSQ (0.743), indicating adequate convergent validity. The final model ensures robust constructs for digital engagement, perceived SQ, and CL (see Table 2).

Discriminant validity was evaluated through two different approaches: "The square root of the AVEs must be greater than the inter-construct correlations" (Fornell and Larcker, 1981), and the HTMT ratio between any two indicative elements ≤ 0.85 (Henseler et al., 2016). The measurement model has discriminant validity since all of the values fall within the recommended ranges (see Table 3).

Table 2: Reliability and validity test result

Factors	CA	Rho_a	CR	AVE	Factor loading
Customer Loyalty (CL)	0.83	0.924	0.887	0.673	0.848 – 0.942
Digital Engagement (DE)	0.777	0.794	0.864	0.624	0.814 – 0.916
Perceived Service Quality (PSQ)	0.93	0.948	0.945	0.743	0.743 – 0.933

Table 3: Discriminant validity

Construct	CL	DE	PSQ
Customer Loyalty (CL)	0.821	0.845	0.789
Digital Engagement (DE)	0.749	0.79	0.729
Perceived Service Quality (PSQ)	0.754	0.633	0.862

Note: "The HTMT values are above the bold diagonal, the Fornell-Larcker criterion findings are below it, and the square roots of the AVEs are bolded."

4.2. Test of hypothesis and Structural model

To determine whether multi-collinearity existed, the constructs' VIF values were examined before the structural model evaluation. The VIF values (DE → CL = 1.126; DE → PSQ = 1.801; PSQ → CL = 2.960) were below the recommended limit of 5. Additionally, each dependent variable's R² values were looked at (see Table 4). Every number exceeded the suggested minimum of 0.1 (Falk and Miller, 1992).

The significance of each regression's β coefficients and P-values was analyzed to examine hypotheses 1–4. The findings demonstrate that digital engagement (DE) had positive and substantial effects on CL ($\beta = 0.467, p < 0.001$), perceived SQ (PSQ) ($\beta = 0.633, p < 0.001$), and DE on CL ($\beta = 0.453, p < 0.001$). Furthermore, PSQ had a positive and substantial mediating influence on the association between DE and CL ($\beta = 0.295, p < 0.001$). Therefore, all the hypotheses were approved, confirming the importance of digital engagement and perceived SQ in promoting retail CL.

Table 4: Structural model Result

Hypotheses	β	f ²	Q ²	R ²
H1: Digital engagement → Perceived SQ	0.633*	0.699		

H2: Perceived SQ→customer loyalty	0.467*	0.422
H3: Digital engagement →customer loyalty	0.453*	0.398
H4: Digital engagement →Perceived SQ→customer loyalty	0.295*	
Customer loyalty		0.588 0.691
Perceived SQ		0.507 0.401

Note. β: path coefficient; *p <0.001

The effect magnitude was evaluated using the f^2 values (Henseler et al., 2016). The findings reveal that the effect of Digital Engagement (DE) on Perceived Service Quality (PSQ) is large ($f^2 = 0.699$), while the impact of PSQ on CL is moderate ($f^2 = 0.422$). Similarly, the effect of DE on CL is moderate ($f^2 = 0.398$). The Q^2 values were utilized to evaluate the model's predictive relevance. All the Q^2 values are greater than 0 and confirm the ability of the model to forecast, both CL ($Q^2 = 0.588$) and PSQ ($Q^2 = 0.507$). The R^2 values show that PSQ explains 40.1% of its variance ($R^2 = 0.401$), while CL is explained by 69.1% of its variance ($R^2 = 0.691$). These values show that PSQ has a moderate explanatory power; while CL has a significant one. As stated by Henseler et al. (2016), the SRMR value is < 0.08, which indicates an adequate goodness of fit. Other fit indices, including d_ULS and d_G, yielded significant results ($p < 0.05$), which indicates that the model fits well overall (Dijkstra and Henseler, 2015). The structural model shows strong power in prediction with a good fit and robust effect, which explains the validity of the model together with reliability toward analyzing the different relationships between the digital engagement dimension, perceived SQ, and loyalty. Figure 2 presents the results of the conceptual model assessment.

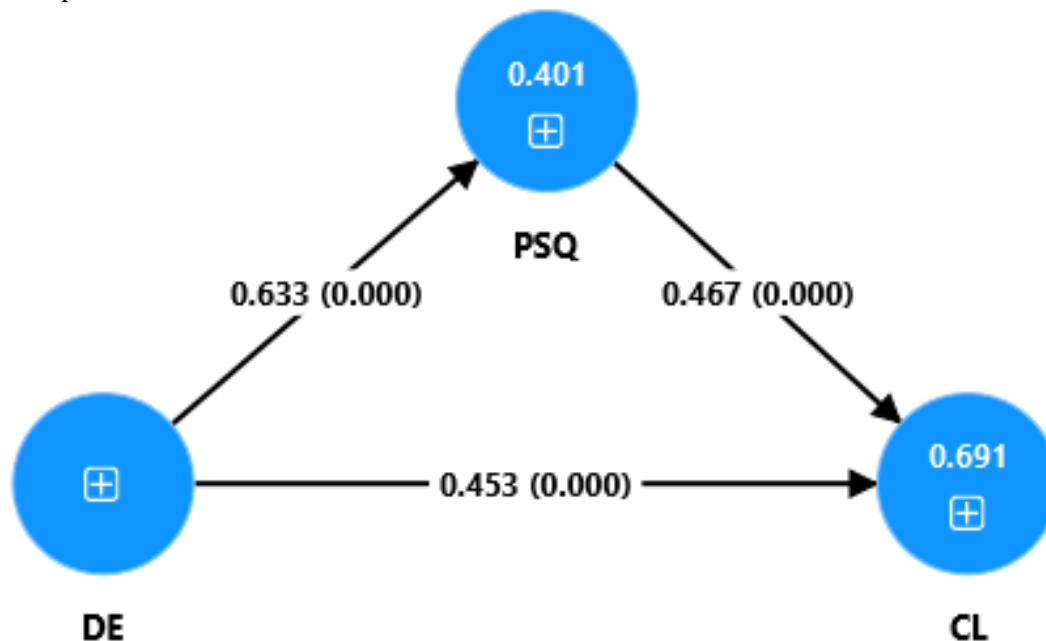


Figure 2: Conceptual Model Results.

5. Discussion

The present research makes an important contribution to the literature on DE (digital engagement), PSQ (perceived SQ), and CL in the retail sector. Firstly, this study extends previous research by

examining the mediating effect of PSQ in the association between digital engagement and customer loyalty, an area that has not gotten much attention in earlier research. Most studies focus on specific elements of digital engagement, such as app adoption, satisfaction, or usage. However, this study sheds light on the connection between digital engagement and CL through perceived SQ. This is highly relevant in the current omnichannel retail landscape, in which consumers interact with retailers across both online and offline channels.

It is further indicated that perceived SQ acts as an important motivator for CL. Though many studies have analyzed SQ in the context of previous research, such as Irshad et al., 2024; Pang & Zhang, 2024; Sharma et al., 2024; Kosasih et al., 2024, this study underlined the relevance of these aspects in the digital age. The study will integrate attributes like tangibility, dependability, certainty, responsiveness, and empathy with the evaluation of retail SQ to demonstrate the importance of such elements in defining positive client experience and loyalty to both digital and physical retail interfaces.

While digital engagement has an indirect impact on loyalty through perceived SQ, showing the role of service quality as a mediating factor in this relationship, the results of this research reinforce the point that retailers have a vested interest in ensuring consistent, reliable and personalized service experiences across all digital channels to enhance the holistic impact of digital engagement.

Fourth, this study extends prior research by confirming the significant path coefficients for DE (digital engagement) → PSQ (perceived service quality) ($\beta = 0.633$), PSQ (perceived service quality) → CL ($\beta = 0.467$), and DE (digital engagement) → CL ($\beta = 0.453$). These results support and expand upon earlier studies, including the works of Verhoef et al. (2015) and Pantano et al. (2020), a finding showed that digital engagement enriches not only customer interactions but also perceptions of SQ in a way that increases long-lasting customer loyalty.

It supports, for example, the growing body of knowledge on moderators. This study does not explicitly examine moderators, but it clearly points to how future studies will be able to clearly study how the relationship of digital engagement, SQ, and CL is influenced by demographic variables, such as age or gender and purchase preferences. These insights may further add to our understanding of how diverse customer segments experience and react to such digital and service-related interactions. Finally, perceived SQ remains important as it helps close the customer interaction and loyalty behavior gaps. This study confirms that perceived SQ mediates the effect of digital engagement on CL; hence, it offers actionable recommendations for retailers seeking to intensify their customer relationships in the digital marketplace. Therefore, retailers should focus on improving aspects such as SQ dimensions, especially responsiveness and reliability, while ensuring that digital tools enhance customer engagement and satisfaction.

6. Managerial Implications

The findings of the research present very important information for retail professionals who are seeking to strengthen customer loyalty within an increasingly digitalized retail landscape. First, retailers must prioritize investments in digital infrastructure that enable seamless and seamless experiences across every customer touchpoint, like websites, mobile applications and social networks. A well-integrated omnichannel presence ensures that customer expectations are met

regardless of the platform used. Second, enhancing perceived service quality is critical; retailers should focus on delivering responsiveness, reliability, empathy, and personalized attention through both digital and physical interfaces. Service encounters that are consistent, supportive, and timely directly influence how customers evaluate the brand and its trustworthiness.

Third, the use of real-time analytics and customer feedback loops can help retailers continuously monitor and improve service quality. By identifying pain points and adjusting strategies dynamically, retailers can strengthen their value proposition and improve long-term engagement. Additionally, customer segmentation based on demographics and behavioral data can support the design of more targeted engagement strategies. Younger consumers, for instance, may respond better to interactive and gamified experiences, while older customers may prioritize clarity, support, and simplicity in digital interactions. This tailoring of experiences can reinforce both satisfaction and loyalty across diverse customer groups.

Another important implication is the need to shift from purely transactional loyalty to emotional loyalty. Retailers can build this deeper connection by consistently aligning their brand values with customer expectations and providing value-added experiences that go beyond basic product delivery. Loyalty programs should reflect this shift by offering incentives that reward engagement, feedback, and long-term association, not just purchase volume. Finally, the study reinforces the need for digital preparedness and resilience, especially in light of disruptions including events like the COVID-19 pandemic. Retailers that implement scalable and adaptable digital engagement strategies are better positioned to maintain customer trust and loyalty during periods of uncertainty, making service quality and digital engagement vital not just for growth, but also for business continuity.

7. Conclusion and Limitations

This study is quite useful in gaining insights into relationships between DE and CL as influenced by PSQ in the retailing sector. The perceived service quality mediates the correlation between customer loyalty and the application of digital engagement greatly in the retail industry. The investigation also proves that to drive loyalty, high-quality services should be coupled with digital engagement through frictionless, reliable, and personalized interactions between customers and retail service providers. This study provides theoretical contributions on how digital touchpoints and SQ influence loyalty in online and offline retail. Practically, the findings offer the following implication to retailers: development in digital technologies and SQ enhancement to facilitate relations between retailers and customers in a highly-digitized retail context.

Although this study offers valuable contributions, it also has certain limitations, which are outlined below. The sample consists of retail customers from India and was selected using a non-probabilistic method. Future studies could then investigate the developed model in various cultural and geographical settings, sample with probability selection, and then have a representative sample to achieve better generalizability.

Second, self-reported surveys were used to gather the data, that could be biased by things like recall errors as well as social desirability. In order to offer an improved comprehension of CL behavior, future research could supplement survey responses with real behavioral data, like purchase history or app usage metrics.

Third, this study focused on perceived SQ as a mediator and did not examine other potential mediators or moderators, such as trust, satisfaction, or demographic variables like income and education level. Future research may include some of these elements to make a richer contribution towards understanding the connection between digital engagement and CL.

The final study focused on digital engagement with the help of online and offline retail interactions and did not account for omnichannel synergies. Prior research has demonstrated that touchpoints from a combination of different channels have an immense impact on customer behavior. Future studies must take an omnichannel view to analyze the different touchpoints that lead to CL throughout the customer journey.

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