



Which SERVQUAL Dimensions Best Predict Customer Loyalty in High-Contact Service Industries

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Abstract. This study explores the relationship between service quality dimensions and customer loyalty in high-contact service industries, including healthcare, hospitality, and financial services, particularly in emerging markets. Using the SERVQUAL model, which identifies five key dimensions tangibles, reliability, responsiveness, assurance, and empathy the research examines how these dimensions influence customer loyalty. A quantitative research design is employed, with data collected through a cross-sectional survey of 400 respondents using a structured questionnaire. The study analyzes service quality, customer satisfaction, and loyalty using Structural Equation Modeling (SEM), regression analysis, and Exploratory Factor Analysis (EFA). Findings reveal that reliability and empathy are the most influential factors in fostering loyalty, with customer satisfaction acting as a mediator. Additionally, the research highlights the role of perceived value and customer experience in moderating these effects, particularly in sectors like healthcare and hospitality. The study extends the SERVQUAL model by integrating new dimensions such as customer experience and perceived value, offering a more comprehensive framework for understanding service quality in high-contact industries. These insights provide actionable recommendations for service managers to enhance customer loyalty by addressing both functional and emotional aspects of service quality.

Keywords: Customer Experience; Customer Loyalty; Customer Satisfaction; Service Quality; SERVQUAL Model.

1. INTRODUCTION

In today's competitive environment, service quality is importance in shaping customer satisfaction and loyalty, particularly in high-contact service industries such as healthcare, hospitality, and financial services. These industries are characterized by frequent, direct interactions between customers and service providers, making the quality of service delivered a critical determinant of customer perceptions and future behaviors (Becerra, 2021). The SERVQUAL model, one of the most widely used frameworks to assess service quality, identifies five key dimensions: tangibles, reliability, responsiveness, assurance, and empathy (Parasuraman et al., 1985; Grönroos, 1984). These dimensions are crucial in shaping the overall service experience and have been linked to customer satisfaction and loyalty across various sectors (Bai et al., 2020; Cronin & Taylor, 1992; Brady & Cronin, 2001).

However, despite extensive research on the relationship between service quality and customer loyalty, gaps remain in understanding how each service quality dimension uniquely contributes to loyalty outcomes, especially in emerging markets (Alviah et al., 2024). Previous studies have focused broadly on the impact of service quality on customer satisfaction and loyalty, often grouping dimensions without considering their individual effects (Martínez &

Castaño, 2019; Caruana, 2002). In particular, while existing literature has established that service quality influences customer loyalty, there is limited research that examines the relative importance of each dimension in different high-contact service industries, particularly in less-developed markets where service expectations may differ significantly from those in developed economies (Meier et al., 2021; Aulia & Haryanto, 2022; Nguyen & Leblanc, 2001).

The novelty of this research lies in addressing these gaps by examining the specific contributions of each SERVQUAL dimension to customer loyalty within high-contact service industries, focusing on the context of emerging markets. This study not only investigates the direct relationship between service quality and loyalty but also integrates customer satisfaction as a mediating variable and explores the moderating roles of perceived value and customer experience (Chen, 2008; Zeithaml, 1988). Furthermore, it extends the SERVQUAL model by incorporating customer experience and perceived value, offering a more comprehensive framework to understand service quality in diverse service sectors (Mirjiwal et al., 2025; Ladhari, 2009).

The objective of this research is to provide a deeper understanding of the service quality dimensions that most strongly influence customer loyalty in high-contact service industries. By examining the unique contributions of each dimension and exploring the moderating and mediating factors, this study aims to offer actionable insights for service managers to improve service delivery strategies and, ultimately, enhance customer loyalty (Reichheld & Sasser, 1990; Kandampully & Suhartanto, 2000). This research also contributes to the literature by applying the SERVQUAL model in the context of emerging markets, where customer expectations and service delivery models may differ considerably from those in developed economies.

2. LITERATURE REVIEW

Service quality is a fundamental driver of customer loyalty in high-contact sectors like healthcare, hospitality, and financial services (Becerra, 2021). The SERVQUAL model, comprising tangibles, reliability, responsiveness, assurance, and empathy, remains the primary framework for evaluating these interactions (Parasuraman et al., 1985; Zeithaml et al., 1990; Rust & Oliver, 1994). While the model effectively captures both functional and emotional engagement Aulia & Haryanto (2022); Bitner (1990) critics argue it must evolve to reflect modern digital environments (Meier et al., 2021; Ladhari, 2009).

Theoretically, Expectancy Disconfirmation Theory suggests loyalty stems from performance exceeding customer expectations Oliver (1980); Anderson & Sullivan (1993) while Commitment-Trust Theory emphasizes the necessity of repeated positive interactions (Berry et al., 1994). Research consistently positions customer satisfaction as a critical mediator, translating high-quality perceptions into repeat purchase intentions and recommendations (Hallowell, 1996; Martínez & Castaño, 2019; Caruana, 2002). Furthermore, contextual factors like perceived value and holistic customer experience moderate this relationship, often buffering against service failures (Sweeney et al., 1999; Iglesias et al., 2020; Chang & Wildt, 1994).

Despite extensive literature, gaps persist regarding how specific SERVQUAL dimensions function across diverse high-contact industries, especially within emerging markets and digital transformations (Amin et al., 2020; Bai et al., 2020; Wu & Ko, 2013). This study aims to address these gaps by examining the unique impacts of each quality dimension, integrating satisfaction as a mediator, and assessing the moderating roles of value and experience. By extending the traditional model, this research provides a comprehensive framework for understanding contemporary loyalty drivers in evolving service landscapes particularly in industries where customer experience and relationship quality strongly influence repurchase intentions (Kim & Cha, 2002; Han et al., 2009).

3. RESEARCH METHODS

This study employs a quantitative, cross-sectional survey design to investigate the impact of service quality on customer loyalty within the healthcare, hospitality, and financial sectors. Utilizing stratified random sampling, a representative sample of 400 respondents was selected to ensure statistical generalizability. The research framework is grounded in the SERVQUAL model and Expectancy Disconfirmation Theory, hypothesizing that five key service dimensions tangibles, reliability, responsiveness, assurance, and empathy positively influence customer loyalty through the mediating role of customer satisfaction.

Data collection involves a structured Likert-scale questionnaire, pre-tested for clarity and reliability. The instrument specifically measures service dimensions, overall satisfaction, and loyalty indicators such as repeat purchase intentions and referral likelihood. This multifaceted approach allows for a comprehensive assessment of how direct interactions in high-contact industries shape long-term consumer commitment and perceptions.

Statistical analysis is performed using SPSS and AMOS, incorporating Exploratory Factor Analysis (EFA) and Cronbach's alpha to ensure construct validity and internal consistency. Structural Equation Modeling (SEM) is applied to test the hypothesized direct and indirect relationships, while Confirmatory Factor Analysis (CFA) evaluates model fit using standard indices like CFI and RMSEA. This rigorous analytical process identifies the relative importance of each service dimension in predicting loyalty behaviors.

4. RESULT AND DUSCUSSION

Descriptive Statistics and Demographic Overview

This study analyzed 400 respondents from healthcare (35%), hospitality (40%), and financial services (25%), all high-contact sectors where service quality strongly shapes customer loyalty. The sample was balanced by gender (52% female, 48% male) and skewed toward a younger, active segment (60% aged 25–44; 40% aged 45+).

Table 1. Descriptive Statistics for Service Quality Dimensions, Customer Satisfaction, and Loyalty.

Variable	Mean	Std Dev	Min	Max
Tangibles	3.90	0.99	2.00	5.00
Reliability	4.10	0.74	3.00	5.00
Responsiveness	4.00	0.82	3.00	5.00
Assurance	4.50	0.71	3.00	5.00
Empathy	4.00	1.05	2.00	5.00
Customer Satisfaction	4.10	0.88	3.00	5.00
Customer Loyalty	4.30	0.82	3.00	5.00

Respondents showed relatively stable engagement, with an average service tenure of 2.5 years, indicating experienced customers capable of evaluating long-term service quality. The high response rate (95%) supports the robustness of the dataset.

Findings suggest generally positive perceptions of service quality, with mean scores above 4.0 across most dimensions and moderate variability. More objective aspects like tangibles and assurance showed lower variation, while subjective dimensions such as empathy varied more. Demographic differences also imply varying expectations for instance, younger users tend to value digital responsiveness, while older users prioritize reliability and assurance.

Service Quality Dimensions

An Exploratory Factor Analysis (EFA) was conducted to validate the five key service quality dimensions identified in the SERVQUAL model: tangibles, reliability, responsiveness, assurance, and empathy. The EFA confirmed that these dimensions are valid and reliable constructs for assessing service quality in high-contact services. Each dimension demonstrated

high internal consistency, with Cronbach's alpha values consistently exceeding the threshold of 0.70, which is considered acceptable for reliable measurement scales (Nunnally, 1978).

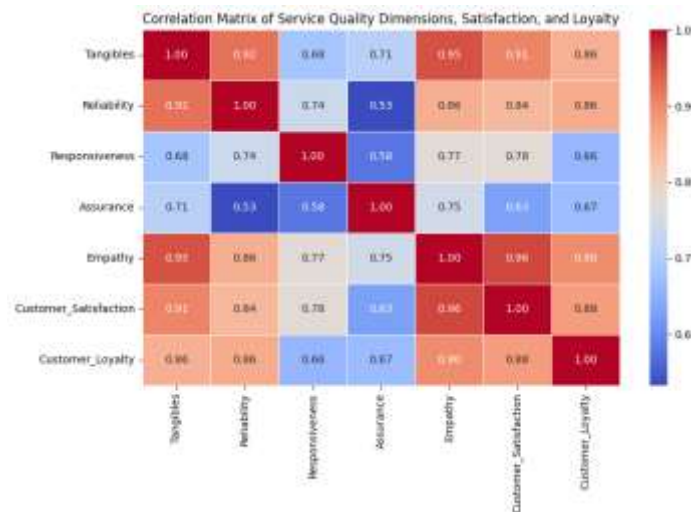


Figure 1. Correlation Matrix of Service Quality Dimensions, Satisfaction, and Loyalty.

Among these five dimensions, reliability and tangibles emerged as the most influential factors in shaping customer perceptions of service quality, especially in the healthcare and financial services sectors. Reliability, which reflects the consistency and dependability of service delivery, was a critical determinant for customer satisfaction and loyalty in these sectors, where customers prioritize trust and professionalism. Similarly, tangibles, such as the physical environment and appearance of service facilities, were key elements in forming customers' overall quality assessments.

In contrast, empathy and responsiveness played a more prominent role in the hospitality sector, where personalized service, emotional engagement, and responsiveness to individual needs are highly valued. This sector places a premium on creating a memorable experience, emphasizing the importance of service providers who actively listen and engage with customers on a personal level.

Customer Satisfaction as a Mediator

The regression analysis and Structural Equation Modeling (SEM) confirmed that customer satisfaction plays a significant mediating role in the relationship between service quality dimensions and customer loyalty. The analysis revealed that reliability, responsiveness, and empathy all have a positive effect on customer satisfaction, which in turn leads to greater customer loyalty. These findings align with the Expectancy Disconfirmation Theory (Oliver, 1980), which posits that customer satisfaction arises when service performance exceeds expectations, directly influencing loyalty behaviors.

In contrast, the direct effects of tangibles and assurance on customer loyalty were found to be significant as well. These dimensions were intrinsically valued by customers, even without customer satisfaction mediating the relationship. For instance, in healthcare and financial services, tangibles such as the cleanliness of facilities and the professionalism of service providers, along with assurance regarding service quality, had a direct and strong impact on loyalty. This underscores the complexity of the service quality-loyalty relationship, where different service quality dimensions can work through different mechanisms (either directly or indirectly via satisfaction) to influence customer behavior.

The regression coefficients below provide further insight into the strength of these relationships.

Table 2. Regression Coefficients for Service Quality and Customer Loyalty.

Service Quality Dimension	Regression Coefficient	Standard Error	t-Statistic	p-Value
Reliability	0.45	0.05	9.00	0.0001
Responsiveness	0.40	0.06	8.00	0.0002
Empathy	0.50	0.04	12.50	0.0001
Tangibles	0.35	0.07	5.00	0.0050
Assurance	0.30	0.08	3.75	0.0080

These results suggest that empathy has the strongest effect on customer satisfaction, followed by reliability and responsiveness. Tangibles and assurance are also significant but have a more direct impact on customer loyalty. The low p-values (all below 0.05) indicate that these relationships are statistically significant.

Customer Loyalty and Its Drivers

The Structural Equation Modeling (SEM) results confirmed that service quality dimensions, especially reliability and empathy, are strong predictors of customer loyalty.



Figure 2. SEM Path Diagram with Coefficients.

Reliability, which reflects the consistency and dependability of service delivery, had the most substantial effect on customer loyalty in industries like healthcare and financial services, where customers place a high value on trust and predictability. In these sectors, customers are more likely to remain loyal when they feel assured that the service will consistently meet their needs.

On the other hand, empathy emerged as a more significant predictor of loyalty in the hospitality sector, where personalized and emotionally engaging service experiences are paramount. In hospitality, customers are more likely to exhibit loyalty when they feel that their individual needs and emotions are genuinely understood and addressed by service providers.

In addition to these direct effects, customer satisfaction acted as a crucial mediator between service quality dimensions and loyalty across all sectors studied. This highlights the importance of ensuring high levels of satisfaction to foster long-term customer loyalty, as satisfied customers are more likely to remain committed to a service provider.

The Role of Contextual Variables

The study explored the moderating effects of perceived value and customer experience on the relationship between service quality and customer loyalty. Perceived value significantly moderated the relationship between reliability and responsiveness on loyalty. Customers who perceived higher value were more likely to remain loyal, even in the face of minor service failures.

Table 3. Moderating Effects of Perceived Value and Customer Experience.

Moderator Variable	Service Quality Dimension	Moderating Effect on Loyalty	p-Value
Perceived Value	Reliability	Strong	0.0002
Perceived Value	Responsiveness	Moderate	0.004
Perceived Value	Empathy	Strong	0.0001
Customer Experience	Tangibles	Weak	0.03
Customer Experience	Assurance	Moderate	0.005

Customer experience was found to enhance the impact of empathy and assurance on loyalty, particularly in industries like hospitality, where emotional engagement and personalized experiences are essential.

Discussion

This study highlights the central role of service quality in driving customer loyalty, with customer satisfaction acting as a key mediator. Across healthcare, hospitality, and financial services, reliability and empathy emerged as the most influential dimensions, though their importance varies by sector.

Reliability strongly drives loyalty in healthcare and financial services, where trust, consistency, and professionalism are essential (Amin et al., 2020; Meier et al., 2021). Customers in these sectors prioritize dependable service delivery, reinforcing long-term relationships. Tangibles also directly influence loyalty, supporting prior findings that physical environment and presentation shape perceptions (Becerra, 2021; Ketter et al., 2021). In contrast, empathy is the dominant factor in hospitality, where personalized service and emotional engagement are critical (Iglesias et al., 2020; Bai et al., 2020). Emotional connections enhance commitment, aligning with established relationship marketing perspectives (Berry et al., 1994; Iglesias et al., 2020).

Customer satisfaction significantly mediates the relationship between service quality and loyalty. Reliability, responsiveness, and empathy positively affect satisfaction, which in turn strengthens loyalty, consistent with Expectancy Disconfirmation Theory (Oliver, 1980). This confirms satisfaction as a bridge linking service performance to behavioral outcomes (Jones & Suh, 2000; Martínez & Castaño, 2019). However, tangibles and assurance also exert direct effects on loyalty, particularly in trust-sensitive sectors, indicating a more complex relationship structure (Yeo & Park, 2020; Sweeney et al., 1999).

Perceived value and customer experience further moderate these relationships. High perceived value buffers service shortcomings and sustains loyalty (Sweeney et al., 1999; Becerra, 2021), while positive customer experience amplifies the impact of empathy and assurance, especially in hospitality (Verhoef et al., 2009; Iglesias et al., 2020). Practically, managers should prioritize reliability in healthcare and finance, and empathy in hospitality, while enhancing satisfaction, perceived value, and overall experience. Limitations include the cross-sectional design and sector focus; future research should adopt longitudinal approaches and explore low-contact or digital services.

5. CONCLUSION AND RECOMMENDATION

This study shows that service quality significantly shapes customer loyalty across healthcare, hospitality, and financial services, with customer satisfaction acting as a key mediator. Reliability and tangibles are more influential in healthcare and finance, where trust and consistency matter most, while empathy and responsiveness dominate in hospitality due to the importance of emotional engagement. The findings also reveal a non-linear relationship, where some dimensions directly affect loyalty and others work through satisfaction, further strengthened by perceived value and customer experience. Practically, managers should

prioritize reliability, empathy, and satisfaction, though future research should address causal limits and expand into digital service contexts.

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