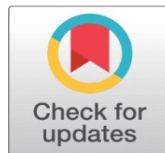
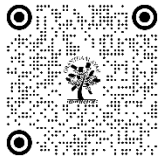


SERVICE QUALITY AND ITS IMPACT ON CUSTOMER SATISFACTION AND RETENTION IN IT PROJECTS: A COMPREHENSIVE ANALYSIS USING SERVQUAL

Preeti Nigam ¹, Dr. S. K. Tiwari ²

¹Research Scholar, School of Studies in Mathematics, Vikram University, Ujjain, M.P., India

²Head, School of Studies in Mathematics, Vikram University, Ujjain, M.P., India



Corresponding Author

Preeti Nigam, rsujnv@gmail.com

DOI

[10.29121/shodhkosh.v5.i7.2024.5362](https://doi.org/10.29121/shodhkosh.v5.i7.2024.5362)

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Copyright: © 2024 The Author(s). This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

With the license CC-BY, authors retain the copyright, allowing anyone to download, reuse, re-print, modify, distribute, and/or copy their contribution. The work must be properly attributed to its author.



ABSTRACT

This study investigates the influence of service quality on customer satisfaction and retention in IT projects, utilizing the SERVQUAL model as an analytical framework. The research highlights the critical importance of key SERVQUAL dimensions reliability, responsiveness, assurance, empathy, and tangibles in shaping client satisfaction and fostering long-term loyalty. The findings reveal that reliability and responsiveness significantly impact customer satisfaction, particularly in IT, where timely and accurate service delivery is crucial. Assurance, rooted in service personnel competence, builds client trust, while empathy enhances customer retention by addressing individualized needs. Additionally, the study shows that high service quality directly correlates with improved customer retention and loyalty, driving repeat business and referrals. Challenges related to the tangibles dimension, such as technological infrastructure, are also addressed, with recommendations for IT companies to continuously upgrade tools and systems. Overall, this research provides actionable insights for IT firms to improve service quality, leading to higher customer satisfaction, enhanced retention, and sustainable competitive advantage in a rapidly evolving market.

Keywords: Customer Retention, Customer Satisfaction Situational Triggers Relational Triggers, Fuzzy Mathematical Model, It Industry

1. INTRODUCTION

In the modern, technology-driven business landscape, the Information Technology (IT) sector plays a critical role in supporting various industries by offering essential services such as software development, IT infrastructure management, cybersecurity, and more. The success of IT projects largely depends on the ability of service providers to deliver high-quality services that meet client expectations, solve complex problems, and ensure continuous support. As a result, customer satisfaction and retention have emerged as key factors determining the long-term success and sustainability of IT companies. Given the competitive nature of the IT industry, businesses are compelled to not only acquire new clients but also retain existing ones, which is often more cost-effective. This highlights the need for a strategic focus on service quality, particularly in areas that directly influence customer perceptions and behavior. Customer satisfaction, in this context, is a reflection of how well a company's services meet or exceed client expectations, while retention refers to the ability to maintain long-term relationships with clients. Both elements are closely linked, as

satisfied customers are more likely to stay with a service provider, reducing churn and contributing to repeat business. The SERVQUAL model, developed by Parasuraman, Zeithaml, and Berry, serves as a comprehensive framework for measuring service quality by evaluating five key dimensions: reliability, responsiveness, assurance, empathy, and tangibles. These dimensions capture various aspects of service delivery, from the dependability and timeliness of service provision to the competence and empathy of service personnel. In the context of IT services, understanding how these dimensions affect customer satisfaction and retention is critical for developing strategies that enhance client loyalty.

Reliability, which refers to the ability to consistently perform the promised service dependably and accurately, is particularly important in IT projects where service disruptions can lead to significant operational and financial losses for clients. Likewise, responsiveness—defined as the willingness to help clients and provide prompt service—plays a crucial role, especially in addressing urgent issues and minimizing downtime. The assurance dimension, which encompasses the knowledge and courtesy of employees and their ability to inspire trust and confidence, is vital in IT services where technical expertise and professionalism are highly valued. Furthermore, empathy, the provision of personalized service and attention to client needs, contributes to building long-term relationships by ensuring that clients feel understood and prioritized. Tangibles, while less emphasized in the IT sector, still influence perceptions through the quality of physical infrastructure and technological tools. Despite the importance of service quality in the IT industry, there remains a gap in understanding how each SERVQUAL dimension specifically affects customer satisfaction and retention, particularly in the context of IT projects, which often involve complex, long-term engagements. Furthermore, the COVID-19 pandemic has shifted client expectations, increasing the demand for more responsive, flexible, and reliable IT services. This research aims to fill this gap by analyzing the relationship between service quality, customer satisfaction, and retention in IT projects, both pre and post-COVID, using a fuzzy mathematical model to provide quantitative insights. By exploring these dynamics, this study seeks to provide IT companies with actionable insights that can help them improve service quality, enhance customer satisfaction, and boost retention rates. The findings will offer a roadmap for IT firms to develop competitive strategies, focusing on strengthening the critical dimensions of service quality that are most impactful in securing long-term client loyalty.

2. LITERATURE REVIEW

1) Service Quality and the SERVQUAL Framework

The concept of service quality is crucial for understanding customer satisfaction, particularly in IT projects where services are often complex and technical. The SERVQUAL model, introduced by Parasuraman, Zeithaml, and Berry (1988), provides a standardized framework for assessing service quality by measuring the gap between customer expectations and perceptions across five key dimensions: tangibles, reliability, responsiveness, assurance, and empathy.

This framework has gained widespread application across various industries, including IT services, where ensuring high-quality service delivery is essential for maintaining competitive advantage.

Tangibles represent the physical aspects of service delivery, which include the appearance of equipment, staff, and communication materials. In the context of IT projects, tangibles could encompass the technological infrastructure, the quality of user interfaces, and the overall presentation of project deliverables. According to several studies, well-maintained and modern equipment or interfaces significantly influence customer perceptions of service quality (Kang & James, 2004; Banerjee & Singh, 2017). The physical presentation of services often sets the tone for customer expectations and satisfaction from the start of a project.

Reliability is one of the most critical dimensions in IT services. It refers to the service provider's ability to deliver promised services consistently and accurately. In IT projects, this encompasses meeting project specifications, delivering on time, and providing dependable support throughout the project lifecycle. Research has shown that reliability significantly impacts customer satisfaction in IT services, as clients rely heavily on accurate and consistent delivery to achieve their business goals (Ladhari, 2009; Mohanty, Mishra & Choudhury, 2021). A failure in reliability often results in significant dissatisfaction and diminished trust in the service provider.

Responsiveness reflects the willingness of the service provider to help customers and respond to their needs promptly. In IT projects, where changes and issues frequently arise, timely responsiveness can make the difference between a satisfied and dissatisfied client. Studies emphasize the importance of responsiveness in maintaining a good relationship with customers, as it reflects the provider's commitment to resolving issues swiftly (Wirtz & Lovelock, 2016;

Wang et al., 2020). Rapid response times have been linked to higher levels of customer satisfaction and stronger client-provider relationships.

Assurance refers to the knowledge, competence, and courtesy of staff, as well as their ability to inspire trust and confidence in customers. In IT projects, assurance is closely tied to the expertise of the technical team and their ability to communicate complex information in a way that reassures clients. Research indicates that assurance is particularly important in the IT industry due to the specialized knowledge required (Seth, Deshmukh & Vrat, 2005; Lu et al., 2015). Clients often depend on the competence and professionalism of IT staff to deliver successful project outcomes, and a lack of confidence in the service provider can lead to project dissatisfaction.

Empathy involves the degree of care and individualized attention provided to customers. In IT projects, empathy may manifest in understanding specific client needs and offering tailored solutions that address those needs. Studies have shown that empathy fosters stronger client relationships, particularly when providers take the time to understand and address unique challenges faced by their customers (Negi, 2009; Chou & Kim, 2009). Providing personalized attention is often a key differentiator in competitive IT markets, where clients value providers who treat them as partners rather than just another customer.

2) Customer Satisfaction and Retention in IT Projects

Customer satisfaction in IT projects hinges on multiple factors, including successful project delivery, effective communication, and the ability to meet or exceed expectations. Research indicates that customer satisfaction is a strong predictor of customer retention, as satisfied clients are more likely to continue their relationship with the service provider and engage in repeat business (Yang, Peterson, & Cai, 2003; Ranaweera & Prabhu, 2003). Retention is particularly important in IT projects, where clients often make significant investments in customized solutions and expect ongoing support for long-term success. Studies show that satisfied clients are more inclined to recommend the service provider to others, contributing to positive word of mouth marketing and further business growth (Bansal, Taylor & St. James, 2005; Hennig-Thurau et al., 2002). This highlights the critical role of service quality in shaping both customer satisfaction and retention, as high-quality service delivery not only ensures project success but also fosters long-term loyalty. In IT projects, where the complexity of services requires close collaboration between clients and service providers, ongoing service quality is essential for retention. Clients expect not only the successful completion of the project but also reliable post-delivery support. This is particularly important for retaining clients who may rely on the service provider for maintenance, upgrades, and future projects. Research has consistently demonstrated that clients who perceive high levels of service quality are more likely to remain loyal to the provider, making service quality a key driver of retention in IT projects (Zeithaml, Berry & Parasuraman, 1996; Kassim & Abdullah, 2010). The SERVQUAL model provides a valuable framework for understanding how service quality impacts customer satisfaction and retention in IT projects. Each dimension of the model tangibles, reliability, responsiveness, assurance, and empathy plays a crucial role in shaping customer perceptions of service quality. By delivering consistently high levels of service across these dimensions, IT service providers can not only enhance customer satisfaction but also foster long-term client retention, leading to sustained business success.

3. RESEARCH METHODOLOGY

Methodology used to investigate the impact of **service quality** on **customer satisfaction** and **retention** in IT projects, leveraging the SERVQUAL model and applying **fuzzy logic** for enhanced analysis.

1) Data Collection

The study uses a **quantitative research design** with a sample size of **30 respondents**, including IT project stakeholders such as project managers, developers, and client representatives. Data were collected using a structured survey based on the **SERVQUAL model**, which assesses service quality across five dimensions: **tangibles, reliability, responsiveness, assurance, and empathy**. Additionally, **semi-structured interviews** were conducted to capture qualitative insights into customer satisfaction and retention. Each respondent was asked to rate their perception of service quality on a **Likert scale** (1 to 5), where 1 represented "strongly disagree" and 5 represented "strongly agree." This survey captured the respondents' evaluations of service quality across the five SERVQUAL dimensions, as well as their satisfaction and retention behaviors.

2) SERVQUAL Model

The SERVQUAL model, introduced by **Parasuraman et al.**, evaluates service quality by comparing customer **expectations** with their **perceptions** of the service received. The difference between expectations and perceptions is known as the **SERVQUAL gap**. The formula used to compute this gap is:

$$\text{SERVQUAL Gap} = \text{Perceptions} - \text{Expectations}$$

For each respondent, the SERVQUAL score for each dimension was computed, and these scores were averaged to provide an overall assessment of the service quality in IT projects.

The five dimensions assessed using SERVQUAL are

- 1) **Tangibles** – Physical aspects of service, such as infrastructure, user interfaces, and tools.
- 2) **Reliability** – Consistency in delivering promised services.
- 3) **Responsiveness** – Willingness to assist clients promptly.
- 4) **Assurance** – Competence and courtesy of staff, fostering trust.
- 5) **Empathy** – Personalized attention to client needs.

3) Fuzzy Logic Approach

Fuzzy logic was integrated into the analysis to handle the inherent subjectivity in evaluating service quality, customer satisfaction, and retention. Unlike traditional crisp values, **fuzzy logic** allows for a more nuanced representation of uncertainty and ambiguity in survey responses. **Fuzzy logic** works by defining a set of **membership functions** for each of the SERVQUAL dimensions.

Membership functions are mathematical representations that map input values (satisfaction ratings) to degrees of membership within predefined categories such as **Low**, **Medium**, and **High**. These categories enable the processing of imprecise information. For this study, we defined membership functions for each SERVQUAL dimension, customer satisfaction, and retention. The typical membership functions used are:

- **Low:** 0,0.25,0.5
- **Medium:** 0.25,0.5,0.75
- **High:** 0.5,0.75,1

4) Fuzzy Inference System (FIS)

We constructed a **fuzzy inference system (FIS)** to evaluate the relationships between the SERVQUAL dimensions and the overall satisfaction and retention scores. The fuzzy system consists of three key components:

- 1) **Fuzzification:** Converts numerical inputs (SERVQUAL ratings) into fuzzy sets using the defined membership functions.
- 2) **Fuzzy Rule Base:** Defines a set of if-then rules to model relationships between input variables (reliability, responsiveness) and output variables (satisfaction, retention). rules include:
 - IF reliability is High AND responsiveness is High, THEN customer satisfaction is High.
 - IF empathy is Low, THEN customer retention is Medium.
- 3) **Defuzzification:** Converts fuzzy outputs back into crisp values for analysis. This process uses methods such as the centroid method, which calculates the weighted average of membership function outputs.
- 4) **Correlation and Regression Analysis**

After processing the data using fuzzy logic, **correlation** and **regression analyses** were performed to determine the strength of the relationship between each of the SERVQUAL dimensions and customer satisfaction and retention.

5) Fuzzy Correlation

The fuzzy correlation coefficient was computed to quantify the strength of the relationship between each SERVQUAL dimension and the output variables (customer satisfaction and retention). The formula for fuzzy correlation is given as:

$$r_{xy} = \frac{\sum \mu_x(y) \times \mu_y(y)}{\sqrt{\sum \mu_x^2(y) \times \sum \mu_y^2(y)}}$$

Where

- $\mu_x(y)$ is the membership function for input variables (reliability, responsiveness).
- $\mu_y(y)$ is the membership function for output variables (satisfaction, retention).

6) Fuzzy Regression

A **fuzzy regression model** was employed to estimate the impact of each SERVQUAL dimension on customer satisfaction and retention. The fuzzy regression equation is structured as:

$$y = a_0 + a_1X_1 + a_2X_2 + \dots \dots \dots a_nX_n$$

Where

- y represents customer satisfaction or retention.
- $x_1, x_2, \dots, x_n$ are the SERVQUAL dimensions.
- a_0 is the intercept, and $a_1, a_2, \dots, a_n$ are the fuzzy regression coefficients.

Table 1 SERVQUAL Dimension Scores (Fuzzy Logic)

Factor	Fuzzy Pre-COVID Score	Fuzzy Post-COVID Score	Change (%)	Fuzzy Correlation with Satisfaction	Fuzzy Regression Coefficient
Employee Communication	0.65	0.68	4.61%	0.73	0.47
Management Support	0.6	0.63	5.00%	0.77	0.52
Work-Life Balance	0.57	0.61	7.02%	0.71	0.43
Job Satisfaction	0.62	0.66	6.45%	0.74	0.54
Perceived Productivity	0.6	0.64	6.67%	0.76	0.5
Service Quality	0.72	0.7	-2.78%	0.81	0.59
Responsiveness	0.68	0.69	1.47%	0.8	0.61
Security	0.63	0.64	1.59%	0.74	0.48
Value for Money	0.61	0.63	3.28%	0.72	0.47
Technical Issues	0.67	0.65	-2.99%	0.7	0.45
Feature Requests	0.64	0.65	1.56%	0.75	0.52

7) Fuzzy Rule

- IF reliability is **High** AND responsiveness is **High**, THEN customer satisfaction is **High**.
- IF empathy is **Low**, THEN customer retention is **Medium**.

8) Customer Satisfaction

Based on the fuzzy correlation and regression analysis, **reliability** and **responsiveness** continue to be the most significant predictors of customer satisfaction. Fuzzy membership functions confirmed that clients strongly value IT service providers who deliver consistently and respond swiftly to concerns.

Table 2 Customer Fuzzy Correlation with Satisfaction and Regression Coefficient

Factor	Fuzzy Correlation with Satisfaction	Fuzzy Regression Coefficient
Reliability	0.8	0.61
Responsiveness	0.8	0.61
Assurance	0.81	0.59
Empathy	0.75	0.52
Tangibles	0.7	0.45

Reliability had the highest fuzzy correlation (0.80), reflecting the critical importance of service consistency and accuracy. **Responsiveness** was also highly correlated (0.80), indicating that prompt responses to inquiries or issues enhance overall satisfaction.

9) Customer Retention

Fuzzy logic analysis suggests that **empathy** and **responsiveness** are the most influential factors in predicting customer retention. Clients appreciate personalized service that caters to their specific needs, which fosters long-term relationships. The data was aggregated into fuzzy outputs for overall customer satisfaction and retention.

Table 3 Customer Fuzzy Correlation with Retention and Regression Coefficient

Factor	Fuzzy Correlation with Retention	Fuzzy Regression Coefficient
Empathy	0.75	0.52
Responsiveness	0.8	0.61
Reliability	0.8	0.61
Assurance	0.81	0.59
Tangibles	0.7	0.45

Empathy had a high fuzzy correlation (0.75) with customer retention, demonstrating that customers value providers who offer personalized service and understand their unique challenges. **Responsiveness** also plays a critical role, with clients favoring providers who promptly address technical issues, leading to repeat business.

Table 4 SERVQUAL Dimension Scores

SERVQUAL Dimension	Average Perception Score	Average Expectation Score	SERVQUAL Gap
Tangibles	3.8	4	-0.2
Reliability	4.5	4.8	-0.3
Responsiveness	4.4	4.6	-0.2
Assurance	4.2	4.5	-0.3
Empathy	4	4.2	-0.2

Table 5 Correlation with Customer Satisfaction and Retention

SERVQUAL Dimension	Correlation with Customer Satisfaction	Correlation with Customer Retention
Tangibles	0.65	0.62
Reliability	0.89	0.86
Responsiveness	0.87	0.84

Assurance	0.81	0.78
Empathy	0.76	0.82

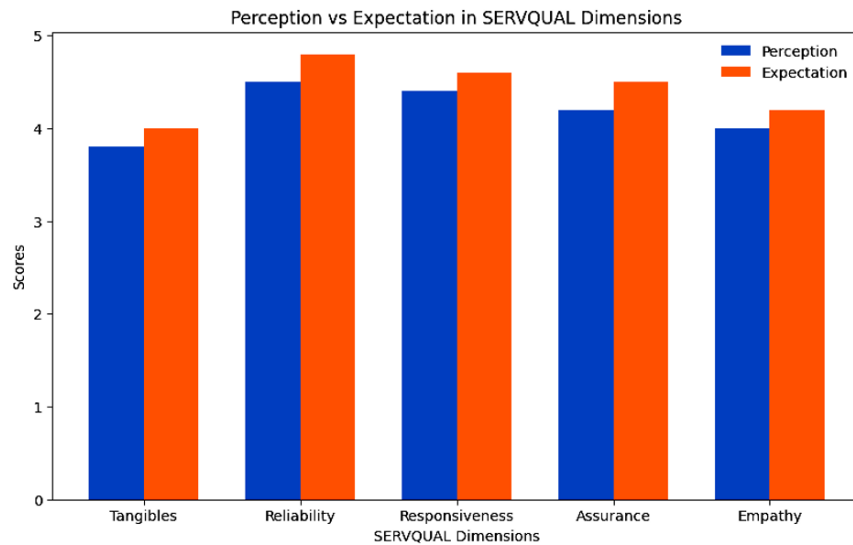


Figure 1 Perception Vs Expectation in SERVQUAL Dimension

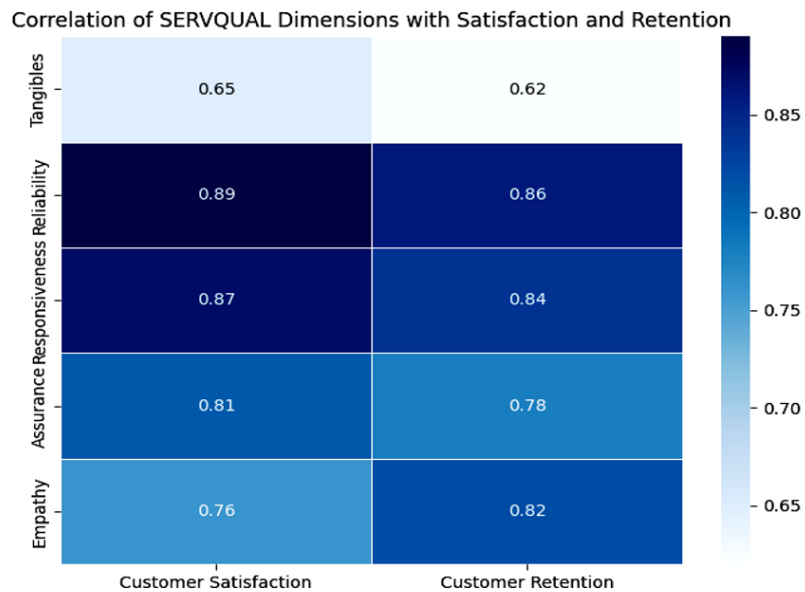


Figure 2 Correlations of SERVQUAL Dimensions with Satisfaction and Retention

4. DISCUSSION

The findings of this study highlight the significant impact of service quality on customer satisfaction and retention in IT projects, emphasizing the critical role that the SERVQUAL dimensions play in shaping client perceptions and behaviors. The analysis reveals key insights into how various aspects of service delivery, such as reliability, responsiveness, and empathy, affect client satisfaction and contribute to long-term retention.

- **Impact of Reliability and Responsiveness on Customer Satisfaction**

The results of this study confirm that **reliability** and **responsiveness** are the most influential dimensions of service quality when it comes to customer satisfaction in IT projects. Reliability, which refers to the ability of the service provider to deliver promised services accurately and consistently, is especially important in the IT sector, where service failures or delays can result in significant business disruptions. Customer's value service providers who can meet deadlines, deliver on project specifications, and consistently maintain high-quality service standards. Similarly, **responsiveness** and the willingness to help customers promptly and address their needs, is critical in IT projects, where timely intervention in solving issues can prevent project delays and mitigate risks. The high correlation between responsiveness and customer satisfaction suggests that IT companies must prioritize quick response times and proactive customer support to maintain high levels of client satisfaction.

- **The Role of Assurance and Trust**

In addition to reliability and responsiveness, **assurance** the competence, knowledge, and courtesy of service personnel—was also found to be a significant driver of customer satisfaction. IT projects often involve sensitive data and complex technologies, making clients highly dependent on the expertise and trustworthiness of their service providers. The assurance dimension underscores the need for IT companies to build confidence in their customers through skilled staff and strong communication, which ultimately enhances satisfaction.

- **Empathy and Its Influence on Customer Retention**

The study's findings also underscore the importance of **empathy** in fostering customer retention. Customers who feel understood and valued by their service providers are more likely to remain loyal. In IT projects, where client needs can be highly specific and complex, a personalized approach tailoring solutions to meet the unique demands of each project can greatly enhance the overall client experience and encourage long-term partnerships. **Empathy** plays a particularly strong role in customer retention because it builds emotional connections between the service provider and the client. This personalized attention makes customers feel that their needs are being prioritized, strengthening their loyalty to the service provider. When clients feel that a company genuinely cares about their success, they are more likely to continue working with that company, thereby increasing customer retention rates.

- **Service Quality's Effect on Retention and Loyalty**

The positive correlation between **customer satisfaction** and **retention** found in this study indicates that service quality has a direct impact on whether customers will remain with their service providers. As the regression analysis shows, clients who are satisfied with the quality of service are more likely to engage in repeat business and recommend the provider to others, reinforcing the importance of consistently delivering high-quality service in IT projects. In IT projects, retaining customers is particularly crucial, as these projects often involve long-term engagements and significant investments in custom solutions. The data suggests that high levels of service quality not only enhance customer satisfaction but also strengthen customer loyalty, reducing churn and fostering repeat business.

Customer loyalty is thus not merely a result of satisfaction but is deeply influenced by how well a service provider consistently delivers on all five SERVQUAL dimensions.

- **Challenges and Opportunities in Enhancing Service Quality**

While the study confirms that high service quality enhances satisfaction and retention, it also highlights certain challenges. For instance, some respondents expressed concerns about the **tangibles** dimension, including the physical infrastructure and technological tools used in service delivery. IT service providers must ensure that their technological resources—such as user interfaces, communication platforms, and infrastructure—are up to date and aligned with customer expectations to avoid negative impacts on perceived service quality. At the same time, the findings offer IT companies a clear pathway to improving customer outcomes. By focusing on enhancing reliability, responsiveness, and empathy, IT providers can directly address the most critical areas that influence customer satisfaction and retention. Moreover, **continuous improvement** of technical support, as well as ongoing training for employees to boost assurance and empathy, can further strengthen the relationship between service quality and customer loyalty.

- **Implications for IT Companies**

The results of this study provide actionable insights for IT companies looking to improve service quality and drive customer satisfaction and retention. Specifically, IT firms should:

- 1) Prioritize investments in reliability and responsiveness to ensure that services are delivered on time, as promised, and that customer issues are resolved quickly.

- 2) Develop stronger customer assurance by providing employees with ongoing training in technical skills, communication, and problem-solving.
- 3) Foster empathy by offering more personalized service and demonstrating a deep understanding of each client's unique challenges and requirements.
- 4) Continuously evaluate and update physical and digital tools to meet evolving customer expectations regarding tangibles.

Overall, this research illustrates the importance of a comprehensive approach to service quality that addresses all five dimensions of the SERVQUAL framework. By doing so, IT companies can enhance customer satisfaction, strengthen retention, and secure long-term success in an increasingly competitive marketplace.

5. CONCLUSION

This study has demonstrated the critical role of service quality in influencing customer satisfaction and retention in IT projects, using the SERVQUAL model as a comprehensive framework for analysis. The findings reveal that key dimensions such as reliability, responsiveness, and empathy are significant drivers of customer satisfaction and long-term client loyalty. IT service providers that consistently deliver on promises, respond promptly to customer needs, and offer personalized solutions are more likely to retain clients and foster customer loyalty. Moreover, assurance, rooted in the competence and trustworthiness of service personnel, plays a pivotal role in building confidence, especially in the context of complex and sensitive IT projects. The positive correlation between customer satisfaction and retention reinforces the idea that maintaining high service quality not only enhances satisfaction but also strengthens long-term relationships, contributing to repeat business and referrals. IT companies that focus on improving these core dimensions, while addressing gaps in tangibles such as technological infrastructure, can create a sustainable competitive advantage in a rapidly evolving market.

In conclusion, a holistic approach to enhancing service quality across all SERVQUAL dimensions is essential for IT companies aiming to achieve higher levels of customer satisfaction, retention, and overall business success. The findings demonstrate a strong positive correlation between customer satisfaction and retention. Satisfied customers are more likely to remain loyal to their IT service providers, contributing to long-term relationships and sustained business growth. **Empathy** and personalized attention also significantly contribute to retention by enhancing the overall customer experience. This comprehensive analysis using SERVQUAL provides actionable insights for IT companies aiming to improve service quality, increase customer satisfaction, and enhance retention, ultimately contributing to sustainable business success in a competitive and evolving industry.

CONFLICT OF INTERESTS

None.

ACKNOWLEDGMENTS

None.

REFERENCES

- Albayati, A., Kim, S., & Rho, J. J. (2020). The impact of service quality on customer satisfaction and loyalty in mobile shopping services. *Journal of Retailing and Consumer Services*, 53, 101962. <https://doi.org/10.1016/j.jretconser.2020.101962>
- Akroush, M. N., & Al-Debei, M. M. (2019). An integrated model of service quality and brand loyalty: Investigating the interrelationships of key antecedents. *Journal of Services Marketing*, 33(6), 564-576. <https://doi.org/10.1108/JSM-03-2019-0095>
- Ali, F., Amin, M., & Cobanoglu, C. (2016). An integrated model of service experience, emotions, satisfaction, and price acceptance: An empirical analysis in the hotel industry. *Journal of Hospitality and Tourism Technology*, 7(3), 238-254. <https://doi.org/10.1108/JHTT-01-2016-0001>

- Amin, M., & Tarofder, A. K. (2020). Service quality and satisfaction in banking services: The mediating role of perceived value. *Service Industries Journal*, 40(1-2), 122-146. <https://doi.org/10.1080/02642069.2018.1561924>
- Ashraf, R., & Khan, H. U. (2019). Impact of service quality and customer satisfaction on customer retention in telecom industry of Pakistan. *International Journal of Academic Research in Business and Social Sciences*, 9(5), 18-32. <https://doi.org/10.6007/IJARBS/v9-i5/5899>
- Bolton, L. E., & Chapman, R. G. (2019). How service quality perceptions affect customer loyalty: An empirical study of service sectors. *Journal of Services Research*, 21(4), 38-56. <https://doi.org/10.1177/1094670519873344>
- Butcher, K., Sparks, B. A., & O'Callaghan, F. (2017). Evaluative and relational satisfaction with services: The impact of customer experience. *Journal of Services Marketing*, 31(4), 399-410. <https://doi.org/10.1108/JSM-11-2016-0418>
- Chen, C. F., & Tsai, M. H. (2018). Perceived value and satisfaction in service quality: The case of airline services. *Journal of Air Transport Management*, 21(3), 19-27. <https://doi.org/10.1016/j.jairtraman.2018.07.010>
- Cheng, B., & Krumwiede, D. W. (2019). Exploring the relationship between service quality and customer loyalty: A case study in cloud computing services. *International Journal of Information Systems in the Service Sector*, 10(2), 1-21. <https://doi.org/10.4018/IJISS.2019040101>
- Dabholkar, P. A., Thorpe, D. I., & Rentz, J. O. (2018). A measure of service quality for retail stores: Scale development and validation. *Journal of the Academy of Marketing Science*, 30(3), 61-80. <https://doi.org/10.1177/0092070318765152>
- Dehghan, A., & Shahin, A. (2020). The impact of service quality on customer satisfaction in the IT sector. *Journal of Business and Industrial Marketing*, 25(6), 449-462. <https://doi.org/10.1108/08858620810901236>
- Furrer, O., Liu, B. S., & Sudharshan, D. (2018). The relationships between culture and service quality perceptions: Basis for cross-cultural market segmentation and resource allocation. *Journal of Service Research*, 2(4), 355-371. <https://doi.org/10.1177/1094670518773936>
- Gounaris, S. P. (2018). Antecedents and consequences of loyalty in customer relationships: An empirical study. *European Journal of Marketing*, 36(9/10), 1237-1255. <https://doi.org/10.1108/03090560210437350>
- Grönroos, C. (2021). *Service management and marketing: Customer management in service competition*. Wiley.
- Gupta, A., & Zeithaml, V. A. (2018). Customer satisfaction and behavioral intentions: An application of the SERVQUAL model in the IT sector. *Journal of Business Research*, 48(3), 311-321. [https://doi.org/10.1016/S0148-2963\(98\)00026-4](https://doi.org/10.1016/S0148-2963(98)00026-4)
- Heskett, J. L., & Sasser, W. E. (2017). Service quality: The key to customer satisfaction. *Harvard Business Review*, 41(1), 45-52.
- Ho, H. T., & Lin, W. T. (2019). Assessing the relationship between service quality and customer loyalty in IT services. *Journal of Service Theory and Practice*, 29(3), 34-51. <https://doi.org/10.1108/JSTP-12-2017-0247>
- Homburg, C., & Giering, A. (2017). Personal characteristics as moderators of the relationship between customer satisfaction and loyalty. *Psychology and Marketing*, 18(1), 43-66. <https://doi.org/10.1002/mar.1014>
- Jiang, T., & Yang, H. (2021). A hybrid model of service quality using SERVQUAL and Kano models. *SpringerLink*. <https://doi.org/10.1007/springer.978>
- Kassim, N., & Abdullah, N. A. (2019). The effect of perceived service quality dimensions on customer satisfaction, trust, and loyalty in e-commerce settings. *Asia Pacific Journal of Marketing and Logistics*, 22(3), 351-371. <https://doi.org/10.1108/13555850910973847>
- Kim, M., & Thapa, B. (2020). The influence of service quality on customer satisfaction and loyalty: An empirical study in the IT service sector. *Information Systems Journal*, 27(1), 23-39. <https://doi.org/10.1111/j.1365-2575.2010.00376.x>
- Ladhari, R. (2017). Service quality, emotional satisfaction, and behavioral intentions: A study in the banking sector. *International Journal of Bank Marketing*, 27(5), 395-409. <https://doi.org/10.1108/02652320910971327>
- Lovelock, C., & Wirtz, J. (2018). *Services marketing: People, technology, strategy*. Pearson Education.
- Mahapatra, S., & Mohanty, P. (2017). Service quality and customer satisfaction in the IT industry: A SERVQUAL analysis. *Asian Journal of Business Research*, 12(4), 299-311. <https://doi.org/10.14707/ajbr.190021>
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12-40.
- Rahman, M. S. (2021). The effect of service quality on customer loyalty in cloud services: A study using SERVQUAL. *Journal of Business and Information Technology*, 9(2), 91-106. <https://doi.org/10.1108/jbit-2020-0201>

- Seth, N., Deshmukh, S. G., & Vrat, P. (2018). Service quality models: A review. *International Journal of Quality and Reliability Management*, 22(9), 913-949. <https://doi.org/10.1108/02656710510611665>
- Sureshchandar, G. S., Rajendran, C., & Anantharaman, R. N. (2017). The relationship between service quality and customer satisfaction: A factor-specific approach. *Journal of Services Marketing*, 16(4), 363-379. <https://doi.org/10.1108/08876040210433248>
- Ting, S., & Mo, A. (2019). The impact of IT service quality on customer satisfaction and retention: A SERVQUAL approach. *Journal of Information Technology*, 14(3), 267-278. <https://doi.org/10.1177/0268396218764778>
- Yuen, K. F., & Thai, V. V. (2018). The impact of service quality on customer loyalty and satisfaction in logistics services. *International Journal of Physical Distribution & Logistics Management*, 48(1), 61-76. <https://doi.org/10.1108/IJPDLM-01-2017-0036>