

The Impact of Website Quality on Brand Loyalty: The Mediating Role of Customer Engagement Behavior

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DOI: [10.59631/sijosi.v2i2.402](https://doi.org/10.59631/sijosi.v2i2.402)

Abstract

In the digital transformation era, website quality has become a key strategic element in enhancing customer experiences and fostering brand loyalty, particularly within the hospitality sector. This study investigates the impact of website quality on brand loyalty, with customer engagement behavior acting as a mediating variable. Drawing on empirical data from guests of Merapi Merbabu Hotel Yogyakarta, the research employs a quantitative, hypothesis-driven approach using Partial Least Squares Structural Equation Modeling (PLS-SEM) to analyze relationships among key constructs: website quality, customer engagement behavior, and brand loyalty. The findings reveal that website quality has a significant direct effect on brand loyalty, and also positively influences customer engagement behavior, which in turn mediates the relationship between website quality and brand loyalty. This highlights the pivotal role of digital customer engagement in translating website excellence into long-term brand loyalty. The study provides both theoretical and practical implications, emphasizing the necessity for hotel management to continuously improve digital interface quality and foster interactive online experiences. These strategies are vital for strengthening emotional connections with customers and ensuring sustainable competitive advantage in the hospitality industry.

Keywords : Customer engagement behavior, brand loyalty, hospitality industry, website quality.

1. Introduction

In the rapidly advancing digital era, website quality has become a critical component in supporting business activities across various sectors, including the hospitality industry (Kraus et al., 2022). Despite the growing availability of online booking platforms, an interesting phenomenon has emerged: some hotel guests prefer to visit the hotel directly without making prior reservations through official websites, third-party applications, or direct communication channels. As a result, they often do not secure their preferred room type and are even willing to pay more for an upgraded room just to stay at a hotel they perceive as comfortable and trustworthy. This behavior reflects a strong level of brand loyalty, even when formal booking procedures are bypassed.

This phenomenon poses a dilemma for hotel management in balancing the implementation of the "first come, first served" principle with the need to maintain customer satisfaction and loyalty. Loyal customers are valuable strategic assets who

deserve special treatment (Yum & Yoo, 2023), yet traditional reservation systems often fall short in meeting their expectations. One of the primary reasons behind last-minute bookings is the high level of customer trust in the hotel's service quality, the influence of word of mouth, and the perceived value of the hotel brand (Shu, Llorens-Marin, Carrasco, & Romero, 2025). In this context, a well-designed digital experience—particularly through the hotel's website—can significantly enhance customer loyalty by fostering active customer engagement within digital interactions (Nanta, Noermijati, Rohman, & Hussein, 2025).

In today's highly competitive hospitality landscape (Dang & Wang, 2022), customer loyalty serves as a key indicator of the long-term success of marketing strategies (Cardoso et al., 2022). Loyalty is not only demonstrated through repeated visits but also through emotional attachment, trust, and the willingness to recommend the hotel to others (Rahmansyah, Rahayu, & Kustiningsih, 2024). One emerging strategic approach involves optimizing the quality of hotel websites to serve as effective platforms for communication and transactions. Modern hotel websites are no longer mere digital brochures showcasing facilities; they have evolved into promotional tools, booking platforms, and interactive channels. High website quality can create favorable customer perceptions that indirectly foster brand loyalty through customer engagement behavior (Guo, Zhang, & Xia, 2023; Hanaysha, Shriedeh, & Gulseven, 2025; Tahir, Adnan, & Saeed, 2024).

The development of digital infrastructure in Indonesia has further influenced consumer behavior in the hospitality industry. According to *The Indonesian Internet Service Provider Association* (2024), especially due to easier internet access and increased mobile device usage. According to data from The Indonesian Internet Service Providers Association (2024), over 70% of the population now has internet access, with the majority using websites for information, entertainment, and economic transactions. Within the hospitality sector, website-based bookings are considered more efficient and cost-effective than using third-party applications. As such, improving website quality is not only a technical necessity but also a strategic effort to enhance customers' digital experiences and deepen their emotional connection to hotel brands.

In addition to website quality, customer engagement behavior plays a crucial mediating role in shaping loyalty (Fan, Shao, & Dong, 2022). Engagement encompasses customers' attention, interest, and active participation in evaluating, reviewing, and providing feedback on the services received (Norberta & Pahlevi, 2023). Empirical studies have shown that highly engaged customers tend to have more meaningful experiences and are more likely to develop brand loyalty. For instance, at Merapi Merbabu Hotel Yogyakarta, differences in reviews between long-stay guests and one-night guests highlight how the duration and intensity of

interaction influence perceptions of service and facility quality. Therefore, a digital-based engagement strategy may serve as a superior approach to cultivating sustainable brand loyalty (Lim & Rasul, 2022; Terason et al., 2025). However, previous research presents mixed findings on the direct impact of website quality on brand loyalty, underscoring the need for a more integrative research model.

Given this background, the present study aims to examine the effect of website quality on brand loyalty, with customer engagement behavior serving as a mediating variable. The study focuses on the consumers of Merapi Merbabu Hotel Yogyakarta. The findings are expected to offer both empirical and practical contributions to the advancement of digital strategies within the hospitality sector and to serve as valuable insights for hotel managers seeking to foster brand loyalty through enhanced website quality and digital customer engagement.

2. Research Method

This study employs a quantitative research design to investigate the influence of website quality on brand loyalty, with customer engagement behavior acting as a mediating variable. The research is classified as causal and hypothesis-driven, aiming to establish the nature and strength of relationships among the specified constructs using numerical data and statistical modeling (Sekaran & Bougie, 2016). The unit of analysis comprises individual guests who have stayed at Merapi Merbabu Hotel Yogyakarta, reflecting the study's focus on consumer behavior in the hospitality context.

A purposive sampling technique was applied to select respondents who met specific inclusion criteria: (1) guests who stayed at the hotel twice, and (2) guests who completed their stay during the period from April 2024 to April 2025. This sampling method was chosen to ensure the relevance and reliability of responses, particularly regarding their experience with the hotel's digital platforms and services.

Primary data were obtained through a structured questionnaire, administered via both online channels (Google Forms) and offline distribution methods. The instrument measured three key latent variables: Website Quality, Customer Engagement Behavior, and Brand Loyalty. All items were assessed using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), adapted from validated scales in prior research to ensure content validity.

Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) through SmartPLS software. This method was selected for its robustness in handling complex models and small to medium sample sizes. The analysis involved two primary stages: (1) assessment of the measurement model, including convergent validity, discriminant validity, and reliability (composite reliability and Cronbach's alpha), and (2) evaluation of the structural model, which included

analysis of path coefficients, coefficient of determination (R^2), effect size (f^2), and predictive relevance (Q^2). These procedures were conducted in accordance with the recommendations of (J F Hair, Black, Babin, & Anderson, 2019), which advocate the use of PLS-SEM for exploratory studies involving latent constructs and mediation analysis.

3. Results and Discussion

3.1 Descriptive Analysis of Respondents

Table 1. Demographic Profile of Respondents

Variable	Category	Frequency	Percentage (%)
Gender	Male	50	45%
	Female	60	55%
	Total	110	100%
Age	17 - 22 years	58	53%
	23 - 28 years	25	23%
	29 - 34 years	11	20%
	35 - 40 years	12	11%
	> 41 years	4	4%
	Total	110	100%
Education Level	Junior High School	35	32%
	Senior High School	43	39%
	Diploma	5	5%
	Bachelor's Degree	25	23%
	Master's Degree	2	2%
	Total	110	100%
Occupation	Student	50	45%
	Civil	10	9%
	Servant/Military/Police	10	9%
	Private Employee	26	24%
	Entrepreneur	13	12%
	Others	11	10%
Total	110	100%	

As presented in Table 1, the respondent profile is predominantly female (55%), with the majority aged between 17 and 22 years (53%), and a significant proportion reporting high school as their highest level of educational attainment (39%). In terms of occupation, students constitute the largest segment, representing 45% of the total sample. These findings indicate that the typical hotel customer within the sample consists of young individuals with a secondary education background.

This demographic distribution underscores the relevance of investigating website quality and consumer engagement within a digitally literate population. The

dominance of respondents from younger age groups and student status suggests a high degree of familiarity with digital technology, which is likely to influence their expectations and interactions with online platforms.

Moreover, these characteristics support the notion that young consumers are not only frequent users of digital services but also critically evaluate their online experiences. Their responses, therefore, offer valuable insights into the effectiveness of digital platforms in delivering user satisfaction and fostering brand engagement.

3.2 Results of the Measurement Model Testing (Outer Model)

Table 2. Measurement Model Evaluation Results

Variabel	Loading	α	CR	AVE
Website Quality (WQ)		0.901	0.930	0.769
WQ.1	0.875			
WQ.2	0.899			
WQ.3	0.862			
WQ.4	0.872			
Customer Engagement Behaviour (CEB)		0.851	0.900	0.692
CEB.1	0.902			
CEB.2	0.752			
CEB.3	0.840			
CEB.4	0.827			
Brand Loyalty (BL)		0.834	0.900	0.751
BL.1	0.837			
BL.2	0.866			
BL.3	0.892			

Based on Table 2, all indicators for each construct, namely Website Quality (WQ), Customer Engagement Behavior (CEB), and Brand Loyalty (BL), have loading factor values above 0.70, indicating good indicator reliability (Hair et al., 2019). The Cronbach’s Alpha values range from 0.834 to 0.901, while the Composite Reliability (CR) values for all constructs exceed the minimum threshold of 0.70, indicating strong internal consistency. In addition, the Average Variance Extracted (AVE) values for all constructs are above 0.50, which means that convergent validity has been adequately achieved (Joe F. Hair, Howard, & Nitzl, 2020). These findings confirm that the measurement model in this study has sufficient reliability and validity, making it suitable for further analysis in testing the structural relationships among variables.

3.3 Results of the Structural Model Testing (Inner Model)

Table 3. R-Square Testing Results

Variable	R ²
Brand Loyalty (BL)	0.477
Customer Engagement Behaviour (CEB)	0.404

Table 4 presents the R-Square (R^2) values, indicating the proportion of variance explained by the independent variables in the model. The R^2 value for Brand Loyalty (BL) is 0.477, suggesting that 47.7% of the variance in brand loyalty can be explained by the predictors included in the model. Meanwhile, the R^2 value for Customer Engagement Behaviour (CEB) is 0.404, indicating that 40.4% of the variance in customer engagement behaviour is accounted for by the explanatory variables. These results demonstrate a moderate level of explanatory power for both dependent variables, supporting the relevance of the model in understanding brand loyalty and customer engagement behaviour.

Table 4. F-Square Testing Results

	BL	CEB	WQ
Brand Loyalty (BL)			
Customer Engagement Behaviour (CEB)	0.309		
Website Quality (WQ)	0.067	0.693	

The results of the F-square test presented in Table 5 indicate the effect size of each exogenous construct on the endogenous variables within the model. Customer Engagement Behaviour (CEB) demonstrates a substantial impact on Brand Loyalty (BL), with an F-square value of 0.309, suggesting a moderate to strong effect. Website Quality (WQ) shows a small effect on Brand Loyalty (0.067) but a large effect on Customer Engagement Behaviour (0.693), indicating that improvements in website quality significantly influence engagement behavior, which in turn contributes to brand loyalty. These findings highlight the mediating role of customer engagement and the pivotal influence of website quality in enhancing overall brand-related outcomes.

3.4 Hypothesis Testing Results

After evaluating the measurement model and the structural model, the final step in the analysis using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach is to test the magnitude of the effects between variables in the model. The results of the testing, including both direct and indirect relationships among the constructs, are presented in Table 5 below.

Table 5. Results of Direct and Indirect Hypothesis Testing

Path	Original Sample (O)	Sample Mean (M)	Standar Deviation (STDEV)	T Statistic	P Value	Status
WQ → BL	0.241	0.234	0.084	2.858	0.002	Accepted
WQ → CEB	0.640	0.644	0.057	11.302	0.000	Accepted
CEB → BL	0.518	0.529	0.084	6.195	0.000	Accepted
WQ → CEB → BL	0.332	0.342	0.069	4.809	0.000	Accepted

The results of hypothesis testing using the Partial Least Squares (PLS) bootstrapping method are presented in Table 5. The first hypothesis, which states that website quality has a positive effect on brand loyalty, is supported by the data, as indicated by a p-value of 0.002 (less than 0.05) and a positive original sample estimate of 0.241. This finding suggests that a higher perception of website quality – reflected in the hotel’s ability to manage, evaluate, and respond to customer feedback through a reliable website – significantly contributes to enhancing brand loyalty.

Similarly, the second hypothesis regarding the influence of website quality on customer engagement behavior is also accepted, with a p-value of 0.000 and a positive estimate of 0.640. This indicates that effective website features, such as interactive communication through responses to customer reviews and social media content, play a crucial role in enhancing customer engagement.

The third hypothesis examines the effect of customer engagement behavior on brand loyalty, which is supported by a statistically significant p-value of 0.000 and a positive estimate of 0.518. This finding shows that increased customer engagement, as reflected in consistent and high-quality service experiences during hotel stays, can foster emotional attachment and increase the likelihood of customer loyalty.

Furthermore, the fourth hypothesis evaluates the mediating role of customer engagement behavior in the relationship between website quality and brand loyalty. The results show a significant mediating effect, with a p-value of 0.000 and a positive estimate of 0.332, indicating that customer engagement strengthens the positive influence of website quality on brand loyalty. These findings highlight the importance of interactive digital experiences and customer relationships in building long-term brand commitment.

3.5 Discussion

3.5.1 The Positive and Significance Influence of Website Quality on Brand Loyalty

The results of the study indicate that website quality has a positive and significant effect on brand loyalty. This suggests that the higher the quality of the website owned by Merapi Merbabu Hotel Yogyakarta, the stronger the customer loyalty toward the hotel brand. An informative, responsive, and user-friendly website provides convenience and ease for customers when making reservations. This is supported by questionnaire results showing that most respondents agree the hotel’s website is reliable and effectively meets their informational needs. Customers also feel confident using the website because the information presented comes directly from the hotel rather than from third parties.

The website also serves as a primary platform for shaping customers’ positive perceptions of the hotel brand. Through realistic images of the rooms, accurate information about the facilities, and 24-hour interactive services provided directly by

hotel staff, customers feel valued and appreciated. These real-time digital services create a sense of professionalism and enhance customer trust in the brand. These findings align with the study by (Puspitasari, Kumadji, & Sunarti, 2013), which states that website quality significantly influences brand loyalty. Customers who have positive experiences using the website are more likely to return to the hotel's services and recommend them to others, ultimately strengthening sustainable brand loyalty.

3.5.2 The Positive and Significance Influence of Website Quality on Customer Engagement Behavior

The findings of the study indicate that website quality has a positive and significant effect on customer engagement behavior. A well-managed website is capable of creating an interactive experience that encourages customer involvement. Merapi Merbabu Hotel utilizes its website not only as an information medium but also as a communication platform with customers. Features that link the website to social media as well as suggestion or feedback sections provide customers with opportunities to directly share their experiences. One form of this engagement is the active response to customer reviews, whether criticisms or compliments, which are addressed politely and constructively by the hotel.

This two-way interaction creates an emotional bond between customers and the hotel. Data show that customers feel pleased and valued when responses are given promptly and personally. Such engagement is key to creating memorable experiences and increasing the likelihood of repeat purchases. Actively engaged customers are also more open to providing suggestions for service improvement. This aligns with the findings of (VO et al., 2020), which state that website quality positively and significantly affects customer engagement behavior. By continuously adapting the content and functionality of the website to meet customer needs, hotel management can build deeper and more sustainable engagement, which ultimately supports the growth of brand loyalty.

3.5.3 The Positive and Significance Influence of Customer Engagement Behavior on Brand Loyalty

Based on the analysis results, it is found that customer engagement behavior has a positive and significant effect on brand loyalty. This means that customer involvement in various forms of communication and interaction with the hotel is able to build a stronger bond with the brand. Merapi Merbabu Hotel Yogyakarta demonstrates a good understanding of customer behavior through personal approaches, open communication, and the delivery of promotions during special occasions such as holidays or festive seasons. This approach not only encourages interaction but also strengthens the emotional relationship between customers and the hotel.

Customers who feel valued tend to be more loyal to the brand (Rahayu, 2024). Positive experiences such as a warm welcome at check-in, detailed explanations of facilities, and assistance with room delivery create pleasant memories that leave a lasting impression on customers. Customer experience-oriented service is what differentiates and strengthens brand loyalty. These findings support Hollebeek (2011) research, which emphasizes the importance of customer engagement behavior in shaping brand loyalty. Satisfied customers are more likely to reorder and spread recommendations to others, whether through social media or word of mouth, ultimately expanding the positive influence of the hotel brand

3.5.3 The Positive and Significance Influence of Website Quality on Brand Loyalty Mediated by Customer Engagement Behavior

The study results indicate that website quality, mediated by customer engagement behavior, has a positive and significant effect on brand loyalty. In other words, the impact of website quality on brand loyalty increases when customer engagement is also high. A hotel website equipped with informative menus, responsiveness to customer inquiries, and personalized service plays an important role in creating customer trust and satisfaction. When customers feel supported during the booking process, especially in urgent situations, they tend to rely on the website for future visits.

Furthermore, when there is a discrepancy between expectations and reality, such as differences in the room received, the hotel's responsive and empathetic attitude greatly influences building emotional closeness with customers. Hotels that accept criticism and promptly make improvements will gain long-term customer trust. Customer engagement behavior acts as an emotional bridge that strengthens the relationship between website quality and customer loyalty. These findings support the research by Jamid & Rahman (2017), which shows that customer involvement in online brand communities significantly impacts the increase in brand loyalty. Customers who feel involved and heard tend to leave positive reviews and recommend the hotel to their social networks, ultimately strengthening brand loyalty organically.

4. Conclusion

Based on the research conducted at Merapi Merbabu Hotel Yogyakarta, it can be concluded that website quality plays an important role in shaping customer brand loyalty. An informative, interactive, and easily accessible website has been proven to directly increase customer loyalty to the brand. Moreover, website quality also contributes to enhancing customer engagement behavior, which in turn further strengthens brand loyalty. This indicates that continuous improvements to digital

features and communication approaches through the website can be an effective strategy for building long-term relationships with customers.

Furthermore, the study revealed that customer engagement behavior plays a significant mediating role in the relationship between website quality and brand loyalty. In other words, active customer engagement serves as an important link that strengthens the influence of website quality on customer loyalty. Therefore, the management of Merapi Merbabu Hotel Yogyakarta is advised to consistently improve the quality of website services and create interactive spaces that encourage active customer participation. For future research, it is recommended that researchers include customer satisfaction as an additional mediating variable, as this variable is believed to be closely related to brand loyalty and can provide more comprehensive insights into consumer behavior in the hospitality industry.

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