

The Influence of Customer Relationship Management on Loyalty Mediated by Customer Satisfaction and the Role of Service Quality as a Moderating Variable (Study at the Grand Mercure Malang Mirama Hotel)

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Abstract. This study aims to provide empirical evidence of the influence of Customer Relationship Management (CRM) on customer loyalty, mediated by customer satisfaction, and to examine the role of service quality as a moderating variable, with a case study conducted at Grand Mercure Malang Mirama Hotel. A quantitative approach with an associative design was employed. The population in this study comprises all customers who have stayed at the hotel. Sampling was conducted using purposive sampling, and the sample size was determined to be 96 respondents. The study applied a path analysis model with the assistance of Smart-PLS 4 software. The results indicate that: (1) Customer Relationship Management (CRM) has a positive and significant effect on both customer satisfaction and customer loyalty; (2) Customer satisfaction and service quality have a positive and significant influence on customer loyalty; (3) Customer satisfaction mediates the relationship between CRM and customer loyalty; and (4) Service quality does not significantly moderate the relationship between customer satisfaction and customer loyalty at Grand Mercure Malang Mirama Hotel.

Keywords: Customer Relationship Management (CRM), Service Quality, Customer Satisfaction, Customer Loyalty, Path Analysis.

Introduction

The tourism and hospitality industry has experienced significant development in Indonesia, driven by increased travel mobility, rising public income levels, and technological advancements. In this competitive era, companies in the service sector, particularly hotels, must continuously strive to retain customers and build long-term relationships. One strategic approach to addressing these challenges is through the implementation

of Customer Relationship Management (CRM), which emphasizes the importance of managing interactions with customers to enhance satisfaction and foster loyalty.

Customer loyalty is a key factor in ensuring business sustainability. Loyal customers not only make repeat purchases but are also more likely to recommend services to others. However, customer loyalty does not arise automatically; it is built through a combination of satisfaction, quality service, and personalized treatment. In the hotel industry, where service encounters are highly intensive, the implementation of CRM must be accompanied by excellent service quality to strengthen customer retention efforts.

Previous studies have shown that CRM has a significant influence on both customer satisfaction and loyalty (Sin et al., 2005); (Frederick Hong-kit Yim, Rolph E. Anderson, 2004); (Eid, 2007). Customer satisfaction is considered a central mediator in this relationship, while service quality often plays a moderating role that can strengthen or weaken the effect of satisfaction on loyalty. Despite various findings, there are still gaps in understanding how these variables interact simultaneously in the hotel context, especially in Indonesia.

This study aims to provide empirical evidence regarding the influence of CRM on customer loyalty mediated by customer satisfaction and moderated by service quality. The research is conducted at Hotel Grand Mercure Malang Mirama, one of the premium hotels in Malang, East Java, which has implemented

CRM strategies and consistently maintains its service standards. Through this study, it is expected that a deeper understanding of the mechanisms between CRM, satisfaction, service quality, and loyalty can be achieved, and the results can contribute to both academic and practical development in the field of relationship marketing and hospitality management.

Methods

This study employed a quantitative approach with an associative research design to examine the influence of Customer Relationship Management (CRM) on customer loyalty, mediated by customer satisfaction and moderated by service quality at Grand Mercure Malang Mirama. The research aimed to analyze causal relationships among the studied variables by testing hypotheses using empirical data.

Population and Sampling. The population in this study consisted of all customers who had stayed at least twice at the Grand Mercure Malang Mirama hotel. A non-probability sampling method, specifically purposive sampling, was used to determine the sample, based on the criteria that the respondents had stayed at the hotel and were willing to complete the questionnaire. The total number of respondents was determined using the Lemeshow formula, resulting in 96 valid responses.

Data Collection. Primary data were collected through structured questionnaires distributed via Google Form. The questionnaire included items measuring CRM, customer satisfaction, service quality, and customer loyalty using a Likert scale. Secondary data were obtained from internal hotel documents, journals, and other literature relevant to the research variables.

Measurement Instruments. CRM was measured using three indicators: people, process, and technology (Buttle & Maklan, 2016). **Customer Satisfaction** was measured using indicators such as complaint handling systems, reputation surveys, and lost customer analysis (Kotler & Keller, 2016). **Service Quality** used five SERVQUAL dimensions: tangibles, reliability, responsiveness, assurance, and empathy (Parasuraman, A

Parsu; Zeithaml & Berry, 1988); (Berry, 1995). **Customer Loyalty** was measured based on repurchase behavior, cross-buying, referrals, and resistance to switching (Griffin, 2010).

Data Analysis. Descriptive statistical analysis was conducted using SPSS 25 to analyze the demographic characteristics of respondents. To test the research hypotheses and the structural relationships among variables, this study employed Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS 4 software, (Hair & Ringle, 2022).

Result and Discussion

Result

Descriptive Statistics

Descriptive analysis was conducted to describe the respondents’ characteristics and each research variable. The respondents consisted of 100 hotel guests who had stayed at least once at Grand Mercure Malang Mirama. The majority of respondents were female (61%) and aged between 26–35 years (45%). Most respondents had stayed more than twice and rated the service positively. The mean score for each variable showed that: **Customer Relationship Management (CRM)** had a mean of 4.15, indicating high implementation. **Customer Satisfaction** scored a mean of 4.21, reflecting a high satisfaction level. **Service Quality** showed a mean of 4.26, suggesting excellent perceived service. **Customer Loyalty** had a mean of 4.18, indicating a strong tendency toward repeat usage and positive word of mouth.

Reliability test results can also be strengthened by Cronbach's alpha, as shown in the SmartPLS output in Table 4.9. Cronbach's alpha is a measure of internal reliability that assumes that all indicators within a construct have equal weight. A Cronbach's alpha value ≥ 0.7 indicates good reliability, while values between 0.6 and 0.7 are acceptable in exploratory contexts. However, Cronbach's alpha tends to be more conservative than composite reliability.

Table 1: Cronbach's Alpha

Variabel	Cronbach's alpha
Customer Relationship Management (X)	0.914
Customer Loyalty (Z)	0.928
Service Quality (M)	0.956
Loyalty (Y)	0.934

The recommended value is above 0.6 and the table above shows that the Cronbach's alpha value for all constructs is above 0.9.

The Variance Inflation Factor (VIF) is used to test for multicollinearity between independent variables in a structural model. Multicollinearity occurs when two or more independent variables are highly correlated, which can distort parameter estimates and compromise model accuracy. An ideal VIF value is <5.0 , and more conservatively, <3.3 . If the VIF value exceeds 5 or even 10, there is a strong indication of high multicollinearity and the need for variable removal or adjustment, (Hair & Ringle, 2022).

Table 2: Variance Inflation Factor (VIF)



Hubungan Antar Variabel	VIF
Customer Relationship Management (X) -> Customer Loyalty (Z)	1.000
Customer Relationship Management (X) -> Loyalty (Y)	1.282
Customer Loyalty (Z) -> Loyalty (Y)	1.816
Service Quality (M) -> Loyalty (Y)	1.512
Service Quality (M) x Customer Loyalty (Z) -> Loyalty (Y)	1.177

Structural Model (PLS-SEM) Results Using SmartPLS 4, the following path analysis results were obtained:

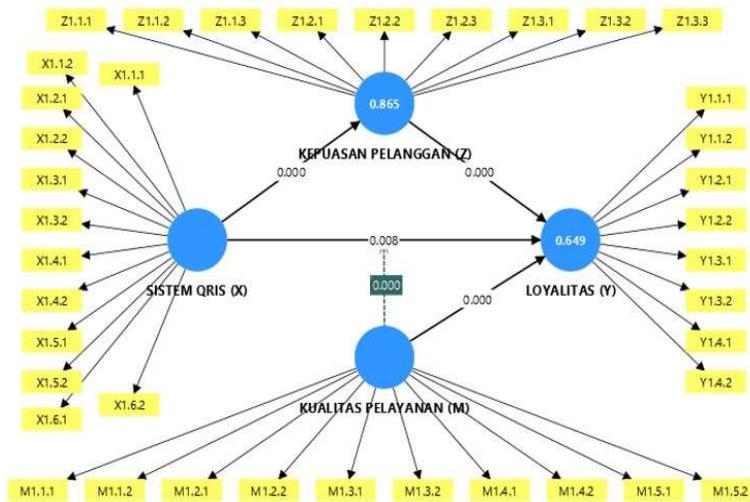


Figure 1: Inner Model

Structural model testing (inner model) can be seen from the R-Square value for each endogenous variable as a measure of the predictive power of the structural model. Changes in the R-Square value can be used to explain the influence of certain exogenous latent variables on endogenous latent variables. R-square measures the proportion of variance in the endogenous (dependent) variable that can be explained by exogenous (independent) variables. The R² value indicates how well the structural model can explain the target construct. R² values of 0.75 (substantial), 0.50 (moderate), and 0.25 (weak) are used as a reference in assessing the predictive power of the model. The higher the R² value, the better the model's ability to explain the endogenous construct.

Tabel 1: Summary of Hypothesis Test Results

Hypothesis	Path	T-Statistics	P-Value	Conclusion
H1	Customer Relation Management (X) → Loyalty (Y)	2.530	0.011	Accepted

Hypothesis	Path	T-Statistics	P-Value	Conclusion
H2	Customer Relationship Management (X) → Customer satisfaction (Z)	7.495	0.000	Accepted
H3	Customer satisfaction (Z) → Loyalty (Y)	7.466	0.000	Accepted
H4	Service Quality (M) → Loyalty (Y)	2.191	0.029	Accepted
H5	Customer Relationship Management (X) → Customer satisfaction (Z) → Loyalty (Y)	5.012	0.000	Accepted
H6	Customer satisfaction (Z) x Service Quality (M) → Loyalty (Y)	0.271	0.786	Rejected

Based on the data presented in table 4.20 above, it can be seen that of the 6 hypotheses proposed in this study, 5 of them can be accepted because each influence shows a t-statistics value greater than 1.96, while 1 hypothesis is rejected because the influence shows a t-statistics value smaller than 1.96. The test results show that Customer Relationship Management (CRM) has a positive and significant effect on customer loyalty at the Grand Mercure Malang Mirama Hotel. This is evidenced by a coefficient value of 0.174 and a significance level of 0.011, which is smaller than the significance limit of 0.05. Thus, it can be concluded that the first hypothesis in this study is accepted, which means that the higher the quality of CRM implementation carried out by the hotel, the greater the possibility of customers to demonstrate loyal behavior such as making repeat purchases, recommending the hotel to others, and showing resistance to competitors' offers.

Discussion

These findings align with research conducted by (Laksaguna & Sucipto, 2019); (Lestari, 2018), which demonstrated that structured and implemented CRM can enhance customer loyalty by improving the quality of interactions and emotional relationships between companies and customers. In this context, CRM is viewed not merely as a technology-based management system, but more than that, as a strategic tool that can build psychological bonds and consistently satisfying experiences. Increased customer loyalty occurs due to the company's systematic efforts to deeply understand customer needs and preferences and provide relevant and personalized services.

These empirical findings are also consistent with the Relationship Marketing Theory framework proposed by (Morgan & Hunt, 1994); (Hennig-thurau et al., 2004). This theory emphasizes that commitment and trust are two key elements in building and maintaining long-term, mutually beneficial relationships between companies and customers. When customers perceive that a company demonstrates concern, keeps

its service promises, and consistently creates satisfying experiences, a sense of trust and emotional attachment are formed, which serve as a strong foundation for customer loyalty. Therefore, it can be concluded that CRM not only contributes to operational efficiency but also has strategic implications in fostering long-term customer loyalty, particularly in the context of premium services such as five-star hotels.

Customer Relationship Management (CRM) significantly influences customer satisfaction, with a coefficient value of 0.462 and a significance level of 0.000, well below the threshold of 0.05. This indicates that the second hypothesis in this study is accepted, meaning that improving the quality of customer relationship management will have a direct impact on increasing customer satisfaction. In the context of hotel operations, integrated CRM allows companies to understand customer needs, desires, and preferences in greater detail, thus enabling them to provide more personalized and proactive service. When customers feel individually cared for and treated according to their expectations, their perception of service quality will improve, ultimately strengthening overall satisfaction levels.

These findings align with research by Chooset et al. (2021); (Zahra & Dewanti, 2024) conducted in the Thai hospitality industry. They found that consistent CRM implementation significantly increased customer perceptions of hotel services, particularly in terms of response speed, information accuracy, and the attentiveness provided by hotel staff during every interaction. Customers who perceive added value in every interaction tend to feel satisfied because their needs are not only met but also emotionally valued. These results reinforce the understanding that CRM aims not only to improve communication efficiency but also to create more meaningful and valuable service experiences for customers.

The results of the study indicate that customer satisfaction has a positive and significant influence on customer loyalty, with a coefficient value of 0.610 and a significance value of 0.000, indicating a very strong and statistically significant relationship. Thus, the third hypothesis is accepted. This indicates that the higher the level of satisfaction felt by customers towards the services provided by the Grand Mercure Malang Mirama Hotel, the more likely they are to exhibit loyal behavior, such as making repeat purchases, persisting against competitors' offers, and providing positive recommendations to others. Customer satisfaction in this case includes overall perceptions of service quality, information accuracy, staff friendliness, facility comfort, and ease of reservation and complaint processing.

This finding is reinforced by research conducted by (Yunitasari & , Ni Luh Sili Antari, 2024); (Andreani & Sumargo, 2012), which states that satisfaction is a key predictor of customer loyalty, particularly in service sectors such as hotels, restaurants, and transportation. They found that satisfied customers tend to form emotional connections with brands or institutions that provide positive experiences, and this has direct implications for their intention to remain long-term customers. In this context, satisfaction is not simply the result of technically good service, but also the perception that the company understands customer needs and is able to provide value beyond expectations.

Furthermore, these results are also in line with the Satisfaction-Loyalty Chain model proposed by (Caruana & Caruana, 2002). This model explains that customer satisfaction is a crucial foundation in the loyalty formation process, where customers who feel consistently satisfied will develop a psychological commitment to the brand or service provider. This commitment will motivate customers to continue using the service despite other alternatives in the market, and will be willing to become brand ambassadors voluntarily through recommendations and positive reviews. In a highly competitive environment such as the hospitality industry, successfully creating customer satisfaction is key to maintaining customer loyalty and building sustainable competitive advantage. Therefore, it can be concluded that the higher the customer satisfaction, the higher the loyalty formed as a form of affective and behavioral response to the service experience received.

The fourth hypothesis in this study is also supported by the results of the analysis which shows that service quality has a positive and significant influence on customer loyalty, with a coefficient value of 0.159 and a significance value of 0.029, which is smaller than the significance level of 0.05. These results indicate that the higher the customer's perception of the service quality provided by the Grand Mercure Malang Mirama Hotel, the greater the likelihood of them remaining loyal, either through the decision to stay again, maintain long-term relationships, or provide recommendations to others. Loyalty in this case is not only reflected in repeat purchasing behavior, but also in the affective aspects of trust and attachment to the hotel brand.

Research by Sukmawati and (Randy, 2020) reinforces these findings by showing that key dimensions of service quality, such as reliability, empathy, and responsiveness, significantly influence the formation of customer loyalty in star-rated hotels. Customers will feel more comfortable and trustworthy when service is provided consistently, staff respond quickly and appropriately to needs, and demonstrate concern for customers' comfort and personal preferences. In this context, service quality is not just about technical standards but also involves the emotional aspects built through interpersonal interactions.

Furthermore, these findings align with the SERVQUAL model.

The results of the indirect effect analysis in this study indicate that customer satisfaction significantly mediates the relationship between Customer Relationship Management (CRM) and customer loyalty, with a coefficient value of 0.282 and a significance level of 0.000. The significance level, which is well below the 0.05 threshold, provides strong evidence that this mediation effect is real and does not occur by chance. Thus, the fifth hypothesis can be stated as accepted. This means that CRM not only has a direct effect on customer loyalty but also has a significant indirect influence pathway through increasing customer satisfaction. In the context of hotel services, this process reflects how customer relationship management can shape positive perceptions and pleasant experiences, which in turn strengthen customer attachment to the hotel.

These findings reinforce the research conducted by (Sandra Sriwendiah, 2021), who found that customer satisfaction acts as a key mediator in strengthening the relationship between CRM strategy and customer loyalty, particularly in the hospitality and experience-based service sectors. They stated that strategically designed CRM can create valuable and personalized customer experiences, so that customers feel valued and understood individually. The satisfaction that arises from this process serves as a psychological reinforcement for the loyalty that is formed. This mediation process is crucial because it shows that loyalty does not emerge automatically from company-customer interactions, but is built through perceptions of quality, convenience, and satisfaction in the service experience.

Furthermore, a study by (Sofi et al., 2020) also emphasized the importance of CRM in creating emotional added value through personalized services tailored to customer preferences. This personalized service can build an emotional connection between customers and the company, which then significantly increases satisfaction levels. This high level of satisfaction directly contributes to customer loyalty, both in the form of repeat purchasing behavior and positive advocacy for the company. In other words, CRM creates customer loyalty not only through functional mechanisms but also through meaningful relational experiences.

The results of testing the sixth hypothesis indicate that service quality is unable to significantly moderate the relationship between customer satisfaction and customer loyalty. The interaction coefficient value of 0.024 with a significance level of 0.786 (greater than 0.05) indicates that this hypothesis is rejected. Thus, it can be concluded that although service quality is an important factor in shaping individual satisfaction and loyalty, in this context, service quality does not function as a moderating variable that strengthens or weakens the relationship between customer satisfaction and loyalty at the Grand Mercure Malang Mirama Hotel.

This finding aligns with research conducted by (Payne & Frow, 2005), which observed that in high-end service industries such as five-star hotels, customers generally already have high expectations for basic service quality. Therefore, small differences in perceived quality are not significant enough to alter the effect of satisfaction on loyalty. Customers in this segment tend to view high service standards as normative, rather than as a competitive advantage. Therefore, the effect of service quality in strengthening loyalty is more limited when customer satisfaction has been achieved through other factors such as personal relationships, rewards, or strong emotional experiences.

Conclusion

1. Customer Relationship Management (CRM) has a positive and significant impact on customer loyalty at the Grand Mercure Malang Mirama Hotel. This demonstrates that long-term relationships, attention to customer needs, and good communication can increase customer loyalty.
2. CRM also has a positive and significant impact on customer satisfaction. This demonstrates that CRM not only directly impacts loyalty but also creates positive experiences that enhance customer satisfaction.
3. Customer satisfaction has a positive and significant influence on customer loyalty. This means that the more satisfied customers are with the service and experience a hotel provides, the more likely they are to become loyal customers.
4. Service quality has a positive and significant effect on customer loyalty. This indicates that good service—including reliability, responsiveness, assurance, empathy, and tangibles—contributes to increased customer loyalty.
5. Customer satisfaction mediates the effect of CRM on customer loyalty. This confirms that CRM shapes loyalty not only directly but also indirectly through increased customer satisfaction.
6. Service quality has not been shown to significantly moderate the effect of satisfaction on customer loyalty. In other words, the high or low level of customer perception of service quality does not strengthen or weaken the relationship between satisfaction and loyalty.
7. Overall, the results of this study indicate that CRM, customer satisfaction, and service quality are important factors in building customer loyalty, although the moderating role of service quality in the satisfaction-loyalty relationship is not proven in this context.

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