



## Optimizing the Quality of Tourism Management Services in Sumatra: Integration of Total Quality Management, CRM, and Innovation as Key Factors

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### ABSTRACT

The study aims to analyze the impact of Total Quality Management (TQM), Customer Relationship Management (CRM), and Innovation as factors influencing service quality in service management in Sumatra. The research uses a descriptive quantitative method with a Structural Equation Model and PLS 3.0 application. The sample size is 2433 service providers across Sumatra, and 343 service providers in the study were selected using systematic random sampling. The results show that total quality management, customer relationship management, and Innovation have a significant positive impact on service quality in service management in Sumatra. These factors can be integrated to improve service quality if integrated. The study contributes to the literature on factors influencing service quality in service management. However, the study has limitations, such as a large sample size and focus on service management in Sumatra. The research recommends conducting the study with a larger sample size and using a geographical approach to provide a more comprehensive analysis.

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## INTRODUCTION

Tourism activities are activities carried out to increase the interest of visitors to see beautiful nature naturally and interspersed with various facilities that can pamper visitors as a tourist attraction, so that later he will get good service and quality. (Pabel, Anja, 2023). The proper management of tourism so that it can be visited is inseparable from the existing tourism management as the manager of the tourist attractions, where good tourism management will always do careful planning regarding what products and services will be presented to visitors, so that they are interested in visiting the tourist attractions that we have developed. (Tandon, Anushree, 2023). In addition, this tourism management must be able to manage existing human resources so that later these human resources can increase their understanding, skills and competencies so that later they will be able to carry out their duties properly in accordance with the direction of the company which is aligned with the vision, mission and goals that have been set, where good and competent tourism management will bring their tourist attractions into good and quality tourist attractions (Szromek, 2023). (Szromek, 2023). Based on data from the Ministry of Tourism and Creative Economy / Indonesian Tourism and Creative Economy Agency that the percentage of businesses in the tourism industry is too small. The following data is presented in table 1, namely:

Table 1. Percentage of Tourism Industry and Creative Economy Businesses by Province and Legal Entity/Business Entity Status

Province	Legal Entity/Business Entity Status							Total
	PT/PT (Persero)/ Perum	CV	Firm	Cooperativ e/Pension Fund	Foundatio n	Special permission from the agency authorized	Not incorporate d	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Aceh	2,14	1,49	0,37	0,00	0,17	12,06	83,78	100
North Sumatra	3,73	1,98	0,89	0,02	0,08	9,80	83,50	100
West Sumatra	4,25	2,73	1,28	0,08	0,12	4,99	86,55	100
Riau	8,27	1,59	1,98	0,03	0,04	10,92	77,17	100
Jambi	4,23	2,50	0,38	0,00	0,10	15,60	77,19	100
South Sumatra	4,55	2,63	0,07	0,00	0,05	8,79	83,91	100
Bengkulu	6,64	4,32	0,99	0,08	0,12	11,80	76,06	100
Lampung	4,02	4,27	0,47	0,00	0,14	5,38	85,72	100
Bangka Belitung Islands	6,08	6,39	0,53	0,00	0,11	24,30	62,60	100
Riau Islands	17,54	6,02	0,33	0,03	0,12	10,84	65,12	100

**Source:** Ministry of Tourism and Creative Economy / Indonesian Tourism and Creative Economy Agency, 2023

In accordance with these data, it can be assured that tourism management in Sumatra is an important factor in the development of a quality tourism sector. One of the crucial aspects in tourism management is service quality, where the

quality of service expected by visitors as connoisseurs of tourist attractions is the ability to manage good human resources who are able to serve tourists without complaints from visitors, manage programs that have been prepared, such as work planning through identifying predetermined goals, developing strategies, and determining new target markets that are different from the old target market, so that a different innovation is needed from the ama target market for tourist attractions specifically for the new apsar segmentation. (Berbekova, Adiyukh, Uysal, Muzaffer and Assaf, 2021). To achieve high-quality tourism management, collaboration among stakeholders is essential. This includes cooperation between tourist attraction managers, local governments, and local communities regarding work agreements, as well as partnerships with the Central Government, particularly the Ministry of Tourism. Such collaboration is expected to drive government support for developing quality tourist attractions, increasing revenue, and fostering economic growth (Mandić & Kennell, 2021).

Improving tourism service quality requires enhancing human resources through effective planning, careful labor selection, and proper placement based on competencies. Managers must also address visitor suggestions and complaints promptly and effectively to maintain a professional and conducive atmosphere. Responsive management is perceived as delivering quality service that meets industry standards (Antić et al., 2023).

The integration of Total Quality Management (TQM), Customer Relationship Management (CRM), and innovation plays a vital role in service quality improvement. TQM emphasizes customer satisfaction, continuous improvement, and adherence to quality standards, such as responsive complaint handling, facility planning, performance monitoring, and capacity building (Bonfanti, 2023; Spenceley et al., 2019). Organizations applying TQM can better identify areas for improvement, measure quality performance, and foster a culture of continuous enhancement (Benaraba, 2023; Labanauskaitė et al., 2020; Sumrit & Sowijit, 2023).

CRM complements TQM by facilitating the collection and management of customer data, enabling personalized services, and improving client interactions across multiple channels. Effective CRM enhances customer retention through loyalty programs and tailored offerings, ultimately boosting service quality and satisfaction (Tsai, 2021; Różyński & Bielecka, 2023; Guerola-Navarro, 2021; Alipour & Arefipour, 2020).

Additionally, the innovative mindset of tourism managers significantly impacts service quality. Innovative managers introduce unique experiences, adopt digital technologies, and implement best practices to enhance the visitor experience. They also invest in infrastructure improvements and remain responsive to market trends, ensuring meaningful and satisfying tourist experiences (Hwang et al., 2020; Chun, 2020; Liang & Wu, 2023; So et al., 2020; Tuan, 2019).

However, in Sumatra, the number of tourism operators has declined over recent years, from 2,958 in 2019 to 2,433 in 2023. This decrease reflects a lack of TQM, CRM, and innovative strategies, resulting in suboptimal service quality and declining visitor numbers. Therefore, research on optimizing tourism

management through the integration of TQM, CRM, and innovation is necessary to enhance service quality and achieve regional economic growth.

In the end, it is necessary to conduct research on the transformation of Tourism Management Service Quality Optimization in Sumatra: Integration of Total Quality Management, CRM, and Innovation as Key Factors. This is done to make changes in achieving foreign exchange for the region and country.

## THEORETICAL REVIEW

### *Total Quality Management (TQM)*

(Gato, Mafalda, 2023) stated that TQM is a systematic approach to quality improvement that includes continuous improvement, process control, data-based decision making, involvement of all members of the organization, and collaboration with business partners. (Rodríguez-Díaz, Manuel and Espino-Rodríguez, 2017) states that TQM is a management technique that focuses on meeting customer needs, measuring performance, managing change, and involving everyone from the business in achieving high quality. TQM entails the use of quality tools and procedures, the establishment of work teams, process improvement through root cause elimination, and a continuous approach to quality improvement. (Spalding, Mark D., 2023). (Pásková, Martina, 2021) states that the basic concepts of *Total Quality Management (TQM)* in tourism management are as follows:

1. Focus on tourist satisfaction,
2. Process-oriented thinking,
3. Continuous improvement,
4. Participation of all members of the organization.

### *Customer Relationship Management (CRM)*

(Li, Minglong, 2021) states that *Customer Relationship Management* is defined as "the process of managing customer interactions with the aim of increasing customer satisfaction and loyalty." The role of CRM in improving service quality in the tourism industry. (Soliman, Mohammad, 2021) (Soliman, Mohammad, 2021) states that CRM is defined as "a technology-based business approach that enables companies to manage customer relationships and provide personalized and relevant experiences." *Customer Relationship Management* entails managing customer relationships through the use of strategy, technology, and business processes. Understanding customer demands, providing personalized and relevant services, building loyalty, and increasing overall customer happiness are all goals. (Wang, 2023). (Pavlatos, 2021) states that the components of this CRM are as follows:

1. Customer data collection,
2. Customer analysis,
3. Personalized Customer Service,
4. Communication and Interaction,
5. Customer relationship management,
6. Performance measurement,

### ***Innovative Attitude***

(Hamid, Rula A., 2021) stated that in tourism management, an innovative mindset requires the ability to think creatively, adapt to market changes, and implement new tactics as appropriate to meet changing customer expectations. (Jardim, Sandra and Mora, 2021) stated that an innovative attitude is an ability to find new opportunities, offer distinctive products or services, and develop attractive tourist experiences for visitors is a creative mindset in tourism administration. (Schönherr, Sarah, Bichler, Bernhard Fabian and Pikkemaat, 2023) (Schönherr, Sarah, Bichler, Bernhard Fabian and Pikkemaat, 2023) stated that an innovative attitude is a willingness and ability to implement significant changes in the administration of tourist attractions, such as the development of new products, updating operational processes, or using new technologies, referred to as an innovative mindset in tourism management. (Hussain, Shahid, 2023) stated that an innovative mindset in tourism management requires a willingness to take calculated risks, the ability to recognize new opportunities, the drive to react to market changes, and inventiveness in developing new solutions to increase the attractiveness and competitive advantage of tourist attractions. (Chen, Shui xia, 2021) The characteristics of an innovative attitude in tourism management are as follows:

1. Creativity,
2. Adaptability,
3. Controlled risk-taking,
4. Perseverance and continuous satisfaction,
5. Collaboration and openness,
6. Use of technology and data,

### ***Tourism Management Service Quality***

(Zheng, 2023) stated that in tourism management, service quality is the level of excellence or adequacy of a service in meeting or exceeding consumer expectations. This service quality consists of features such as accessibility, employee friendliness, service reliability, responsiveness to client requests, security assurance, and personalization and originality in the customer experience. (Lankia, Tuija, Venesjärvi, Riikka and Pouta, 2023) stated that in tour management, service quality refers to the client's perception of how well their experience with the service matches their expectations. (Sun, Ya Yen and Higham, 2021) stated that in travel management, service quality refers to how well customers' experiences meet or exceed their expectations. This service quality includes factors such as dependability, responsiveness, assurance, empathy, and physical evidence in the visitor experience.

### ***Tourism Management Service Quality Indicators***

(Abidin, Zainal, 2023) stated that the indicators of the quality of tourism management services are as follows:

1. Customer satisfaction level,
2. The level of customer engagement,
3. Customer retention rate,
4. The level of customer complaints,

5. Response time to complaints or requests,
6. Evaluation of employee performance,

### ***Conceptual Framework***

#### *The Relationship Between Total Quality Management (TQM) and Tourism Management Service Quality*

(Sun, Ya Yen and Higham, 2021) stated that TQM has a major influence on the quality of tourism management services, where TQM must focus on customers by understanding customer needs, TQM must make continuous improvements to existing services, and TQM must prioritize community participation in increasing understanding of existing tourist attractions, so that understanding TQM will create good service quality from tourism management in the area.

#### *Relationship between Customer Relationship Management (CRM) and Tourism Management Service Quality*

(Lankia, Tuija, Venesjärvi, Riikka and Pouta, 2023) stated that CRM is a strategic approach that focuses on managing relationships and interactions with customers. In the context of tourism management, CRM plays an important role in improving service quality and strengthening the relationship between tourist destinations and customers, where by being able to improve customer service to get to know existing customers better, as well as improving services through a responsive understanding of customer complaints, so that by increasing CRM in management it is expected to improve the quality of service that will be provided to visitors.

#### *The Relationship between Innovative Attitude and Tourism Management Service Quality*

(Pásková, Martina, 2021) stated that if the owner of a tourist attraction has an innovative attitude, this can have a positive impact on the development and improvement of the quality of services offered to customers, where customers will always be presented with an innovation that is different from before, which by relying on the differentiation of tourism products, it is expected to improve the quality of good service.

#### *Innovative Attitude as a Moderator Factor in the Relationship Between Total Quality Management (TQM), Customer Relationship Management (CRM) with Tourism Management Service Quality*

(Chun, Joungyoon, 2020) stated that TQM, CRM are able to create a tourism product that is able to increase responsiveness to visitors. The process of increasing responsiveness is expected to get a quick response from management which will make management able to improve service quality well and accompanied by an innovative attitude to continue to be different from other tourism products. The conceptual framework of this research can be seen in Figure 1 below:

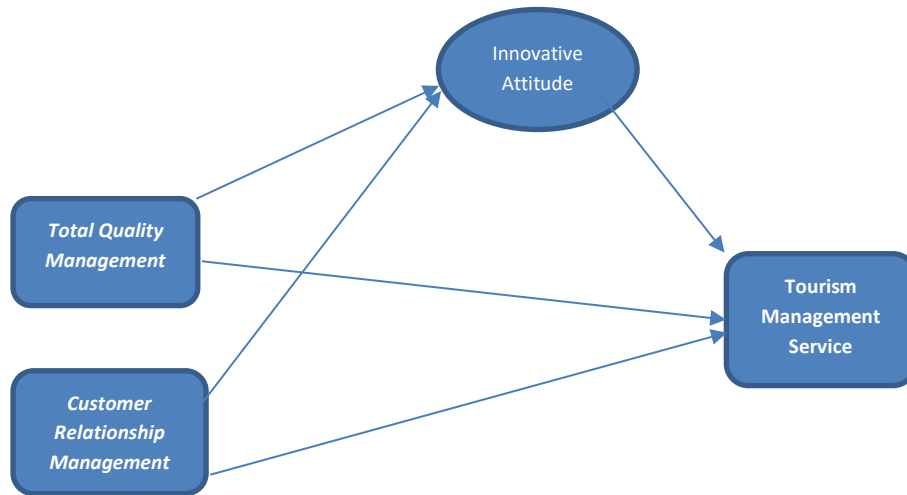


Figure 1 Conceptual Framework

### Hypothesis

H1: TQM affects the quality of tourism management services

H2: CRM affects the quality of tourism management services

H3: TQM affects the quality of innovative attitude

H4: CRM affects the quality of innovative attitude

H5: innovative attitude affects the quality of tourism management services

H6: TQM affects the quality of tourism management services through innovative attitude as a moderator variable.

H7: CRM affects the quality of tourism management services through innovative attitude as a moderator variable.

### RESEARCH METHODS

This research approach is a Quantitative descriptive method through the Survey method. (Cheah, Jun Hwa, Amaro, Suzanne and Roldán, 2023) state that the research approach with quantitative descriptive methods with survey research methods allows researchers to collect statistically selected quantitative data to present an in-depth view of the variables studied in the larger population. The population in this study were tourism owners spread throughout Sumatra with a population of 2433 tourism owners, where the sample size was 343 tourism owners with sampling using the Slovin formula as follows:

$$n = N / (1 + (N \times e^2))$$

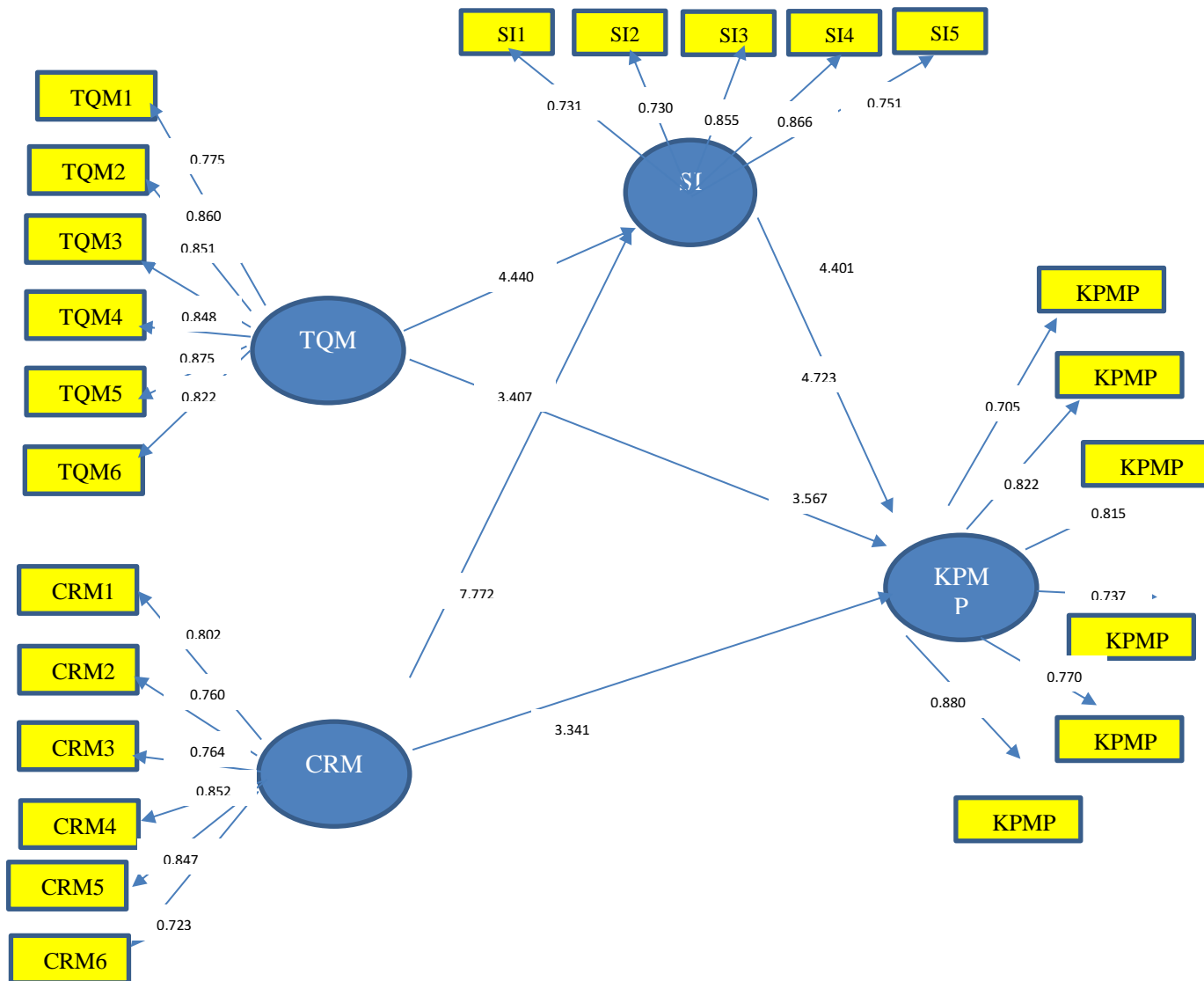
$$n = 2433 / (1 + (2433 \times 0.05^2))$$

$$n = 343, 52 \text{ or about } 343 \text{ samples.}$$

The sampling technique uses systematic random sampling. (Dash, Ganesh and Paul, 2021). Data collection techniques are carried out by observation, administering questionnaires and studying documentation. Data analysis uses the Structural Equation Modeling (SEM) method with the Smart PLS analysis

**RESEARCH RESULTS**

The results of the SEM PLS analysis can be seen in Figure 2 below:



This test is conducted to determine the outer loading value, where the representation of the research results can be seen in Table 3 below:

Table 3 Convergent Validity Test Results

Variables	Outer Loading
Total Quality Management (X) <sub>1</sub>	0,775
Customer Relationship Management (X) <sub>2</sub>	0,802
Innovative Attitude (Z)	0,731
Tourism Management Service Quality (Y)	0,705

Source: PLS 3.0 Data Processing Results, 2023

Based on Table 3 above, it can be explained that the outer loading value of each variable is greater than 0.70, it can be concluded that the distribution of *convergent validity* test results from each variable has a valid data distribution and is suitable for other data tests.

**Average Variant Extracted (AVE)**

The results of the AVE analysis data processing can be seen in Table 4 below:

Table 4 AVE Test

Variables	AVE
Total Quality Management (X) <sub>1</sub>	0,744
Customer Relationship Management (X) <sub>2</sub>	0,650
Innovative Attitude (Z)	0,642
Tourism Management Service Quality (Y)	0,722

Source: Results of Data Processing with PLS 3.0, 2023

Based on Table 4 above, it can be explained that the *Average Variant Extracted* value has a value greater than 0.5, which means that the data distribution from the AVE test is accurate, so it is necessary to continue further data testing.

**Composite Reliability Test**

For the results of data processing from the *composite reliability* test can be seen in Table 3 below:

Table 5 Composite Reliability Test

Variables	Composite Reliability
Total Quality Management (X) <sub>1</sub>	0,835
Customer Relationship Management (X) <sub>2</sub>	0,864
Innovative Attitude (Z)	0,820
Tourism Management Service Quality (Y)	0,843

Source: Results of Data Processing with PLS 3.0, 2023

Based on Table 5 above, it can be explained that the value of the *composite reliability* test results is greater than 0.6, which means that all variables have a high level of reliability and are suitable for use in further testing.

**Path Coefficient Test**

The *path coefficient test* is the result of data testing to determine how strong the direct influence of several variables is. The results of the *path coefficient test*

can be seen in the R Square value which can be analyzed according to Tables 6 to 8 below:

Table 6 R Square Test of Variable  $X_1$  on Y

Variables	R Square
Total Quality Management ( $X$ ) <sub>1</sub>	0,826
Tourism Management Service Quality (Y)	0,821

**Source:** Results of Data Processing with PLS 3.0, 2023

Based on Table 6 above, it can be explained that the R Square value of the total quality management variable is 82.6, which means that the percentage increase in total quality management of 82.6% can be explained by the tourism management service quality variable and the remaining 17.4% can be explained by other variables not explained in this study.

Table 7 R Square Test of Variable  $X_2$  on Y

Variables	R Square
Customer Relationship Management ( $X$ ) <sub>2</sub>	0,682
Tourism Management Service Quality (Y)	0,632

**Source:** Results of Data Processing with PLS 3.0, 2023

Based on Table 7 above, it can be explained that the R Square value of the customer relationship management variable is 68.2, which means that the percentage of increased customer relationship management generated by 68.2% can be explained by the tourism management service quality variable and the remaining 31.8% can be explained by other variables not explained in this study.

Table 8 R Square Test of Variable  $X_1$  Against Z

Variables	R Square
Total Quality Management ( $X$ ) <sub>1</sub>	0,832
Innovative Attitude (Z)	0,812

**Source:** Results of Data Processing with PLS 3.0, 2023

Based on Table 8 above, it can be explained that the R Square value of the total quality management variable is 83.2, which means that the percentage of increasing total quality management of 83.2% can be explained by the innovative attitude variable and the remaining 16.8% can be explained by other variables not explained in this study.

Table 9 R Square Test of Variable X<sub>2</sub> Against Z

Variables	R Square
<i>Customer Relationship Management (X )<sub>2</sub></i>	0,860
Innovative Attitude (Z)	0,627

**Source:** Results of Data Processing with PLS 3.0, 2023

Based on Table 9 above, it can be explained that the R Square value of the customer relationship management variable is 86, which means that the percentage of increased customer relationship management of 86% can be explained by the variable innovative attitude of the community and the remaining 14% can be explained by other variables not explained in this study.

Table 10 Test R Square Variable Z Against Y

Variables	R Square
Innovative Attitude (Z)	0,855
Tourism Management Service Quality (Y)	0,835

**Source:** Results of Data Processing with PLS 3.0, 2023

Based on Table 10 above, it can be explained that the R Square value of the innovative attitude variable is 85.5, which means that the percentage increase in the innovative attitude of tourism owners in improving the quality of tourism management services by 85.5% can be explained by the variable financial inclusion of the community and the remaining 14.5% can be explained by other variables that are not explained in this study.

### *Hypothesis Test*

To explain the results of hypothesis testing can be seen in Table 9 below:

Table 11.Hypothesis Test

Hypothesis	Influence	T-Statistics	P-Value	Results
H1	The effect of <i>total quality management</i> on the quality of tourism management services	6,770	0,001	Accepted
H2	The effect of <i>customer relationship management</i> on the quality of tourism management services	3,341	0,003	Accepted
H3	The effect of <i>total quality management</i> on innovative attitude	4,440	0,000	Accepted
H4	The effect of <i>customer relationship management</i> on innovative attitudes	3,407	0,002	Accepted

H5	The effect of innovative attitude on the quality of tourism management services	4,723	0,001	Accepted
H6	The effect of <i>total quality management</i> on the quality of tourism management services through innovative attitude as a moderator variable	4,401	0,000	Accepted
H7	The effect of <i>customer relationship management</i> on tourism management service quality through innovative attitude as a moderator variable	3,567	0,000	Accepted

Source: Results of Data Processing with PLS 3.0, 2023

Based on Table 11 above, it can be explained that partially only the total quality management variable affects the tourism management service quality variable and innovative attitude as well as the customer relationship management variable also affects the tourism management service quality variable and innovative attitude. Simultaneously, the total quality management variable affects the quality of tourism management services through the innovative attitude variable and as a moderator variable, and the customer relationship management variable also affects the quality of tourism management services through the innovative attitude variable and as a moderator variable.

## DISCUSSION

### *The Effect of Total Quality Management on Tourism Management Service Quality*

The application of Total Quality Management (TQM) has a significant effect on service quality in tourism management in Sumatra. TQM involves using a systematic approach to improving quality through process control, performance measurement, and involvement of all members of the organization. By implementing TQM, tourism management can improve efficiency, effectiveness, and customer satisfaction. (Szromek, 2023).

### *The Effect of Customer Relationship Management on Tourism Management Service Quality*

Customer Relationship Management (CRM) also has a significant influence on service quality in tourism management. CRM is a strategic approach that aims to build and maintain good relationships between companies and customers. By utilizing information and communication technology, tourism management can improve customer experience, identify customer needs and preferences, and increase customer loyalty. (Tuan, Luu Trong, 2019).

### ***The Effect of Total Quality Management on Innovative Attitudes***

The application of Total Quality Management (TQM) has a significant effect on the innovative attitude of tourism owners, where by implementing good TQM, tourism owners will always increase their innovative attitude to continuously improve good service to visitors, so that this improvement will have an impact on improving service quality. (Hwang, Jinsoo, Kim, Jinkyung Jenny and Lee, 2020).

### ***The Effect of Customer Relationship Management on Innovative Attitudes***

Customer Relationship Management (CRM) also has a significant influence on the innovative attitude of tourism owners, where by applying CRM will always prioritize increasing maximum service to customers, so that it has an impact on improving the quality of good service at tourist attractions. (Gato, Mafalda, 2023).

### ***The Influence of Innovative Attitudes on the Quality of Tourism Management Services.***

Innovative attitude also has a significant positive influence on service quality in tourism management in Sumatra. An innovative attitude involves the ability to think creatively, create new ideas, and adopt change. In tourism management, an innovative attitude enables the development of products and services that are unique, attractive, and in line with changing market needs. (Li, Minglong, 2021).

### ***The Effect of Total Quality Management on Tourism Management Service Quality Through Innovative Attitude as a Moderator Variable.***

TQM has a strong influence on improving the quality of tourism management services, where management always uses TQM so that it can get maximum results from the tourism business it runs. He can improve overall improvement with creative and innovative ideas that exist by creating something different from the others, then it is expected that good service quality will be created and can captivate visitors. (Spalding, Mark D., 2023).

### ***The Effect of Customer Relationship Management on Tourism Management Service Quality Through Innovative Attitudes as a Moderator Variable.***

In the context of moderating factors, this study shows that CRM, and innovative attitude jointly strengthen their influence on service quality in tourism management in Sumatra. That is, when TQM, CRM, and innovative attitude are applied in an integrated manner, tourism management can achieve a higher level of service quality. (Soliman, Mohammad, 2021).

## **CONCLUSIONS AND RECOMMENDATION**

Based on the results of this study, it can be concluded that partially only the total quality management variable affects the tourism management service quality variable and innovative attitude as well as the customer relationship management variable also affects the tourism management service quality

variable and innovative attitude. Simultaneously, the total quality management variable affects the quality of tourism management services through the innovative attitude variable and as a moderator variable, and the customer relationship management variable also affects the quality of tourism management services through the innovative attitude variable and as a moderator variable. The implication is that the application of Total Quality Management (TQM), Customer Relationship Management (CRM), and innovative attitude has a significant positive influence on service quality in tourism management in Sumatra. The three factors can mutually reinforce their influence when applied in an integrated manner. Therefore, it is recommended for tourism management to consider the implementation of TQM, CRM, and the development of innovative attitudes as strategies to improve their service quality. This study also contributes to enriching the literature on factors that influence service quality in the context of tourism management. However, this study has some limitations, such as limited sample size and focus on the context of tourism management in Sumatra. Therefore, it is recommended to conduct further research with a larger sample size and expand the geographical coverage to obtain broader generalizations.

#### **FURTHER STUDY**

1. **Expanded Geographical Scope:** The study is limited to Sumatra, providing valuable insights for that region. Future research could expand to other Indonesian regions or Southeast Asia for comparative analysis. This broader scope could yield generalizations across varying tourist demands, cultural attractions, and economic impacts.
2. **Exploration of Additional Factors:** Beyond TQM, CRM, and innovation, other factors, such as digital marketing strategies, cultural heritage preservation, and sustainable practices, could influence tourism service quality. Including these factors may present a more comprehensive understanding of what enhances tourist satisfaction and retention.
3. **Longitudinal Study on Service Quality Evolution:** Conducting a longitudinal study would allow observation of changes in tourism service quality over time, particularly as tourism adapts to post-pandemic recovery, evolving visitor expectations, and new technological implementations.
4. **Impact of Technology Integration:** Since the study discusses innovation as a critical factor, further research could examine the specific role of technologies like AI, big data analytics, and virtual reality in enhancing customer experience and operational efficiency in tourism.
5. **Qualitative Analysis for Deeper Insights:** Supplementing the quantitative findings with qualitative data (e.g., interviews with tourism managers and visitors) could provide richer insights into the experiences, challenges, and preferences influencing tourism management in Sumatra.

6. Policy Implications and Recommendations: Based on the findings, future studies could assess how government policies and public-private partnerships can support the adoption of TQM, CRM, and innovative practices. This could contribute to policy recommendations that strengthen tourism infrastructure and service quality.

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