



The influence of social media marketing on the quality of hotel services and the behavioral intentions of tourists

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ARTICLE INFO

Keywords:

Social media marketing
Information involvement
Hotel service quality
Tourists' behavior intention
Cognitive trust

ABSTRACT

The presented study examines the influence of social media marketing on hotel service quality and tourist treatment purposes to raise service standards, meet consumer requirements, and boost marketing effectiveness. A theoretical framework detects information quality and involvement, and cognitive trust as independent parameters, with perceived value and tourist satisfaction as mediating elements, and hotel service quality as the dependent parameter. Data collection and analysis are carried out through questionnaire surveys and multiple regression assessment. The reports outlined strong reliability and validity across all variables, with high internal consistency and significant statistical features. The results affirm a normal data distribution and reveal substantial correlations between marketing strategies, information exchange, and hotel service quality, and tourist treatment intentions. Key predictors, comprising online reputation, information quality, and cognitive trust, remarkably contribute to the regression model, with no multicollinearity identified. Online word-of-mouth emerges as the most influential factor on service quality, followed by tourist satisfaction, while marketing strategies play a key role in shaping treatment intentions. These insights highlight the critical role of social media marketing in elevating hotel services and inform strategic recommendations for enhancing marketing approaches in the hospitality sector.

1. Introduction

In recent years, the tourism industry has experienced unprecedented exponential growth driven by improved transportation convenience, accelerated globalization, and people's growing desire for unique tourism experiences. This growth has significantly impacted the accommodation industry, especially the hotel industry, facing unprecedented challenges and opportunities in meeting the diverse needs of contemporary tourists (Tesfa Regassa & Xin, 2020). With the continuous upgrading of tourism demand, hotels not only need to cope with the increase in reception volume, but also strive to improve the overall standard of service to meet the increasingly demanding expectations of modern travelers, including high requirements for comfort, convenience, and personalization (Bian, 2021; Sihombing et al., 2024).

In this trend, hotel operators must pay more attention to continuous improvement of service quality, ensuring that every aspect of the guest experience meets their preferences and requirements, thereby

consolidating their competitive advantage in the fiercely competitive market. However, traditional marketing strategies based on room types, facilities, and facility descriptions are no longer sufficient to address current challenges. Modern hotels need to have a deeper understanding and meet new dimensions of customer expectations, as customer satisfaction has been proven to be a key indicator for measuring hotel service quality (Rajak et al., 2023).

In this context, the transformation of marketing strategies is particularly urgent, requiring a more customer-oriented approach, precise targeting of potential customers, and establishing long-term relationships with them. Social media marketing has emerged as a powerful tool that enables hotels to reach a wide audience through customized and personalized content. Compared with traditional marketing methods, the advantage of social media lies in its ability to achieve real-time interaction, thereby obtaining valuable customer feedback, building communities around the brand, and playing an important role in enhancing brand visibility and influencing customer decisions (Sharma et al., 2022; Veloso et al., 2024).

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<https://doi.org/10.1016/j.actpsy.2025.104881>

Received 7 October 2024; Received in revised form 26 November 2024; Accepted 5 March 2025

Available online 13 March 2025

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Nomenclature

Abbreviations

PLS-SEM	Partial Least Squares Structural Equation Modeling
UNESCO	United Nations Educational, Scientific and Cultural Organization
SPSS	Statistical Package for the Social Sciences
KMO	Kaiser-Meyer-Olkin
VIF	Variance Inflation Factor

Symbols

α	Cronbach's alpha coefficient (a measure of reliability)
t -values	the t -statistic values in regression analysis

Although the application of social media marketing in the tourism industry has been widely discussed (Lin et al., 2021), there is in-depth research on how it affects hotel service quality and tourist behavior intention through specific information dissemination mechanisms, interaction modes, and customer trust building processes is still scarce. Especially, how to effectively integrate elements such as information quality, information participation, and cognitive trust in SMM, and how these elements work together to improve hotel service quality and guide tourist behavioral intentions, is a significant gap in current research (Abbasi et al., 2024; Maucuer et al., 2022). The existence of this research gap is regrettable, as the hotel industry operates in a highly competitive environment where service quality is a key factor distinguishing each other, and social media significantly influences customer perception and overall satisfaction (Wu et al., 2021). How hotels can effectively showcase their excellent service through social media (Salhab et al., 2022), respond to online reviews in a timely manner, and have a positive impact on guests' decision-making and experience is an urgent issue that needs to be explored in depth.

The novelty of this study in terms of methodology lies in the use of multiple regression analysis techniques and the combination of Theory of Planned Behavior (TPB) as the theoretical basis to explore in depth the impact mechanism of SMM on hotel service quality and tourist behavioral intentions. The Theory of Planned Behavior emphasizes the influence of individual attitudes, subjective norms, and perceived behavioral control on behavioral intentions, providing theoretical support for understanding how SMM indirectly affects tourists' hotel selection and recommendation behavior through variables such as information quality, information participation, and cognitive trust. Through questionnaire surveys and empirical analysis, it is not only filled the gap in existing research on the specific impact mechanism of SMM, but also further clarified the core role of online reputation and information quality in improving hotel service quality and guiding tourist behavior.

Therefore, based on key independent variables such as information quality, information participation, and cognitive trust, this study constructed a theoretical framework to deeply analyze the impact of social media marketing on hotel service quality and tourist behavioral intentions. Through questionnaire surveys and multiple regression analysis techniques, the gap in existing research on the specific impact mechanism of social media marketing has filled, especially clarifying the core role of online reputation and information quality in improving hotel service quality and guiding tourist behavior. The main significance of this study is that it not only reveals the detailed impact of different factors in social media marketing, but also provides targeted and practical marketing strategy recommendations for the hotel industry, demonstrating a certain degree of originality and actual contribution to the industry.

1.1. Related works

Panwanitdumrong and Chen (2021) focused on Marine litter, today believed to be one of the more important environmental problems at coastal destinations, mainly caused by bad tourist waste management behavior. Based on the extended theory of planned behavior, they conducted a survey among 876 tourists who visited Libong Island in Thailand. Environmental awareness and personal background are the considerable factors affecting tourists in terms of their environmentally responsible behavior. Palazzo et al. (2021) studied the effect of social media network marketing on the quality of the hotel's services by interviewing hotel managers and guests who were active in the sector. Qualitative research and the literature review developed the model of the investigated effect; the detailed model was further developed by structural equation modeling techniques. This conceptual framework was built on how the intention was to verify how hotel service quality is influenced by social media network marketing, adding to the literature evidence upon the scale. Empirical results verified methodologies applied, which were coherent with the previous theoretical frameworks, and this study provided more evidence by correlating different dimensions for a better explanation of how social media marketing affects hotel service quality. Dandis and Al Haj Eid (2022) referring to the attitudinal and behavioral aspects, studied the drivers of customer lifetime value regarding the Industry of the Internet service. The sample size was 481, and partial least squares-structural equation modeling was used. Results indicated how brand credibility, special treatment, and confidence benefits had an effect on the intentions to pay more, word-of-mouth positivity, and finally, to repurchase. Especially, brand credibility and confidence benefits became the most critical ones. Moreover, it was shown that the factors above indirectly affect true brand loyalty via customer satisfaction, hence, it once again confirmed that substantial customer-provider relationships are important to enhance customer lifetime value. Ho et al. (2022) conducted research examining how the image of social media platforms affects customers' intentions to visit hotels, utilizing hotel image, motivation, and anticipated service quality as mediating factors. Indeed, their online survey, conducted on a sample of 349 people on different social media platforms, indicated that the image of the social media sites themselves impacts motivation primarily due to the hotel's image. Besides, motivation directly impacts the visit intention.

On a related aspect, the research by Alsoud et al. (2023) analyzed the role of brand image as a mediating variable between social media marketing activities and the intention of tourists to visit Jordanian destinations. According to the findings of this study's survey data analyses, social media, especially in word-of-mouth form, is an important aspect of the decision-making processes for tourists when it comes to site visits. Therefore, the results showed that the selected social media marketing variables significantly influenced both brand image and tourist behavior and provided the necessary support to devise appropriate tourism strategies. These findings of the study prove to be particularly relevant for industry practitioners and policymakers interested in using social media to improve tourism in Jordan. Armutcu et al. (2023) investigated the influence of digital marketing and social media on the behavior of tourists in Turkey, a country where 80.7 % of the population engages extensively with online platforms. Their research revealed that tourists' perceptions of online content have a direct effect on their behavioral intentions, with satisfaction serving as a mediating factor. The study postulated that, besides improvement in the quality of products and services, encouraging tourists to share their experiences through digital platforms may help in improving the visitation to the destinations having positive electronic word-of-mouth. Baber and Baber (2023) studied the facilitating factors such as e-reputation, perceived destination image, and social media marketing activities which help and enhance tourists' intentions to visit. Through the analysis of data collected from 209 tourists at a UNESCO World Heritage site in India, the findings indicated that social media marketing efforts and electronic

reputation significantly improved the destination image, which subsequently acted as a complete mediator in the relationship with tourists' intentions to visit. This study emphasized e-reputation and social media as supporters of destinations by highlighting some useful strategies that could be adopted by tourism organizations in an effort to attract more visitors and develop more competitive advantages. [Van Huy and Thai Thinh \(2024\)](#) analyzed the service quality of hotel websites and introduced a ranking methodology aimed at pinpointing essential areas for enhancement. Following the base of data drawn from four-star hotels in Vietnam, the authors considered a holistic approach in determining the ranking index. The results depicted that the very important drivers causing an upward shift in website service quality, thereby increasing customer satisfaction, relate to design, functionality, interactivity of the website, and information quality. [Xia et al. \(2024\)](#) investigated the interconnections among motivation, service quality, tourist satisfaction, quality of life, and spa and wellness tourism through the application of partial least squares structural equation modeling (PLS-SEM). The results showed that motivation positively affected service quality and satisfaction, which in turn influenced quality of life. Satisfaction was reported to act as a mediator between the influence of service quality on the quality of life as far as spa and wellness tourism goes. [Aziz and Al Alam \(2024\)](#) examined the role that social networks play in the formation of tourist behavior in relation to destination image and satisfaction. In the framework of this research, on a sample of 1600 tourists, by applying the factor analysis technique, the social network influenced the destination image positively and the latter contributed much to the improvement of tourist satisfaction.

From these results, it can be seen that social media marketing (SMM) plays a core role in shaping tourist perception, improving hotel service quality, and driving tourist behavioral intentions. In addition, drawing on recent cutting-edge research on the interaction between SMM and the hotel industry can not only strengthen our understanding of existing literature gaps, but also expand the breadth and depth of research, providing more accurate and effective marketing strategy guidance for the hotel industry, thereby consolidating its competitive advantage in a fiercely competitive market.

1.2. Study overview

This investigation focuses on the influence of social media marketing on the quality of services provided by hotels and the behavioral intentions of tourists. Thus, a theoretically developed framework was done that analyzes what impact information quality, cognitive trust, and perceived value have on satisfaction and behavior. This article uses a questionnaire survey as the main sampling method to conduct random sampling of hotels of different types (such as luxury, economy, business, etc.) and in different regions (such as city centers, tourist attractions, suburbs, etc.) to ensure the breadth and representativeness of the sample. The determination of sample size is based on statistical requirements and limitations of research resources, ensuring reliable research results within a reasonable margin of error. Specifically, it is planned to select at least 50 hotels in each hotel type and randomly select 100 tourists from each hotel for a questionnaire survey, with a total sample size of thousands. In terms of controlling variables, individual characteristics of tourists are considered (such as age, gender, occupation, income, etc.) and travel characteristics (such as travel purpose, duration of stay, number of companions, etc.) to eliminate the interference of these factors on the research results. At the same time, in order to more accurately measure social media marketing (SMM) variables, detailed questionnaire items are designed, including information quality (such as accuracy, timeliness, completeness, etc.), information participation (such as frequency of interaction and number of comments by tourists on social media), cognitive trust (such as tourists' trust in hotel information, trust in social media platforms, etc.), and other aspects. For the measurement of hotel service quality, a multidimensional evaluation system have been adopted, including service attitude,

accommodation environment, facilities and equipment, catering services, and other aspects, to ensure a comprehensive reflection of the hotel's service level. The behavioral intention of tourists is measured by asking whether they are willing to choose the hotel again in the future, whether they are willing to recommend the hotel to others, and other indicators. In the data analysis stage, multiple regression analysis techniques will be used to explore how social media marketing variables affect hotel service quality and tourist behavioral intentions through the mediating variables of perceived value and tourist satisfaction. Through this method, the key factors in social media marketing that have the greatest impact on hotel service quality and tourist behavior can be identified, providing a scientific basis for hotels to develop more effective marketing strategies.

2. Theoretical model construction

2.1. Theoretical model dimension selection

According to the theories of social media marketing, hotel service, and tourists' behavior, a theoretical model of the effect of social media marketing on hotel service quality and tourists' behavior intention is established, and the influencing factors are refined according to the above theories. The results are shown in [Table 1](#).

In [Table 1](#), the main influencing factors of social media marketing on hotel service quality and tourists' behavior intention are selected, and the details of the main influencing factors are as follows:

In the realm of social media marketing, the significance of network information is paramount in analyzing hotel service quality and the behavioral intentions of tourists. Within this marketing landscape, the stimulation provided by hotel marketing platforms and various user engagement groups serves as the primary sources of network information. Tourists prioritize their information needs in the following order: room rates, lodging conditions, service quality, and options for transportation and entertainment. Furthermore, there is a noticeable increase in tourists' reliance on this information ([Baer et al., 2023](#)). As the Internet continues to evolve, there is a growing awareness among tourists regarding the cognitive risks associated with the reliability of information quality. When tourists think that the information quality is reliable, their satisfaction with the hotel will be improved, which shows that the hotel service quality is high, it will also significantly affect the psychological state of tourists, enhance their acceptance of hotel service information, and affect their behavioral intentions. As for the hotel service quality, the information quality belongs to the tourists' actual feelings after staying in the hotel, which is consistent with their satisfaction with the hotel service information transmitted by social media platforms, and the higher their satisfaction with the hotel service quality, that is, the higher the hotel service quality. In the realm of social media marketing, the interaction of information serves as a fundamental element connecting media, society, and individuals, with individuals being the primary agents of information distribution. The evolution of the social networking landscape has enhanced the reach of data

Table 1
Extraction results of impact factors.

Theory	Influence factor
Tourist behavior intention	External stimuli, perceived value, individual attitudes, behavioral intentions
Theory of personality trait	Individual background characteristics and personality traits
Theory of planned behavior	Costs, benefits, self-interest and altruism
Social media marketing	Online word-of-mouth, information exchange, marketing methods, information quality, information attractiveness, information engagement, cognitive trust
Hotel service theory	Perceived value, service attitude, tourist satisfaction, living environment, hotel service quality

information networks (Mihelčić, 2023), amalgamated social and entertainment functionalities, and established novel avenues for communication. In the social media marketing environment, information interaction is sometimes stimulated by marketing, resulting in an internal driving force. Hotel service quality and tourists' behavior intention are not only influenced by the hotel itself and tourists themselves, but also by social platform information, and information interaction will change tourists' behavior intention. Information interaction (Ivanova, 2022) has the behavior intention, behavior implementation, and results of tourists' users. By analyzing their own experiences, tourists make users feel a certain sense of accomplishment and realize their values. In the process of interaction, users will perceive other people's feedback information about the hotel and change their behavior intention.

In social media marketing, online word-of-mouth is very important for hotel service quality and tourists' behavior intention. Online word-of-mouth refers to transmitting one's own opinions and suggestions on hotel service quality without revealing one's real name, without considering other objective factors and interests, to enhance the authenticity of information transmission. Online word-of-mouth can spread synchronously (Bai & Cai, 2021) and asynchronously. When tourists can't decide whether to choose a hotel, the network information transmission channel is the main way of hotel information transmission, and in the network information transmission channel, online word-of-mouth directly affects the hotel service quality and tourists' behavior intention.

Social media platform integrates user behavior information through certain technical means to complete hotel information resource integration and hotel information recommendation. In the social media marketing environment, various social media methods are used to transmit hotel information and service content highly related to tourists. Through different marketing methods (Ramadhani et al., 2021), tourists' comprehensive understanding of hotel service quality can be improved. For tourists, the marketing method needs to be highly matched with the tourists' situation (Prieto-Sandoval et al., 2022), to firmly grasp the tourists' eyes, vigorously publicize the high service quality of the hotel, guide the tourists' positive attitude towards the hotel service, and then influence their behavior intention and enhance their satisfaction with the hotel service.

In social media marketing, perceived value includes the functions of perceived gain and loss. Perceived gain encompasses the quality of hotel services, the attributes of information provided, and the psychological expectations of guests, whereas perceived loss pertains to the costs and efforts expended to fulfill personal needs. The overall experience of tourists is largely influenced by the quality of hotel services and their emotional and functional satisfaction. In terms of hotel service quality, perceived value is derived from the subjective assessment made by tourists when they evaluate the relationship between the quality of services received and the prices paid. The profits generated by hotels play a crucial role in shaping tourists' perceived value, which in turn is a significant determinant of both the quality of hotel services and the behavioral intentions of tourists.

In the realm of social media marketing, tourists acquire hotel information through both active and passive methods. The information that tourists intentionally seek out while navigating social media platforms is categorized as active acquisition. Conversely, the hotel information that tourists encounter serendipitously during their use of social media is classified as passive acquisition. Therefore, the hotel information obtained by active means is significantly higher than that obtained by passive means (Zhang et al., 2021). In social media, whether hotel information can influence tourists' behavior is mainly due to whether hotel information is attractive and can attract tourists' attention. Attractive hotel information can strengthen tourists' motivation to choose this hotel and improve hotel service quality.

The degree of information involvement of tourists in social media represents the degree of tourists' attention to hotel activities in social media, which belongs to a kind of purchase decision involvement. The

influence of engagement on tourists' behavior intention is mainly reflected in hotel information collection, brand preference, hotel service quality, and cognitive response. Tourists with high involvement pay more attention to hotel activities, actively search for hotel information, and have a greater influence on tourists' behavior intention.

Cognitive trust represents tourists' psychological expectation of hotel capacity and service quality and provides information credibility, which belongs to tourists' rational cognition. Tourists' cognitive trust in hotel information in social media is tourists' expectation of the credibility of hotel information in social media, which represents tourists' psychological activities and can directly affect tourists' behavior intention and hotel service quality.

2.2. Theoretical model construction

In the social media marketing environment, based on hotel service theory and personal behavior theory, a theoretical model of the influence of social media marketing on hotel service quality and tourists' behavior intention is established, and the construction result is shown in Fig. 1.

In the theoretical model of the influence of social media marketing on hotel service quality, information involvement, and cognitive trust level belong to independent variables, perceived value and tourist satisfaction belong to intermediate variables, and hotel service quality belongs to dependent variables.

In the theoretical model of the influence of social media marketing on tourists' behavior intention, information quality, online word-of-mouth, information interaction, marketing mode, information attraction, information involvement, and cognitive trust belong to independent variables, perceived value belongs to intermediate variables, and tourists' behavior intention belongs to dependent variables.

The definition of each variable is shown in Table 2.

2.3. Research hypothesis

In social media marketing, independent variables such as information involvement and cognitive trust, and intermediate variables such as perceived value and tourists' satisfaction will all affect the hotel service quality. The theoretical model of social media marketing's influence on hotel service quality is shown in Table 3.

In Table 3, "A" represents the hypothesis related to hotel service quality, and "B" represents the hypothesis related to tourist behavior intention. The "–" indicates that the variable is not applicable in the column or does not directly form a hypothetical relationship with other variables as a mediator/dependent variable. Perceived value and tourism satisfaction are used as mediating variables in the table, affecting service quality and behavioral intention, respectively. Therefore, they do not have corresponding columns for "impact on perceived value" and "impact on tourist satisfaction/service quality".

3. Empirical analyses

Taking a large chain economy hotel and tourists living in the hotel as the research object, this paper analyzes the effect of social media marketing on hotel service quality and tourists' behavior intention by using this method.

3.1. Descriptive statistical analysis of variables

Descriptive statistical analysis is carried out on the variables constructed by this method, and the analysis results are listed in Table 4.

According to the findings in Table 4, it can be seen that the maximum value of each variable is the same as the minimum value, indicating that some people completely agree with each variable, while others completely disagree with each variable, and the standard deviation is slightly higher than 1, which means that the dispersion of each variable

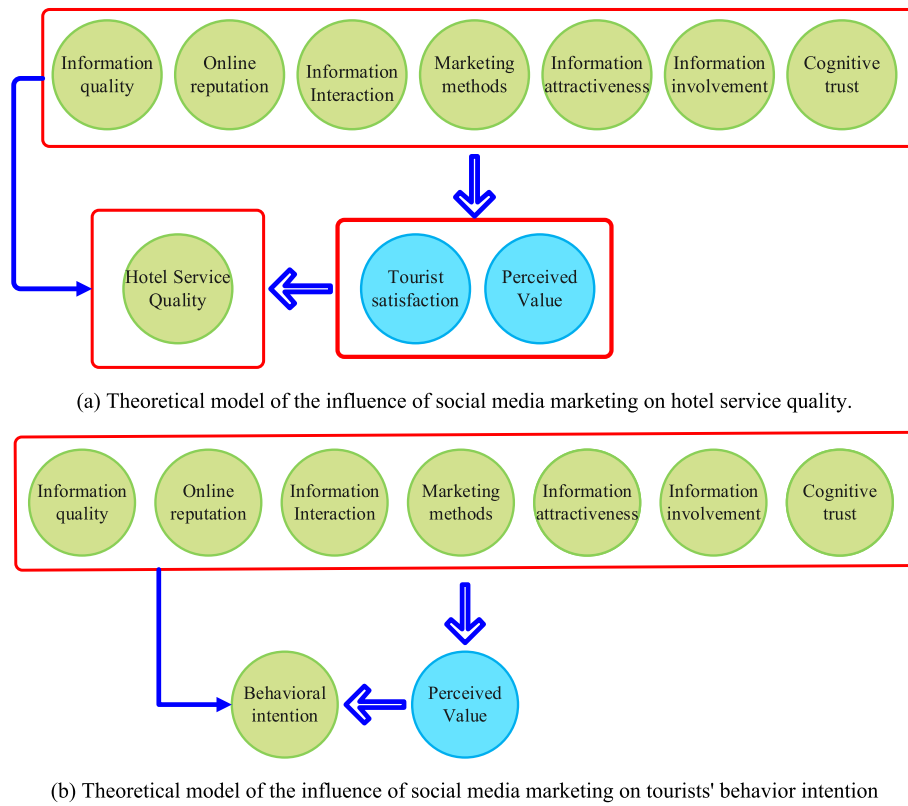


Fig. 1. Theoretical model.

(a) Theoretical model of the influence of social media marketing on hotel service quality.

(b) Theoretical model of the influence of social media marketing on tourists' behavior intention.

Table 2

Definition of each variable.

Variable	Define
Information quality	The satisfaction level of tourists with hotel service information conveyed on social media platforms.
Online reputation	Tourists use social media platforms to express their thoughts on the quality of hotel services.
Marketing methods	Hotels promote their service quality through different marketing methods.
Information interaction	Tourists exchange information and provide feedback on social media platforms.
Information attractiveness	Hotels publish rich and interesting information through social media platforms to attract customers.
Information involvement	The level of attention paid by tourists to hotel activities.
Cognitive trust	The psychological expectations of tourists regarding the reliability of hotel capabilities and service quality.
Perceived value	The perception and attitude of tourists in the process of receiving information transmitted by social media platforms.
Tourist satisfaction	The overall satisfaction of tourists with the hotel.
Hotel service quality	The hotel's ability to deliver promised services and the guarantee of service provided by the hotel.
Tourist behavior intention	The process of tourists choosing hotels to stay in during their travels is based on their own needs.

is very small. The skewness and kurtosis of each variable are lower than 1, which shows that the samples of each variable conform to the normal distribution test standard, that is, obey the normal distribution. Comprehensive analysis shows that the variables meet the needs of social media marketing for the analysis of hotel service quality and tourists' behavior intention.

3.2. Reliability analysis of each variable

Reliability is used to analyze the reliability of variables, which is an effective method to analyze the stability and consistency of variables. The reliability of each variable is analyzed by SPSS statistical analysis software, and the internal consistency of each variable is analyzed by the Cronbach coefficient. The value range of Cronbach's α coefficient is [0,1], and the closer the α coefficient is to 1, the better the internal consistency of each variable and the higher the reliability. When $\alpha \geq 0.8$, the reliability of the variable is high. When $0.6 \leq \alpha < 0.8$, the variable reliability is within the allowable range; when $\alpha < 0.6$, the reliability of variables is low; when $\alpha < 0.3$, the variable is not available. The reliability analysis results of each variable are shown in Fig. 2.

Analysis of Fig. 2 shows that the α coefficients of each variable are around 0.97, 0.99, 0.96, 0.94, 0.98, 0.95, 0.99, 0.98, 0.91, 0.93, and 0.91, all of which are above 0.90, indicating that the reliability of each variable is high. The results show that the reliability of the variables selected by this method is ideal, and it is suitable for the subsequent research on the influence of social media marketing on hotel service quality and tourists' behavior intention.

3.3. Validity analysis of each variable

Validity represents the degree of effectiveness of each variable. The variables with a KMO value exceeding 0.7, approximate Chi-square value exceeding 100, and degree of freedom exceeding 2 in the Bartlett spherical test can be used to study the influence of social media marketing on hotel service quality and tourists' behavior intention, while the unqualified variables are not suitable for studying the influence of social media marketing on hotel service quality and tourists' behavior intention.

The results of the KMO test and Bartlett spherical test are shown in

Table 3
Research hypothesis.

Research variables	Assuming number	The impact on perceived value	The impact on tourist satisfaction	The impact on service quality	The impact on behavioral intention
Information quality	A1/B1	Positive impact	A2	A3	B2
Online reputation	A4/B3	Positive impact	A5	A6	B4
Marketing methods	A7/B5	Positive impact	A8	A9	B6
Information exchange	A10/B7	Positive impact	A11	A12	B8
Information attractiveness	A13/B9	Positive impact	A14	A15	B10
Information participation	A16/B11	Positive impact	A17	A18	B12
Cognitive trust	A19/B13	Positive impact	A20	A21	B14
Perceived value	–	–	A22 (intermediary)	–	B15
Tourist satisfaction	–	–	– (dependent variable)	A23 (intermediary)	–

Table 4
On analysis.

Variable number	Variable name	Minimum value	Maximum value	Standard deviation	Skewness	Kurtosis
1	Information quality	1	6	1.005	0.587	0.279
2	Online reputation	1	6	1.057	0.963	0.499
3	Marketing methods	1	6	1.033	0.724	0.128
4	Information interaction	1	6	1.004	0.641	0.383
5	Information attractiveness	1	6	1.022	0.973	0.682
6	Information involvement	1	6	1.035	0.844	0.766
7	Cognitive trust	1	6	1.028	0.362	0.934
8	Perceived value	1	6	1.064	0.295	0.676
9	Tourist satisfaction	1	6	1.083	0.449	0.767
10	Hotel service quality	1	6	1.015	0.733	0.293
11	Tourist behavior intention	1	6	0.005	0.893	0.539

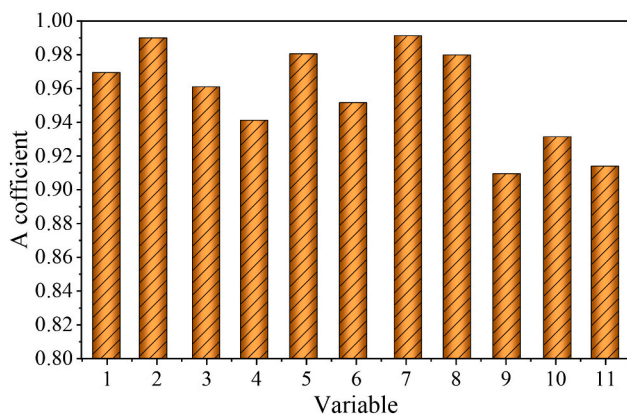


Fig. 2. Reliability analysis results of each variable.

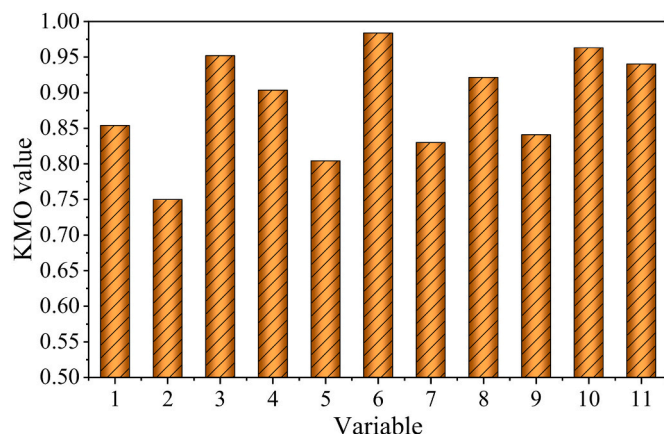


Fig. 3. KMO test analysis results for each variable.

Fig. 3 and Fig. 4.

From the analysis of Fig. 3, it can be seen that the KMO values of each variable are around 0.85, 0.75, 0.95, 0.90, 0.80, 0.98, 0.82, 0.92, 0.83, 0.96, and 0.94 in turn, and the KMO values of each variable are all above 0.70, which indicates that each variable meets the KMO test standard and belongs to a valid variable.

Analysis of Fig. 4(a) shows that the approximate chi-square values of each variable are around 292, 267, 154, 208, 241, 181, 278, 170, 238, 198, and 258 in turn, and the approximate chi-square values of each variable are all above 100, which shows that each variable meets the approximate chi-square test standard and belongs to effective variables.

Analysis of Fig. 4(b) shows that information quality, online word-of-mouth, information interaction, marketing mode, information attraction, and information involvement are consistent with the independent variables of cognitive trust, all of which are about 5, while the intermediate variables of perceived value and tourists' satisfaction are consistent with 9.5, and the hotel service quality is consistent with the dependent variables of tourists' behavior intention, all of which are about 11.5. The degree of freedom values of all variables is above 2, which shows that all variables meet the degree of freedom test standard of the Bartlett spherical test and belong to effective variables. Comprehensive analysis shows that the variables selected by this method are in line with the KMO test standard and Bartlett spherical test standard, which presents that the variables selected by this method are all effective and can be used to study the influence of social media marketing on hotel service quality and tourists' behavior intention.

3.4. Correlation analysis of variables

The findings of correlation analysis among independent variables, intermediate variables, and dependent variables are detailed in Table 5.

Table 5 shows that marketing methods, information interaction, information attraction, and information involvement are all significantly related to hotel service quality at the level of 0.05, while information quality, online word of mouth, cognitive trust, perceived value, and tourist satisfaction are all significantly related to hotel service quality at

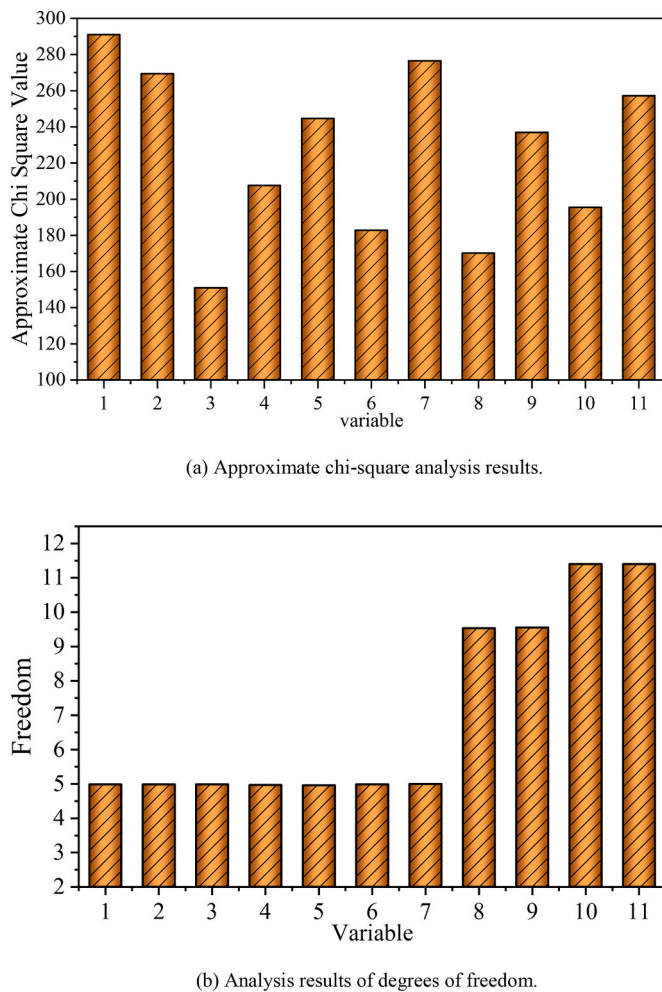


Fig. 4. Bartlett's spherical test analysis results for each variable.

(a) Approximate chi-square analysis results.

(b) Analysis results of degrees of freedom.

Table 5

Correlation analysis results between individual variables, intermediate variables, and dependent variables.

Variable name	Pearson correlation coefficient of hotel service quality	Pearson correlation coefficient of tourist behavior intention
Information quality	0.373**	0.341**
Online reputation	0.366**	0.114*
Marketing methods	0.121*	0.355**
Information interaction	0.105*	0.110*
Information attractiveness	0.113*	0.399**
Information involvement	0.109*	0.384**
Cognitive trust	0.388**	0.367**
Perceived value	0.378**	0.345**
Tourist satisfaction	0.399**	—

Note: ** is significantly correlated at the level of 0.01; * Significant correlation at the level of 0.05.

the level of 0.01. Online word-of-mouth, information interaction, and behavior intention are all significantly correlated at the level of 0.05, and information quality, marketing method, information attraction,

information involvement, cognitive trust, and perceived value are all significantly correlated with tourists' behavior intention at the level of 0.01. Comprehensive analysis shows that the respective variables and intermediate variables are positively related to hotel service quality and tourists' behavior intention.

3.5. Regression analysis of the influence of social media marketing on hotel service quality

The stepwise regression method is used to analyze the relationship between social media marketing and hotel service quality and to understand the causal relationship among the variables. Tolerance and variance inflation factor (VIF) are used to analyze whether there is collinearity among the variables. The closer the tolerance value is to 1, the weaker the multilingualism among the variables is, and the VIF value is lower than 10, so there is no multilingualism among the variables. Through the non-standardized coefficient, the influence degree of each variable is analyzed. The greater the value, the more significant the influence is.

The regression analysis results of social media marketing independent variables on the perceived value of tourism service quality are presented in Table 6.

From the analysis of Table 6, it can be seen that marketing mode, information interaction, information attraction, and information involvement have not entered the regression model, only information quality, online word-of-mouth, and cognitive trust have entered the regression model, and t values of these three independent variables are all significant at the level of 0.01, which means that these three independent variables can be placed in the regression model as explanatory variables. The tolerance of information quality, online word-of-mouth, and cognitive trust are all close to 1, and the VIF values are all lower than 10, which means that these three independent variables do not have multicollinearity. The non-standardized coefficients in the regression model represent the regression coefficients of their respective variables. According to the non-standardized coefficients, it is known that online word-of-mouth has the most significant influence on perceived value, followed by cognitive trust and information quality, among which marketing methods, information interaction, information attraction, and information involvement have no significant influence on perceived value. Therefore, it is assumed that A1, A4 and A19 hold, but A7, A10, A13 and A16 do not.

The regression analysis results of social media marketing independent variables on tourists' satisfaction are represented in Table 7.

Analysis of Table 7 shows that the three independent variables of information quality, online word-of-mouth, and cognitive trust are all significant at the level of 0.01. The tolerance of information quality, online word-of-mouth, and cognitive trust are all close to 1, and the VIF values are all lower than 10, which means that these three independent variables do not have multicollinearity. According to the non-standardized coefficient, online word-of-mouth has the most significant influence on perceived value, followed by information quality and cognitive trust. Among them, marketing methods, information interaction, information attraction, and information involvement have no significant influence on tourists' satisfaction. Therefore, it is assumed that

Table 6

Regression analysis results of social media marketing independent variables on the perceived value of tourism service quality.

Variable name	t-Values	Nonstandardized coefficient	Tolerance	VIF
Information quality	0.768**	0.197	0.893	1.792
Online reputation	0.165**	6.659	0.893	1.792
Cognitive trust	0.393**	0.275	0.893	1.792

Note: ** is significantly correlated at the level of 0.01.

Table 7

Regression analysis results of social media marketing independent variables on tourist satisfaction.

Variable name	t-Values	Nonstandardized coefficient	Tolerance	VIF
Information quality	0.435**	3.548	0.902	5.215
Online reputation	0.276**	5.288	0.902	5.215
Cognitive trust	0.282**	0.753	0.902	5.215

Note: ** is significantly correlated at the level of 0.01.

A2, A5 and A20 hold, but A8, A11, A14 and A17 do not.

The regression analysis results of social media marketing independent variables on hotel service quality are shown in Table 8.

Analysis of Table 8 shows that the three independent variables of information quality, online word-of-mouth, and cognitive trust are all significant at the level of 0.01. The tolerance of information quality, online word-of-mouth, and cognitive trust are all close to 1, and the VIF values are all lower than 10, which means that these three independent variables do not have multicollinearity. According to the non-standardized coefficient, online word-of-mouth has the most significant influence on hotel service quality, followed by information quality and cognitive trust. Among them, marketing methods, information interaction, information attraction, and information involvement have no significant influence on tourists' satisfaction. Therefore, it is assumed that A3, A6 and A21 hold, but A9, A12, A15 and A18 do not.

The regression analysis results of social media marketing intermediate variables on hotel service quality are shown in Table 9.

Based on the findings of Table 9, it can be seen that two intermediate variables, perceived value, and tourist satisfaction, both entered the regression model, and both were significant at the level of 0.01. The tolerance between perceived value and tourists' satisfaction is close to 1, and the VIF value is lower than 10, which shows that these two intermediate variables are not multicollinearity. According to the non-standardized coefficient, tourist satisfaction has the most significant influence on hotel service quality, followed by perceived value. Therefore, it is assumed that A22 and A23 hold.

3.6. Regression analysis of the influence of social media marketing on tourists' behavior intention

Through the stepwise regression method, the regression analysis of social media marketing on tourists' behavior intention is carried out, and the regression analysis results of social media marketing independent variables on tourists' behavior intention perceived value are shown in Table 10.

Table 10 shows that online word-of-mouth and information interaction have not entered the regression model, and other independent variables have entered the regression model, and they are all significant at the level of 0.01. The tolerance of each variable is consistent, which is close to 1, and the VIF value of each variable is consistent, which is lower than 10, indicating that there is no multicollinearity among the factors. Among them, the non-standardized coefficient value of information quality is the largest, that is, it has the most significant influence on

Table 8

Regression analysis results of social media marketing independent variables on hotel service quality.

Variable name	t-Values	Nonstandardized coefficient	Tolerance	VIF
Information quality	0.046**	4.218	0.899	3.936
Online reputation	0.087**	7.234	0.899	3.936
Cognitive trust	0.093**	1.537	0.899	3.936

Note: ** is significantly correlated at the level of 0.01.

Table 9

Regression analysis results of social media marketing intermediate variables on hotel service quality.

Variable name	t-Values	Nonstandardized coefficient	Tolerance	VIF
Perceived value	0.163**	2.906	0.953	2.668
Tourist satisfaction	0.198**	6.355	0.953	2.668

Note: ** is significantly correlated at the level of 0.01.

Table 10

Regression analysis results of social media marketing independent variables on the perceived value of tourists' behavioral intentions.

Variable name	t-Values	Nonstandardized coefficient	Tolerance	VIF
Information quality	0.115**	6.327	0.911	2.883
Marketing methods	0.134**	5.361	0.911	2.883
Information attractiveness	0.129**	2.638	0.911	2.883
Information involvement	0.138**	1.226	0.911	2.883
Cognitive trust	0.136**	3.428	0.911	2.883

Note: ** is significantly correlated at the level of 0.01.

perceived value, followed by marketing mode, cognitive trust, information attraction, and information involvement. Therefore, it is assumed that B1, B5, B9, B11 and B13 hold, but B3 and B7 do not.

The regression analysis results of social media marketing independent variables on tourists' performance intention are shown in Table 11.

As observed from Table 11, it can be seen that the tolerance of each variable entering the regression model is consistent, which is close to 1, and the VIF value of each variable is lower than 10, illustrating that there is no multicollinearity among the variables. According to the non-standardized coefficient, information quality has the most significant influence on behavior intention, followed by marketing mode, cognitive trust, information involvement, and information attraction. Therefore, it is assumed that B2, B6, B10, B12 and B14 hold, while B4 and B8 do not.

The regression analysis results of social media marketing intermediate variables on tourists' behavior intention are presented in Table 12.

Table 12 shows that the tolerance of perceived value is close to 1, and the VIF value is lower than 10, showing that there is no multicollinearity between perceived value and tourists' act intention. Therefore, the research assumes that B15 holds.

3.7. Research hypothesis verification

The verification results of the above research hypotheses are shown in Table 13.

From the findings of Table 13, it can be seen that the research hypotheses A7 to A18, B3, B4, B7, and B8 are not valid, and all other research hypotheses are valid. From the non-standardized coefficients of

Table 11

Regression analysis results of social media marketing independent variables on tourists' behavioral intentions.

Variable name	t-Values	Nonstandardized coefficient	Tolerance	VIF
Information quality	0.126**	7.438	0.732	3.537
Marketing methods	0.145**	6.472	0.732	3.537
Information attractiveness	0.138**	1.557	0.732	3.537
Information involvement	0.149**	2.337	0.732	3.537
Cognitive trust	0.147**	4.539	0.732	3.537

Note: ** is significantly correlated at the level of 0.01.

Table 12

Regression analysis results of social media marketing intermediate variables on tourists' behavioral intentions.

Variable name	t-Values	Nonstandardized coefficient	Tolerance	VIF
Perceived value	0.152**	4.984	0.831	3.267

Note: ** is significantly correlated at the level of 0.01.

Table 13

Validation results of research assumptions.

Research hypotheses on the impact of social media marketing on hotel service quality	Hypothesis testing	Research hypotheses on the impact of social media marketing on tourists' behavioral intentions	Hypothesis testing
A1	Establish	B1	Establish
A2	Establish	B2	Establish
A3	Establish	B3	Not established
A4	Establish	B4	Not established
A5	Establish	B5	Establish
A6	Establish	B6	Establish
A7	Not established	B7	Not established
A8	Not established	B8	Not established
A9	Not established	B9	Establish
A10	Not established	B10	Establish
A11	NOT established	B11	Establish
A12	Not established	B12	Establish
A13	Not established	B13	Establish
A14	Not established	B14	Establish
A15	Not established	B15	Establish
A16	Not established	–	–
A17	Not established	–	–
A18	Not established	–	–
A19	Establish	–	–
A20	Establish	–	–
A21	Establish	–	–
A22	Establish	–	–
A23	Establish	–	–

each variable, it can be seen that the most significant influence of social media marketing on hotel service quality is online word of mouth, followed by tourist satisfaction. The most significant influence of social media marketing on tourists' behavior intention is information quality, followed by marketing methods.

4. Discussions

4.1. Comparison with previous studies

This study shares many similarities with previous research on the impact of social media marketing on hotel service quality and tourist behavior intentions, but there are also some significant differences. Previous studies have generally emphasized the importance of social media in the tourism and hotel industries, particularly in enhancing brand awareness, customer engagement, and customer satisfaction. However, this study delved deeper into the direct impact of specific variables (such as information quality, online reputation, cognitive

trust, etc.) on hotel service quality and tourist behavioral intentions, and verified these relationships through empirical analysis.

Compared with previous studies, the uniqueness of this research lies in: firstly, it integrates multiple variables and constructs a more comprehensive analytical framework, thus more accurately revealing the multidimensional impact of social media marketing on hotel service quality. Secondly, this study quantified the specific relationships between variables through statistical methods such as regression analysis, providing more operational guidance for hotel managers. Finally, this study also focused on the important output variable of tourist behavior intention, further enriching the research system for evaluating the effectiveness of social media marketing.

4.2. This article studies and discusses

This study has made significant contributions to the theory of social media marketing. Firstly, it validates the crucial role of variables such as online reputation and information quality in evaluating hotel service quality, further enriching the theory of service quality. Secondly, by introducing the mediating variable of cognitive trust, this study reveals how social media marketing affects tourists' perception of trust and subsequently influences their behavioral intentions, providing a new perspective for understanding tourists' decision-making processes. Finally, the results of this study support the effectiveness of social media marketing in the tourism and hotel industries, providing new empirical evidence for theoretical research in related fields.

For hotel managers, this study has important practical guidance significance. Firstly, hotels should attach importance to the management of online word-of-mouth, and enhance their online image and perceived service quality by actively responding to customer reviews and encouraging satisfied customers to share positive experiences. Secondly, hotels should pay attention to improving the quality of information, ensuring that the content posted on social media is accurate, useful, and attractive, in order to enhance tourists' cognitive trust and satisfaction. Finally, hotels can enhance tourist engagement and loyalty through innovative marketing models and interactive information, thereby promoting their behavioral intentions and choices.

Although this study has achieved certain results, there are still some limitations. Firstly, the data in this study comes from samples taken at specific times and locations, which may have certain regional and cultural biases. Future research can expand the sample size and explore the impact of social media marketing on hotel service quality under different regional and cultural backgrounds. Secondly, this study mainly focuses on several aspects of social media marketing. In the future, the research perspective can be further expanded to consider more factors that may affect hotel service quality and tourist behavior intentions. Finally, this study used cross-sectional data for analysis, and in the future, methods such as time series data or experimental design can be used to further verify the causal relationships and dynamic changes between variables.

5. Conclusion

This research showed the deep influence of social media marketing on the quality of hotel services and the behavioral intentions of tourists. It emphasized the essential roles played by information quality, cognitive trust, and perceived value in shaping tourists' perceptions and decision-making processes. The findings emphasized that online word-of-mouth and consumer satisfaction are the major driver variables in driving marketing strategy, though it has shown that hotels have to further emphasize social media channels in this present digital era. Though traditional marketing techniques may still have their relevance, it is usually overtaken by the quality and depth of information provided through social networking sites. These findings provided some useful recommendations to hotel managers and marketers by stating that social media marketing can be incorporated in a strategic manner so as to

improve service quality and build up brand loyalty, hence consolidating their competitive advantages in the hospitality sector.

In the future, further focus can be considered on the differences in the response of different population groups (such as age, gender, cultural background, etc.) to social media marketing, and the unique role of different social media platforms (such as WeChat, Weibo, Tiktok, etc.) in influencing hotel service quality and tourists' behavioral intentions. At the same time, considering the limitations that sample diversity and cultural factors may bring, research can further explore how these variables regulate the effectiveness of social media marketing, thereby providing more accurate and personalized marketing strategy recommendations for the hotel industry. Such research will not only deepen our understanding of the relationship between social media marketing and hotel service quality, but also provide practical guidance for the hotel industry to more effectively utilize social media platforms on a global scale.

CRedit authorship contribution statement

Liu Han: Writing – original draft, Supervision, Software, Project administration, Conceptualization. **Huang Mingying:** Writing – review & editing, Writing – original draft, Validation, Formal analysis, Data curation. **Zhang Peng:** Writing – review & editing, Writing – original draft, Validation, Methodology, Investigation, Formal analysis.

Funding

This work was supported by the major project of Anhui University Social Science: “Problems and Countermeasures of Bozhou Medicinal Food and Beverage Marketing” (2022AH040327), and the Cultivation database project of Anhui Vocational Education Innovation and Development Pilot Zone: Supported by “Research on the Cultivation and Construction of Bozhou” Town “Internet + Traditional Chinese Medicine Tourism” (WB-ZJYQ-034) and “Bozhou Cultural Tourism Industry Think Tank” (ypzk003).

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this article.

Data availability

Data will be made available on request.

References

- Abbasi, A. Z., Rather, R. A., Hooi Ting, D., Nisar, S., Hussain, K., Khwaja, M. G., & Shamim, A. (2024). Exploring tourism-generated social media communication, brand equity, satisfaction, and loyalty: A PLS-SEM-based multi-sequential approach. *Journal of Vacation Marketing*, 30(1), 93–109.
- Alsoud, M., Alfdool, S., Trawnih, A., Helalat, A., & Mahrakani, N. (2023). Social media marketing activities and tourists' purchase intention. *International Journal of Data and Network Science*, 7(2), 677–686.
- Armutcu, B., Tan, A., Amponsah, M., Parida, S., & Ramkissoon, H. (2023). Tourist behaviour: The role of digital marketing and social media. *Acta Psychologica*, 240, 104025.
- Aziz, M. R., & Al Alam, A. F. (2024). The influence of digital marketing on tourists' behavioural intentions from social networks and e-WOM interactions. *International Journal of Internet Marketing and Advertising*, 20(3–4), 364–385.
- Baber, R., & Baber, P. (2023). Influence of social media marketing efforts, e-reputation and destination image on intention to visit among tourists: Application of SOR model. *Journal of Hospitality and Tourism Insights*, 6(5), 2298–2316.
- Baer, D. R., Watts, J. F., Herrera-Gomez, A., & Gaskell, K. J. (2023). Evolving efforts to maintain and improve XPS analysis quality in an era of increasingly diverse uses and users. *Surface and Interface Analysis*, 55(6–7), 480–488.
- Bai, Y., & Cai, W. (2021). Recommendation with diversity: Mass diffusion model based on trust network and object reputation. *Mobile Information Systems*, 2021(1), 5527568.
- Bian, Q. (2021). Social media marketing optimization method based on deep neural network and evolutionary algorithm. *Scientific Programming*, 2021(1), 5626351.
- Dandis, A., & Al Haj Eid, M. B. (2022). Customer lifetime value: Investigating the factors affecting attitudinal and behavioural brand loyalty. *The TQM Journal*, 34(3), 476–493.
- Ho, J.-L., Chen, K.-Y., Wang, L.-H., Yeh, S.-S., & Huan, T.-C. (2022). Exploring the impact of social media platform image on hotel customers' visit intention. *International Journal of Contemporary Hospitality Management*, 34(11), 4206–4226.
- Ivanova, I. A. (2022). Information exchange, meaning and redundancy generation in anticipatory systems: Self-organization of expectations—The case of Covid-19. *International Journal of General Systems*, 51(7), 675–690.
- Lin, J., Luo, Z., Benitez, J., Luo, X. R., & Popović, A. (2021). Why do organizations leverage social media to create business value? An external factor-centric empirical investigation. *Decision Support Systems*, 151, 113628.
- Maucuer, R., Renaud, A., Ronteau, S., & Muzellec, L. (2022). What can we learn from marketers? A bibliometric analysis of the marketing literature on business model research. *Long Range Planning*, 55(5), 102219.
- Mihelčić, M. (2023). Redescription mining on data with background network information. *Knowledge-Based Systems*, 260, 110109.
- Palazzo, M., Foroudi, P., & Ferri, M. A. (2021). Examining antecedents and consequences of perceived service quality in the hotel industry: A comparison between London and New York. *The TQM Journal*, 33(7), 193–221.
- Panwanitdumrong, K., & Chen, C.-L. (2021). Investigating factors influencing tourists' environmentally responsible behavior with extended theory of planned behavior for coastal tourism in Thailand. *Marine Pollution Bulletin*, 169, 112507.
- Prieto-Sandoval, V., Torres-Guevara, L. E., & García-Díaz, C. (2022). Green marketing innovation: Opportunities from an environmental education analysis in young consumers. *Journal of Cleaner Production*, 363, 132509.
- Rajak, R., Kumar, S., Prakash, S., Rajak, N., & Dixit, P. (2023). A novel technique to optimize quality of service for directed acyclic graph (DAG) scheduling in cloud computing environment using heuristic approach. *The Journal of Supercomputing*, 79(2), 1956–1979.
- Ramadhani, R., Suswanta, S., & Shaddiq, S. (2021). E-Marketing of village tourism development strategy (case study in the tourist village Puncak Sosok). *Journal of Robotics and Control (JRC)*, 2(2), 72–77.
- Salhab, R., Le Ny, J., Malhamé, R. P., & Zaccour, G. (2022). Dynamic marketing policies with rating-sensitive consumers: A mean-field games approach. *European Journal of Operational Research*, 299(3), 1079–1093.
- Sharma, M., Antony, R., Sehrawat, R., Cruz, A. C., & Daim, T. U. (2022). Exploring post-adoption behaviors of e-service users: Evidence from the hospitality sector/online travel services. *Technology in Society*, 68, 101781.
- Sihombing, S. O., Antonio, F., Sijabat, R., & Bernarto, I. (2024). The role of tourist experience in shaping memorable tourism experiences and behavioral intentions. *International Journal of Sustainable Development and Planning*, 19(4).
- Tesfa Regassa, M., & Xin, Z. (2020). Assessment of tourism industry in Gondar City, Ethiopia. *GeoJournal*, 1–13.
- Van Huy, L., & Thai Thinh, N. H. (2024). Ranking the hotel website service quality according to customer's perception: A case study of 4-star hotel. *Journal of Quality Assurance in Hospitality & Tourism*, 25(1), 37–56.
- Veloso, M., Ieva, M., & Gómez-Suárez, M. (2024). Social media content strategy in hospitality: The impact of experiential posts and response congruence on engagement, hotel image, and booking intention. *Journal of Hospitality Marketing & Management*, 33(1), 57–77.
- Wu, J., Shi, L., Xu, G., Yuan, Y.-H., Tsai, S.-B., Hao, W., & Jiang, J. (2021). [Retracted] using the mathematical model on precision marketing with online transaction data computing. *Mathematical Problems in Engineering*, 2021(1), 5539300.
- Xia, L., Lee, T. J., & Kim, D. (2024). Relationships between motivation, service quality, tourist satisfaction, quality of life, and spa and wellness tourism. *International Journal of Tourism Research*, 26(1), e2624.
- Zhang, M., Zhang, Y., & Li, K. (2021). Effective information extraction of cold chain logistics big data based on cart decision tree. *Computer Simulation*, 38(09), 456–459.