Effectiveness of structural equation modeling to measure hotel customer satisfaction

Siti Normii*, Mangasa Panjaitan2
1,2 Program Studi Manajemen, Fakultas Ekonomi, Universitas Methodist Indonesia

Abstract
Although some studies on gauging hotel guests' levels of satisfaction have been published in several research findings, structural equation modeling's efficacy in Indonesia is still rarely investigated. The study's objective is to assess hotel patron satisfaction utilizing an electronic system for guest reviews that is centered on online and Internet technology. The research's data came from 500 hotel guests staying at two five-star full-service hotels in Medan, North Sumatra. To accomplish this goal, the study used structural equation modeling to uncover the inherent link between consumer assessments of hotel services and amenities on one side and perceived usefulness, contentment, and their intention to return and refer customers on the other side. The findings demonstrate the clear correlations between value, contentment, desire to return and suggest as well as customer ratings of employee quality of service, guest bedroom quality, safety, and service disruption. Additionally, it should be highlighted that major mediating influences had an impact on how well-liked the hotel's amenities and employees provided service to guests. Through the use of web-based technologies, the research offered several recommendations for improving guest satisfaction with hotel operations. The results of this study could contribute to hotel management concentrating on the elements of the experiences of their guests that are the most important factors for boosting the level of satisfaction.

Keywords: Effectiveness, customer satisfaction, structural equation modeling

Introduction
To maintain customer loyalty and build brand awareness, hotel guest pleasure has traditionally been seen as a crucial component of hotel operations (Khan et al., 2015). Hotel visitor satisfaction level is affected by some concrete and intangible factors that determine guest happiness. The two biggest problems facing hotel management are raising customer happiness and lowering guest intent to stay at competing properties. To improve services, amenities, and other operational aspects, hotel management is eager to hear from guests. To increase visitor interest in hotel services, hotel management will benefit from timely feedback from the guests to identify and address any service problems.

Traditionally, Post-stay customer experience questionnaires or paper comment cards left in the rooms have been used to collect data on the contentment of the hotel visitors (Zhu et al., 2020). Written guest feedback cards, which are often used, seen as indicators of
visitor happiness, and also enable quick management answers by most hotels, have formed the basis of certain research. The standard of the customer feedback cards used mostly by hotel chains in Indonesia was examined and assessed using eight-item recommendations. The study’s findings discovered that the majority of written guest feedback cards employed structured questions with a positive bias but did not provide consistent return methods, or enough space for open-ended comments. Both academicians and practitioners have challenged the use of written customer feedback for gauging customers’ satisfaction and future purchase intent due to response bias and interference with the distributing and collecting of the instrument by hotel staff.

Hotel administration is thought to frequently hear from two types of customers: those who were disappointed when their hopes weren't fulfilled by the hotel's services and amenities and those who were thrilled when their expectations were fulfilled (Ibrahim et al., 2017). It is challenging for hotel managers to improve a structured implementation strategy that will live up to the standards of all hotel guests because comment sections from the two fringe groups of the hotel guest population only make up a minority of what feels like the significant portion of the hotel guests’ views on the functionality and comfort of the facilities and amenities, as well as the quality of the service. Besides, hotel executives and academic researchers have voiced concerns about how hotel workers handle the gathering of guest comment cards.

Due to the rapid acceptance of technology in the hospitality industry and guest customer engagement, ever since the early 2000s, a growing number of hotel organizations have utilized customer engagement experience management. Analyzing the satisfaction of hotel guests Using an Online QMS 447 system (del Río-Rama et al., 2019), which integrates email questionnaires and digital guest feedback cards, one can measure customer satisfaction via text mining. For several advantages over conventionally written guest customer feedback, the usage of web-based online visitor customer reviews has been suggested. First, electronic guest feedback cards lower operating expenses.

By sending out email-based customer satisfaction questionnaires, Hilton Hotels & Resorts claimed to save over $1 million yearly (Santouridis & Veraki, 2017). When guest feedback cards are used, a sizable sample size that is more representative of the broader population is generated and collecting of the instrument by hotel staff.

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less price sensitive (Loureiro & Kaufmann, 2018). Numerous studies have shown that acquiring new customers requires five times as much time, cost, and personnel as maintaining current ones. As part of efficient hotel brand management, several types of research have also shown the critical link between guest pleasure and room revenues. In this study, 8 Indonesian hotel brands that operate both domestically and globally were contrasted to see how customer happiness affected hotel occupancy and average daily rate measures of room income (ADR). Higher occupancy rates and ADR were shown to be associated with hotel brands that received higher guest satisfaction levels, according to O'Neill and Mattila’s (2004) research.

Additionally, the study showed that hotel companies with better customer satisfaction had higher profitability compared with those having a lower level of customer satisfaction. Furthermore, it has been one of the main variables determining hotel brand success and long-term corporate survival. Customer satisfaction is described as a customer's post-purchase assessment of a good or service, which may then be gauged by asking the customer to rate the performance on particular criteria (Berezan et al., 2014).

In a weighted compensatory model, "satisfaction" and "dissatisfaction" are typically assumed to be at opposite ends of a range, and the client’s overall satisfaction with a friendliness customer interaction. It is determined as the discrepancy between their actual results and their expectations concerning a collection of weighted criteria. Since each service encounter must retain its happiness to attain overall satisfaction, some academics have suggested that cognitively based hotel visitor satisfaction is efficiently measured at each interaction of the service delivery.

Based on Hartman’s three value dimensions, Park et al. (2021) evaluated the five experiences that make up the hotel service delivery process: the registration encounter, the accommodation happenstance, the dining encounter, the lunch encounter, and the counter experience. The investigators settled that it is more realistic to gauge customer pleasure at each stage of the hotel service delivery procedure.

It's crucial to concentrate primarily on aspects that matter to clients while looking for strategies to maintain and improve service quality (Liat et al., 2014). Important qualities for consumers to consider while choosing hotels have been highlighted by several academics. The detected characteristics often match the trichotomy of generic factors identified by Srivastava and Kaul (2014), the substantial product (e.g., the facility of sleeping lodgings), the ambiance (e.g., the physical characteristics of the hotel including the hotel rooms), and the attitude of the hotel employees.

The fundamental issues that have influenced visitors' satisfaction with the calibers of goods and services offered by hotel operations have been covered in previous research. Pandey (2016) concluded that consumers should consider the following hotel qualities when choosing a hotel: cleanliness, safety, value for money, politeness, and staff assistance. Furthermore, Liat et al. (2017) advanced a complete 26-item device; LODGSERV, to support hotel supervision by gauging consumer evaluations of hotel service quality. The factors that affect how satisfied guests are with their housing comprise the spotlessness of the rooms, the upkeep of the accommodations' equipment, the friendliness of the personnel, and the expertise of the employees (attention of staff). Stefano et al. (2015) exposed that client happiness was closely tied to the hotel's service standards, room layout, and physical surroundings. Xu et al. (2019) uncovered three key elements that influence how satisfied guests are: the room (cleanliness, functional facilities, and comfort), the meal
(food experience), and the personnel (friendliness, helpfulness, accuracy, and promptness of service).

The four main aspects that are relevant to the client, according to the prior study, are the quality of the service employees, the room quality, security, and upkeep. In their analysis of the causes and effects of visitor retention and satisfaction in hotel operations. Truong et al. (2020) built on earlier research by attempting a conceptual model that predicts visitor pleasure, loyalty, and desire to switch using hotel ambiance and hospitality service. The model also looks for any possible relationships between the latent variables of customer satisfaction and customer retention and gender and added value.

The test findings show that providing value has a positive and significant influence on visitor satisfaction but a positive but small impact on guest retention. Gender and customer happiness and retention, however, do not appear to be significantly related. By evaluating the impact of additional value and gender on customer satisfaction and retention, this study built on past research to operationalize the assessment of customer intention by loyalty and intent to switch. The most often used approach for determining consumer pleasure and discontent is the expectation disconfirmation paradigm (Hussain et al., 2015). The literature has given strong support to this model, which holds that satisfaction is a function of the magnitude and direction of the discrepancies between expected and actual product performance. However, there is also strong evidence to support the idea that performance assessments alone may be used to correlate satisfaction, eliminating the necessity for disconfirmation as an intermediary variable (Kang & Park, 2014).

In the study, customer satisfaction was analyzed concerning how well hotels performed as determined by real reported opinions from hotel guests. Customer satisfaction surveys and questionnaires that focus on client perceptions and attitudes can be used to gather subjective evaluations of service quality and client satisfaction (Rita et al., 2019). Although there have been several studies looking at hotel guests’ satisfaction, there are two significant flaws in the existing research. Firstly, although there is a growing consensus identifying the critical elements linked to hotel visitor pleasure, the relative importance of these important elements has received relatively little attention, and managers lack explicit guidelines to help them prioritize. Secondly, early modern analytical approaches typically treat the individual expressions as individual variables, obscuring the true relationships among and between the important underlying factors, although emerging theories of consumer satisfaction tend to highlight multiple manifestations of key constructs (e.g., cleanliness of the room and cleanliness of the bathroom are both related to the same underlying construct).

The present study aims to close any gaps in the previous studies by simultaneously examining how hotel guests’ perceptions of value, comfort, and commitment are affected by key operational characteristics. The study of the literature suggests some testable hypotheses regarding the characteristics of hotel services, client satisfaction, and behavioral intention. To examine the impacts of quality service, room performance, security staff, guest complaints, and other mediating variables that influence the appraisal of value, satisfaction, intention to revisit, and recommendation, this study concentrates on four accurate claims connected to these dimensions (Figure 1).

The assessments of these multifaceted qualities, as opposed to one-dimensional ranking models, can more accurately pinpoint the real connections between the key elements and establish their relative importance. The manifestation element of service issues as
customer complaints, which is not often modeled in multiple tests, can also be included in this study. To determine how the underlying components affect hotel patron pleasure and loyalty, the current study uses a structural equation modeling technique.

The study aims at analyzing the variables that affect the degree of hotel patron satisfaction. The following research questions comprise the formulation of the issue in this study:

1. What is the description of hotel customers’ evaluation, perceive values, and degree of satisfaction with hotel facilities, and staff service?

2. How do customers’ evaluation, perceived values, and degree of satisfaction affect customer decision to revisit and recommend the hotel to their colleagues?

**Methods**

The study used a quantitative research approach by applying a structural equation modeling technique utilizing the PROC CALIS function in SAS. The study employed a branded online quality management system (QMS) to measure, monitor, and manage guests' satisfaction with their lodging experience as the study's foundation. With permission from the hotel management, the researchers gained access to databases of guest reviews from two hotels that shared an online quality management system. The study's target audience consisted of guests staying at five full-service hotels in Medan, Indonesia, to assess the essential elements of hotel operations and customer complaints of service challenges in the vacation segment of the hotel industry. With a market mix of 70% leisure travelers and 30% corporate clients, these five hotels are run by two hotel chains under the same franchise name and mostly cater to transitory leisure and some tourists. In 2015, the hotel chain began utilizing the online QMS, and in 2020, they began online feedback collection.

The samples for this study consisted of 1,218 guests who emailed the two hotels between July 1, 2021, and June 30, 2022, with their feedback. In this study,
Electronic guest comment cards were employed by both hotels to gather feedback from recent hotel guests using the same online QMS. After guests had checked out of the hotels, emails were issued to them acknowledging them for their recent official visit and requesting them to give opinions on the numerous aspects of the room and client service happenstances. To gauge how the customers felt about the amenities and services offered by these two hotels, an online visitor remark form with 11 hotel quality features was established. To evaluate the essential components of hotel services and amenities found in earlier research addressed in the literature study, the 11 hotel qualities were chosen.

Every question was graded on an anchored 5-point scale, except the dichotomous "any issues" indication. Figure 2 displays the response distribution for each variable used in this investigation. Figure 2's data distribution, where 5 denotes an outstanding experience, demonstrates that more visitors are satisfied with their time spent at the two hotels. The research refutes the idea that only extremely happy or extremely unhappy visitors give their opinions, as a sizable number of visitors appear to fall somewhere in the center. However, guests who left reviews that weren't fantastic would probably leave and result in a huge loss of money.

**Results**

The data were analyzed and the parameter estimations were driven by a structural equation modeling technique utilizing the PROC CALIS function in SAS (Version 9; SAS Institute). This method was chosen because it enables the precise separation of the measurement items from the regression model that are thought to be the source of the observed variable. Figure 1 illustrates a structural equation modeling method that enables the estimate of connections among and between the latent components and the suggested test model. The covariance matrix related to the manifest variables served as the foundation for the data analysis.

| No | Variable               | M   | SD  | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  |
|----|------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|    | Quality of Staff provision |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 1  | Greetings              | 3.68| 1.31|     |     |     |     |     |     |     |     |     |     |     |
| 2  | Sociability            | 3.77| 1.32| 0.80|     |     |     |     |     |     |     |     |     |     |
| 3  | Capability             | 3.74| 1.32| 0.75| 0.78|     |     |     |     |     |     |     |     |     |
|    | Superiority of room    |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 4  | Room spotlessness      | 3.67| 1.34| 0.54| 0.53|     |     |     |     |     |     |     |     |     |
| 5  | Lavatory sanitation    | 3.62| 1.34| 0.54| 0.52| 0.53| 0.88|     |     |     |     |     |     |     |
|    | Safety                 |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 6  | Safety problems        | 3.83| 1.26| 0.57| 0.55| 0.58| 0.68| 0.68|     |     |     |     |     |     |
|    | Evaluation             |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 7  | Value                  | 3.72| 1.39| 0.57| 0.54| 0.58| 0.62| 0.61| 0.61| 0.27|     |     |     |     |
| 8  | satisfaction           | 3.53| 1.42| 0.57| 0.56| 0.58| 0.54| 0.62| 0.62| 0.34| 0.83|     |     |     |
| 9  | returning              | 3.61| 1.44| 0.58| 0.57| 0.62| 0.66| 0.63| 0.64| 0.41| 0.77| 0.78|     |     |
| 10 | Recommend              | 3.46| 1.53| 0.55| 0.54| 0.58| 0.64| 0.60| 0.62| 0.39| 0.71| 0.73| 0.91|     |
The mean value, standard deviation value, and correlation value for the various variables are shown in Table 1. Fit Quality of the Structural Equation Model

The coefficient of determination index (CFI), the Tucker Lewis index (TLI), the Akaike's information criterion (AIC), the Bayesian criterion (BIC), and the root-mean-square error of approximation were all used to evaluate the suggested model's overall fit (RMSEA). Values of 0.95 or above for the CFI and TLI indicate a typical with an acceptable match. Lower index scores imply a better fitting model when using the AIC and BIC to judge models. The large sample sizes (N = 500) used in this study produced a statistically significant chi-square value that showed a poor fit between the data and the model. The relative chi-square (\( \chi^2/\text{pdf} \)), another full model fit measure, thus exhibits analogous flaws in this model to those of the chi-square since it is based on straightforward chi-square difference patterns. As shown in Table 2, the comparative chi-square (\( \chi^2/\text{pdf} \)) was 15.66 and the chi-square degree of fit was significant (\( \chi^2 = 563.10, \text{df} = 36, p < .0001 \)).

Table 2. Structural Equation Model Statistics

| Fit Statistics                  | Rate    |
|--------------------------------|---------|
| \( \chi^2 \)                   | 563.11  |
| \( \text{df} \)                 | 37      |
| Goodness-of-fit index           | 0.93    |
| Comparative fit index           | 0.95    |
| Tucker-Lewis index              | 0.94    |
| Akaike’s Information Criterion  | 491.11  |
| Bayesian InformationCriterion   | 307.32  |

The data on the directories were well suitable by the structural equation model: GFI = .93 as an atal fit index, CFI = .95 as a non-centrality-based index, and TLI = .94 as a comparative index. TLI is comparatively genuine by sample size, but GFI and CFI are recognized analytically to be contingent on sample size: the larger the sample, the stronger the fit index.

Approximations of restrictions such as relationships between the linked manifest variables and each of the three multiple-indicator concepts were steadily strong, fluctuating from 0.88 to 0.90 (all \( p < .05 \)), representing a high level of inside steadiness and trustworthiness among the things thought to be associated to a factor (see Table 3).

Table 3. Standardized Parameter estimates and T-values

| Parameters | Estimates | T-value |
|------------|-----------|---------|
| \( Q \)    | 0.21      | 17.32   |
| \( \mu \)  | 0.90      | 40.10   |
| \( X \)    | 0.48      | 19.06   |
| \( Y \)    | 0.25      | 10.50   |

The relationships between staff provision quality, room quality, and perceived safety were similarly high as stated in table 3 in parameter \( Q \). Although there were significant statistical associations among these three factors and whether or not there were issues throughout the customer's visit, their magnitude was noticeably smaller (Ranging from .21 to .30), a potential reflection of the combined impacts of arbitrary events and a binary indicator. As stated in table 3, the standardized structural coefficients for the quality of the personnel services with the average value \( \gamma = 0.25 \) where (\( \gamma_1 = 0.32, p < .05 \)) and the quality of the room (\( \gamma_2 = 0.34, p < .05 \)) were shown to be near twice as large as the coefficients connecting felt security to the hotel assessment construct (\( \gamma_3 = 0.18, p < .05 \)) and problems with the guest's stay (\( \gamma_4 = 0.19, p < .05 \)) to the assessment framework for hotels. These four factors together explained 78% of the variation in the rating construct.

Discussion

To create bigger sample sizes and give fast input for continual process efficiency, hoteliers have steadily adopted the usage
of paperless guest comment cards, or online customer surveys (González et al., 2007). The research used an internet QMS to administer a sample of online customer experience questionnaires from two overpriced full-service hotels in Medan, Indonesia. Prior research on guest experience, potential purchase purpose, and the characteristics of accommodations, facilities, and compensation benefits that impact guests' perceptions of value, satisfaction, greater chance to endorse, and prospective purchase decision briefed the structural equation modeling, which explored the causal relations of the quality attributes at the same time. The three observed items relating to hotel staff attitude and service: greeting, friendliness, and competence in performing services have significantly braced the staff service quality theory.

The key expressions of staff service quality include a greeting by front desk personnel as the initial impression, staff friendliness met by customers, and service capacity displayed by hotel frontline workers (Stefano et al., 2015). Room cleanliness and bathroom cleanliness, the two observable elements for assessing room quality, give strong support for the concept of room quality. The sole observed variable of safety is relevant in evaluating guests' perceptions of security guards; nevertheless, it is less important for visitors when compared to staff service quality and room quality because Medan is seen as a generally secure and family-friendly venue.

The category of difficulties, as evaluated by the dichotomous variable, is particularly important in evaluating the hotel experience, since 55% of customers cited service or facility-related issues. It was discovered that multiple reasons for these concerns were given, including bathrooms (13%), noise (12%), TV/remote (10%), rooms (9%), sanitation (9%), broken items (7%), billing (5%), check-in (4%), reservations (3%), staff personality (4%), water pressure (2%), heater/HAVC (3%), check-out (2%), and related problems (19%) denoting to certain features and services like Internet access, alarm clocks, shampoo, safes, etc. The study evidence that looked at the relationships between the evaluated hotel services and value perception, enjoyment, desire to come back, and the possibility to advise showed that both the directly measured and the unmeasurable aspects of staff product attributes play a major role in improving the result of the hotel customer experience. This phenomenon is in a line with the works of previous researchers (El-Adly, 2019; Jalil et al., 2016). Intangibly, providing exceptional service to customers to increase their perceived value, contentment, the likelihood of returning, and word-of-mouth recommendations are regarded as significant human assets. The cleanliness of the guest room and bathroom has a significant effect on how positively guests perceive their trip adventures since they desire clean and comfortable accommodations. The visitors' assessment of security reveals a considerable influence on their consumer perception, contentment, and inclination to return and suggest the hotel. The construction of difficulties, which covers any potential service and facilities issues during the passenger's stay at the hotel, was also taken into consideration by hotel visitors as having a substantial impact on their perception of value, contentment, and intent to return and refer.

Because 21 percent of the variation is not described by the assessment construct, the detected model also exposed substantial moderating effects on the assessment impacting the visitors' professed quality, contentment, desire to return, and recommendation (Prayag et al., 2017). Travel preferences of various categories of visitors, business vs pleasure, duration of stay, and market origin might all have an impact (e.g., national vs. global tourists), social background, or other
Demographics, which need further examination.

Demographic information, as well as attitudinal and cognitive features, should be considered when conducting consumer behavior research using internet survey approaches because they could be viewed as the moderating factors affecting the consumers' sense of value, satisfaction, and persistent behaviors to capture market share and maintain profitable development, the hotel staff must prioritize customer pleasure and brand recognition. All hotel businesses' missions contain strategic goals for increasing guests' consumer perception and happiness as well as encouraging them to recommend and revisit. This research used internet guest customer feedback to analyze hotel customers' perceived value, satisfaction, desire to return, and referrals. It is emphasized as the combined effect of obvious hotel amenities and subjective employee services. To capture market share and maintain profitable development, the hotel staff must prioritize customer pleasure and brand recognition (Sim et al., 2006). The strategic objectives that are included in the missions of all hospitality firms include raising the perceived value and contentment of visitors, as well as motivating them to return and refer. The combined influence of tangible hotel facilities and intangible staff services is what is highlighted as the driver for guests' perceived value, contentment, intention to return, and recommendations that were studied in this study utilizing online guest customer feedback.

To guarantee a clean room for every visitor upon admission, management should concentrate on housekeeping activities, training detail-oriented, committed cleaning employees, and developing efficient room inspection methods. The intangible service quality provided by hotel employees is an equally significant component in affecting visitors' perceptions of value, contentment, and loyal behavior. An individual's attitude, as demonstrated by their politeness and friendliness, as well as their skill in providing services, may make or break a visitor's stay at a hotel (Rather et al., 2019). Any kind of experience, whether good or bad, will impact how customers perceive value, feel satisfied, and behave in terms of loyalty. The workers at the hotel must be well trained, committed to providing excellent customer service, and possess a variety of skill sets. Every employee of the company has a common knowledge of its values and principles thanks to a strong corporate culture. It encourages workers to become more invested in their work and to identify more strongly with the brand image even though Medan city is a secure, family-friendly destination in this survey, security, and safety remain the top concerns for hotel management (Sutabri et al., 2018).

Hotels can safeguard their guests' protection and possessions in some ways, including the use of electronic keys, surveillance of common areas, the provision of in-room safes for the storage of individual possessions, well-lit parking lots at night, as well as police checkpoints of the public areas all over the night. Guests will feel more secure as a result of these safety and security measures, which might improve their desire to suggest and revisit the resort.

The perceived quality, pleasure, and willingness to return and refer are all correlated with service issues. Although hotel management may have put in place clearly defined operational processes to reduce any potential failures in service interactions, human mistakes are unavoidable since service is performed by humans. However, for a pleasurable stay, hotel amenities and services must be kept in good condition. However, how hotel management and personnel handle service issues are crucial to regaining the respect and loyalty of customers (Hwang et al., 2014).

In reality, hotel management is committed to identifying and resolving any
issues that guests report in real-time. When QMS is used effectively, hotel management can see the frequency and specific characteristics of service issues reported by visitors following their stay. Recurring issues with customer satisfaction, services, and equipment signal serious worries about certain employees or facilities and demand the top management’s quick action and attention. With regular maintenance operations and efficient service personnel training, such data may help management avoid possible issues from repeating.

As part of efficient customer engagement, hotel management should also inform guests through email of the improvements they made in response to input from visitors. Some consumers may vent their frustrations publicly via online review websites or social media channels if the management fails to interact with them to resolve the issues. This will have a more detrimental effect on the hotel brand and the company’s success (Foroudi, 2019). To enable department managers and front-line workers to promptly and effectively address any service issues that visitors may have while staying at the hotel, hotel management must create operational processes for managing service failure. Managers may effectively manage customer experience by anticipating and addressing any potential service and facility-related issues by leveraging the customer reviews obtained from the customers to identify recurring issues.

Since the data collected came from hotel guests who experienced the level of service, it is anticipated that the study's findings will be a reliable representation of the quality of hotel services. A metric of service quality in each area of the hotel that may be used as the foundation for hotel management policies and decision-making is assessment in the form of reflection. The results of this study offer a fresh perspective for enhancing the quality of hotel services not only in Indonesia but also throughout the globe based on the validity of the results and the correctness of the data acquired. Although just a small number of respondents provided the information for this study, the findings are nonetheless highly helpful for enhancing.

Conclusions

The results of this study have revealed the effectiveness of using structural equation modeling in measuring the level of patient satisfaction of hotel service users. This research utilizes structural equation modeling to identify the elements that determine visitor experience while using numerous features rather than one-dimensional ranking systems and a significant sample of online guest customer feedback, however, it has certain limitations.

First, the online guest feedback form omitted a question that is often an essential component of the visitors in full-service hotels: the perception of value and satisfaction with the food and beverage offerings. As a result, the focus of this study was on customer satisfaction with the room division operations. Second, the sample was taken from the clientele of two full-service hotels in the Southeast United States that were overpriced. As a result, it may not be possible to generalize the findings of this study to luxury hotel markets or various geographical areas. Thirdly, although being acknowledged as a significant moderating factor in studies on consumer happiness and loyalty, consumer demography is not considered in this model due to a lack of data. Consumers' assessments of their own experiences and levels of satisfaction with hospitality-related goods and services are influenced by demographic factors including gender, age, education level, and income. To find the basic moderating impact, future structural models must investigate demographic aspects.
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Notes on Contributors

Siti Normi is a senior lecturer in Management Program, Universitas Methodist Indonesia, Medan. Her research interests are human resource management, Risk Management, Good Governance, Audit forensics, strategic management, and Capital market.

Mangasa Panjaitan is a senior lecturer in Management Program, Universitas Methodist Indonesia, Medan. His research interests are company management, human resource management, Risk Management, and Good Governance.

References

Berezan, O., Millar, M., & Raab, C. (2014). Sustainable Hotel Practices and Guest Satisfaction Levels. *International Journal of Hospitality and Tourism Administration, 15*(1), 1–18. https://doi.org/10.1080/15256480.2014.872884

del Río-Rama, M. de la C., Álvarez-García, J., & Oliveira, C. (2019). Quality practices and their influence on customer results: an empirical study. *Current Issues in Tourism, 22*(7), 806–826. https://doi.org/10.1080/13683500.2017.1320361

El-Adly, M. I. (2019). Modelling the relationship between hotel perceived value, customer satisfaction, and customer loyalty. *Journal of Retailing and Consumer Services, 50*, 322–332. https://doi.org/10.1016/j.jretconser.2018.07.007

Foroudi, P. (2019). Influence of brand signature, brand awareness, brand attitude, brand reputation on hotel industry’s brand performance. *International Journal of Hospitality Management, 76*(2), 271–285. https://doi.org/10.1016/j.ijhm.2018.05.016

González, M. E. A., Comesaína, L. R., & Breá, J. A. F. (2007). Assessing tourist behavioral intentions through perceived service quality and customer satisfaction. *Journal of Business Research, 60*(2), 153–160. https://doi.org/10.1016/j.jbusres.2006.10.014

Hussain, R., Al Nasser, A., & Hussain, Y. K. (2015). Service quality and customer satisfaction of a UAE-based airline: An empirical investigation. *Journal of Air Transport Management, 42*, 167–175. https://doi.org/10.1016/j.jairtraman.2014.10.001

Hwang, S. Y., Lai, C. Y., Jiang, J. J., & Chang, S. (2014). The identification of noteworthy hotel reviews for hotel management. *Proceedings - Pacific Asia Conference on Information Systems, PACIS 2014*. https://doi.org/10.17705/1pais.06402

Ibrahim, R., Boerhannoeddin, A., & Bakare, K. K. (2017). The effect of soft skills and training methodology on employee performance. *European Journal of Training and Development, 41*(4), 388–406. https://doi.org/10.1108/EJTD-08-2016-0066

Jalil, N. A. A., Fikry, A., & Zainuddin, A. (2016). The Impact of Store Atmospherics, Perceived Value, and Customer Satisfaction on Behavioural Intention. *Procedia Economics and Finance, 37*, 538–544. https://doi.org/10.1016/s2212-5671(16)30162-9

Kang, D., & Park, Y. (2014). Review-based measurement of customer satisfaction in mobile service: Sentiment analysis and VIKOR approach. *Expert Systems with Applications, 41*(4), 1041–1050.
Khan, I., Garg, R. J., & Rahman, Z. (2015). Customer Service Experience in Hotel Operations: An Empirical Analysis. *Procedia - Social and Behavioral Sciences, 189*, 266–274. https://doi.org/10.1016/j.sbspro.2015.03.222

Liat, C. B., Mansori, S., Chuan, G. C., & Imrie, B. C. (2017). Hotel Service Recovery and Service Quality: Influences of Corporate Image and Generational Differences in the Relationship between Customer Satisfaction and Loyalty. *Journal of Global Marketing, 30*(1), 42–51. https://doi.org/10.1080/08911762.2016.1262932

Liat, C. B., Mansori, S., & Huei, C. T. (2014). The Associations Between Service Quality, Corporate Image, Customer Satisfaction, and Loyalty: Evidence From the Malaysian Hotel Industry. *Journal of Hospitality Marketing and Management, 23*(3), 314–326. https://doi.org/10.1080/19368623.2013.796867

Loureiro, S. M. C., & Kaufmann, H. R. (2018). The role of online brand community engagement on positive or negative self-expression word-of-mouth. *Cogent Business and Management, 5*(1), 1–24. https://doi.org/10.1080/23311975.2018.1508543

O’Neill, J. W., & Mattila, A. S. (2004). Hotel Branding Strategy: Its Relationship to Guest Satisfaction and Room Revenue. *Journal of Hospitality & Tourism Research, 28*(2), 156–165. https://doi.org/10.1177/1096348004264081

Pandey, M. M. (2016). Evaluating the service quality of airports in Thailand using fuzzy multi-criteria decision making method. *Journal of Air Transport Management, 57*, 241–249. https://doi.org/10.1016/j.jairtraman.2016.08.014

Park, S., Kwun, D. J., Park, J. Y., & Bufquin, D. (2021). Service Quality Dimensions in Hotel Service Delivery Options: Comparison between Human Interaction Service and Self-Service Technology. *International Journal of Hospitality and Tourism Administration, 23*(5), 1–28. https://doi.org/10.1080/15256480.2021.1935392

Prayag, G., Hosany, S., Muskat, B., & Del Chiappa, G. (2017). Understanding the Relationships between Tourists’ Emotional Experiences, Perceived Overall Image, Satisfaction, and Intention to Recommend. *Journal of Travel Research, 56*(1), 41–54. https://doi.org/10.1177/0047287516620567

Rather, R. A., Tehseen, S., Itoo, M. H., & Parrey, S. H. (2019). Customer brand identification, affective commitment, customer satisfaction, and brand trust as antecedents of customer behavioral intention of loyalty: An empirical study in the hospitality sector. *Journal of Global Scholars of Marketing Science, 29*(2), 196–217. https://doi.org/10.1080/21639159.2019.1577694

Rita, P., Oliveira, T., & Farisa, A. (2019). The impact of e-service quality and customer satisfaction on customer behavior in online shopping. *Helion, 5*(10), 1–14. https://doi.org/https://doi.org/10.1016/j.heliyon.2019.e02690

Santouridis, I., & Veraki, A. (2017). Customer relationship management and customer satisfaction: the mediating role of relationship quality. *Total Quality Management and Business Excellence, 28*(9–10), 1122–1133. https://doi.org/10.1080/14783363.2017.1303889
Sim, J., Mak, B., & Jones, D. (2006). A model of customer satisfaction and retention for hotels. *Journal of Quality Assurance in Hospitality and Tourism, 7*(3), 1–23. https://doi.org/10.1300/J162v07n03_01

Srivastava, M., & Kaul, D. (2014). Social interaction, convenience and customer satisfaction: The mediating effect of customer experience. *Journal of Retailing and Consumer Services, 21*(6), 1028–1037. https://doi.org/10.1016/j.jretconser.2014.04.007

Stefano, N. M., Casarotto Filho, N., Barichello, R., & Sohn, A. P. (2015). A fuzzy SERVQUAL based method for evaluated of service quality in the hotel industry. *Procedia CIRP, 30*, 433–438. https://doi.org/10.1016/j.procir.2015.02.140

Sutabri, T., Suryatno, A., Setiadi, D., & Negara, E. S. (2018). Improving naïve bayes in sentiment analysis for hotel industry in Indonesia. *Proceedings of the 3rd International Conference on Informatics and Computing, ICIC 2018, March*, 1–6. https://doi.org/10.1108/IAC.2018.8780444

Truong, N. T., Dang-Pham, D., McClelland, R. J., & Nkhoma, M. (2020). Service innovation, customer satisfaction and behavioural intentions: a conceptual framework. *Journal of Hospitality and Tourism Technology, 11*(3), 529–542. https://doi.org/10.1108/JHTT-02-2019-0030

Xu, F., La, L., Zhen, F., Lobang, T., & Huang, C. (2019). A data-driven approach to guest experiences and satisfaction in sharing. *Journal of Travel and Tourism Marketing, 36*(4), 484–496. https://doi.org/10.1080/10548408.2019.1570420

Zhu, L., Lin, Y., & Cheng, M. (2020). Sentiment and guest satisfaction with peer-to-peer accommodation: When are online ratings more trustworthy? *International Journal of Hospitality Management, 86*, 102369. https://doi.org/10.1016/j.ijhm.2019.102369