



The Impact of Online Reviews on Consumer Behavior in the Hospitality Industry: A Case Study to top 10 Five-Star Hotels in Bangladesh

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ABSTRACT

This study attempts to analyze customer perceptions and identify the key service quality dimensions reflected in online reviews of the top ten five-star hotels in Bangladesh. Using text mining, semantic network analysis, and CONCOR clustering, the study examines the attributes most frequently discussed by hotel guests and explores how these attributes are interconnected in shaping customer evaluations of luxury hotel experiences. As electronic word-of-mouth has become an important source of information influencing consumer decision-making, understanding customer experiences is essential for improving service quality and maintaining competitiveness in the hospitality industry. A total of 12,074 customer reviews were collected from Google Reviews and TripAdvisor and analyzed using text mining techniques. Keyword frequency analysis was conducted to identify the most frequently mentioned terms associated with hotel experiences. Semantic Network Analysis was subsequently employed to examine the relationships among keywords using frequency, degree centrality, and eigenvector centrality measures. In addition, CONCOR (Convergence of Iterated Correlations) analysis was performed to identify clusters of conceptually related keywords.

The findings revealed that customer perceptions of luxury hotels in Bangladesh are structured around four major dimensions: Intangible Service, Physical Environment, Location, and Purpose. Keywords such as “hotel,” “good,” “Dhaka,” “food,” and “service” emerged as the most influential terms within the review network. The results indicate that both service-related and environment-related attributes play significant roles in shaping customer satisfaction and overall hotel experiences. These findings provide practical insights for hotel managers seeking to enhance service quality, strengthen customer satisfaction and loyalty, and improve their competitive position in the hospitality market. The study also contributes to the growing body of literature on online review analytics and service quality assessment in emerging tourism destinations.

1. Introduction

The rapid growth of digital technologies has transformed how consumers search for information, evaluate alternatives, and make purchasing decisions in the hospitality industry. Online reviews have emerged as one of the most influential forms of electronic word-of-mouth

(eWOM), significantly affecting consumer trust, hotel selection, and booking intentions (Litvin et al., 2008; Xiang & Gretzel, 2010). Tourism eMediaries such as TripAdvisor and Google Reviews provide travelers with access to large volumes of user-generated content, enabling prospective guests to evaluate service quality based on the experiences of previous customers. Research suggests that consumers

increasingly rely on online reviews because they are perceived as more credible and informative than traditional marketing communications (Filieri & McLeay, 2014).

The hospitality industry has witnessed growing academic and managerial interest in leveraging online review data to understand customer satisfaction and service quality. Traditional service quality studies have primarily relied on survey-based instruments such as SERVQUAL (Parasuraman et al., 1988). However, the increasing availability of online reviews has enabled researchers to capture authentic customer experiences and evaluate service performance through large-scale textual data (Sparks & Browning, 2011; Mariani & Baggio, 2022). User-generated reviews provide valuable insights into customer expectations, perceived service quality, emotional responses, and overall satisfaction, thereby offering a richer understanding of guest experiences than conventional survey methods alone (Ye et al., 2009).

Bangladesh represents an important yet underexplored context for hospitality research. The travel and tourism sector plays an increasingly significant role in the country's economy, contributing to employment generation, foreign exchange earnings, and national development. As domestic and international travel continue to grow, the luxury hospitality segment has expanded considerably, resulting in heightened competition among five-star hotels. Guests in this segment typically exhibit high expectations regarding service quality, reliability, responsiveness, personalization, and overall experience (Knutson, 1988). Consequently, understanding customer perceptions has become essential for maintaining competitiveness and enhancing the international image of Bangladesh's tourism industry.

Despite the extensive literature on online reviews and hotel service quality, several research gaps remain. First, most studies examining online reviews have been conducted in developed economies or globally recognized tourism destinations, leaving emerging hospitality markets relatively underrepresented (Xiang et al., 2017). Second, previous studies have often focused on individual hotels, limited datasets, or survey-based assessments of service quality, rather than large-scale analyses of user-generated content across multiple luxury hotel brands. Third, relatively few studies have explored how big-data analytics of online reviews can reveal customer satisfaction patterns and service quality dimensions within the context of Bangladesh's five-star hotel sector.

To address these gaps, the present study analyzes 12,074 customer reviews collected from TripAdvisor and Google Reviews for ten highly rated five-star hotels in Bangladesh, including Amari Dhaka, The Westin Dhaka, Radisson Blu Dhaka Water Garden, Holiday Inn Dhaka City Centre, and other comparable luxury properties.

The purpose of this study is to analyze customer perceptions and identify the key service quality dimensions

reflected in online reviews of the top ten five-star hotels in Bangladesh. Using text mining, semantic network analysis, and CONCOR clustering, the study examines the attributes most frequently discussed by hotel guests and explores how these attributes are interconnected in shaping customer evaluations of luxury hotel experiences.

By applying a systematic analysis of customer-generated feedback, the study identifies key dimensions of service quality that influence guest satisfaction and uncovers recurring themes in customer experiences. The study contributes to the literature by extending research on eWOM, online review analytics, and hospitality service quality to an emerging tourism market while offering practical insights for hotel managers seeking to enhance customer satisfaction and service excellence in Bangladesh's luxury hotel industry.

2. Literature Review

2.1. Bangladesh Hotel Industry

The hospitality industry in Bangladesh has witnessed significant growth in recent years, driven by increased tourism, business travel, urbanization, and rising disposable income. The country's rich cultural heritage, natural attractions, and emerging urban centers have attracted both domestic and international travelers. International hotel chains such as Marriott, InterContinental, Radisson, and Holiday Inn have entered the market, encouraged by government initiatives aimed at improving tourism infrastructure and attracting foreign investment (Kweon, 2018). As a result, the luxury hospitality segment has expanded considerably, increasing competition among five-star hotels and emphasizing the importance of delivering superior service quality and customer experiences.

Despite these positive developments, the industry continues to face challenges including inadequate infrastructure, limited high-quality accommodations outside major metropolitan areas, and a shortage of skilled hospitality professionals (Lovelock & Wirtz, 2004). High operational costs and varying levels of digital adoption further limit the ability of some hotels to compete with international standards (He et al., 2013). Consequently, hotel managers are increasingly seeking innovative approaches to understand customer expectations, improve service quality, and enhance guest satisfaction.

In recent years, the growth of digital platforms has provided hotels with access to vast amounts of customer-generated information. Online reviews posted on platforms such as TripAdvisor and Google Reviews offer valuable insights into customer experiences and perceptions. These reviews serve as an important source of market intelligence, allowing hotels to identify strengths and weaknesses in service delivery and make data-driven decisions to improve competitiveness.

2.2. Big Data Analytics in Hospitality

The Utilization of Big Data Analytics and Smart Technology in the Global Hospitality Industry Big data analytics is playing an increasingly important role in transforming the global hospitality industry by improving decision-making, enhancing the customer experience, and boosting operational efficiency (Choi & Chu, 2001). Hospitality organizations are increasingly adopting big data analytics and digital transformation strategies (Maria & Serrat, 2011). Big data refers to large and complex datasets generated from various sources, including online reviews, social media interactions, booking platforms, and customer transactions. The hospitality industry utilizes big data analytics to better understand customer behavior, personalize services, forecast demand, optimize pricing strategies, and improve operational efficiency.

Globally, hotels employ machine learning algorithms, predictive analytics, and artificial intelligence technologies to analyze guest preferences and enhance customer experiences. Smart technologies such as AI-powered chatbots, Internet of Things (IoT)-enabled rooms, automated check-in systems, and recommendation engines have transformed service delivery and guest engagement (Kotler et al., 2017). These technologies enable hotels to provide personalized experiences while improving operational effectiveness and customer satisfaction.

In Bangladesh, however, the adoption of big data analytics remains concentrated among luxury hotels due to barriers such as high implementation costs, limited technical expertise, and insufficient digital infrastructure (Mattila, 1999). While some leading hotels have begun integrating analytics into revenue management, customer relationship management, and service optimization processes, broader industry adoption remains relatively limited. Nevertheless, advancements in artificial intelligence, cloud computing, and data analytics are expected to accelerate digital transformation within the country's hospitality sector.

2.3. Electronic Word-of-Mouth (e-WOM) and Online Reviews

The emergence of digital communication platforms has significantly altered the way consumers obtain and share information regarding hospitality services. Electronic word-of-mouth (e-WOM) refers to any positive or negative statement made by current, former, or potential customers about a product, service, or company through Internet-based platforms (Hennig-Thurau et al., 2004). In the hospitality industry, online reviews have become one of the most influential forms of e-WOM, affecting customer perceptions, trust, booking intentions, and hotel reputation.

Platforms such as TripAdvisor, Google Reviews, and Booking.com allow travelers to share their experiences and evaluate hotel services based on various attributes including room quality, cleanliness, food and beverage offerings,

location, and staff performance. Research indicates that consumers often consider online reviews to be more credible than traditional advertising because they reflect actual customer experiences (Filieri & McLeay, 2014). Consequently, online reviews play a critical role in shaping travel decisions and influencing consumer behavior.

Several studies have demonstrated the significant impact of e-WOM on hospitality outcomes. Litvin et al. (2008) highlighted the strategic importance of online reviews in tourism and hospitality management, while Sparks and Browning (2011) found that online reviews directly influence consumers' booking intentions and perceptions of trust. Similarly, Xiang and Gretzel (2010) emphasized that user-generated content has become a central component of travel information search behavior. Given the growing influence of e-WOM, analyzing online reviews provides valuable opportunities to understand customer expectations and evaluate service performance.

2.4. Hotel Service Quality and Customer Satisfaction

Service quality has long been recognized as a critical determinant of customer satisfaction and organizational success in the hospitality industry. Parasuraman et al. (1988) introduced the SERVQUAL model, which conceptualizes service quality through five dimensions: reliability, responsiveness, assurance, empathy, and tangibles. These dimensions have been extensively applied in hospitality research to evaluate customer perceptions of service performance.

Previous studies consistently report a positive relationship between service quality and customer satisfaction. Kandampully and Suhartanto (2000) found that customer satisfaction significantly influences loyalty and repeat visitation behavior in hotels. Similarly, Choi and Chu (2001) identified service quality as a major predictor of customer retention and hotel performance. As customer expectations continue to evolve, hotels must continuously monitor guest perceptions and adapt service offerings accordingly.

Online reviews provide a valuable mechanism for evaluating service quality because they capture authentic customer experiences and spontaneous evaluations. Unlike traditional survey instruments, online reviews offer rich qualitative information regarding specific aspects of hotel performance. Research by Ye et al. (2009) demonstrated that customer reviews significantly influence hotel sales performance and provide meaningful insights into guest satisfaction. Therefore, online review analysis represents an important complement to traditional service quality measurement approaches.

2.5. Text Mining, Semantic Network Analysis, and CONCOR Analysis

The rapid growth of online review platforms has generated substantial volumes of unstructured textual data, creat-

ing opportunities for researchers to apply advanced analytical techniques. Text mining has emerged as an effective approach for extracting meaningful information from large datasets of customer-generated content. Through text mining, researchers can identify frequently occurring keywords, customer sentiments, emerging themes, and service quality dimensions discussed in online reviews (He et al., 2013).

Beyond simple keyword analysis, semantic network analysis provides a systematic method for examining relationships among words and concepts within textual data. Semantic network analysis focuses on the co-occurrence of keywords and enables researchers to visualize and interpret the underlying cognitive structures embedded in customer narratives (Lee & Jeong, 2014). This approach has been widely adopted in tourism and hospitality research to investigate customer experiences, destination image, service quality, and tourist perceptions.

One of the most widely used techniques in semantic network analysis is CONCOR (Convergence of Iterated Correlations) analysis. CONCOR identifies clusters of keywords that share similar relational patterns within a network, thereby revealing latent thematic structures and conceptual groupings within textual datasets. Previous hospitality studies have successfully utilized semantic network analysis and CONCOR techniques to explore customer satisfaction dimensions, travel experiences, and destination perceptions from large-scale online review data (Kim & Stepchenkova, 2015; Park et al., 2019).

The integration of text mining, semantic network analysis, and CONCOR analysis offers a powerful framework for understanding customer experiences in hospitality settings. By examining relationships among frequently occurring terms and identifying thematic clusters, researchers can gain deeper insights into customer satisfaction drivers and service quality dimensions. Building upon this methodological foundation, the present study analyzes 12,074 online reviews from ten highly rated five-star hotels in Bangladesh to identify the key factors influencing guest satisfaction and hotel experiences.

2.6. Theoretical Foundation & Research Framework

The present study is grounded in service quality theory, servicescape theory, and hospitality customer experience literature. These theoretical perspectives provide a conceptual basis for understanding how customers evaluate hotel experiences and express their perceptions through online reviews.

Service quality theory suggests that customer satisfaction is influenced by both tangible and intangible service

attributes. The SERVQUAL framework developed by Parasuraman et al. (1988) proposes that customers evaluate service quality through dimensions such as reliability, responsiveness, assurance, empathy, and tangibles. Within the hospitality industry, these dimensions have been widely used to explain customer satisfaction and hotel performance (Choi & Chu, 2001). As online reviews contain detailed descriptions of guest experiences, they provide valuable insights into how customers perceive and evaluate service quality.

In addition to service quality theory, servicescape theory emphasizes the importance of the physical environment in shaping customer experiences (Bitner, 1992). Hotel facilities, room quality, cleanliness, dining experiences, and other tangible elements influence customer perceptions and behavioral responses. Consequently, online reviews frequently contain evaluations of both physical and service-related attributes, making them an important source of information for understanding customer experiences in hospitality settings.

Hospitality customer experience literature further suggests that customer evaluations are influenced by contextual factors such as destination characteristics and travel purpose (Pine & Gilmore, 1999; Oh et al., 2007). Guests may evaluate the same hotel differently depending on whether their visit is for business, leisure, family travel, or special occasions. Similarly, accessibility and location-related attributes often contribute to overall satisfaction and perceived value.

Drawing upon these theoretical perspectives, this study conceptualizes online reviews as reflections of customer evaluations of hotel service quality and experiences. Semantic network analysis and CONCOR analysis were employed to identify the underlying dimensions embedded within customer reviews. Based on the theoretical foundation and empirical findings, four dimensions emerged: Intangible Service, Physical Environment, Location, and Purpose. The Intangible Service dimension reflects interpersonal service encounters and service quality attributes proposed in SERVQUAL. The Physical Environment dimension corresponds to servicescape theory and tangible hotel attributes. The Location dimension captures destination and accessibility-related evaluations, while the Purpose dimension reflects the influence of travel motivations and consumption context on customer perceptions. Together, these dimensions form the research framework used to interpret customer evaluations of luxury hotel experiences in Bangladesh.



Figure1. Conceptual framework.

3. Methodology

3.1. Hotel Selection and Data Collection

A systematic research methodology was employed to examine customer perceptions of service quality reflected in online reviews of luxury hotels in Bangladesh. The study focused on the top ten five-star hotels operating in Bangladesh. Hotel selection was based on a combination of customer ratings, review volume, online visibility, and ranking positions on Google Reviews and TripAdvisor. Hotels were included if they were officially classified as five-star properties and consistently appeared among the highest-rated hotels across both platforms during the data collection period. This approach ensured that the selected hotels represented leading luxury hotels with substantial customer review activity. The final sample included Amari Dhaka, The Westin Dhaka, Radisson Blu Dhaka Water Garden, Holiday Inn Dhaka City Centre, Six Seasons Hotel, and other comparable five-star hotels.

Review data were collected from publicly accessible customer review pages on Google Reviews and TripAdvisor. The official names of the selected hotels were used as search keywords to retrieve customer reviews. A combination of manual extraction and an instant data-scraping tool was employed to collect the review data. Following the hotel selection and screening process, a total of 12,074 customer reviews were obtained and retained for analysis.

3.2. Data Screening and Preprocessing

Prior to analysis, several screening and preprocessing procedures were conducted to improve data quality and ensure analytical reliability. Only customer-generated reviews containing textual content were included in the study. Reviews without textual descriptions, duplicate entries, promotional content, management responses, and comments unrelated to hotel service experiences were excluded from the dataset. Duplicate reviews were identified through review matching and content verification procedures and subsequently removed.

The review texts were then cleaned by removing punctuation marks, special characters, numbers, hyperlinks, and non-textual elements. Common stopwords were eliminated

to improve the quality of keyword extraction and semantic analysis. Similar terms referring to the same concept were standardized using a thesaurus dictionary, while low-frequency and contextually irrelevant words were removed to reduce analytical noise. These preprocessing procedures ensured that the dataset accurately reflected customer evaluations and service quality perceptions.

The cleaned dataset was subsequently analyzed using text mining techniques. Keyword frequency analysis was first conducted to identify the most frequently mentioned terms in customer reviews. Semantic Network Analysis was then employed to examine the relationships among keywords through frequency, degree centrality, and eigenvector centrality measures. Finally, CONCOR (Convergence of Iterated Correlations) analysis was performed to identify clusters of conceptually related keywords and reveal the major dimensions underlying customer evaluations of luxury hotel experiences.

A systematic research methodology was employed to examine customer satisfaction and identify the key factors influencing guest experiences in Bangladesh's luxury hotel sector. The study focused on online customer reviews of the top ten five-star hotels operating in Bangladesh. Hotel selection was based on rankings and customer ratings available on major travel and booking platforms, particularly Google Reviews and TripAdvisor, during the data collection period. Hotels were included if they were officially classified as five-star properties and consistently ranked among the highest-rated hotels across both platforms. Additional selection criteria included overall rating, review volume, online visibility, and customer engagement. Based on these criteria, the final sample comprised Amari Dhaka, The Westin Dhaka, Radisson Blu Dhaka Water Garden, Holiday Inn Dhaka City Centre, Six Seasons Hotel, and other comparable five-star hotels.

Online review data were collected from publicly accessible customer review pages on Google Reviews and TripAdvisor using a combination of manual extraction and an instant data-scraping tool. The official names of the selected hotels were used as search keywords on both platforms. Only customer-generated reviews that contained

textual content were included in the analysis. Duplicate reviews, management responses, promotional content, and comments unrelated to hotel service experiences were excluded. After applying the inclusion and exclusion criteria, a total of 12,074 valid customer reviews were retained for analysis.

Data preprocessing was conducted prior to the text mining and network analysis procedures. First, duplicate reviews were identified and removed through review matching and content verification. Subsequently, the review texts were cleaned by removing punctuation marks, special characters,

numbers, hyperlinks, and other non-textual elements. Common stopwords were excluded to improve the quality of the textual analysis. Similar terms referring to the same concept were standardized using a thesaurus dictionary, while low-frequency and contextually irrelevant terms were removed to reduce analytical noise. The resulting dataset was then used for keyword frequency analysis, semantic network analysis, and CONCOR clustering to identify the major dimensions of customer satisfaction reflected in online hotel reviews.

Table 1. Number of reviews according to hotel brands (Tripadvisor)

Rank	Brands	No.of Reviews
1	Amari Dhaka Bangladesh	1159
2	Radisson Blu Dhaka Water Garden	318
3	Holiday Inn Dhaka City Centre, an IHG Hotel	1536
4	Six Seasons Hotel	2084
4	The Westin Dhaka	3481
6	Renaissance Dhaka Gulshan Hotel	885
7	Dhaka Regency Hotel & Resort	685
8	Pan Pacific Sonargaon Dhaka	586
9	InterContinental Dhaka, an IHG Hotel	229
10	Le Méridien Dhaka	1111
Total/Average		12074/1208

To uncover hidden patterns and beneficial knowledge from unstructured text, text mining techniques utilizing information retrieval and natural language processing were applied. During the data refinement stage, meaningless articles, prepositions, and pronouns were removed, leaving only terms relevant to the hotel experience. From the refined data, the top 100 most frequent terms were selected, and a word matrix was constructed for subsequent analysis. Furthermore, the overall satisfaction score from the reviews was established as a dependent variable to determine the general level of hotel experience satisfaction.

To understand the structural relationships and hidden underlying meanings between words, a semantic network analysis was conducted on the top 100 frequent words using the UCINET 6.0 package and the NetDraw visualization tool. Freeman’s degree centrality and eigenvector centrality were measured to identify which words had the most connections and the greatest impact within the network. A Convergence of Iterated Correlation (CONCOR) analysis was performed to repeatedly analyze correlations and group the keywords into distinct clusters (subgroups) based on similarities. This helped figure out the specific facets of the hotel experience that customers are most interested in.

4. Results

4.1. Frequency Analysis

To find the words most frequently used in customer reviews, Table 2 listed the top 100 frequent words associated with the hotel experience. The top five words were ‘hotel’,

‘good’, ‘dhaka’, ‘food’, and ‘service’. The distribution of frequently used words is shown in Figure 3 and Figure 4, and the result of visualizing the network that reflects the frequency is Figure 5.

There were words describing the food, such as ‘food’, ‘breakfast’, ‘restaurant’, ‘dining’, ‘bar’, ‘drink’ and describing the service, such as ‘star’, ‘service’, ‘hospitality’, ‘care’. Likewise, there were the words related to facility, such as ‘room’, ‘resort’, ‘view’, ‘pool’, ‘spa’, ‘villa’, ‘facility’, ‘beach’, ‘garden’, ‘bathroom’, ‘lake’ and the words related to the location or name of the hotel, such as ‘place’, ‘locate’, ‘Dhaka’.

4.2. Frequency Analysis

The semantic network analysis identifies the relationship between words and expresses the connection between them. The centrality and CONCOR analyses of keywords were performed. The degree centrality is a simple centrality measure that counts how many neighbors a node has and refers to the degree to which a word has many connections and becomes central, and the more connections it has, the greater its impact on other words and the more dominant it can be. The eigenvector centrality extends the concept of connective centrality by considering not only the number of words connected, but also how important a connected relationship is. Thus, it is a useful indicator for finding the most influential central node in the network. It is sometimes used to measure a node’s influence in the network. It performs matrix calculations to determine adjustments.

Table 2. Top 100 frequent words from the online hotel reviews

Rank	word	freq	rank	word	freq	rank	word	freq
1	hotel	556	34	city	63	67	ambiance	37
2	good	338	35	like	61	68	six	37
3	dhaka	318	36	hospitality	60	69	attentive	36
4	food	302	37	dinner	60	70	spacious	36
5	service	279	38	item	59	71	airport	35
6	room	261	39	view	57	72	heart	35
7	staff	216	40	comfortable	57	73	staying	34
8	place	210	41	facilities	56	74	many	34
9	nice	202	42	gulshan	53	75	swimming	34
10	stay	177	43	delicious	52	76	fantastic	33
11	great	162	44	services	52	77	options	33
12	buffet	146	45	always	50	78	guest	32
13	location	142	46	stayed	49	79	wonderful	32
14	2experience	121	47	bangladesh	48	80	dining	32
15	one	113	48	environment	47	81	iftar	31
16	best	101	49	overall	47	82	people	30
17	quality	96	50	business	47	83	offers	30
18	friendly	95	51	highly	46	84	quite	30
19	excellent	94	52	area	45	85	regency	30
20	time	89	53	top	44	86	made	29
21	breakfast	88	54	beautiful	44	87	rooftop	29
22	luxury	85	55	family	43	88	high	29
23	restaurant	85	56	thank	42	89	seasons	29
24	really	79	57	every	41	90	everything	28
25	visit	78	58	amenities	41	91	westin	28
26	love	77	59	much	41	92	atmosphere	27
27	clean	76	60	helpful	40	93	perfect	27
28	amari	74	61	recommend	40	94	security	27
29	pool	74	62	intercontinental	40	95	everyone	27
30	amazing	71	63	recently	39	96	special	26
31	star	69	64	recommended	39	97	floor	26
32	went	69	65	exceptional	38	98	get	26
33	enjoy	65	66	just	38	99	modern	26
						100	Variety	26

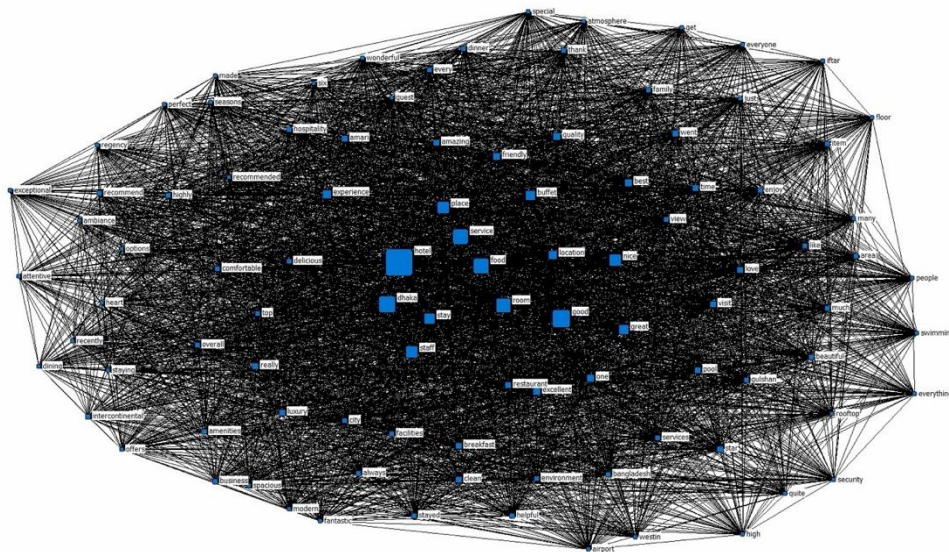
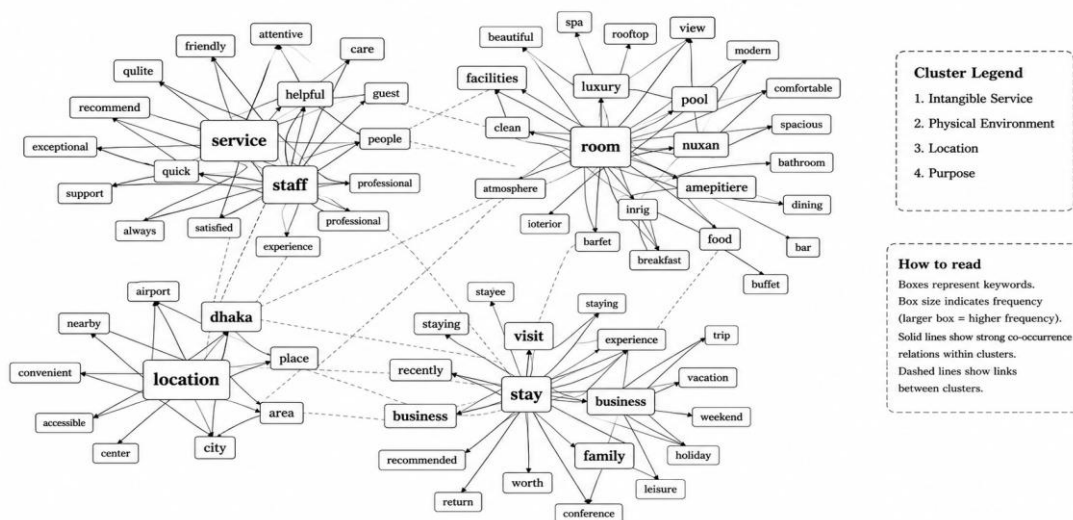


Figure 2. Keyword visualization of network analysis

CONCOR Cluster Map of Hotel Review Keywords



Note: Only the strongest 150 links are displayed for clarity. Box size is proportional to keyword frequency.

Figure 3. Elaborated keyword visualization of network analysis.

CONCOR (Convergence of Iterated Correlations) analysis was employed because it enables researchers to identify structurally equivalent groups of keywords that exhibit similar relational patterns within a semantic network. Unlike simple frequency analysis, which only reveals how often words appear, CONCOR analysis identifies latent thematic structures by clustering keywords according to their co-occurrence relationships. This approach has been widely applied in tourism and hospitality research to uncover customer experience dimensions, destination image attributes, and service quality factors embedded within large volumes of user-generated content (Kim & Stephenkova,

2015; Park et al., 2019). Given the large number of online reviews analyzed in this study, CONCOR analysis was considered appropriate for identifying the underlying dimensions of customer satisfaction reflected in hotel guests' narratives.

The results of the CONCOR analysis revealed four major clusters that were closely interconnected within the semantic network. The cluster labels were assigned based on the dominant keywords within each group and were interpreted using established hospitality and tourism theories.

The first cluster, labeled "Intangible Service," contained keywords such as service, staff, hospitality, friendly, atten-

tive, helpful, care, excellent, quality, and guest. These terms primarily represent interpersonal interactions and service delivery processes experienced by customers. The cluster corresponds closely with the SERVQUAL dimensions of responsiveness, assurance, and empathy, which emphasize employee behavior, service competence, and customer care (Parasuraman et al., 1988). Previous hospitality studies have consistently identified employee service performance as a major determinant of customer satisfaction and loyalty (Choi & Chu, 2001; Kandampully & Suhartanto, 2000).

The second cluster, labeled "Physical Environment," included keywords such as room, pool, facilities, amenities, luxury, clean, beautiful, atmosphere, ambiance, rooftop, spa, and modern. These terms describe the tangible and physical aspects of the hotel environment. The interpretation of this cluster is supported by servicescape theory, which suggests that the physical environment significantly influences customer perceptions, emotions, and overall experiences (Bitner, 1992). Similar dimensions have frequently been identified in hospitality studies examining hotel service quality and customer experiences through online reviews (Walls et al., 2011).

The third cluster, labeled "Location," consisted of keywords such as Dhaka, Gulshan, airport, city, area, place, and location. These terms reflect the geographical accessibility and convenience of hotel properties. Location has consistently been recognized as an important determinant of hotel

selection and customer satisfaction, particularly among business and international travelers (Yang et al., 2012). The prominence of this cluster suggests that accessibility and proximity to key destinations remain important considerations for hotel guests in Bangladesh.

The fourth cluster, labeled "Purpose," included keywords such as business, family, visit, stay, staying, recently, recommend, and experience. These keywords reflect the motivations and purposes underlying hotel consumption. This interpretation is supported by travel motivation literature, which emphasizes that travelers evaluate hospitality experiences differently depending on the purpose of travel, such as business, leisure, family, or special occasions (Crompton, 1979; Pearce & Lee, 2005). The emergence of this cluster indicates that customer evaluations are influenced not only by service attributes but also by the context and objectives of their hotel stay.

Overall, the four clusters demonstrate that customer satisfaction in Bangladesh's luxury hotel sector is shaped by a combination of interpersonal service quality, physical facilities, locational advantages, and travel-related motivations. The findings support existing hospitality literature suggesting that customer experiences are multidimensional and cannot be explained by a single service attribute alone. To improve transparency, Table 3 presents the keywords associated with each cluster and the rationale underlying the cluster naming process.

Table 3. Keywords associated with each CONCOR cluster and rationale for cluster naming

Cluster	Representative Keywords	Rationale for Label
Intangible Service	service, staff, hospitality, helpful, friendly, excellent	Reflects interpersonal service interactions and employee-related experiences
Physical Environment	room, food, facilities, clean, restaurant, comfortable	Reflects tangible aspects of hotel facilities and physical surroundings
Location	Dhaka, location, area, airport, convenient, access	Reflects accessibility and destination-related attributes
Purpose	business, stay, trip, family, leisure, visit	Reflects travel motivations and usage contexts

To visualize the results, Net Draw in UCINET 6.0 program was applied. The nodes are presented as blue squares and their sizes indicate their frequency, and the network shows the connectivity between them.

The result of the CONCOR analysis is shown in with visibility. There are four groups that were intricately interwoven with each other. After looking at the words in the group, the group was named as "Intangible Service", "Physical Environment", "Location", and "Purpose".

5. Conclusion

This study examined customer perceptions and service quality dimensions reflected in online reviews of the top ten five-star hotels in Bangladesh. Through text mining, semantic network analysis, and CONCOR clustering, the study identified four interconnected dimensions—Intangible Service, Physical Environment, Location, and Purpose—that

structure customer evaluations of luxury hotel experiences. The findings demonstrate that hotel guests place particular emphasis on service quality, staff interactions, room quality, food experiences, and location-related attributes when evaluating their hotel stays.

This study systematically analyzed online reviews of the top 10 five-star hotels in Bangladesh to identify key drivers of customer experience and satisfaction. Recognizing that online reviews are a critical determinant of consumer behavior, this research employed advanced text mining techniques to extract and refine unstructured data from TripAdvisor, ultimately gathering over 12,000 reviews. For the data analysis, the first process involved extracting keywords and calculating the frequency of words used by guests, which revealed that terms like 'hotel', 'good', 'dhaka', 'food', and 'service' were the most dominant. Based on this frequency analysis, the degree and eigenvector centrality of

the top 100 frequent words were measured using the UCINET 6.0 package to uncover their structural connections and identify the most influential keywords shaping guest perceptions. Subsequently, a CONCOR (Convergence of Iterated Correlation) analysis was performed to group these highly connected words into meaningful semantic clusters.

The analysis successfully categorized the multifaceted hotel experience into four distinct groups: "Intangible Service," "Physical Environment," "Location," and "Purpose". The "Intangible Service" cluster highlights the critical role of staff interactions, food quality, and general hospitality, whereas the "Physical Environment" emphasizes tangible assets like room conditions, pools, and luxury facilities. "Location" underscores the importance of accessibility, and "Purpose" reflects the diverse motivations of travelers, such as family vacations, honeymoons, or business trips. These findings reveal how deeply interconnected these factors are in contributing to overall satisfaction, reaffirming that online feedback significantly impacts consumer purchasing behavior and ultimate hotel success.

In conclusion, five-star hotels in Bangladesh can leverage these big data-driven insights to strategically improve service quality and proactively address common complaints. By focusing on the specific attributes prioritized within these four dimensions, hotels can shift from traditional service models to more personalized guest experiences, thereby enhancing customer loyalty and strengthening their competitive market position. As the travel and tourism sector continues to be a vital contributor to the national economy, maintaining world-class standards is imperative. Ultimately, by successfully meeting and exceeding guest expectations through these identified key factors, luxury hotels will not only boost their own profitability but also contribute positively to the sustainable growth and global image of Bangladesh's hospitality industry.

5.1. Theoretical Implications

This study contributes to the hospitality and service quality literature by providing empirical evidence on how customers evaluate luxury hotel experiences through online reviews. The semantic network and CONCOR analyses revealed four interconnected dimensions of customer evaluation: Intangible Service, Physical Environment, Location, and Purpose. These findings demonstrate that customer perceptions of hotel quality extend beyond isolated service attributes and are shaped by multiple interconnected aspects of the hospitality experience. The results support the view that customer satisfaction is a multidimensional construct influenced by both tangible and intangible aspects of service delivery (Parasuraman et al., 1988; Kandampully et al., 2015).

The Intangible Service cluster, which includes keywords associated with service encounters, staff behavior,

and customer interactions, reinforces the importance of interpersonal service quality in shaping customer satisfaction. This finding is consistent with previous hospitality studies that identify employee responsiveness, courtesy, and service performance as key determinants of guest satisfaction and loyalty (Choi & Chu, 2001; Kandampully et al., 2015). The prominence of keywords such as "service" within the semantic network further highlights the central role of intangible service elements in luxury hotel evaluations.

The Physical Environment cluster provides support for servicescape theory by demonstrating that guests frequently evaluate tangible aspects of the hotel experience, including facilities, rooms, cleanliness, and food-related attributes. The strong presence of keywords such as "hotel" and "food" suggests that physical surroundings and tangible service components significantly influence customer perceptions and satisfaction. These findings align with the servicescape framework proposed by Bitner (1992), which emphasizes the influence of physical environments on customer experiences and behavioral responses.

The identification of the Location cluster highlights the continued importance of accessibility and destination-related attributes in hospitality evaluations. The prominence of the keyword "Dhaka" indicates that customers evaluate hotel experiences not only in terms of internal service performance but also in relation to the surrounding destination context. This finding supports previous hospitality research suggesting that location serves as a critical attribute affecting customer choice, perceived value, and overall satisfaction (Chu & Choi, 2000; Rhee & Yang, 2015).

The Purpose cluster contributes to the understanding of customer experience by illustrating that guest evaluations are influenced by the reasons and contexts underlying hotel stays. Whether guests travel for business, leisure, or other purposes, their expectations and satisfaction levels are shaped by the extent to which hotels meet their specific needs. This finding is consistent with experiential consumption literature, which suggests that consumer evaluations are influenced by consumption context and purpose-driven expectations (Pine & Gilmore, 1999; Oh et al., 2007).

Overall, the study contributes to hospitality research by empirically demonstrating that customer evaluations reflected in online reviews are structured around four interconnected dimensions of service experience. Rather than viewing hotel service quality as a single construct, the findings support a multidimensional perspective in which intangible service, physical environment, location, and purpose collectively shape customer perceptions and satisfaction. By linking these dimensions directly to customer-generated reviews, the study provides further evidence that online review data can offer valuable insights into the factors driving customer satisfaction within the luxury hotel sector.

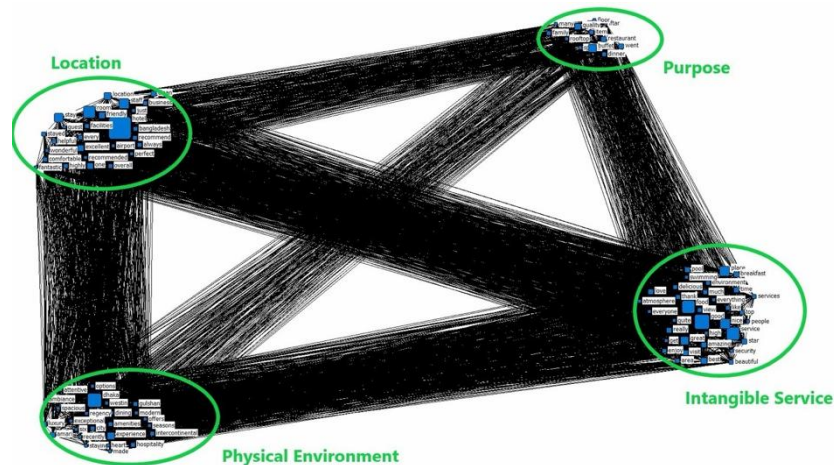


Figure 4. Visualization of Convergence of iterated Correlation (CONCOR) analysis.

5.2. Managerial Implications

The findings of this study provide practical insights for hotel managers, hospitality practitioners, and tourism policymakers seeking to improve customer satisfaction in Bangladesh's luxury hotel sector. Rather than focusing on general service quality improvements, the results indicate that customer evaluations are primarily shaped by four dimensions: Intangible Service, Physical Environment, Location, and Purpose. The semantic network analysis further revealed that keywords such as “service,” “staff,” “food,” “room,” “hotel,” and “Dhaka” were among the most central and frequently occurring terms, suggesting that these attributes are particularly influential in shaping guest experiences.

The Intangible Service cluster highlights the importance of employee behavior, responsiveness, hospitality, and service interactions in customer evaluations. The prominence of keywords such as “service” and “staff” suggests that guests place significant emphasis on the quality of interpersonal encounters during their hotel stay. Therefore, hotel managers should prioritize continuous staff training, customer service development, multilingual communication skills, and service recovery programs. Establishing systems to regularly monitor guest feedback related to staff performance can help hotels identify recurring service issues and improve customer satisfaction. These findings support previous studies emphasizing the role of service encounters in shaping customer perceptions and loyalty (Choi & Chu, 2001; Kandampully et al., 2015).

The Physical Environment cluster demonstrates that tangible hotel attributes remain critical determinants of customer satisfaction. Frequently mentioned keywords such as “room,” “food,” and “hotel” indicate that guests closely evaluate accommodation quality, cleanliness, dining experiences, and hotel facilities. Consequently, hotel managers should invest in regular room maintenance, enhanced cleanliness standards, facility modernization, and continuous improvement of food quality and restaurant services. Given

the prominence of food-related reviews, hotels should also monitor customer feedback regarding menu variety, food quality, and dining experiences to identify opportunities for improvement. These findings are consistent with servicescape theory, which emphasizes the influence of physical environments on customer experiences (Bitner, 1992).

The Location cluster highlights the importance of destination-related attributes in shaping guest perceptions. The frequent appearance of the keyword “Dhaka” suggests that customers evaluate hotels not only based on internal service performance but also in relation to accessibility, convenience, and proximity to business districts, tourist attractions, transportation hubs, and commercial areas. Hotel managers can leverage this advantage by providing transportation assistance, local travel information, destination guides, and partnerships with nearby attractions and businesses to enhance the overall guest experience.

The Purpose cluster indicates that customers evaluate hotels according to the objectives of their stay, such as business travel, leisure tourism, family visits, or special occasions. This finding suggests that a standardized service approach may not adequately address diverse customer expectations. Managers should therefore develop tailored service packages and customized experiences for different market segments. For example, business travelers may value meeting facilities, high-speed internet, and efficient check-in processes, whereas leisure travelers may prioritize recreational amenities, dining options, and local experiences. Aligning service offerings with customer travel purposes can enhance perceived value and overall satisfaction.

The findings also demonstrate the value of online review analysis as a managerial decision-making tool. By systematically monitoring customer reviews and tracking frequently occurring keywords related to service, staff, food, rooms, and location, hotel managers can identify emerging issues, assess customer expectations, and implement targeted improvements. The integration of text analytics into

service management can enable hotels to move beyond traditional customer satisfaction surveys and utilize real-time customer feedback to enhance service quality and competitive performance.

Overall, the study suggests that hotel managers should focus on improving the specific attributes most frequently discussed by guests—service quality, staff performance, room quality, food experiences, and location-related convenience—while simultaneously recognizing that customer satisfaction is influenced by the broader interaction among the four dimensions of Intangible Service, Physical Environment, Location, and Purpose. Such a targeted and evidence-based approach can contribute to higher customer satisfaction, stronger online reputation, and long-term competitive advantage in the luxury hotel industry.

5.3. Limitations and Future Research

This study has several limitations that provide directions for future research. The study relies on secondary data collected from online review platforms which, although extensive, lack detailed demographic information such as age, nationality, and travel motivation of reviewers. These factors may influence perception and expression patterns and may limit the depth of behavioral interpretation. Prior research has highlighted the importance of demographic variables in shaping consumer evaluations (Mattila, 1999).

The analysis is based primarily on textual data extracted from online reviews which may not fully capture the complete customer experience. Future studies may adopt mixed method approaches including surveys and interviews to gain deeper insights into customer expectations and satisfaction, as recommended in service research methodologies (Creswell, 2014).

The study focuses on the top ten five-star hotels in Bangladesh which may limit the generalizability of the findings to other market segments or geographical contexts. Future research may extend the analysis to include mid-range and budget hotels as well as comparative studies across different countries to provide a broader understanding of consumer behavior in the hospitality industry. Cross cultural variations in service perception have been widely discussed in prior studies (Hofstede, 2001).

While this study employs text mining and semantic network analysis, additional analytical techniques such as sentiment analysis, topic modeling, and machine learning approaches may be incorporated in future research to further explore emotional polarity, thematic structures, and predictive patterns in customer reviews. The integration of advanced analytics is increasingly emphasized in hospitality research (Xiang et al., 2017).

Longitudinal research examining changes in online review patterns over time would provide valuable insights into how customer expectations and service quality perceptions evolve. Future research may also explore the role of

emerging technologies such as artificial intelligence and digital platforms in shaping consumer behavior and service innovation in the hospitality sector.

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Data Availability Statement: The data supporting the findings of this study are available from the corresponding author upon reasonable request.

Conflicts of Interest: The author declares no conflict of interest.

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