



Tourism destination image of Aqaba in the digital age: A user-generated content analysis of cognitive, affective, and conative elements

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Abstract

This study aims to evaluate the image of Aqaba as a key tourist destination in Jordan through the analysis of tourist reviews on TripAdvisor, the largest user-generated content (UGC) platform for travel. TripAdvisor allows insights into a destination's image from the perspective of actual visitors. Utilizing NVivo 12 software, both content and sentiment analyses were conducted on reviews found in the TripAdvisor Forum for Aqaba. The findings highlight the significance of the cognitive, affective, and conative components of Aqaba's destination image. These elements were examined to determine whether reviewers identified aspects of the destination, or behavioral intentions (e.g., revisits or recommendations). Additionally, each image component was rated positively or negatively based on the review content. The study's results provide valuable insights for decision-makers and planners, including those at the Ministry of Tourism and Antiquities and the Aqaba Special Economic Zone Authority, to better tailor their strategies to improve the destination's appeal.

Keywords: Affective, Aqaba, Cognitive, Conative Components, Destination Image, TripAdvisor, User-Generated Websites.

DOI: 10.53894/ijirss.v8i2.6106

Funding: This study received no specific financial support.

History: Received: 14 February 2025 / Revised: 18 March 2025 / Accepted: 20 March 2025 / Published: 11 April 2025

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Competing Interests: The authors declare that they have no competing interests.

Publisher: Innovative Research Publishing

Authors' Contributions: All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

Transparency: The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Acknowledgement: This research has been done during the sabbatical leave from the University of Jordan for the academic year 2022/2023.

1. Introduction

Nowadays, travelers read reviews and comments about destinations, accommodations, and attractions left by other travelers on travel blogs, forums, and social media platforms [1, 2], and they believe these peer-to-peer reviews to be more credible and trustworthy than traditional advertising or promotional materials [3, 4]. UGC websites allow tourists to interact with each other, sharing tips, advice, and recommendations. This creates a sense of community and trust among tourists, which can positively influence their perceptions of a destination [1, 5]. Additionally, UGC websites provide valuable feedback for tourism businesses and destinations, allowing them to improve their offerings and address any issues or concerns that tourists may have [6]. Accordingly, UGC websites can influence the decision-making process of potential visitors, as they often consult these websites before making a booking or travel plans.

Aqaba is one of the main tourist destinations and the only coastal city in Jordan, located at the Red Sea at the southernmost point of the country. Its strategic position on the Red Sea linking Asia, Africa, and Europe attracted many civilizations historically, such as the Nabateans, to use the port of Aqaba for their trade. Aqaba sea port and King Hussein International Airport played a vital role in receiving a huge number of tourists every year. In addition to magnificent aquariums nearby and a golf course, Aqaba offers a variety of recreational activities like scuba diving, snorkeling, and acrobatic water sports [7]. Due to its status as a duty-free city and the several tourism mega-projects it has drawn, the city is also endowed with a wealth of historical resources [8]. Due to this, the city is now a thriving tourist attraction that hosts a variety of events, adventures, and recreational activities [9]. The current study seeks to assess the tourist destination image of Aqaba as one of the main tourist destinations in Jordan using tourists' reviews on the TripAdvisor website.

2. Theoretical Framework and Hypotheses Development

2.1. Destination Image

According to Crompton and Burke [10] and Lai and Li [11], the concept of a destination image is the fusion of what individuals think, feel, and believe about a certain location. The definition of destination image by Baloglu and McCleary [12] states that it is "an attitudinal construct consisting of an individual's mental representation of knowledge (beliefs), feelings, and overall impression about a destination." As such, it is a crucial component of the destination brand. Marine-Roig [13] suggested that the destination image is a complex construct because of the dialectic interaction between projected and perceived pictures. Because it affects a traveler's cognition, behavior, and actions while at a place, the destination image is crucial to the tourism business [14]. Additionally, it affects travelers' hopes, desires, and overall pleasure with their travel destinations. Travel decision-making, cognition, and conduct of tourists, as well as their happiness and memories of the trip, are all influenced by destination imagery [14]. The topic of tourist destination image (TDI) has received a fair amount of research attention [15-20]. The creation of TDI has, however, mostly been studied to understand how and why tourists behave [21], whereas the intricate nature and mechanism of TDI production are frequently disregarded [22, 23].

Recently, Nayak et al. [24] used three (TDI) components (cognitive, emotional, and conative) to analyze the destination image of one of the most well-known pilgrimage sites in India (Tirumala Tirupati). The research methodology selected was known as netnography, in which data was acquired online via the Google Reviews website and then reviewed using content analysis. They demonstrate how opinions on all three—positive and negative—aspects combine to form the overall perception of Tirumala Tirupati as a travel destination. Visitors were quite delighted with Tirumala Tirupati's cognitive properties as a pilgrimage tourism location, including the natural qualities, the general and tourist infrastructure, and the cultural and historical features. Users also rated the total experience with an incredibly high emotional rating because of the site's religious components. The institution's overall conative image features were positive, despite the criticisms of the management. The likelihood of visitors returning and recommending others was high.

Measuring tourism destination image is a crucial aspect for destinations aiming to attract visitors and enhance their overall appeal. The image of a tourism destination encompasses perceptions, attitudes, and beliefs held by potential visitors and reflects the destination's brand and reputation [12]. By understanding the image, destination managers can identify strengths and weaknesses, devise targeted marketing strategies, and improve the overall visitor experience. Surveys and questionnaires, and focus groups are widely used to collect data on tourists' perceptions and attitudes towards a destination [25]. Researchers have developed various image scales and indices to quantitatively measure the image of tourism destinations [26, 27]. These scales incorporate multiple dimensions, such as scenic beauty, safety, culture, and infrastructure, into a composite score. Moreover, destination branding measurements focus on assessing the effectiveness of destination marketing efforts and the alignment of the destination's image with its intended brand identity [28]. Recently, web analytics tools have provided valuable data on the online behavior of potential tourists. By analyzing website traffic, user engagement, and search engine trends, destination managers can gauge the interest and preferences of their target audience.

2.2. User-Generated Website

Websites with User-Generated Content (UGC), like TripAdvisor, have grown more significant in recent years for the perception of travel destinations [3, 6, 19, 29-32]. Because researchers may obtain this information for free on social media, user-generated content has replaced surveys and interviews in research [33]. Visitors can contribute their ideas and experiences regarding travel locales, lodging options, and attractions on these websites, which helps potential travelers by giving them useful information [34]. Online reviews can provide planners and decision makers in tourism with valuable insights into tourist perceptions, destination marketing [35] areas for improvement [36, 37], customer satisfaction, and emerging trends. By identifying new tourist preferences and behaviors, these insights can help to inform tourism strategies and enhance the image of the destination [38].

Online traveler-generated material, according to Marine-Roig [33], is a brand-new, uninvited organic image-formation component in the Gartner model, which brings fresh perspectives to experience design for marketers. In order to examine Aqaba as a tourist destination in Jordan using TripAdvisor data, the current study followed the three components of destination image provided by Gartner [39].

2.3. Destination image and User-Generated Website

Prior studies mostly used cognitive and affective approaches to examine the perception of tourism destinations [18, 26, 40]. Destinations can be realized at two different levels in the context of tourism: the cognitive image level, which relates to the features of the destination, and the affective image level, which refers to tourists' sentiments toward the location [41]. Although emotive and cognitive aspects are acknowledged as essential elements of destination image, some research neglects the affective dimension in favor of the cognitive dimension as the primary predictor of destination image [42, 43]. However, according to recent research, cognitive and emotive factors should be considered in tandem for a better understanding of the destination image [44]. Pike & Ryan claimed in their study from 2004 that the three interconnected elements of cognition, affect, and conative or behavioral conduct make up the image of a tourist location [31]. The cognitive component refers to what travelers already know or believe about the destination; the affective component refers to the emotional responses, reactions, and feelings elicited by the location; and the conative component is the outcome of the interaction between these two components, which creates a general image related to the positive/negative evaluation of the location. This element illustrates how and why a tourist's knowledge and emotions influence their decision to travel to a certain location [33].

2.4. Cognitive-Affective-Conative (CAC) Model

The Cognitive-Affective-Conative (CAC) model, initially proposed by Gartner [39] and later refined by Baloglu and McCleary [12], provides a structured framework for understanding how tourists form perceptions of a destination. Unlike unidimensional models, the CAC framework recognizes that destination image formation is a multifaceted process, where cognitive and affective evaluations interact to shape tourists' ultimate behavioral responses. This model is particularly useful for analyzing tourist-generated content, as it accounts for both objective attributes of a destination and the subjective emotions they evoke. The CAC model consists of three interconnected components: cognitive, affective, and conative.

The cognitive component represents what tourists know and believe about a destination. It encompasses tangible and factual attributes such as natural attractions, historical sites, infrastructure, safety, and hospitality services [12, 14]. In the context of Aqaba, this includes its marine biodiversity, diving spots, beaches, historical landmarks, transportation infrastructure, and its strategic location as Jordan's only coastal city. The cognitive image of a destination is typically shaped by prior experiences, media exposure, and user-generated content (UGC) on platforms like TripAdvisor, which serve as major sources of travel information and peer recommendations.

The affective component refers to the emotional responses and feelings evoked by a destination [41]. Tourists may perceive a location as exciting, relaxing, enjoyable, disappointing, or stressful, depending on their personal experiences. In Aqaba's case, emotions may be linked to the beauty of the Red Sea, the warmth of local hospitality, or the comfort level of hotels and resorts. Research suggests that affective perceptions are often influenced by cognitive factors—for instance, a well-maintained beach and friendly service may evoke positive emotions, whereas overcrowding or poor infrastructure may lead to frustration. This interaction between cognition and emotion is fundamental in shaping a tourist's overall impression of a destination.

The conative component captures tourists' behavioral intentions, which are based on their cognitive and affective evaluations [27]. This component reflects actions such as recommending the destination, revisiting it, or avoiding it in the future. Conative responses are a key performance indicator for destination management organizations (DMOs) and tourism planners, as they provide insight into whether a destination successfully meets tourist expectations. In Aqaba's context, positive conative responses may be reflected in reviews stating, "I would love to return," "Aqaba is a must-visit," or "Highly recommended!" Conversely, negative responses may include comments such as "Not worth the trip" or "Would not return." Understanding these behavioral outcomes is essential for developing effective marketing strategies and enhancing visitor satisfaction [29].

By adopting the CAC model, this study acknowledges that destination image is not a static construct, but rather an evolving cognitive-affective-conative process influenced by multiple interactions between tourists and the destination [33, 39]. This holistic approach allows for a comprehensive assessment of Aqaba's image as portrayed through user-generated content (UGC) on TripAdvisor, offering valuable insights into tourist perceptions, emotional experiences, and behavioral intentions.

The CAC model has been validated in various destination image studies, demonstrating its effectiveness in understanding tourist perceptions and behavior. Recent research highlights the importance of considering all three components together. For instance, Nayak et al. [24] applied the CAC model to analyze the perception of Tirumala Tirupati, a major pilgrimage site in India, using online reviews. Their findings revealed that cognitive elements, such as historical significance and infrastructure, directly influenced affective responses, which, in turn, shaped tourists' willingness to return. This underscores the interdependence of cognition, emotion, and behavior in destination image formation.

Similarly, San Martín and Del Bosque [40] emphasized that cognitive and affective factors must be analyzed together, as affective evaluations often act as mediators between knowledge-based perceptions and behavioral intentions [31]. Their study found that tourists' emotional reactions significantly impact their likelihood of recommending or revisiting a destination, reinforcing the importance of integrating affective dimensions in tourism research.

Other scholars have also highlighted the need for a comprehensive approach to destination image analysis. Echtner and Ritchie [42] argued that failing to account for affective dimensions leads to an incomplete understanding of destination image, as emotions play a critical role in shaping tourist satisfaction and decision-making. Additionally, Pike and Ryan [27] demonstrated that cognitive and affective elements are strong predictors of conative behaviors, further justifying the need to analyze all three dimensions together.

These studies highlight why the CAC model is the most suitable framework for evaluating Aqaba's destination image. The model not only captures the factual aspects of the city, such as its attractions, infrastructure, and safety, but also assesses tourists' emotional experiences and their likelihood of revisiting or recommending the destination. By applying this model to TripAdvisor reviews, this study provides actionable insights for tourism stakeholders, enabling them to identify strengths and weaknesses and tailor destination marketing strategies accordingly. Based on the theoretical foundation of the CAC model and prior research, the following hypothesis is proposed:

 $H_{1:}$ User-Generated Content (UGC) significantly influences the cognitive, affective, and conative components of Aqaba's destination image.

3. Methodology

The primary goal of the study was to ascertain how tourists saw the various parts of the destination image as acknowledged by comments and reviews made by travelers on TripAdvisor. San Martín and Del Bosque [40] used a common quantitative method to test the chosen framework previously. This study instead took a qualitative method. Given that the research examined notes and evaluations that had previously been made public, it seems sensible to use social media as a method for gathering and analyzing data [45]. Furthermore, the relationship between destination image studies and internet marketing depends critically on the relationship between destination image and search phrases. Despite its significance, there is a paucity of studies examining the image as it appears in social media, especially studies evaluating the significance of each component of the online user [19, 32]. Therefore, the content analysis and sentiment analysis of the TripAdvisor Forum on the Aqaba page were conducted using the NVivo 12 software.

In more detail, the specific forum was chosen because, from December 2005 to the time of submission of this study, it was the only forum hosting Aqaba reviews on TripAdvisor. This was determined given that at the time of the research, the forum had hosted over 993 topics and over 5,000 reviews and included more than 500 relevant pages on TripAdvisor referring to tourist attractions in Aqaba. As a result, a study on the reputation of Aqaba as a travel destination was created utilizing content analysis of the forum posts and reviews on the TripAdvisor website for Aqaba as well as pages relating to the city's key attractions.

From December 2005 until the end of July 2024, a total of 6,163 reviews were analyzed. Using NVivo 12 software's theme content analysis (i.e., cognitive, emotional, and conative), the reviews and comments were gathered, and their contents examined. In more detail, the evaluation of visitor remarks is based on the particular words and phrases used to convey the associations and feelings of visitors [46, 47]. When a review or comment included reference to the environment's socioeconomic status, natural beauty, or cultural significance, it was classed as a cognitive destination-image component in accordance with San Martín and Del Bosque's [40] approach. In the same way, evaluations that mention Aqaba as a place that delivers experiences that evoke certain emotions (such as an arousing, outstanding, great, or pleasant experience) were categorized as affective image elements. When reviews discussed behavioral intentions, such as by addressing potential referrals or follow-up visits in the future, the conative component was identified [32].

A more thorough evaluation of the destination image was judged necessary to make a significant contribution to the tourism destination image (TDI) in general. Studies [12, 14, 48] have attempted to examine both positive and negative or neutral tourist judgments of the destination image. Therefore, the current study uses sentiment analysis to distinguish between negative or positive or neutral image traits, it was essential.

Sentiment analysis is a procedure that uses Natural Language Processing (NLP) to automatically mine attitudes, opinions, perspectives, and emotions from text, audio, tweets, and database sources [49, 50]. This study uses sentiment analysis to group thoughts, reviews, and comments in text into subcategories like "positive," "negative," or "neutral." Although the terms opinion, feeling, view, and belief are sometimes used interchangeably, there are some distinctions between them.

- Opinion: A conclusion open to dispute (because different
- View: subjective opinion
- Belief: deliberate acceptance and intellectual assent
- Sentiment: opinion representing one's feelings
- Opinion: A conclusion opens to dispute (because different experts have different opinions)
- View: subjective opinion
- Belief: deliberate acceptance and intellectual assent
- Sentiment: opinion representing one's feelings
- An example for terminologies for Sentiment Analysis is as given below,

<SENTENCE> = "an amazing resort with very good vibes on pools and fantastic view on beach...."

- <OPINION HOLDER> =<Reviewer>
- <OBJECT> = < general Resort >
- <FEATURE> = <pools>< beach >
- <OPINION >= < amazing >< very good > < fantastic >

<POLARITY> = <Very Positive>

Sentiment analysis is a broad phrase that covers a variety of activities, including, but not limited to, sentiment extraction, sentiment categorization, self-categorization, opinion summarization, and spam detection. According to Kharde and Sonawane [49], it tries to examine how individuals feel about many things, including products, people, subjects, organizations, and services. Since NVivo 12 enables the extraction of up to four sentiments [51], the current study used NVivo 12 to carry out sentiment analysis. Originally, NVivo was intended for binary classification, which limits the classification of thoughts or reviews to two extremes, such as positive or negative.

4. Data collection

Retrieval of tourists' replies and reviews data is conducted by crawling tools utilizing the WebHarvy tool, as in the techniques Figure 1. Data is obtained from TripAdvisor, as in photo 1. TripAdvisor is the largest travel community review site on the internet [52].

In addition, Figure 2 shows an overview of topics from the TripAdvisor forum about Aqaba city. It also shows two categories of data, in the yellow box is the topic title, while the red box is a traveler's reply. This study will use tourist review data as a data source.





4.1. Reliability

Due to the big data retrieved from TripAdvisor, an automatic code has been implemented by NVivo 12, then the results of the auto code were checked separately by two authors. An inter-rater reliability was performed, and the authors didn't show big differences in classifications. According to the formula from McAlister et al. [53], which is displayed in Figure 3, the inter-rater reliability is 79.6% (R = 4283/(4283 + 1092) = 0.796). Additionally, the thematic content analysis showed that the San Martín and Del Bosque [40] framework can be used in its current form without the requirement for a more detailed classification of the three elements that make up a tourism destination's image.

reliability = $\frac{\text{number of agreements}}{\text{number of agreements} + \text{disagreements}}$

Figure 3. Equation of Reliability. A descriptive analysis was deemed required in addition to the sentiment analysis and thematic content analysis (TCA) due to the current state of the research. This was useful when analyzing the correlation between demographics and the elements of a tourism destination's image.

5. Results

On TripAdvisor, visitors can choose to reveal or conceal their personal information. The demographic information is always supplied in relation to the place of origin or date of publishing, but the poster does not add other details like gender, age, or income. In fact, there are 5,375 reviews considered, 1081 of which did not mention their continent of origin. As shown in Table 1, Asia ranked first among the continents of origin with 40.8%, followed by North America countries with 21.5%, and South America is last in the table with 0.1%.

Table 1.

Number of references per continent.

Continent of origin	Number of reviews	Percentage
Asia	2192	40.8%
North America	1154	21.5%
Europe	907	16.9%
N/A	1081	20.1%
Africa	36	0.7%
South America	5	0.1%
Total	5375	100.0%

Meanwhile, Table 2 shows the evolution in the number of topics in Aqaba forum during the period 2005 until 2023. The period from 2005 to 2010 has the lowest ratio of new topics in the Aqaba forum within TripAdvisor, with 10.2%. the number of topics tripled in the period 2011-2015, reaching to 413 topics. The duration from 2016 to 2023 has the majority of topics related to Aqaba.

Table 2.

Number of references per Topic.

Duration	Number of topics	Percentage
2005-2010	136	10.2%
2011-2015	413	31.0%
2016-2023	784	58.8%
Total	1333	100.0%

In line with the literature, data analysis offers a qualitative assessment of the reviewers' postings and reviews. Reviews were thus classified according to the cognitive, emotional, and conative components of a particular Tourism Destination Image (TDI) and identified as positive or negative [40].

Only 5,375 references to (TDI) elements could be found in the 6,163 reviews, according to preliminary data analysis. The reviewers' remarks did, however, touch on the cognitive, emotional, and conative aspects of the destination image, as seen in Table 3. 76.6% of the references emphasized cognitive destination image, whereas 21.5% of reviews discussed affective destination image, and only 1.9% of references discussed the conative component.

Table 3.

Summary of number of references per Tourism Destination Image (TDI) components.

Name	References Freq.	Percentage
Cognitive	4116	76.6%
Affective	1155	21.5%
Conative	104	1.9%
Total	5375	100.0%

After thematic content analysis, sentiment analysis was implemented using NVivo 12. This software tool provides four levels of reviewers' attitudes and beliefs to share their positive or negative assessments about Aqaba city. The analysis indicates that 70.4% of the reviewers had a positive evaluation of Aqaba. In detail, 29.7% of the comments represent a very positive assessment, 40.7% of the comments refer to moderately positive, 16.2% of the comments refer to moderately negative, and 13.4% refer to very negative comments (see Table 4).

Table 4.

Sontimont	opolycia	of referen	as about	Tourism	doctination	imaga (TDI	acomponent
Sentiment	anarysis	of reference	es about	rounsin	destination	image (TDI) component.

Sentiment analysis categories	References count	Percentage
Very negative	403	13.4%
Moderately negative	488	16.2%
Moderately positive	1228	40.7%
Very positive	895	29.7%
Total	3014	100.0%

The following phase attempts to determine whether reviewers had the propensity to offer good or negative feedback about each element of the target image. Figure 4 indicates that reviewers have high positive perceptions toward components of the destination image, except for the cognitive component, where there is moderate positive perception toward it, but in general, tourists have positive feelings and emotions toward Aqaba city. As stated in the literature [6], tourists' comments provide valuable feedback for tourism businesses and destinations, allowing them to improve their offerings and address any concerns that tourists may have. Therefore, this result sheds light on the cognitive component as a key dimension that planners and decision makers in Aqaba should consider when including the destination attributes. This finding is consistent with an earlier study, which found that the cognitive image significantly affects the affective one [12]. They also found that the cognitive image significantly affects other dimensions.



Figure 4.

Table 5. explains that the topics about Aqaba as a tourist destination increased gradually from 136 topics for the period 2005-2010 to 413 topics between 2011-2015, reaching to 784 topics for the period 2016-2021. When focusing on those tourists who provided information about the publication of their topics, Table 5 indicates that 58.8% of tourists (i.e., 784 out of 1333) posted only from 2016-2023. During this period, the cognitive component (culture, people, atmosphere...) has the highest percentage with 64 %, followed by the affective component (emotions) (29%), and the conative component with 6.5%. Meanwhile, the period from 2005 to 2010 has the fewest reviews from tourists across the TDI components at 10.2%, and finally, conative destination image has the lowest component of all periods, but in an opposing cognitive destination image the most references scored across all periods. See the table below.

Table 5.

Distribution	of TDI	components	according	to To	ppics	dates
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TDI components	2016-2023	2011-2015	2005-2010
Cognitive	503	210	78
Affective	230	181	30
Conative	51	22	28
Total	784	413	136

Table 6. also examines the relationship between the components of TDI and the demographics of tourists, especially the continent of reviewers, as shown in Table 4, the continent of Asia has many references with 2,192 comments followed by North America with 1154 comments and reviews, and Africa and South America have the lowest share of reviews with 36 and 5 respectively. It sounds like the cognitive component has gained the most total reviews in all continents. In the European continent, the cognitive dimension represented almost 83% of total comments.

Sentiment analysis with destination image components.

Table 6.

Distribution of TDI components	according to	reviewers'	continent.
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TDI	Asia	North America	Europe	Africa	South America
Cognitive	1753	783	749	15	2
Affective	379	350	153	10	3
Conative	60	21	5	11	0
Total	2192	1154	907	36	5

A more in-depth approach to examining visitor reviews is necessary at this point. Aqaba, Petra, gratitude, time, day, hotel, and other words with TDI components are often repeated words, as seen, for example, in the word cloud graphic in Figure 4. There were 1029 references that described the infrastructure, socioeconomic environment, atmosphere, natural environment, and cultural environment in a positive light, which helped to highlight the cognitive component. A European visitor wrote: "If you prefer to be based at a single hotel then it would be advisable to take a 2-night break from your accommodation and do a loop to Wadi Rum and Petra (they are both in the same direction so you will significantly reduce your travel time by not returning to Aqaba)". Another visitor said: "Great Arabic food and a stylish place to savor." Other references mentioned the hotels, the activities, the beach, the friendly people, and transportation options. 660 unfavorable remarks, on the other hand, were recorded. That becomes rather pricey for a round journey, as a male US national wrote. And yet another person stated, "For me, Aqaba is an average Jordanian town, not very clean, and except for relaxing on the beach, there isn't much to do or see."

586 good reviews were found, as shown in Figures 4 and 5, which allowed for a deeper analysis of the emotive component. Reviews frequently used adjectives and nouns like "great" or "nice," as well as the phrase "thanks." A visitor from Seattle, Washington, wrote, "Beautiful trip with my family; we had a great time." Another tourist from Dublin stated, "Really enjoyed our time there." Additionally, the affective component included 246 negative reviews. For example, an American female tourist negatively commented on prices in Aqaba; she wrote, "Wow, sorry you had such a horrible experience. 210 JD per person for a two-hour drive is ridiculous. The guides are also at a fixed 2-hour rate for 50 JD as well. I would have paid him what was initially said in the first email, less the guide price since it wasn't provided." Moreover, another tourist complained about the rest and wrote, "5 days there is 4 days too long. This is not a pristine place; there is lots of trash around." The conative component can be reached after identifying 62 favorable reviews. As evidenced.

By the desire to return to, or recommend, the following examples, a range of excitement levels can be observed in the following examples: "...and highly recommended by me and many other people/friends in India ...will return', '[Aqaba is] worth visiting, must try', '[we shall] definitely go back!". All 29 negative comments related to the conative destination image were about bad experiences, "especially at check-in," and advised potential tourists to "be careful!"



Word Cloud image about Aqaba TDI.

6. Discussion

The rise of user-generated content (UGC) platforms has transformed the way tourists search for travel information, share experiences, and influence the perceptions of potential visitors. Digital platforms such as TripAdvisor, Google Reviews, and social media forums play a crucial role in shaping destination image, as travelers increasingly rely on peer-generated content

rather than traditional promotional materials [29, 54]. This shift in information consumption has profound implications for tourism management, marketing, and policymaking, necessitating a deeper understanding of how cognitive, affective, and conative elements interact to shape tourist perceptions.

This study aimed to analyze TripAdvisor reviews to assess the cognitive, affective, and conative dimensions of destination image, using Aqaba as a case study. The findings shed light on the importance of all three components in shaping how tourists perceive a destination, revealing both positive and negative aspects of visitor experiences [19, 55]. Cognitive elements, including natural attractions, historical sites, and infrastructure, were frequently highlighted. Tourists expressed positive affective responses associated with Aqaba's scenic beauty and hospitality, while negative sentiments were often linked to overcrowding, service inconsistencies, and environmental concerns. The conative dimension demonstrated that tourists with strong positive emotions were more likely to return and recommend the destination, while those with negative experiences indicated reluctance to revisit. These findings align with previous research, reinforcing the idea that cognitive attributes influence affective responses, which in turn shape behavioral intentions [12, 18, 27].

An important insight from this study is the regional distribution of tourist reviews, with the majority originating from Asia, North America, and Europe. This suggests that these regions represent the primary source markets for the destination. Consequently, destination marketing organizations (DMOs) and tourism stakeholders should adopt targeted marketing strategies to cater to the preferences and expectations of tourists from these regions. For instance, customized promotional campaigns could highlight marine tourism experiences for Asian markets, cultural and historical attractions for European visitors, and luxury travel experiences for North American tourists. Additionally, addressing common concerns raised in negative reviews, such as infrastructure development, environmental sustainability, and service quality, can enhance overall visitor satisfaction and strengthen destination loyalty.

In addition, the findings of this study emphasize the growing influence of UGC as a dynamic tool for monitoring tourist sentiment, assessing service quality, and refining destination branding strategies. Unlike traditional survey-based research, TripAdvisor reviews offer unsolicited, real-time feedback from visitors, providing a valuable resource for tourism planners [56]. Prior studies have recognized the significance of UGC in shaping public perceptions and influencing travel decisions [32, 33, 57]. The present study builds on this literature by demonstrating that TripAdvisor serves as a platform for destination co-creation, where tourist narratives actively contribute to destination image formation and reputation management. To leverage UGC effectively, DMOs and tourism authorities should:

- 1. Engage with Online Reviews: Actively monitor and respond to both positive and negative reviews, demonstrating a commitment to addressing visitor concerns.
- 2. Incorporate UGC into Decision-Making: Use insights from tourist feedback to inform infrastructure development, service improvements, and promotional strategies.
- 3. Encourage Digital Storytelling: Implement marketing initiatives that incentivize travelers to share their experiences through social media, blogs, and video content, enhancing the destination's organic reach.

Moreover, the application of the Cognitive-Affective-Conative (CAC) model in this study contributes to destination image research by demonstrating the interconnected nature of tourist perceptions, emotions, and behaviors. The findings reinforce previous studies that emphasize the need for a holistic approach to destination image analysis, rather than focusing solely on cognitive or affective dimensions [40, 42]. Moreover, this study highlights the emerging role of UGC in destination image formation, suggesting that UGC-driven insights should be integrated into destination branding strategies.

The study also raises important methodological considerations for future research. The integration of machine learning and Natural Language Processing (NLP) techniques in sentiment analysis can provide more refined and accurate assessments of tourist perceptions. Additionally, longitudinal studies tracking changes in destination image over time could offer deeper insights into how tourism policies, global events (e.g., COVID-19), and infrastructure developments influence visitor perceptions.

7. Limitations and Future Research Directions

Despite its contributions, this study has several limitations. First, UGC data may be biased, as online reviews tend to reflect extreme opinions, with travelers more likely to post reviews when they have either highly positive or negative experiences. Future research should combine UGC analysis with structured surveys and interviews to capture a more balanced representation of tourist perceptions.

Second, the study focused exclusively on English-language reviews, potentially overlooking perspectives from non-English-speaking tourists. A multi-language sentiment analysis could offer a more inclusive understanding of destination image across different cultural contexts.

Third, while this study provides a cross-sectional analysis, a longitudinal approach would allow for the examination of how Aqaba's destination image evolves over time. Future studies could explore seasonal variations, the impact of marketing campaigns, or the effect of major tourism infrastructure projects on tourist sentiment.

8. Conclusion

This study provides a comprehensive analysis of destination image formation through user-generated content, utilizing the Cognitive-Affective-Conative model as a theoretical framework. By examining TripAdvisor reviews, the study identifies key cognitive attributes, affective responses, and conative intentions that shape tourist perceptions. The findings highlight both strengths and areas for improvement in the destination's tourism appeal and offer strategic recommendations for policymakers and marketers.

The study emphasizes the critical role of UGC in shaping public perceptions, influencing tourist decision-making, and guiding tourism development strategies. By leveraging insights from digital traveler narratives, tourism stakeholders can create data-driven policies that enhance visitor experiences, strengthen destination branding, and promote sustainable tourism growth.

Future research should continue exploring the evolving role of digital platforms in destination marketing, incorporating multi-platform data analysis, advanced sentiment classification techniques, and longitudinal tracking to better understand the dynamic nature of tourist perceptions in the digital age.

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