

Competitive Tourism Destination Image, Case Study Lake Toba North Sumatera Indonesia

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Abstract: *This study advances the discourse on destination competitiveness by employing an innovative methodological approach to analyze Lake Toba's competitive image in the post-pandemic tourism landscape. Utilizing the Analytic Network Process (ANP) integrated with a Benefits, Opportunities, Costs, and Risks (BOCR) framework, this research offers a nuanced quantitative assessment of the complex interrelationships between destination attributes and promotion strategies. The study reveals the paramount importance of natural scenery in shaping Lake Toba's competitive image, while also highlighting the critical role of safety perceptions in the post-COVID era. A key finding is the dominant influence of social media as a promotion channel, significantly outweighing traditional methods. The BOCR analysis uncovers substantial opportunities for enhancing Lake Toba's competitive position, providing an optimistic outlook for future development. This research contributes to the literature by offering a comprehensive framework for understanding destination competitiveness in emerging markets, integrating both cognitive and affective components of destination image. The study's findings have significant implications for destination management and policy formulation, particularly in the context of UNESCO Geoparks in developing countries. Future research directions include longitudinal studies to track changes in competitive image over time and comparative analyses with other emerging destinations to validate the broader applicability of the ANP-BOCR framework in destination competitiveness analysis.*

Keywords: *Destination competitiveness, ANP-BOCR, post-pandemic tourism, social media promotion, UNESCO Geopark, destination image*

INTRODUCTION

Indonesia's archipelagic nation boasts a rich cultural and linguistic tapestry, offering diverse tourism destinations. The Indonesian government is actively developing tourism by promoting five superior destinations, including Lake Toba (Kementerian Pariwisata dan Ekonomi Kreatif RI, 2014). However, the global tourism landscape has been significantly altered by recent health crises, notably the COVID-19 pandemic and the emerging Mpox virus. These challenges have reshaped tourist behavior, with safety becoming a paramount concern for travelers (Aschauer & Egger, 2023; Bui, 2023).

In this evolving context, the competitive image of destinations plays a crucial role in attracting visitors. Previous studies have explored various aspects of destination image formation (Baloglu & McCleary, 1999; Echtner & Ritchie, 1991) and the impact of crises on tourism (Aldao et al., 2022). However, there remains a significant gap in the literature regarding the interplay between traditional destination attributes and modern digital promotion strategies in shaping destination competitiveness, particularly in emerging markets like Indonesia.

This research gap is particularly evident in the context of post-pandemic tourism. While scholars such as (Rasoolimanesh et al., 2021) have examined destination image during the COVID-19 pandemic, and (Florida-Benítez, 2024) has explored tourism promotion in the aftermath, there is a lack of comprehensive studies that quantitatively assess how multiple, concurrent global challenges shape destination competitiveness. Furthermore, the literature is scarce on studies that synthesize the roles of social media promotion and local community engagement within a single analytical framework, especially for UNESCO Geoparks in developing countries.

Building upon the existing body of literature on international tourism, this study addresses several critical gaps that have been identified. While (Echtner & Ritchie, 1991) and (Baloglu & McCleary, 1999) have established foundational frameworks for destination image formation, and recent studies by (Aldao et al., 2022) and (Aschauer & Egger, 2023) have explored COVID-19's impact on tourism, there remains a lack of comprehensive, quantitative assessments that integrate traditional destination attributes with modern digital promotion strategies in emerging markets.

Additionally, although (Stojanovic et al., 2022) and (Praptika et al., 2024) have separately examined the roles of social media and local community engagement, research synthesizing these elements within a single analytical framework is notably absent. Furthermore, while (Utari et al., 2024) highlighted the need

to promote natural destinations in Indonesia, there is a significant gap in quantitative analyses focusing on priority destinations in developing countries, particularly those employing advanced methodologies such as ANP-BOCR.

This study addresses these gaps by examining Lake Toba, North Sumatra, Indonesia's competitive destination image in the post-pandemic era. It employs an innovative methodological approach, combining the Analytic Network Process (ANP) with a BOCR (Benefits, Opportunities, Costs, Risks) framework. This novel application provides a comprehensive, quantitative evaluation of destination attributes and promotion channels, offering nuanced insights into their relative importance in shaping competitive positioning.

This study's multifaceted approach to understanding destination competitiveness in the evolving landscape of international tourism is significant. By focusing on Lake Toba, a UNESCO Geopark and one of Indonesia's priority destinations, this research provides valuable insights into how emerging destinations in developing countries can navigate the complexities of post-pandemic tourism. Integrating digital marketing strategies with traditional destination attributes offers a more holistic view of destination image formation, addressing a critical gap in the current literature.

This study makes several original contributions to the field of tourism research and destination competitiveness analysis. It offers an integrated analysis that holistically evaluates both traditional destination attributes and digital promotion strategies, addressing a gap in previous studies that often focused on one aspect or the other. Adopting a multi-crisis perspective, it considers the impacts of both COVID-19 and emerging threats like the Mpox virus, thus providing unique insights into destination resilience in the face of compound health crises. The study's innovative methodology, applying the ANP-BOCR framework to analyze destination competitiveness in a UNESCO Geopark, represents a novel approach that brings quantitative rigor to destination image studies. Furthermore, this research uniquely synthesizes digital and community engagement by combining the analysis of social media promotion with local community involvement. Lastly, by focusing on Lake Toba, an emerging destination, this study contributes to the understudied area of priority destinations in developing countries.

These original aspects align closely with the study's primary objectives: to identify and quantify key factors influencing Lake Toba's competitive destination image in the post-pandemic context; to evaluate the effectiveness of various promotion strategies, particularly social media and local community involvement, in shaping destination competitiveness; to assess opportunities and risks in enhancing Lake Toba's global market position amidst ongoing health crises; and to provide data-driven recommendations for destination managers and policymakers. By addressing these objectives through its unique methodological approach and comprehensive scope, this research not only fills critical gaps in existing literature but also provides a new framework for understanding destination competitiveness in the complex, post-pandemic tourism landscape. The study's findings will contribute significantly to both theoretical discourse and practical strategies in international tourism management, particularly for emerging destinations facing multi-faceted challenges in the global market.

2 THEORETICAL BACKGROUNDS

2.1 Competitive Destination Image

The concept of competitive destination image has emerged as a crucial factor in tourism research, playing a pivotal role in shaping tourist behavior and destination choice. Destination image is the representation of a destination based on travelers' information and experiences before their visit (Chon, 1990). This definition underscores the importance of perceived image in the competitive positioning of tourism destinations.

The groundwork for understanding destination image, emphasizes the need for comprehensive measurement and promotional strategies that present unique and holistic images (Echtner & Ritchie, 1993, 1991). Their work highlighted the multidimensional nature of destination image, encompassing both functional and psychological characteristics, as well as common and unique features. This multifaceted approach aligns well with the ANP-BOCR methodology, which allows for the consideration of multiple, interrelated factors in decision-making processes.

(Baloglu & McCleary, 1999) further developed this concept by identifying cognitive and affective components as key determinants of the destination image. The cognitive aspect relates to beliefs and knowledge about a destination's attributes, while the affective component concerns feelings towards or attachment to a destination. This dual-component model provides a robust framework for evaluating destination competitiveness, making it particularly suitable for ANP-BOCR analysis. The cognitive

elements can be assessed under the Benefits and Opportunities categories, while affective elements may influence the Risks and Cost perceptions in the BOCR model.

(Yang et al., 2009) expanded on this by emphasizing the role of information sources, including word-of-mouth and advertising, in shaping these components. Their findings suggest that the sources and types of information available about a destination significantly influence its competitive image, a factor that can be effectively captured in the ANP network structure.

The interplay between cognitive and affective components in fostering positive feelings and loyalty (Del Bosque & Martín, 2008). This interaction is crucial for the overall tourist experience and can be effectively modeled using the ANP's capability to capture interdependencies between criteria.

In the context of competitive advantage, (Konecnik, 2002) argued that a destination's image serves as a key differentiator. This perspective has gained increased relevance in the post-pandemic era, where destinations compete not only on inherent attributes but also on perceived safety and adaptability to new health norms. The ANP-BOCR framework is particularly adept at incorporating such evolving criteria into the competitive analysis.

Recent studies have further refined our understanding of competitive destination image. (Moliner-Tena et al., 2023) emphasized the importance of natural scenery in shaping destination image, while (González-Rodríguez et al., 2023) stressed the critical role of safety and cleanliness in destination competitiveness, especially in the post-pandemic context. These findings underscore the need for a comprehensive evaluation framework that can adapt to changing global circumstances, a requirement well met by the ANP-BOCR approach.

The literature also reveals the growing importance of digital platforms in shaping destination image. (Cambra-Fierro et al., 2022) and (Stojanovic et al., 2022) highlighted the role of social media in influencing both cognitive and affective dimensions of the destination image. This digital aspect introduces new dynamics in competitive image formation, which can be effectively captured in the ANP network structure and BOCR analysis.

Furthermore, the involvement of local communities in shaping destination image has gained prominence. (Praptika et al., 2024) found that local communities play a crucial role in developing sustainable and resilient tourism destinations. This aspect adds another layer of complexity to the competitive destination image, which the ANP-BOCR methodology can effectively incorporate through its flexible network structure.

2.2 Promotion of Destination Image

The promotion of destination image has evolved significantly with the advent of digital technologies, particularly social media. This shift has profound implications for how destinations communicate both cognitive and affective aspects of their image to potential visitors.

Traditionally, destination information was disseminated through various channels, including personal knowledge, advice from friends, travel agencies, and traditional advertising (Di Marino, 2008). However, the landscape of promotion has undergone a paradigm shift towards digital platforms, with social media emerging as a dominant force in shaping destination imagery.

Social media's influence on destination image is multifaceted, impacting both cognitive and affective dimensions. (Stojanovic et al., 2018) found that social media indirectly influences destination image through brand awareness, helping tourists identify and understand destinations more deeply. This finding was further elaborated by (Stojanovic et al., 2022), who distinguished between destination-generated content (DGC) and user-generated content (UGC) on social media. Notably, DGC primarily influences the cognitive image, providing information about a destination's attributes, while UGC affects both cognitive and affective dimensions, offering personal perspectives and emotional responses.

The effectiveness of social media in promoting cognitive aspects of destination image lies in its capacity to disseminate visual and textual information about a destination's tangible attributes. (Cambra-Fierro et al., 2022) emphasized social media's role in shaping destination imagery, particularly during crisis periods like the COVID-19 pandemic, highlighting its ability to communicate up-to-date information about safety measures and destination conditions.

Equally important is social media's power in conveying affective image elements. Through user-generated content, personal narratives, and immersive visual experiences, social media platforms can evoke emotional responses and create a sense of connection with destinations. This aligns with the findings of (Baloglu & McCleary, 1999), who stressed the importance of affective evaluations in overall destination image formation.

The real-time nature of social media, as noted by (Galiano-Coronil et al., 2023), allows for immediate dissemination of information and experiences, enhancing both cognitive awareness and affective engagement with destinations. This immediacy is particularly crucial in managing expectations and providing timely travel information, aspects that contribute significantly to both cognitive and affective image components.

2.3 Local People

The involvement of local communities in destination promotion has gained significant attention in tourism research, particularly for its role in communicating both cognitive and affective aspects of destination image. (Ambroz, 2008) argued that involving local people in tourism development can lead to improved services and environmental protection, crucial elements of a destination's cognitive image. Local residents play a vital role in shaping visitors' perceptions of a destination. Lobo et al. (2023) emphasized the importance of local participation in promoting cultural attractions and events, thereby enhancing the cognitive dimension of the destination image. This local involvement contributes to the authenticity of the destination experience, a key factor in competitive differentiation.

(Praptika et al., 2024) highlighted the critical role of local communities in developing sustainable and resilient tourism destinations, particularly in crises. This finding underscores the importance of local people in shaping both cognitive (e.g., safety perceptions) and affective (e.g., sense of welcome) aspects of the destination image.

(Stylidis et al., 2017) proposed that residents can serve as informal marketers, providing word-of-mouth recommendations that influence both cognitive and affective image components. Their intimate knowledge of the destination allows for the communication of unique insights and emotional connections that are difficult to replicate through formal marketing channels.

(Del Chiappa et al., 2018) noted that engaged local communities are more likely to maintain the attractiveness of their area, directly impacting the cognitive image of the destination. Moreover, positive interactions between locals and visitors can significantly enhance the affective image, creating emotional bonds that contribute to destination loyalty and competitiveness.

In conclusion, local people are instrumental in promoting both cognitive and affective aspects of destination image, offering authentic experiences and personal connections that are increasingly valued in contemporary tourism.

2.4 ANP-BOCR Model Structure for Competitive Destination Image Analysis

The proposed ANP-BOCR model for analyzing the competitive destination image of Lake Toba is grounded in a comprehensive theoretical framework that reflects the multifaceted nature of destination image formation and promotion. The model's primary objective aligns with (Konecnik, 2002) assertion that destination image serves as a key source of competitive advantage in tourism. The structure incorporates both cognitive and affective elements, as described by (Echtner & Ritchie, 1993, 1991), to provide a holistic evaluation of Lake Toba's competitive position.

The criteria selected for the model are firmly rooted in established tourism literature. Natural Scenery (NS) and Cultural Attraction (CA) are included based on the work of (Echtner & Ritchie, 1991) and (Baloglu & McCleary, 1999) respectively, recognizing their significance in shaping destination image. These criteria are particularly relevant for Lake Toba, given its status as a UNESCO Geopark and its rich Batak cultural heritage. Cleanliness (CL) and Safety (SA) have been incorporated considering recent research by (González-Rodríguez et al., 2023) and (Aschauer & Egger, 2023) reflecting the heightened importance of these factors in the post-pandemic tourism landscape. The inclusion of Hotel Promotion (HP), The Best Hotel (BH), and Flight Promotion (FP) is supported by (Yang et al., 2009) findings on the importance of accommodation quality and accessibility in forming cognitive images. Food Location (FL) and Culture Attraction Location (CAL) are justified by (Greaves & Skinner, 2010) emphasis on local cuisine and (Baloglu & McCleary, 1999) focus on cultural elements, respectively.

The alternatives of social media and Local People as promotion channels are substantiated by recent research. The inclusion of social media is based on the work of (Cambrá-Fierro et al., 2022) and (Stojanovic et al., 2022) who highlighted its significant role in shaping both cognitive and affective dimensions of the destination image. The Local People alternative is justified by studies from (Praptika et al., 2024) and (Stylidis et al., 2017), which emphasized the importance of community involvement in creating authentic experiences and promoting sustainable tourism.

The ANP-BOCR framework's application to this analysis is justified by its ability to capture the complex, interconnected nature of destination image components. It allows for a comprehensive evaluation of how different promotion strategies can influence various aspects of Lake Toba's competitive image,

considering both immediate impacts (Benefits and Costs) and future potentials (Opportunities and Risks). This approach aligns with the dynamic nature of destination competitiveness in the post-pandemic tourism landscape.

By integrating cognitive elements (such as Natural Scenery and Cultural Attractions) with factors that influence affective responses (like Safety and Local People involvement), this model provides a robust framework for evaluating and enhancing Lake Toba's competitive position. It offers a nuanced understanding of how different aspects of destination image interact and how various promotion strategies can be leveraged to improve Lake Toba's standing in the global tourism market. This comprehensive approach, grounded in established tourism theory and adapted to contemporary challenges, positions the study to make significant contributions to both the theoretical discourse on destination competitiveness and practical strategies for destination management and promotion.

Based on that the Network Model Construction can see at figure 1 below:

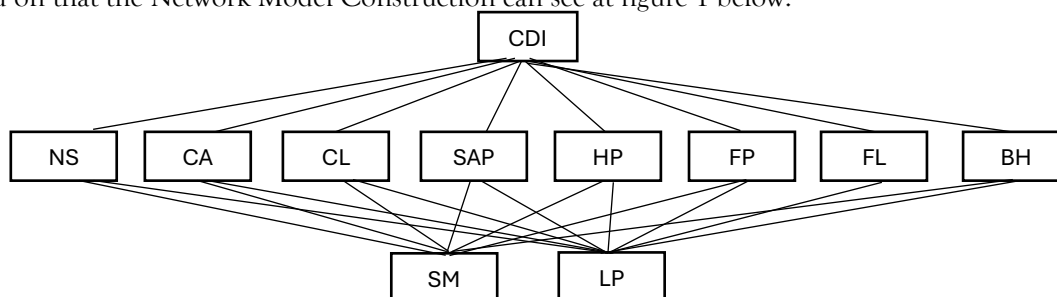


Fig. 1 - Network Structure

3 METHODOLOGY

This study employs a mixed-method approach to analyze the competitive destination image of Lake Toba, North Sumatra, Indonesia, utilizing both quantitative and qualitative data collection techniques. The primary methodological framework is the Analytic Network Process (ANP) combined with a Benefits, Opportunities, Costs, and Risks (BOCR) analysis, which allows for a comprehensive evaluation of the complex interrelationships between various factors influencing destination competitiveness (Saaty & Vargas, 2013). The study's sample comprised 211 visitors to Lake Toba, selected through purposive sampling to ensure respondents had direct experience with the destination, aligning with (Echtner & Ritchie, 1993) emphasis on the importance of first-hand experience in forming destination images.

Data was collected using a structured questionnaire that included both closed-ended questions for the ANP pairwise comparisons and open-ended questions to capture qualitative insights into visitors' perceptions and experiences. The closed-ended questions utilized Saaty's 1-9 scale for pairwise comparisons, allowing respondents to quantify the relative importance of different factors influencing Lake Toba's competitive image (Sipahi & Timor, 2010). These pairwise comparisons formed the basis for constructing the ANP model, which consisted of a goal (Competitive Destination Image of Lake Toba), criteria (destination attributes such as Natural Scenery, Cultural Attraction, Safety, etc.), and alternatives (promotion channels: Social Media and Local People).

The open-ended questions in the questionnaire provided rich, qualitative data on visitors' experiences, preferences, and suggestions for improvement. This combination of closed and open-ended questions allowed for a comprehensive understanding of Lake Toba's competitive destination image, capturing both quantifiable priorities and nuanced perceptions.

The ANP-BOCR model structure was designed to reflect the multifaceted nature of destination competitiveness, as outlined in the theoretical background. It incorporated four main components: the goal, criteria (destination attributes), alternatives (promotion channels), and BOCR subnets. This structure enables the evaluation of interdependencies between criteria and alternatives within the context of potential benefits, opportunities, costs, and risks (Kheybari et al., 2020).

Data analysis followed a multi-step process, including the formation of supermatrices from pairwise comparison results, BOCR analysis of alternatives, synthesis, and interpretation of results, and consistency checks using the Consistency Ratio (CR) as proposed by Saaty (Hassoun Nedjar et al., 2023). This rigorous analytical process allowed for the integration of quantitative priorities with qualitative insights, offering a nuanced understanding of Lake Toba's competitive position in the tourism market.

The choice of the ANP-BOCR methodology is justified by its ability to model complex interrelationships, quantify intangible factors, integrate multiple perspectives, adapt to emerging challenges, and provide a

holistic evaluation of destination competitiveness. This approach addresses the research gaps identified in the literature, particularly the need for comprehensive analyses of priority destinations in developing countries that consider both traditional attributes and modern promotion channels (Cambra-Fierro et al., 2022; Utari et al., 2024)).

By employing this comprehensive methodology, which combines structured quantitative analysis through ANP with rich qualitative insights from open-ended questions, the study aims to provide a thorough understanding of the factors shaping Lake Toba's competitive destination image. This approach allows for the development of data-driven recommendations for enhancing its position in the global tourism market, while also considering the complex dynamics of destination image formation in the context of evolving global challenges such as health crises (Aldao et al., 2022; Bui, 2023).

4 RESULTS AND DISCUSSION

4.1 Sample Size and Respondent Characteristics

This study employed a mixed-method approach, utilizing both quantitative and qualitative data collection techniques. The primary data collection instrument was a structured questionnaire comprising both open-ended and closed-ended questions. The sample size for this study consisted of 211 respondents, all of whom were visitors to Lake Toba, ensuring a robust representation of the target population.

The sampling technique used was purposive sampling, focusing on individuals who had direct experience with the destination. This approach allowed for the collection of data from respondents with firsthand knowledge of Lake Toba's tourism offerings and competitive attributes. The table presenting the respondent characteristics with percentages for each item, based on the data provided in the document in Table 1 below:

Table 1. Respondent characteristics

Characteristic	Category	Frequency	Percentage
Gender	Male	93	44.10%
	Female	118	55.90%
Age	Below 18	13	6.20%
	19 - 24	49	23.20%
	25 - 34	66	31.30%
	35 - 44	41	19.40%
	45 - 54	28	13.20%
	55 - 64	14	6.60%
Education	Elementary School	2	0.90%
	Junior High School	10	4.70%
	Senior High School	140	66.30%
	Bachelor's degree	55	26.10%
	Master/Doctoral Degree	4	1.90%
Occupation	Unemployed/Student	24	11.40%
	Self - Employed	85	40.30%
	Private Sector Employee	46	21.80%
	Civil Servant	14	6.60%
	Housewife	2	0.90%
	Other	40	19.00%

4.2 RESULT AND DISCUSSION

Based on open-ended questions, this research will be divided into seven aspects for visiting Lake Toba. For the first aspect in Table 2 Pairwise Attribute

Table 2. Pairwise attribute.

Attribute	NS	CA	CL	SA	HP	FP	FL	CA L	BH	Priorit y
Natural Scenery (NS)	1	3	5	2	7	6	4	3	8	0.3062

Attribute	NS	CA	CL	SA	HP	FP	FL	CAL	BH	Priority
Cultural Attraction (CA)	1/3	1	2	1/2	5	4	2	1	6	0.1307
Cleanliness (CL)	1/5	1/2	1	1/3	3	2	1/2	1/3	4	0.0698
Safety (SA)	1/2	2	3	1	6	5	3	2	7	0.1891
Hotel Promotion (HP)	1/7	1/5	1/3	1/6	1	1/2	1/4	1/5	2	0.0268
Flight Promotion (FP)	1/6	1/4	1/2	1/5	2	1	1/3	1/4	3	0.0394
Food Location (FL)	1/4	1/2	2	1/3	4	3	1	1/2	5	0.0893
Culture Attraction Location (CAL)	1/3	1	3	1/2	5	4	2	1	6	0.1307
The Best Hotel (BH)	1/8	1/6	1/4	1/7	1/2	1/3	1/5	1/6	1	0.0180

The pairwise comparison matrix for Destination Attributes reveals a hierarchical structure of importance among various factors contributing to Lake Toba's competitive destination image. Natural Scenery emerges as the paramount attribute, with a priority value of 0.3062, suggesting its critical role in shaping the destination's appeal. Safety follows as the second most significant factor, boasting a priority of 0.1891, which underscores the importance of perceived security in attracting visitors to the destination. Cultural Attraction and Culture Attraction Location share an equivalent priority of 0.1307, indicating their balanced and substantial contribution to the destination's competitive image. Food Location, with a priority of 0.0893, occupies a moderate position of importance, suggesting that culinary experiences play a notable, albeit not primary, role in the destination's appeal. Cleanliness, while not among the top priorities, still maintains a respectable significance with a priority of 0.0698, implying its role as a foundational aspect of destination attractiveness. Flight Promotion and Hotel Promotion exhibit lower priorities of 0.0394 and 0.0268 respectively, suggesting that while these promotional aspects contribute to the destination's image, they are perceived as less crucial compared to the inherent attributes of the location. The Best Hotel attribute is assigned the lowest priority of 0.0180, which may indicate that high-end accommodations are not perceived as a primary driver of Lake Toba's competitive destination image. The Consistency Ratio of 0.0993, being below the threshold of 0.1, validates the reliability of these comparisons, lending credence to the prioritization derived from this analysis. Alternative pairwise can be seen below in Table 3.

Table 3. Pairwise Alternative

Alternative	Social media	Local People	Priority
Social media	1.00	3.00	0.75
Local People	1/3	1.00	0.25

The pairwise comparison analysis of promotion channels for Lake Toba's competitive destination image yields a clear prioritization between the two alternatives under consideration. Social media emerges as the dominant promotion channel, with a priority value of 0.7500, significantly outweighing the alternative. Local People, while still retaining importance, are assigned a lower priority of 0.2500, indicating their secondary role in the promotion strategy. This stark differentiation in priorities suggests a 3:1 ratio of perceived effectiveness between social media and Local People as promotion channels. The perfect Consistency Ratio of 0.0000, while expected in a 2x2 matrix, nevertheless confirms the internal coherence of this comparative assessment. These results indicate a strong preference for leveraging digital platforms

to promote Lake Toba's competitive destination image, potentially reflecting social media's perceived wider reach and impact in contemporary tourism marketing. The findings suggest that while local community involvement in promotion remains valuable, it is viewed as substantially less impactful than social media strategies in enhancing the destination's competitive image. The ANP – BOCR supermatrix can be seen in Table 4 below.

Table 4. Completed ANP-BOCR Supermatrix for Lake Toba's Competitive Destination Image

Goal	Goal	NS	CA	CL	SA	HP	FP	FL	CAL	BH	SM	LP
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Scenery (NS)	0.31	0.00	0.30	0.10	0.20	0.10	0.10	0.20	0.30	0.20	0.40	0.30
Cultural Attraction (CA)	0.13	0.20	0.00	0.10	0.10	0.10	0.10	0.20	0.30	0.10	0.20	0.30
Cleanliness (CL)	0.07	0.10	0.10	0.00	0.20	0.20	0.10	0.20	0.10	0.20	0.05	0.10
Safety (SA)	0.19	0.10	0.10	0.30	0.00	0.10	0.20	0.10	0.10	0.10	0.05	0.10
Hotel Promotion (HP)	0.03	0.10	0.10	0.10	0.10	0.00	0.20	0.05	0.05	0.20	0.05	0.05
Flight Promotion (FP)	0.04	0.10	0.10	0.10	0.10	0.20	0.00	0.05	0.05	0.10	0.05	0.05
Food Location (FL)	0.09	0.10	0.10	0.10	0.10	0.10	0.10	0.00	0.05	0.05	0.05	0.05
Culture Attraction Location (CAL)	0.13	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.00	0.05	0.10	0.05
The Best Hotel (BH)	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.05	0.00
Social Media (SM)	0.75	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.00	0.50
Local People (LP)	0.25	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.00

Based on the supermatrix analysis of the ANP-BOCR model for Lake Toba's competitive destination image reveals several key insights: social media emerges as the most influential factor across the model, with consistently high values (0.5000) in its interactions with all Destination Attributes. This suggests that social media plays a crucial role in shaping and promoting various aspects of Lake Toba's image. Local People demonstrate an equally strong influence (0.5000) on all Destination Attributes, indicating the significant role of the local community in shaping the destination's competitive image across various dimensions.

Natural Scenery exhibits the highest direct influence on the goal (0.3062) among the Destination Attributes. It also shows strong interactions with Cultural Attraction (0.3000), Culture Attraction Location (0.3000), and social media (0.4000), underscoring its central role in Lake Toba's competitive image. While having the second-highest direct influence on the goal (0.1891), safety shows a particularly strong interaction with Cleanliness (0.3000). This suggests a perceived link between safety and cleanliness in shaping the destination's image. Cultural Attraction and Culture Attraction Location share equal direct influence on the goal (0.1307 each) and demonstrate strong mutual interactions (0.3000), indicating their intertwined role in the destination's cultural appeal.

Hotel Promotion and Flight Promotion show moderate interactions with each other (0.2000) but relatively lower influence across other attributes, suggesting their supportive rather than primary role in shaping the destination's competitive image. The Best Hotel demonstrates the lowest direct influence on the goal (0.0180) and minimal interactions with other attributes, indicating its relatively minor role in Lake Toba's overall competitive image. While having a moderate direct influence on the goal (0.0893), Food Location shows consistent but relatively lower interactions with other attributes, suggesting its supportive role in the overall destination image.

This super matrix analysis highlights the complex interdependencies between various attributes and promotion channels in shaping Lake Toba's competitive destination image. It emphasizes the central roles of natural scenery, cultural attractions, and safety while underscoring the critical importance of both social media and local community engagement in promoting and enhancing these attributes.

Table 5. BOCR Calculation for Lake Toba's Competitive Destination Image

Category	Attribute	Priority	Category Total
Benefits	Natural Scenery (NS)	0.6062	
	Cultural Attraction (CA)	0.1307	
	Food Location (FL)	0.1307	
	Culture Attraction Location (CAL)	0.0893	
			0.6569
Opportunities	Hotel Promotion (HP)	0.0268	
	Flight Promotion (FP)	0.0394	
	Social media (SM)	0.75	
	Local People (LP)	0.25	
			1.0662
Cost	The Best Hotel (BH)	0.018	
Risks	Cleanliness (CL)	0.0698	
	Safety (SA)	0.1891	
			0.2589

Based on that Table 5 about The BOCR (Benefits, Opportunities, Costs, and Risks) analysis of Lake Toba's competitive destination image yields noteworthy insights into the destination's strategic position in the tourism market. The Benefits category, with a cumulative value of 0.6569, demonstrates the destination's substantial inherent advantages. This high value is predominantly driven by the natural scenery and cultural attractions, underscoring the significance of Lake Toba's indigenous landscape and cultural heritage in shaping its competitive image.

Opportunities emerge as the most prominent category, boasting a remarkable value of 1.0662. This figure, substantially higher than other categories, indicates a significant potential for growth and enhancement in Lake Toba's competitive positioning. The disproportionate contribution of social media (0.7500) to this category highlights the untapped potential of digital marketing strategies in augmenting the destination's appeal and market reach.

The Costs category, registering a minimal value of 0.0180, suggests that the perceived financial and resource burdens associated with developing Lake Toba's competitive image are relatively insignificant. However, this low figure warrants cautious interpretation, as it may not comprehensively capture all potential cost factors relevant to destination development and management.

Risks, quantified at 0.2589, present a moderate concern in the overall strategic landscape. While not negligible, this value is substantially outweighed by the combined Benefits and Opportunities. The respondent needs information about the destination situation, especially regarding the virus spreading, which is now the Mpox virus.

The next questionnaire is open-ended questions in Table 5 Lake Toba Visitor Survey.

Table 5. Word Count Open-Ended Questionnaire

Category	Preference	Percentage
Reason for visiting Lake Toba	Natural Beauty/Scenery	57%
	Relaxation/Stress relief	18%
	Cultural Experiences	12%
	Family visits	8%
	Business/Work	5%
Most Attractive Natural Features	Lake Views	36%

Category	Preference	Percentage
	Mountain/Hills	26%
	Fresh Air	21%
	Forest	10%
	Waterfalls	7%
Popular Cultural Attractions	Traditional batak villages	33%
	Local Cuisine	24%
	Cultural Performance	19%
	Historical Sites	14%
	Handicrafts	10%
Most visited location	Waterfront	33%
	Sibe - bea Hill	23%
	Hobung Hill	20%
	Tomok Village	14%
	Tuk - tuk Peninsula	11%
Aspects That Make Visitors Feel Relaxed	Scenic beauty	36%
	Peaceful atmosphere	24%
	Cool climate	21%
	Friendly locals	12%
	Water activities	7%
Desired Improvements	Better transportation infrastructure	31%
	More accommodation options	24%
	Improved cleanliness	20%
	More tourist information	12%
	Enhanced safety measures	14%
Information Sought Before Visit	Accommodation options	28%
	Transportation to/around Lake Toba	25%
	Tourist attractions	21%
	Local customs and etiquette	14%
	Weather conditions	11%



Figure 2. Most visited location

Based on Table 5 Word Count an open-ended questionnaire reveals that natural beauty, particularly the lake views, is the primary attraction, drawing 57% of visitors. This aligns with the most relaxing aspect (scenic beauty at 36%) and the most visited location (waterfront at 33%). Cultural experiences, especially traditional Batak villages (33% of cultural attractions), play a significant secondary role. Visitors seek relaxation and stress relief, facilitated by the peaceful atmosphere and cool climate. However, the survey

identifies several areas for improvement, with better transportation infrastructure (31%) topping the list, followed by more accommodation options (24%) and improved cleanliness (20%). Before visiting, tourists primarily seek information about accommodation (28%) and transportation (25%), indicating these as key planning factors. The data suggests that while Lake Toba's natural and cultural assets are strong draws, enhancing infrastructure and visitor services could significantly improve the tourism experience and potentially increase visitor numbers and satisfaction.

4.2 DISCUSSION

The comprehensive analysis of Lake Toba's competitive destination image, utilizing the ANP-BOCR framework and visitor survey data, offers multifaceted insights that address the study's primary objectives while contributing novel perspectives to the existing literature on destination competitiveness. This discussion synthesizes the findings with the theoretical foundations established in the literature review, methodological considerations, and the broader context of Lake Toba as a priority destination in Indonesia's tourism development strategy.

The study's primary objective of identifying key factors influencing Lake Toba's competitive destination image is substantially addressed through the ANP model's prioritization of attributes, complemented by visitor preferences. The pre-eminence of natural scenery as the most influential factor aligns with (Afshardoost & Eshaghi, 2020) meta-analysis on destination image and tourist behavioral intentions. This is inline with (Echtner & Ritchie, 1991) conceptualization of destination image. This finding not only confirms the importance of environmental assets but also provides a quantitative assessment of their relative significance in Lake Toba's specific context, contributing to the discourse on nature-based tourism in emerging destinations.

The application of the ANP-BOCR framework, grounded in the work of (Saaty & Vargas, 2013), offers significant methodological contributions to tourism research. This approach provides a robust quantitative method for evaluating the complex interrelationships between destination attributes, addressing the need for more sophisticated analytical tools in destination competitiveness studies. The integration of Benefits, Opportunities, Costs, and Risks (BOCR) into the Analytic Network Process (ANP) allows for a more nuanced understanding of destination competitiveness compared to traditional linear models, aligning with (Kheybari et al., 2020) assertion on ANP's ability to model complex decision environments realistically.

The study reveals a complex interplay between various destination attributes and their collective influence on Lake Toba's competitive image. Safety emerges as a crucial factor, reflecting evolving tourist preferences in the post-COVID-19 era. This finding corroborates recent research by (Aldao et al., 2022) and (Aschauer & Egger, 2023) on the impact of global health crises on tourism, extending the discourse to include emerging destinations like Lake Toba. The next finding on destination management perspectives highlights the need for adaptive strategies in response to global health crises (Fyall & Garrod, 2020). The emphasis on safety, while prioritized in the ANP model, presents an opportunity for destination managers to enhance Lake Toba's competitive position through targeted safety initiatives.

The balanced importance assigned to cultural attractions and their locations in the ANP model aligns with (Pasquinelli, 2017) emphasis on cultural heritage in tourism promotion. These findings align with the (Chan & Marafa, 2018) conceptualization of place branding and tourist destinations. This finding is supported by the visitor survey, where traditional Batak villages, local cuisine, and cultural performances emerge as popular attractions. The study contributes to the literature by quantifying the relative importance of cultural elements in Lake Toba's competitive image, providing valuable insights for destination managers and policymakers in line with (Amani, 2024) work on strengthening tourism ethnocentrism in emerging destinations. This integration of cultural and natural elements in destination competitiveness support from (Baloglu & McCleary, 1999) work on the formation of destination image, offering a more holistic framework for understanding the interplay between cognitive and affective components in destination appeal.

In evaluating effective promotion strategies, a key research objective, the study reveals a strong preference for social media as a promotional channel. This finding is in line with (Cambra-Fierro et al., 2022) and (Stojanovic et al., 2022) on the influence of digital platforms in shaping destination imagery (Galiano-Coronil et al., 2023) on the impact of social media on tourism management. However, the visitor survey indicates that potential tourists seek diverse information before their visit, including accommodation options, transportation, and tourist attractions. This apparent discrepancy between the ANP model's prioritization and visitor information needs highlights the complexity of destination marketing in the

digital age, suggesting a need for a balanced approach that leverages social media while addressing practical information needs, as proposed by (Splendiani et al., 2023) in their investigation of social media use in travel agencies.

The BOCR analysis, revealing that opportunities substantially outweigh risks, offers a unique perspective on Lake Toba's potential for enhancing its competitive position. This optimistic outlook aligns with recent studies on post-pandemic tourism recovery but provides a more nuanced, quantitative assessment specific to Lake Toba. The identification of opportunities for growth is supported by the visitor survey, where respondents expressed desires for improvements in transportation infrastructure, accommodation options, and cleanliness. These findings address the research objective of identifying strategic opportunities for improving Lake Toba's competitive image, offering valuable insights for policymakers and destination managers in prioritizing development initiatives.

The study's findings on the role of local communities in shaping destination image the discourse on community involvement in tourism development (Keyim, 2018; Lobo et al., 2023; McNaughton et al., 2020; Praptika et al., 2024). While the influence of local people is quantitatively lower than that of social media in the ANP model, the visitor survey highlights the importance of friendly locals in creating a relaxing atmosphere. This apparent discrepancy between quantitative prioritization and qualitative importance underscores the complex nature of destination image formation and suggests potential areas for future research, particularly in understanding the nuanced role of host-guest interactions in shaping destination experiences, as explored (Armenski et al., 2011). In line with the result of local people being quantitatively lower than that of social media in the ANP model, the visitor survey highlights the importance of friendly locals (12%) in creating a relaxing atmosphere.

In contextualizing the findings globally, Lake Toba's case offers insights that are both unique to its setting and broadly applicable to emerging destinations worldwide. The prioritization of natural scenery aligns with global trends in nature-based tourism, as observed in studies of other lake destinations. However, Lake Toba's unique cultural context, particularly its Batak heritage, provides a distinctive element that sets it apart in the global tourism market. This study contributes to the growing body of literature on how emerging destinations in developing countries can leverage their natural and cultural assets to compete in the global tourism market, and support from the previous research (Aref & Redzuan, 2009) on community capacity building for tourism development.

The integration of ANP-BOCR findings with the visitor survey results provides a comprehensive framework for understanding Lake Toba's competitive destination image, addressing the methodological call for mixed-method approaches in tourism research advocated by Yang et al. (2009). This approach enhances the validity and reliability of the study's conclusions, offering a balanced perspective on the factors influencing destination competitiveness.

5 CONCLUSION

This study on Lake Toba's competitive destination image contributes to the field of tourism research and destination competitiveness analysis through its application of the Analytic Network Process (ANP) combined with a Benefits, Opportunities, Costs, and Risks (BOCR) framework. This methodological approach addresses the need for more sophisticated analytical tools in destination competitiveness studies, as highlighted by (Kheybari et al., 2020).

The findings reveal the paramount importance of natural scenery in shaping Lake Toba's competitive image, aligning with (Moliner-Tena et al., 2023) emphasis on the role of natural scenery in destination image formation. This result provides a quantitative assessment of the significance of environmental assets in destination appeal, specifically in the context of an emerging destination in Indonesia.

Safety emerges as a crucial factor, reflecting the evolving tourist preferences in the post-pandemic era. This finding resonates with recent research by (González-Rodríguez et al., 2023) on the impact of safety concerns on destination competitiveness, extending this discourse to the specific context of Lake Toba.

The study's methodological approach offers a comprehensive evaluation of the complex interrelationships between destination attributes, integrating both cognitive and affective components of destination image as conceptualized by (Baloglu & McCleary, 1999). This ANP-BOCR model provides a nuanced framework for understanding the multifaceted nature of destination competitiveness.

A key finding is the dominant role of social media as a promotion channel, significantly outweighing traditional methods. This result aligns with (Cambra-Fierro et al., 2022) and (Stojanovic et al., 2022) on the influence of digital platforms in shaping destination imagery, offering new insights into the effectiveness of various promotion strategies in the context of an emerging destination.

The BOCR analysis reveals that opportunities for enhancing Lake Toba's competitive position substantially outweigh potential risks, providing an optimistic outlook for future development. However, the study also identifies areas for improvement, particularly in infrastructure and visitor services, offering actionable insights for policymakers and destination managers.

This research contributes to the ongoing discourse on the role of local communities in shaping destination image, as explored by (Praptika et al., 2024). While the quantitative analysis suggests a lower influence of local people compared to social media, the qualitative findings highlight the importance of host-guest interactions in creating a positive destination experience, pointing to a complex relationship that warrants further investigation.

The study's limitations must be acknowledged. Its focus on Lake Toba limits the generalizability of findings to other destinations. The cross-sectional nature of the research may not capture long-term trends or changes in tourist perceptions over time.

Future research could address these limitations by conducting longitudinal studies to track changes in Lake Toba's competitive image over time, especially as improvements are implemented. Comparative studies with other emerging destinations could validate the broader applicability of the ANP-BOCR framework in destination competitiveness analysis.

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