Domestic Tourist Interest in Lake Toba Tourism Area Destinations

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ABSTRACT

The tourism area around Lake Toba is part of the Indonesian government's super-priority destination program. The goal of this study was to figure out where each destination was on the respondent's mind map. Purposive sampling was used to select 103 participants for this investigation. The results of data processing with SPSS display a three-dimensional perceptual map, with dimension 1 representing the destination image in the Lake Toba tourist area, dimension 2 representing the destination brand experience (Brand experience destination), and dimension 3 representing the attraction in regional Lake Toba tours. Then, based on the Euclidean distance, a destination group was constructed, which was viewed as having a similarity level. Taman Iman Sitinjo, Lae Pandaroh Waterfall, Tuktuk, Hot Springs, and Sipiso-Piso Waterfall have created a single group that is in direct competition with one another. Balige, Sisingamangaraja Palace, and the Salib Kasih are the other groups. Parapat and Tomok, meanwhile, created their own groups. RSQ = 0.76 and Stress = 0.17 are the outcomes.

Keyword: Destination, Perceptual Map, Positioning Analysis, Multidimensional Scaling, Tourism

INTRODUCTION

Aside from oil and gas, Indonesia has another source of foreign exchange, which is the tourist industry. In 2016, the tourist sector generated 176.23 trillion rupiah in foreign exchange. It reached 202.13 trillion rupiah in 2017 and 224 trillion rupiah in 2018. The tourist industry is expected to become the Indonesian economy's greatest foreign exchange earner in 2019. (2019, kemenpar.go.id). The Indonesian government has devised a plan that prioritizes six National Tourism Strategic Areas (KSPN), one of which being Lake Toba in North Sumatra. Lake Toba is a big natural lake located in the crater of a supervolcano mountain in North Sumatra, Indonesia. It is also the world's second largest lake, behind Lake Victoria.

A hostile atmosphere In the priority categories of tourism and travel, pricing competitiveness, air transportation, natural resources and cultural resources, and business travel, Indonesia's tourist industry ranks among the top five in Southeast Asia (WEF, 2015). Along with these benefits, Indonesian tourism has flaws that must be addressed by multiple stakeholders, both public and private, on a continuing basis. Lake Toba is a high-priority destination that is directly surrounded by seven districts. Regional expansion was aided by the development of infrastructure and supporting facilities in numerous locales. The tourism sector of Lake Toba demands innovation in the production of products supplied at locations, as well as simple access to such destinations, to maintain its competitive advantage (Tarigan, 2020; Lumbanraja, 2017). There are seven



districts that surround Lake Toba. The goal of this research is to find the most popular destinations in each area. Toba Regency, Samosir Regency, North Tapanuli Regency, Dairi regency, Simalungun Regency, Humbang Hasundutan Regency, and Karo Regency are the seven regencies. Figure 1 depicts the district boundaries regency, Simalungun Regency, Humbang Hasundutan Regency, and Karo Regency are the seven regencies. Figure 1 depicts the district boundaries.

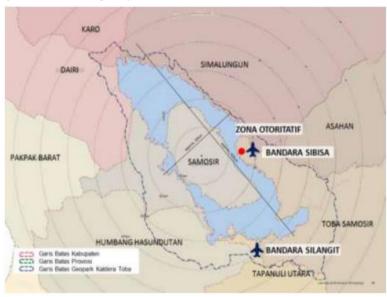


Figure 1. Lake Toba Tourism Area within District Boundaries Source: BOPDT, 2017

The authoritative zone and the coordinating zone have set the borders of the

development area for the development of the Lake Toba Tourism Area, as shown in Figure 2.

Kawasan Koordinatif dan Zona Otoritatif



Source: BOPDT, 2017

Figure 2. Coordinative Zone and Authoritative Zone

A 3A strategy (Attractions, Access, and Amenities) is planned for Lake Toba in the 2016–2019 development strategy portfolio (BPODT, 2017). Natural attractions, cultural

tourism items, and manufactured tourist artifacts are all examples of tourist attraction objects, according to Utama (2017). According to Holloway (2009), the success of tourist sites



in attracting visitors is determined by three key components: attractions, amenities. accessibility. Attractions are all things that travelers find intriguing in tourist attractions, causing them to want to visit them. Tourists go to tourist attractions to obtain items that they would not normally find in their daily life. If a tourist attraction has a variety of attractions that can entice travelers to visit the tourist destination, it is referred to as a tourist attraction (Nisa & Abrani, 2014). As a result, each district's attractions were created in order to boost the number of visitors to the Lake Toba tourist area. Nature (35 percent), which includes marine tourism, ecotourism, and adventure tourism: Culture (60 percent), which includes Cultural and Historical Heritage Tours,

Shopping and Culinary Tours, and City and Village Tours; and Man-made (5 percent), which includes MICE & Events tourism, Sports Tourism, and Integrated Tourism. The Regional Government's development initiative includes destinations in seven regencies surrounding the Lake Toba tourist area (BPODT, 2017). In her research, Tarigan (2021) claims that among the destinations built by the Regional Government. there are some that are outstanding. Tarigan (2021) cites the top destinations in each district, as seen in Table 1. Each destination has its own allure and a unique place in the tourist's mind. The goal of this study is to figure out where each of the top tourist locations falls on the tourist perception

Table 1. Featured Destinations in Lake Toba Tourism Area

District	Destination		
Tananuli I Itana	Salib Kasih		
Tapanuli Utara	Hot Spring		
Samosir	Tomok		
	Tuktuk		
Simalungun	Parapat		
	Tigaras		
Dairi	Taman Iman Sitinjo		
	Water Fall Lae Pandaroh		
Toba	Balige		
	Museum Batak		
Humbang Hasundutan	Sisingamangaraja's Palace		
	Binanga Janji Water Fall		
Karo	Sipiso-piso Water Fall		
	Gundaling High land		
Causas, Ta	. 0004		

Source: Tarigan, 2021

This research use Multidimensional Scaling Analysis (MDS), a multiple variable technique for determining the position of another object based on a comparison of their similarities. MDS is concerned with the creation of a map that describes the position of one object in relation to other objects based on their similarity. A multivariate approach called MDS is used to examine the dependency between

variables (Hair, et al, 2018; Santoso and Tjiptono, 2001: 321). ALSCAL and INDSCAL can be created using SPSS, which is the program currently being used to analyze MDS. The Lake Toba tourism area's allure in comparison to ten other locations, both in terms of similarities and differences or stark variances. based on a rating scale from 1 to 5. If the current tourist attraction is substantially



similar to other tourist attractions, give it a score of 1. (eg destinations in Parapat have similarities with destinations in Tomok). A score of 2 indicates that there are no similarities between the two tourist attractions, a score of 3 indicates that there are similarities and differences between them, a score of 4 indicates that there are many differences between them, and a score of 5 indicates that respondent finds the two tourist destinations to be very different in terms of their allure (eg Parapat is very different from Hot Springs in North Tapanuli). If the RSQ value is 0.1 or near to 1, the MDS analysis results using the ALSCAL procedure show good viability. The proximity between the data and the perceptual map is described by RSQ. that a perceptual map is created using the distance information between objects. While the STRESS value shows whether or not the output results closely reflect the situation as it is. A STRESS score of 0.5 means that the result is more accurate to the situation as it is (the closer to zero the output is said to be more similar to the actual situation).

The word tourism is derived from Sanskrit, which consists of two syllables: pari, which meaning to go around, circle, many times, from, and to. And the term tourism refers to travel, which is synonymous with the term travel in this situation. Thus, tourism is defined as a trip around or a trip repeated many times, circling from one location to another, or a perfect vacation. Tourism, in technical terms, is an activity carried out by a person or group in their own country's or another country's territory, using the convenience of services, supporting factors, and other facilities provided by the government, the business world, and the community to fulfill the wishes of tourists.

According to Kotler and Keller (2012), positioning is the act of designing products and marketing mixes in order to create a certain

impression in the minds of consumers. (Wasana, 2008). The impression in this case is the consumer's positive perception or image of the company or the product. In order for customers to understand and, appreciate what the firm does to set itself apart from its competition. The corporation must research or identify the competitor's position before deciding whether to take an equivalent position or explore for market prospects utilizing a previously developed strategy. If the firm's position is similar to that of other competitors who offer the same product, the company must choose and then look for additional differences in the company's concept or quality.

"Positioning is the act of creating the company's offer so that it occupies a distinct and value placed in the target consumer mind." Kotler and Keller (2012) write in their book Marketing Management. The goal is to determine the best market position after selecting the segmentation approach. In other words, positioning is a firm's activity or set of actions to position a product in the minds of target customers where the company has a differentiator or feature that sets it apart from competitors. Positioning must be matched with good communication, since this can have an impact on the image that the organization wishes to project to target customers. Positioning strategy is the most important component in improving a company's market position in comparison to its competitors in a certain market. Before implementing a branding plan, a company must first position itself. From the definition above, it is clear that positioning is geared toward consumers' beliefs perceptions. By making particular messages, positioning aims to influence the thoughts of target consumers about the products on sale, allowing them to generate perceptions that can help build and form a positive image for the product or firm.

Procedure for Positioning 1) Identifying products that are relevant to the market In most cases, a product is designed to satisfy more than one need or need. 2) Customer Needs Data Collection Marketers must document all of the requirements and desires that a product can meet in order to properly position it. 3) Make a list of competitors. There are both primary and secondary rivals. Primary competitors are those who compete to meet core demands. whereas secondary competitors are those who aren't instantly thought of when thinking of customer wants or needs. 4) Establishing Evaluation Criteria Determine how consumers evaluate solutions to satisfy their needs and the criteria they use to do so. Typically, someone will assess several possible solutions to the difficulties he is confronted with using a set of criteria. In this instance, businesses must perform marketing research to learn about the methods and standards that consumers use to make purchasing decisions. 5) Create a mental map. Understanding how customers view competitor's position (by making a perceptual map). Marketers must use a perceptual map based on product qualities, user scenarios, or user groups to identify the position occupied by competitors. 6) Identify any holes in your current job. Determine if there are any gaps in the occupied position. It may be established which areas or elements have not been focused on or have been worked on by numerous competitors by analyzing the position of various competing products. 7) Create a positioning strategy and put it into action. After determining the target market and intended position, the marketer must establish a marketing program that ensures that all information about the product or brand transmitted to the market creates the desired perception in consumers' minds. A promotional

campaign is at the heart of this positioning strategy. 8) Keep an eye on your surroundings. The current position of a product or brand must be monitored at all times in order to respond to any changes in the environment. The following are the goals of product positioning (Hasan, 2008: 201): 1) To situate or position the product in the market so that it is distinct from competing brands. 2) To place the product in such a way that it communicates some crucial messages to customers. 3) To achieve the following desired outcomes: a) To meet the needs of certain market segments as much as feasible. b) Minimize or eliminate the potential of unexpected sales fluctuations. c) Increasing client trust in the brands available.

Multidimensional scaling analysis is a multivariable technique for determining the location of another object based on its similarity assessment. MDS is a method for determining the interconnectedness or interdependence of variables or data. MDS is divided into metric scale MDS and non-metric scale MDS. Multidimensional Scaling is 1. A collection of statistical techniques to analyze the similarities and dissimilarities between objects. 2. Give results in the form of a plot of points so that the distance between the points describes the level of similarity or dissimilarity. 3. Identify unknown characteristics or factors that influence the emergence of similarity or dissimilarity by providing clues. The goal of multidimensional scaling is to find a configuration in which the distance between points corresponds to the object dissimilarity.

METHODS

This study relies on primary data collected via a Google form questionnaire. The study's population cannot be determined with certainty based on domestic tourists visiting the Lake Toba Tourism Area. According to Ferdinand (2011), the determination of the sample size in this study can be determined by



five to ten times the number of indicators set in this study. Because there are 20 indicators in this study, the sample size is 100 people. Purposive sampling was used to identify which are respondents. people participated in this study based on certain criteria, such as being domestic tourists, being at least 17 years old, and having visited Lake Toba's tourist destinations. Data was collected from respondents via a questionnaire, with Google Form serving as the questionnaire tool in this study. This research questionnaire was created using an ordinal scale, namely Likert, with 7 perception scales from respondents, each representing 1 = Strongly Disagree; 2 = Disagree: 3 = Neutral: 4 = Agree: and 5 = Strongly Agree. This is a descriptive study that will describe respondents' perceptions of the

infrastructure and service variables in the destination, the attractions held at the destination, and the image that respondents have of the destinations surrounding the Lake Toba tourist area. The multidimensional scaling method, as explained above, will provide a map description of the position of the leading destinations around the Lake Toba tourist area based on the similarity of respondents who participated in this study. Knowing the leading destinations in each district can be used as an input for policymakers in the Regional Government to carry out destination development on time. Table 2 is provided below. Indicators and destinations in the Lake Toba Tourism Area are represented by symbols.

Table 2: Indicator and Destination Symbols for the Lake Toba Tourism Area

Symbol	Definition	Symbol	Definition
X ₁	Family Recreation	Α	Parapat, Simalungun
X_2	Adventure	В	Tomok, Samosir
X_3	Beautiful nature	С	Balige, Toba
X_4	Spiritual Experience	D	Taman Iman Sitinjo, Dairi
X_5	Holiday Activities	E	Salib Kasih, Tapanuli Utara
X_6	Music	F	Sisingamangaraja's Palace, Humbahas
X_7	Culinary	G	Hot Spring, Tapanuli Utara
X_8	Culture	Н	Sipiso-piso Water Fall, Karo
X 9	Cleanliness	I	Lae Pandaroh Water Fall, Dairi
X ₁₀	Hospitality	J	Tuktuk, Samosir

Sumber: Tarigan (2021)

RESULT AND DISCUSSION

The coordinates (stimulus coordinates) of each leading destination were obtained as a

result of processing this MDS program, as shown in Table 4 below:



Configuration derived in 3 dimensions Stimulus Coordinates

		Dimension			
Stimulus Number	Stimulus Name	1	2	3	
Number 1	A Name	2,3779	-1,4378	,4264	
2	В	1,3820	1,9730	-,4120	
3	С	-1,8590	-,8321	,7226	
4	D	,5835	-,2455	,7757	
5	E	-1,6528	,6431	,2549	
6	F	-,0679	,3329	1,2251	
7	G	-,0704	,3974	,1688	
8	H	-,5198	-1,0600	-1,6596	
9	I	-,0917	,0003	-,5386	
10	J	-,0818	,2287	-,9633	

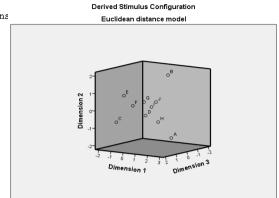


Figure 3. Output of Data Processing

Source: Data Processing

Stress and squared (RSQ) distance correlation The proportion of variance of the scaled data (disparity in partition (row, matrix, or entire data) calculated based on the appropriate distance is the RSQ value. The Kruskal stress formula 1 is used to calculate the stress value.

Stress= For Matrix, 17850, RSQ = .76133

Hair et al. (2012) explain how to interpret the dimensions of the perceptual map. The first is a subjective method in which researchers or respondents label the perceptual dimensions in Figure 3. The second is an objective procedure that involves collecting the attribute ratings of each object and then using PROFIT (PROperty FITting) software to find the best correspondence between the attributes and each object. The first procedure is used in this study.

Figure 3 depicts three dimensions: dimension 1 is the destination image in the Lake Toba tourist area, dimension 2 is the destination brand experience, and dimension 3 is the attraction in the Lake Toba tourist area. Figure 3 shows that D (Taman Iman Sitinjo), I (Lae Pandaroh Waterfall), J (Tuktuk), G (Hot Water Baths), and H (Sipiso-piso Waterfall) are all in the same group, competing directly. The following groups are in the same group: C (Balige), F (Sisingamangaraja Palace), and E (Cross of Love). While A (Parapat) and B

(Tomok) formed separate groups. Direct competition occurs in groups of destinations on the perceptual map in the competitive environment of Lake Toba tourist destinations, as shown in Figure 3. Although each destination competes with the others, the competition is only indirect. Figure 3 shows that A (Parapat) and B (Tomok) are not facing any direct competitors. These two destinations compete with other Lake Toba tourist destinations, but the competition is partial.

Each of the leading tourist destinations in has а distinct distinction this area (differentiating factor). According to the perceptual map in Figure 3, the closer Euclidean distance appears that D (Taman Iman Sitinjo), I (Lae Pandaroh Waterfall), J (Tuktuk), and G (Hot Springs) have a degree of similarity in terms of destination image, destination brand experience, and attractions that the respondent finds at the stated destination. Sitinjo Faith Park in Dairi Regency has the potential to provide tourists with a spiritual experience; Tuktuk in Samosir Regency has the potential to provide tourists with cultural experiences through tourist attractions and activities with local residents. North Tapanuli Regency's Hot Springs can provide an experience of enjoying natural wealth that is rich in benefits.

Maholtra believes that the model can be accepted if the RSQ (R-Square) value is greater than 0.6. The above data processing results yielded an RSQ value of 0.76 with three dimensions, meeting the criteria mentioned. RSQ is the inverse of stress. The proportion of variance differences is indicated by stress. The lower the stress level, the better the MDS model produced. According to Table 2, the stress level in this study was 0.1785 or 17.85 percent; this result falls into the perfect category.

CONCLUSION

The Lake Toba tourist area, which is surrounded by seven districts, is the most popular tourist destination in North Sumatra. Each district has advantages and distinctions, as well as a distinct local culture. The most popular destinations in each district are also distinct. This study utilizes MDS to identify top destinations with similar perceptions among respondents.

The three-dimensional MDS describes the degree of similarity between respondents in the same field's perceptions. This study employs three dimensions: dimension 1 is the image of the destination (destination image) in the Lake Toba tourist area, dimension 2 is the experience of the destination (destination brand experience), and dimension 3 is the attraction in the Lake Toba tourist area. Figure 3 shows that D (Taman Iman Sitinjo), I (Lae Pandaroh Waterfall), J (Tuktuk), G (Hot Water Baths), and H (Sipiso-piso Waterfall) are all in the same group, competing directly. The following groups are in the same group: C (Balige), F (Sisingamangaraja Palace), and E (Cross of Love). While A (Parapat) and B (Tomok) formed separate groups.

It is hoped that knowing respondents' perceptions of leading Lake Toba tourist destinations will assist business people and

even local governments in developing business strategies that will ultimately increase the number of visitors to these destinations. The growing number of visitors to destinations will boost community economic activities, which will benefit regional and national income. By sampling 3-4 times at different times, this MDS perceptual map model produces more valid results. This study collected data twice, at different times. Data can be collected more than twice in subsequent research.

REFERENCES

- Ali Hasan. (2008). *Marketing* (p.201). Yogyakarta: Media Pressindo
- Badan Pelaksana Otorita Danau Toba (BPODT). 2017. Konsep Pembangunan Pariwisata Kawasan Danau Toba. Medan, Sumatera Utara.
- Chen, C-M., Chen, S.H., & Lee, H.T. (2011). The destination competitiveness of Kinmenn's tourism industry: Exploring the interrelationships between tourist perceptions, service performance, customer satisfaction and sustainable tourism. *Journal of Sustainable Tourism*, 19(2), 247-264. http://dx.doi.org/10.1080/09669582.201 0.517315
- Goodrich, Jonathan N. (1977). Differences in perceived similarity of tourism regions: A spatial analysis. Journal of Travel Research, 16(1), 10–13.
- Goodrich, J. N. (1978). A new approach to image analysis through multidimensional scaling. Journal of Travel Research, 16(3), 3–7
- Gursoy, D., Baloglu, S., & Chi, C. G. (2009).

 Destination competitiveness of Middle
 Eastern countries: An examination of
 relative positioning. Anatolia, 20(1), 151–
 163.



- Hair, J.F., Sarstedt, M., Ringle, C.M., Mena, J.A., (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the academy of marketing science*. 40: 414–433 (2012). https://doi.org/10.1007/s11747-011-0261-6
- Holloway, J. Cristopher, Humphreys, Claire dan Davidson, R. (2009). *The Business of Tourism* (8th Edition). ENGLAND: Pearson Education Limited.
- Kementrian Pariwisata. 2019. *Laporan Akuntabilitas Kinerja Kementrian Pariwisata 2018*. www.kemenpar.go.id. Februari 2019: Jakarta
- Kim, D. J., Kim, W. G., & Han, J. S. (2007). A perceptual mapping of online travel agencies and preference attributes. Tourism Management, 28(2), 591–603.
- Kotler, P. & Keller, K.L. (2012), *Manajemen Pemasaran* Jilid I Edisi ke 12. Jakarta: Erlangga.
- Lumbanrajam Prihatin., Lubis, Arlina N., Hasibuan, Baby K., (2017) Sustaining Lake Toba's Tourism: Role of Creative Industry, Green Tourism Marketing and Tourism Experience. *Journal ajba* vol.12 No.1.9
- Malhotra, N. K. (2007). *Marketing Research An Applied Orientation*. New Jersey: Pearson Prentice Hall.
- Nisa, K., Fauzi, H., & Abrani. (2014). Persepsi Wisata dan Masyarakat Terhadap Wisata Alam di Areal Hutan Pendidikan UNLAM MANDIANGIN, Kalimantan Selatan. *Jurnal Hutan Tropis*, 2 (2): 119– 126
- Santoso, Singgih. 2011. Structural Equation Modeling (SEM). Konsep dan Aplikasi

- dengan AMOS 18, Jakarta: PT Elex Media Komputindo
- Suarnayasa, K., & Haris, I. A. (2019). Persepsi Wisatawan terhadap Keberadaan Objek Wisata Air Terjun di Dusun Jembong. Jurnal Pendidikan Ekonomi Undiksha, 9 (2): 473–483. https://doi.org/10.23887/jjpe.v9i2.20132
- Sudiarta , I Nyoman, I Wayan Suardana, dan Nyoman Ariana, (2014), Multidimensional Scaling: Strategi Memasarkan Destinasi Pariwisata Bali. *Jurnal Ilmiah Hospitality Management*, Vol. 5(1), Juli - Desember 2014, 13-25
- Tarigan, Miska I., Lubis, Arlina N., Rini, Endang S., Sembiring, Beby K. F., A study of supply chain management for preliminary destination brand experience in North Sumatera, Indonesia; International Journal of Supply Chain Management, 2020, 9(4), pp. 244–247
- Tjiptono, Fandy. 1997. Strategi Pemasaran. Yogyakarta: Penerbit ANDI
- Utama, I. G. B. R. (2017). Pemasaran Pariwisata. Yogyakarta: ANDI.

Wasana

- Witarsana, I. K. (2017). Motivasi dan Persepsi Wisatawan Mancanegara Berwisata Alam Trekking Mountain Di Taman Wisata Alam Gunung Batur Bukit Payang. 5 (1): 13–19.
- World Economic Forum (WEF) on East Asia, 2015, East Asia in the New Global Context. Jakarta: 19-21 April 2015.
- Zins, A. H. (2010). Mapping beneficial destination images. Journal of Hospitality and Tourism Management, 17(1), 96–107

