

## Analysis of Stakeholder Attitudes toward Sustainable Tourism Development of Lake Toba Area

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### ABSTRACT

The purpose of this study is to analyze the attitude of stakeholders towards sustainable tourism development in Lake Toba, Indonesia. The indicators used to measure stakeholder's attitude were adopted from the United Nations World Tourism Organization and grouped into the human system and ecosystem categories. A total of 361 questionnaires were collected from several stakeholders of Lake Toba tourism. Stakeholders' attitudes were analyzed by multiplying their level of trust in their level of importance to the tourism development indicators. The gap between trust and importance will be mapped on the importance-performance analysis diagram. The analysis indicated that the stakeholders' attitude is generally optimistic about the tourism development in Lake Toba. However, the level of optimism varies among stakeholders. Tourism entrepreneurs and workers have the lowest attitude value compared to local people and tourists. Also, stakeholders which have low income or whose income partly or most comes from the tourism industry or live in the Lake Toba Area are those in the key priority to consider. They provide the lowest level of trust but provide the highest level of importance in development. Decision-makers must give a more serious approach to these stakeholders to get maximum support.

**Keywords:** Attitude, Lake Toba, Sustainable Development, Sustainable Tourism, Stakeholder Analysis

### INTRODUCTION

Tourism is one of the biggest and fastest-growing economic sectors in the world and has a considerable part to play in delivering sustainable development in many countries. In 2019, the impact of tourism has contributed US\$ 8.9 trillion to the world's GDP (Jus, 2020). The concept of sustainable development has become a global agenda for every development including tourism. The tourism sector's fundamental obligation is to understand the ideals of sustainable tourism development and to focus on achieving sustainable development goals. Sustainable tourism development is known as tourism which takes full account of its current and future economic, social and environmental impacts and addresses the needs of visitors, industry, the environment, and local communities (UNWTO, 2013)

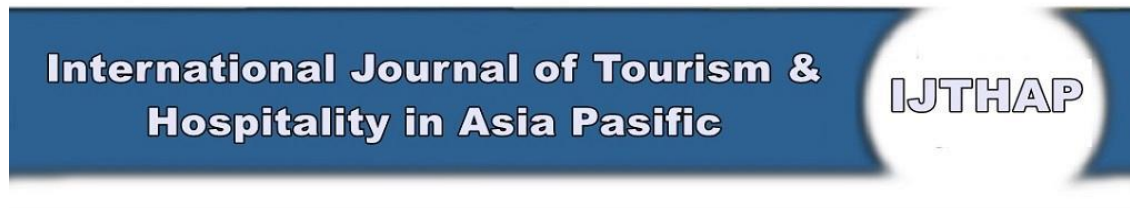
Stakeholders' attitude toward tourism sustainability is one of the important factors in supporting tourism development policy. There have been several other factors also identified as influencing stakeholders' attitudes toward tourism and be used in this research such as distance to the development area (Khoshkam et al., 2016), (Saygin et al., 2015); (Muresan et al., 2016); (Rasoolimanesh & Jaafar, 2017); (Zhu et al., 2017), and economic reliance on tourism (Bagri & Kala, 2016). This study emphasizes the understanding of stakeholders' attitudes and classifies them into various clusters based on their opinions toward tourism development. Demographic characteristics are also considered as a significant factor that influences stakeholders' attitudes that form their perceptions towards further development (Sulistiyadi et al., 2019).

Lake Toba is one of the top priority tourist destinations in Indonesia. As one of the priorities in the development of tourist destinations in Indonesia, it is expected that the development carried out can have national and international service scales for the long term. The scope of this study covers all the stakeholders based on their engagement and involvement in the tourism industry of Lake Toba (Paramitha et al., 2019; Sitorus & Manik, 2021). In order for the tourism development plan in Lake Toba to develop according to its objectives, the involvement of all stakeholders is crucial. Stakeholder engagement can only occur if they have an optimistic view on sustainability. This study aims to analyze the attitude of the stakeholders of the Lake Toba Area towards the sustainability of tourism in Lake Toba. The research instruments used are indicators of sustainable tourism development developed by the United Nations World Tourism Organization (UNWTO, 2013). The findings of this study contribute to understand the stakeholder profiles based on their attitudes so that policymakers can determine the appropriate strategies and approaches to get maximum support from stakeholders for tourism development in Lake Toba Area.

### **Literature Review**

World Tourism Organization, as the only global international organization dealing with trade rules among nations, has indicated that tourism development activities must be prepared, controlled, and established in accordance with the needs and attitudes of the stakeholders toward tourism development (Sdrali et al., 2015). Stakeholders are those who have an interest in a particular decision or course of action, either as individuals or as representatives of a group. This includes any group or anyone who can be affected or is affected by the achievement of the organization's objectives. In other words, the success of sustainable tourism development is inseparable from stakeholder support. Identifying the different levels of stakeholders is an essential step in studying stakeholder engagement in any policy making. Four commonly stakeholder levels utilized in the literature are (1) the individual level; (2) the firm level; (3) the industry level; and (4) the societal level (Avelino & Wittmayer, 2016).

The support of the stakeholders in systems' sustainability transitions is determined by the extent of the attitude and perspective of stakeholders towards sustainability. The attitude of stakeholders greatly contributes to the success and sustainability of the concept (Claiborne, 2010). Understanding stakeholder groups and how their perceptions, attitudes, and engagement are important things to do, as they can affect



the development of tourism (Chiappa, 2015). In line with other studies, it is also stated that understanding the attitudes of stakeholders specifically on the impact of tourism development in their area are needed because they directly or indirectly get the impact of the development so that policymakers can implement the right strategy (Cañizares et al., 2016; Saygin et al., 2015; Muresan et al., 2016).

As indicated by Sumarwan (2004), the concept of attitude is identified with trust/belief and importance. The concept of trust/belief is a component of knowledge and an individual's perception of an object with some uniqueness in it. Meanwhile, the concept of importance will prompt the commonplace aftereffects of that trust. In line with Fishbein Model, indicates that an individual's attitude towards an object is an element of his or her trust that is related to specific ascribes and evaluative reactions that are associated with that trust. The mathematical formulation of an attitude toward the object can be formulated as follows:

$$A_o = \sum_{i=1}^n (bi)(ei)$$

Ao = attitude toward an object

bi = level of trust/belief that the object has attribute i

ei = the evaluation/importance of attribute i

Stakeholders in tourism can be divided into tourists, tourism industries/service providers, tourism service supporters, local communities, and non-governmental organizations (Damanik & Weber, 2006). Another study stated that four main stakeholders have close interests in tourism development; namely, the tourists, the entrepreneurs, the local people, and the government (Goeldner & Ritchie, 2005). Different stakeholders perceive tourism from a diverse perspective that influences their tourism understanding. Several consider tourism as an economic opportunity while others consider it as an ecological burden that could create conflict among these groups (Goeldner & Ritchie, 2005).

Over the past several years, several studies have been carried out to measure the attitudes of stakeholders towards tourism. Local communities are asked to mark their degree of participation in the tourism industry to get their attitude towards tourism development (Saygin et al., 2015; Bagri & Kala, 2016). Another study examined the attitudes of residents towards tourism by measuring their opinion towards the economic, cultural, and environmental impacts of tourism (Zhu et al., 2017; Rasoolimanesh & Jaafar, 2017). The attitude of local communities towards the development of tourism has received much attention from tourism researchers because of its significance for the success and sustainability of tourism development (Yu et al., 2011).

In reverse, this argument is contended by Hsieh et al (2017) and Abdelgair et al (2017) who support studying attitudes of not only local residents but also tourists. The research found that tourists are less concerned about the environmental damage caused by tourism than residents. Identifying the perspective of stakeholders will encourage policies that reduce potential negative effects of tourism development and optimize its



benefits, contributing to community development as well as more tourism support (Thetsane, 2019).

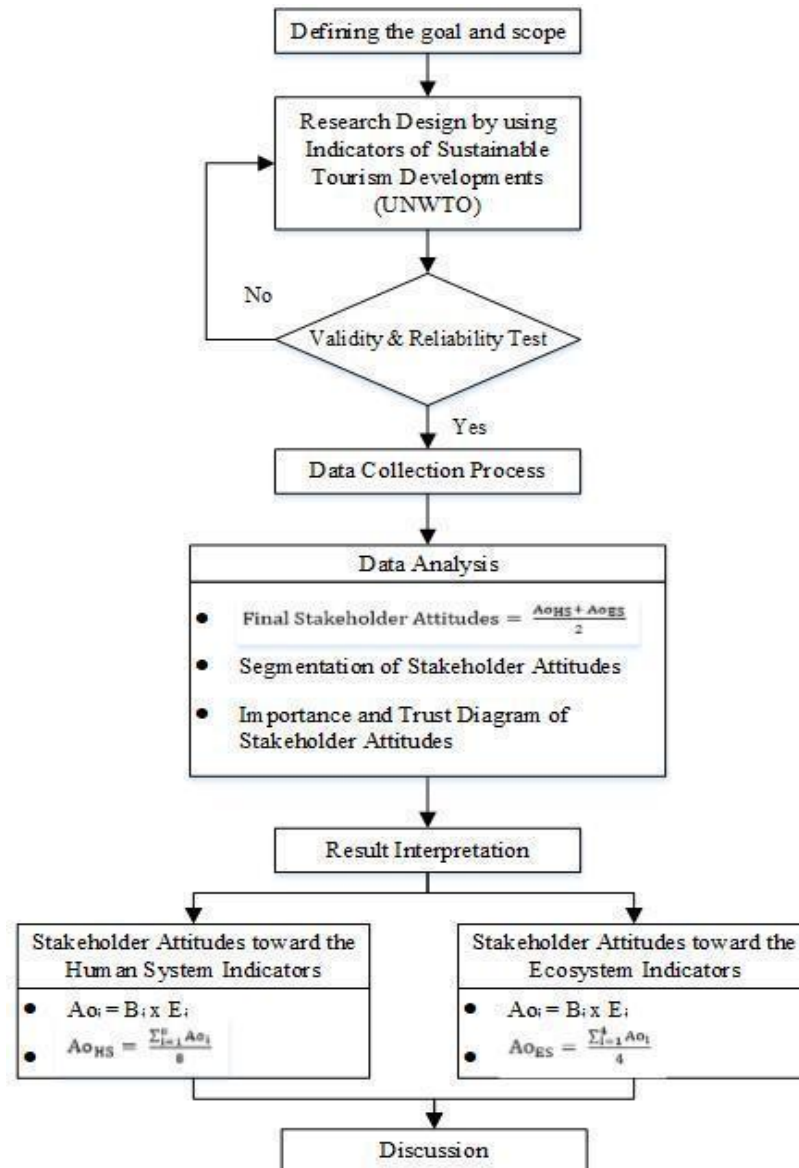
Nevertheless, literature has only concentrated on the role of local communities in the tourism development area, leaving a gap in knowledge on stakeholders' engagement in the development process. Most of the studies concentrated on assessing the impacts of tourism development to measure stakeholder attitudes. The goal of the study is to analyze the attitude of stakeholders towards sustainable tourism development of the tourism industry in the Lake Toba area. (Paramitha et al., 2019) explained in their research that the stakeholders in the tourism industry of Lake Toba area consist of workers in tourism sector, NGOs in development and environment, Executive Body for Lake Toba Tourism Authority (BPODT), Authoritative Body of Lake Toba Tourism (BODT), Religious Institutions, tour operator association, local community, owners/administrators, Coordinating Minister of Maritime Affairs, Ministry of Tourism, Ministry of Environment and Forestry, Regencies Government within Lake Toba Area, Legislative of the regencies within Lake Toba Area, tourists, mass media, prospective investors, concerned public figures (local/national) and social media buzzers.

## RESEARCH METHOD

In this section, the main parts regarding the research method of this study will be explained. Figure 1 represents the framework of this study. Steps in this study consist of defining the research goal, research design, validity and reliability of research instrument, data collection, data analysis, and result interpretation.



Figure 1. Research Methodology



### Research Design

The instrument used to assess stakeholders' attitudes toward tourism development is based on the indicators of sustainable tourism development. These indicators were all derived from the United Nations World Tourism Organization (UNWTO, 2013). There are 12 indicators to be used and grouped into human system and ecosystem categories. The human system category is defined as economic viability, local prosperity, employment quality, social equality, visitor fulfillment, local control, community wellbeing,



cultural richness. The ecosystem category is defined as physical integrity, biological diversity, resource efficiency, and environmental purity. A questionnaire consists of two sections. The first part aims to get information about demographic variables of the participants such as gender, age, educational background, income, marital status, work engagement to the tourism industry, community attachment, economic reliance on tourism, a distance of residence to the development area, and knowledge of tourism. In the second part, the participants were asked a pair of questions, for each indicator: one question to gauge their importance (Ei) and another one to gauge their trust (Bi). The indicators "importance" were designed to explore stakeholders' importance about those indicators related to their role as stakeholders. The indicators "trust" were designed to explore the stakeholders' perceptions about how they perceive the current practice according to their experience of tourism development in Lake Toba. Both indicator levels were gauged using a five-point Likert scale. As an example, one of the indicators is economic viability. The pair of questions for this indicator was "On the scale from 1 to 5, where 1 means strongly unimportant and 5 means strongly important, how do you rate the importance of the economic viability in sustainable tourism in the Lake Toba area?" and "On the scale from 1 to 5, where 1 means strongly disagree and 5 means strongly agree, how do you rate the statement that tourism activities in the Lake Toba area will provide long term economic viability for the surrounding community?".

#### **Validity & Reliability Test**

A purposive sample was drawn for the survey where it was ensured that a proper representation from different stakeholders can be achieved. The pilot study was carried out to ensure reliability and validity of the instruments and the data to be collected therein by spreading questionnaires to a group of pilot samples. In order to validate the reliability, questionnaires were initially distributed to thirty participants. The value of Cronbach's alpha was found to be 0.80 which suggested an acceptable level of reliability of the research instrument.

#### **Data Collection Process**

The target population for this study was the stakeholders over the age of 17 years who have an engagement and involvement in the tourism industry. Some of the stakeholders in question were tourism entrepreneurs, tourism workers, tourism industries/service providers, tourism service supporters, local communities, tourists, and the general public. The stakeholders were also considered based on their community attachment, economic reliance on tourism, a distance of residence to the development area, and knowledge of tourism.

Then, three hundred and sixty-one subject participants were reached in this survey. Each type of stakeholder was represented by a minimum of 30 participants, a conservative minimum sample size to ensure sufficient data for each stakeholder group. For the participants' form, some filled the paper questionnaire and accompanied in person, while others filled the electronic version of the questionnaire sent by a link. Data collection was carried out between January and March 2020, which was the period before the Covid-19 pandemic hit the Lake Toba Area.



### Data Analysis

Final stakeholders' attitude was appraised from the average of multiplication of importance and trust of each indicator which was grouped into the two previous categories, human system, and ecosystem. Then the gaps between stakeholders' average importance and trust of the human system and ecosystem were mapped into the importance-performance diagram. Later on, these gaps were also mapped into vector coordinates to have the degree of optimism/ pessimism of stakeholders towards the sustainability of tourism development in Lake Toba.

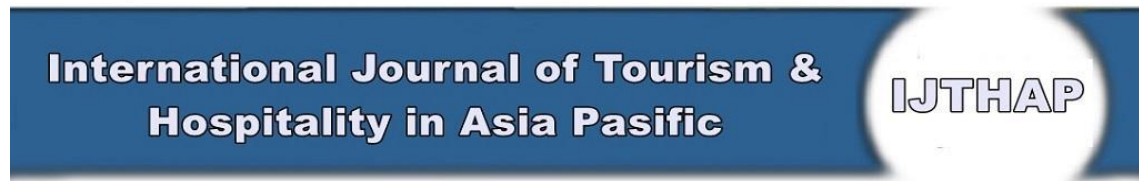
## RESULTS AND DISCUSSION

### Profiles of the Participants

General characteristics of the participants are presented in Table 1. The profiles of the participants were an important variable used by planners and development policy-makers when designing development plan. The Table 1 demonstrates that 50.14% respondents are women, 46.54% are between the ages of 17-25 years old, 42.38% have finished their diploma/bachelor education, 44.88% have income less than 2.5 million rupiahs, 59.28% are married, 62.60% are slightly or unrelated to tourism industries, 29.64% never lived in Lake Toba area and rarely/first visited this area, 26.87% does not earn income from tourism industry Lake Toba and lives outside, and 35.73% are tourists.

**Table 1.** Characteristics of Respondents

Variable	Frequency	%
<b>Gender</b>		
Male	180	49.86
Female	181	50.14
<b>Age</b>		
17-25	168	46.54
26-35	80	22.16
36-45	56	15.51
46-55	45	12.47
56 and over	12	3.32
<b>Education</b>		
Junior high school and less	14	3.88
Senior high school	151	41.83



Diploma/Bachelor	153	42.38
Postgraduate (S2/S3)	43	11.91
<b>Average annual income (IDR)</b>		
Less than 2.500.000	162	44.88
2.500.001-5.000.000	84	23.27
5.000.001-7.500.000	47	13.02
7.500.001-10.000.000	34	9.42
10.000.001 and over	34	9.42
<b>Marital Status</b>		
Unmarried	214	59.28
Married	147	40.72
<b>Work engagement to tourism</b>		
Tourism entrepreneurs	38	10.53
Tourism workers	38	10.53
Travel service provider for tourism	30	8.31
Tourism service supporters	29	8.03
Unrelated or slightly related to tourism	226	62.60
<b>Community attachment</b>		
Born to adulthood in Lake Toba area	73	20.22
Born in Lake Toba area then migrated	58	16.07
Born outside Lake Toba area but work/leave in this area	90	24.93
Never lived in Lake Toba area and rarely/first visited this area	107	29.64
Never lived and visited Lake Toba area	33	9.14
<b>Economic reliance on tourism</b>		
Most of the income from tourism industry Lake Toba and lives in the area	43	11.91





Some of the income from tourism industry Lake Toba and lives in the area	41	11.36
Tourists	95	26.32
Doesn't earn income from tourism industry Lake Toba but lives in the area	85	23.55
Doesn't earn income from tourism industry Lake Toba and lives outside	97	26.87
<b>Distance of residence to the development area</b>		
Lives in Lake Toba area	153	42.38
Lives outside Lake Toba area but still in the same province	124	34.35
Lives outside Lake Toba area and outside the province	84	23.27
<b>Knowledge on the tourism characteristics</b>		
Tourism entrepreneurs/workers and lived in Lake Toba	73	20.22
Local residents (more than 5 years)	87	24.10
Tourists	129	35.73
Never been to Lake Toba area and only know from news	33	9.14
Others	39	10.80

### Stakeholders Attitudes

The attitude of stakeholders in general can be seen in Table 2. Based on the results of the multiplication of the average trust/beliefs that the tourism development in Lake Toba has certain indicators ( $B_i$ ) in the average evaluation of the importance ( $E_i$ ), it was found that there were different attitudes in each object/indicator ( $A_o$ ). But after the indicator is averaged according to its category, it is found that in the category of human system an attitude value is 19.59 which means optimistic. The same thing also happened in the ecosystem, in which the attitude value is 17.71 means optimistic. Through those numbers, it can be concluded that the stakeholders are optimistic about the sustainability of tourism development in Lake Toba which will improve its human system and ecosystem.

This analysis used a five-point scale to measure the attitude of stakeholders. It comes from the maximum value of assessment (5) minus the minimum value of assessment (1) and divided by the number of rating scales formed in the measurement. The details of the scale of stakeholder attitudes in each object/indicator ( $A_o$ ) are as follows very pessimistic ( $1.00 \leq A_o \leq 5.80$ ), pessimistic ( $5.80 < A_o \leq 10.60$ ), neutral ( $10.60 < A_o \leq 15.40$ ), optimistic ( $15.40 < A_o \leq 20.20$ ), very optimistic ( $20.20 < A_o \leq 25.00$ ).



**Table 2.** Respondents' Attitude towards Sustainability

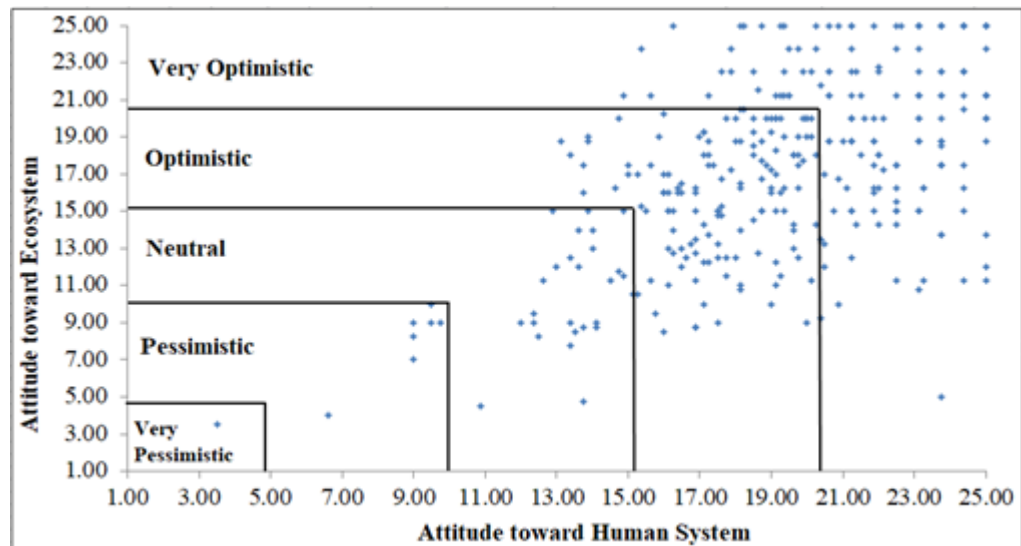
Indicator	Variable	Average Trust (Bi)	Average Importance (Ei)	Attitude (Aoi)	Attitude Interpretation
1	Economic viability	4.37	4.62	20.19	Optimistic
2	Local prosperity	4.40	4.54	19.99	Optimistic
3	Employment quality	4.07	4.50	18.30	Optimistic
4	Social equality	4.01	4.46	17.88	Optimistic
5	Visitor fulfilment	4.37	4.62	20.19	Very Optimistic
6	Local control	4.40	4.42	19.47	Optimistic
7	Community wellbeing	4.37	4.55	19.90	Optimistic
8	Cultural richness	4.42	4.70	20.76	Very Optimistic
Attitudes toward the Human System (Ao Hs)				19.59	Optimistic
9	Physical integrity	3.76	4.57	17.17	Optimistic
10	Biological diversity	4.00	4.60	18.42	Optimistic
11	Resource efficiency	3.82	4.59	17.54	Optimistic
12	Environmental purity	3.84	4.62	17.72	Optimistic
Attitudes toward the Ecosystem (Ao Es)				17.71	Optimistic

**Discussion**

Results from the survey of stakeholders' are shown in a scatter plot showing the attitude for each category (Figure 2). The majority of stakeholders' attitudes fall between optimistic to very optimistic. From 361 participants, it was found that only 2.20% of the 8 participants gave a pessimistic to very pessimistic attitude towards sustainable tourism development in the Lake Toba area. These stakeholders are those aged 17 to 25 years, tourism entrepreneurs, earning less than IDR 2,500,000 (equivalent to USD172.49) and those who have neither lived nor visited Lake Toba area.



**Figure 2.** Scatter Plot of Stakeholders' Attitude



Additionally, the difference between the level of trust and the importance of each indicator in the human system and ecosystem category given by the participants is then mapped on the importance-performance diagram as shown in Figure 3. The aim is to find out stakeholder profiles that need to be given a more detailed approach by policymakers so that stakeholders can increase their support according to sustainable tourism development in Lake Toba. The profile of stakeholders categorized by their demographic such as: (1) income less than IDR 2,500,000, (2) income from IDR 2,500,001 to IDR 5,000,000, (3) income from IDR 5,000,001 to IDR 7,500,000, (4) income from IDR 7,500,001 to IDR 10,000,000, (5) income above IDR 10,000,001, (6) tourism entrepreneurs, (7) tourism workers, (8) travel service provider for tourism, (9) tourism service supporters, (10) unrelated or slightly related to tourism, (11) most of the income from the tourism industry and lives in the area, (12) some of the income from the tourism industry and lives in the area, (13) tourists, (14) doesn't earn income from tourism industry but lives in the area, (15) does not earn income from tourism industry and lives outside, (16) lives in the area, (17) lives outside the area but still in the same province, (18) lives outside the area and outside the province.



**Figure 3.** Importance vs. Trust Diagram

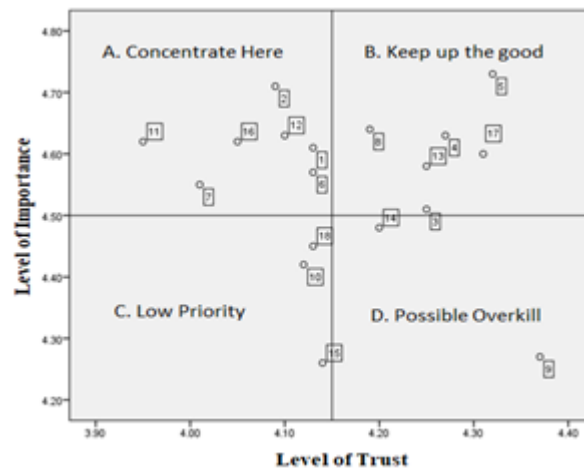


Fig. 3 depicts the importance vs. trust diagram. Quadrant A shows the profile of stakeholders that need to be prioritized to be given a more approach by policymakers so that they can provide maximum support to the development in the Lake Toba area. These stakeholders have high importance in tourism, but their level of trust is low towards the sustainability of tourism development in the Lake Toba area will improve humans and ecosystems in the area. The intended stakeholders are those who have an income of less than IDR 5,000,000 (equivalent to USD 344.99), a tourism entrepreneur/ worker, most of the income from the tourism industry, and live in the Lake Toba Area. In contrast to Quadrant B, it shows stakeholders who have been given a sufficient approach by the policymakers. These stakeholders also have a high level of importance in the tourism industry and their trust in the sustainability of tourism development in Lake Toba is also high. These stakeholders are those who have income above IDR 5,000,000, tourists, a travel service provider for tourism, and live outside the Lake Toba area but still in the same province.

The level of trust about the sustainability of tourism development in Lake Toba between quadrants A and B is contradictory. It is because those who are in quadrant A (lower trust) feel that the development of tourism in the area has not made a positive change for them. Tourism entrepreneurs interviewed during this research confirmed that the development activities carried out had not yet reached the lowest level. The socialization activities that are carried out by the government are still elite and unable to reach all community groups in the Lake Toba area. In addition, stakeholders with higher income (quadrant B) are not too affected by the negative impacts of development and have more access to enjoy the success and luxury of development (Groom & Harris, 2008). In line with other research which states that weak support for sustainable tourism development is due to the lack of involvement of all stakeholders, where only power brokers are beneficiaries at the expense of hidden stakeholders, such as the poor and women who are considered traditional consumer resources (Manwa, 2003).



Then, stakeholders who work as tourism entrepreneurs/workers (quadrant A) who incidentally are more tied to tourism responded that development activities would actually cause losses to them. During the interview, tourism entrepreneurs shared his experience that there is uneven development area selection that is held by the government, which causes an uneven distribution of tourists. In addition, small and medium-sized enterprises (SMEs) shared their experience that there has been no improvement from the government to them related to their production results, such as to get BPOM permits, halal permits, product distribution, and production houses. But when compared to the tourist side or travel service provider for tourism, they see the development process as a change in the form of an increase in infrastructure and quality. So that their level of trust is higher than tourism entrepreneurs/workers. Stakeholders who live in the development area (quadrant A) also feel the existence of eviction activities are carried out to the continuous development process. In addition, they also assume that they do not enjoy the results of tourism development. This has also been confirmed by the tourism government in Samosir district in the Lake Toba area during the interview. This is certainly not felt by those who live outside of the Lake Toba area (quadrant B). A study revealed that the attitudes of local communities towards the economic impacts of tourism development have shifted due to changes in the status of their tourism participation (Peters et al., 2018). This finding is consistent with another study which found that the more tourist development there is in an area, the more negative the perceptions of the local communities (Khoshkam et al., 2016). Some studies noted economic costs or adverse economic impacts such as increasing living costs or higher goods and services prices (Tkalec & Vizek, 2016). A problem for people living in the development area is traffic congestion, crime, pollution, noise, and/or the increasing cost of living.

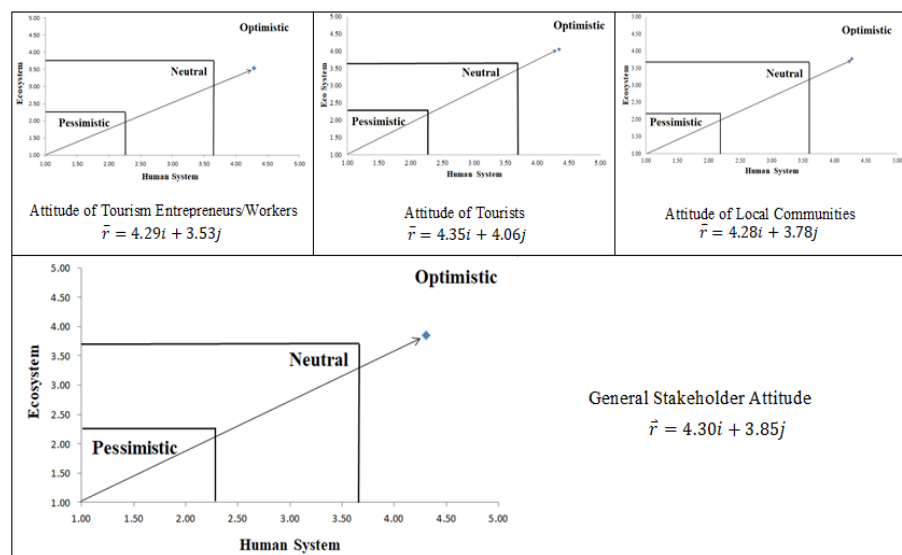
Quadrant C shows the low priority of stakeholders to give more approach by policymakers. These stakeholders have a low level of importance and trust in the sustainability of development in Lake Toba. They are stakeholders who are unrelated or slightly related to tourism, do not earn income from the tourism industry, and are outside lake Toba and the province. Next, there is quadrant D which shows the stakeholders that there will be possible overkill if an approach is given for them by the policymakers. Those are tourism service supporters or stakeholders who do not earn income from the tourism industry but live in the area. The higher level of trust in quadrant D is because they are still affected positively by development activities in that area. For example, tourism service supporters will get an increased income when the number of visitors increases, but when the number of visitors is constant or decreases they will still have a steady income as the general public around them continues to consume their products or services. This is certainly not felt by those who live outside the Lake Toba development area.

To find out the equation model and degree of stakeholders based on their trust and importance in the previous data processing, then it can be used to map the vector coordinates. The vector used is two dimensions, where X coordinates represent the human system category and Y coordinates represent the ecosystem category. The interval scale is divided into three levels based on the maximum attitude of the majority



of stakeholders is optimistic towards sustainable tourism development in the Lake Toba area.

**Figure 4.** The Degree of Stakeholder Attitudes



The overall attitude of stakeholders towards the two categories of human system and ecosystem moves linearly with the equation. The equation concludes that the attitude of stakeholders is optimistic about the sustainability of tourism development in Lake Toba with a direction of  $41.83^\circ$  towards the human system. The magnitude of stakeholders' attitude vector, in general, is 5.78 units. There is a difference between the degree of attitude given by those stakeholders. Tourists have the biggest degree of optimism that is  $43.02^\circ$  with a magnitude of 5.95 units compared to local communities and tourism entrepreneurs/workers. Local communities have a  $41.05^\circ$  optimistic attitude with a magnitude is 5.70 units. And the lowest degree of attitude given by tourism entrepreneurs/ workers, i.e  $39.47^\circ$  with the magnitude is 5.55 units. The difference between this level of optimism can be caused by a difference in knowledge and involvement in the tourism industry in the Lake Toba area. It is known that tourism entrepreneurs/workers are more attached to the tourism industry so that they have enough knowledge about the characteristics of the tourism industry and feel directly the effects of tourism development compared to local communities and tourists. So that it can cause the degree of optimism of tourist entrepreneurs/workers will be low on development activities. This is also in line with the principle of government planning which focuses more on tourism attractions which means focused on tourist areas where tourist entrepreneurs/workers are also present (Gunawan & Ortis, 2012). The acceptance of the people who depend on the tourism industry for tourism opportunities is still far from expectations. The tourist entrepreneurs/workers are still monotonous and just waiting for the government's performance. This statement is supported by the results of interviews with tourism entrepreneurs in the area who have difficulty opening their business if not during the peak tourist periods of December, January, and July. This

situation is called seasonal products which causes a reduced income and negative impact on tourism. These results are in line with the tourism government's response in one of the districts in Lake Toba. He reported that the attitude was natural because of the lack of education to tourism entrepreneurs related to the tourism business that is not instant, causing a closed mindset. Furthermore, while tourism development should be able to increase the income of tourism entrepreneurs, this is difficult for stakeholders who have business capacity but lack the financial capacity to develop their business in accordance with development activities. Thus, causing them to remain in their zones and not develop. Besides, tourism entrepreneurs see that the development in the Lake Toba area is more industrial-based than community-based, causing environmental degradation and incompetent use. Based on observation, local communities experienced eviction and several other losses from development activities. The existence of a tourism-supporting industry that has transformed protected forests into industrial forests has threatened the survival of communities around the area. Overproduction activities carried out by the industry on catches make it difficult for residents such as fishermen to get their catches and threaten biodiversity and pollute the environment.

While on the other hand, tourists see that tourism development activities will improve infrastructure and services, they assume that tourism development will create jobs and improve economic prosperity in the area. The tourism sector is able to absorb uneducated and untrained labor, which is considered a positive thing from the point of view of providing short-term employment opportunities. But this has a negative impact on the long-term sustainability of the industry. Lower-level workers may influence the quality of products and services that must be improved from time to time to achieve sustainability and to be competitive (Gunawan & Ortis, 2012). The results showed that tourists tend to be more optimistic about the sustainability of tourism development than local communities and tourism entrepreneurs/workers do.

## **CONCLUSIONS**

This study found that the attitude for all the stakeholders toward the sustainability of Lake Toba tourism is optimistic in general. They are optimistic that the sustainability of tourism development in Lake Toba can support the human system and ecosystem in the area. But the level of optimism among these stakeholders varies depending on several things such as the level of engagement and involvement with the Lake Toba tourism industry. This stakeholder optimism attitude will become a strong social capital for the development of the Lake Toba area plan as one of the national priority tourism areas in Indonesia. Since the stakeholders who have lower optimism are generally entrepreneurs related to tourism and local communities who are concerned about the sustainability of the Lake Toba ecosystem, the government's attention should be directed to empowering local communities and involving the community in tourism-supporting business sectors and efforts to preserve the environment.

### Acknowledgment

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