

Carrying Capacity of Betawi Setu Babakan Cultural Tourism Area a Case Study in South Jakarta, Indonesia

T. Titi Widaningsih^{1*}, Mirza Ronda¹, Rahtika Diana¹ and Arry Rahayunianto²

¹*Post Graduate Program, Sahid University, Jakarta, Indonesia.*

²*Faculty Communication, Sahid University, Jakarta, Indonesia.*

Authors' contributions

This work was carried out in collaboration between all authors. All authors read and approved the final manuscript.

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ABSTRACT

The Setu Babakan Betawi cultural village has been designated as a cultural heritage for more than 15 years with the aim of preserving and developing the culture of Betawi community. Betawi cultural village is in the tourism area of Setu Babakan. Setu Babakan tourism area has been designated as a Betawi cultural tourism area but the number of tourist visits is still low due to lack of promotion and tourist destination carrying capacity. This study aimed to identify the tourism area carrying capacity covering several dimensions, namely (1) attraction that also included uniqueness, (2) accessibility, (3) facilities that included amenity and ancillary (4) community involvement, using multidimensional scaling analysis (MDS). The results of the MDS analysis of the dimensions of attractiveness and access were in the good category with values of 78.18 and 79.3. The dimensions of uniqueness and facilities were quite good, with values of 59.74 and 67.65 respectively. While the dimensions of community involvement were in the fair category 44.49. Therefore, to develop and increase tourist visits, community involvement needed to be increased.

*Corresponding author: E-mail: titi_widaningsih@usahid.ac.id;

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1. BACKGROUND

The Setu Babakan Betawi cultural tourism area is a natural and cultural tourism area. As a cultural tourism area, Setu Babakan is a Betawi cultural village that has been designated as a Betawi Cultural Heritage area according to Governor Decree No. 9 of 2000. The inauguration of Setu Babakan as a Betawi cultural heritage area was carried out by the Governor of Capital Special Region of Jakarta Province in 2004.

Setu Babakan is one of the tourism destinations developed by the Capital Special Region of Jakarta Provincial Government. In accordance with the mandate of Law No. 29/2007 concerning the Government of the Special Capital Region of Jakarta as the Capital of the Unitary State of the Republic of Indonesia Chapter V / Article 26 paragraph 6, that the Provincial Government of Capital Special Region of Jakarta must preserve and develop Betawi culture [1].

Setu Babakan has been established as a Betawi cultural preserve area for more than 15 years and has become one of the destinations developed by the provincial government DKI Jakarta, but has not been known to the public. Setu Babakan ranks 20th out of 42 popular tourist spots in Jakarta [2]. Aside from being unpopular, Setu Babakan also has a low level of tourist visits. Tourism carrying capacity in the form of attractions, facilities, access and involvement of the community influences tourist visits [3]. This study will examine the tourism carrying capacity in Setu Babakan's Betawi cultural tourism area.

2. LITERATURE REVIEW

Cultural Heritage according to the Republic of Indonesia Law Number 11 of 2010 is a legacy of culture in the form of Objects, Buildings, Structures, Sites, and Areas on land and / or in water which need to be preserved because has important values for history, science, education, religion, and / or culture through a process of determination [4]. The aim of preservation of culture is to preserve the nation's cultural heritage and human heritage, improve the dignity of the nation through Cultural Heritage. Strengthening the nation's personality, improving people's welfare and

promoting the nation's cultural heritage to the international community.

Setu Babakan as a cultural heritage area has important values for the preservation of Betawi culture. Setu babakan as a cultural heritage needs to be protected, developed and utilized. Setu Babakan Regional Development in addition to promoting Betawi culture to national and international communities. The development of Setu Babakan must also be able to increase the dignity of the community and the welfare of the Betawi community.

Tourism, according to Article 1 of Law No. 10 of 2009 concerning Tourism is a travelling activity carried out by a person or a group of people by visiting certain places for recreational purposes, personal development or studying the uniqueness of tourist attractions that are visited in a period of time [5]. Tourism encompasses various kinds of tourism activities and is supported by various facilities and services provided by the community, entrepreneurs, the government and the Regional Government. Tourism is all activities related to tourism and is multidimensional and multi-disciplinary which emerges as a manifestation of the needs of every person and country as well as the interaction between tourists and the local community, fellow tourists, government, local government and entrepreneurs.

Tourism activity is an activity of changing the temporary residence of a person, outside his daily residence for any reason other than conducting activities for earning wages or salaries. Tourism is also a service activity and product of the tourism industry that is able to create travel experiences for tourists [6]. Tourism is a complex symptom in society, in which there are hotels, tourism objects, souvenirs, tour guides, tourist transportation, travel agents, restaurants, and many more [7].

Cultural tourism according to Sillberberg is a visit of people who come from outside the destination and who are driven by interest in the objects or heritage of history, art, science and lifestyles owned by groups, communities, regions or institutions [8]. Cultural tourism is tourism in which there are cultural aspects/values regarding the customs of the

people, religious traditions, and cultural heritage in an area [9].

Cultural tourism is closely related to cultural tourist attraction. Explanation of the National Tourism Development Master Plan, article 14 paragraph (1) letter b explains that cultural tourism attractiveness is a tourist attraction in the form of the results of creativity, taste and intention of humans as cultural beings [10]. Cultural tourist attraction is divided into two, namely tangible cultural tourism attractions and intangible cultural attractions.

Tourism objects are everything that attracts people to visit a certain area. Tourism Objects or Tourism Attractions are things that have uniqueness, beauty and value in the form of natural, cultural, and man-made diversity that are the target or destination of tourist visits [5]. Tourism objects can be divided into three sources, namely 1) originating from nature, such as beaches, natural scenery, mountains, forests, and others. 2) culture, such as museums, temples and galleries. 3) daily activities of the community, such as dances, carnivals, and others [11]. Tourism is a potential that drives the presence of tourists to a tourist destination.

Tourism object is everything that has attraction, uniqueness and high value, which becomes the destination of tourists to come a certain area. Tourist attraction can be interesting for tourists to have to meet the requirements for regional development, namely 1) something to see, there must be tourism objects and attractions in that place, which are different from other places; 2) something to do, a lot can be seen and witnessed in that place. 3) Something to buy at that place must be available in the shopping facilities, especially souvenirs and folk crafts as souvenirs [12].

Tourism object must be designed, built and managed professionally so that it can become a tourist destination that attracts tourists to come to these attractions. Development of tourist destination involves stakeholders, the government, and the general (local) community [13]. The development of good tourist destinations will be able to facilitate access of tourists to reach the tourist destination. Development of tourist destinations can be done through a demand (visitor) and supply factor approach, namely attraction,

accessibility, amenity, ancillary (4A) and (C1) community involvement.

Tourist attractions are a significant component in attracting tourist visits [3]. Things that can be developed into tourist attractions are called capital or tourism resources. There are three attractions that attract tourists, namely 1) natural resources such as mountains, lakes, beaches and hills; 2) cultural tourist attractions such as traditional house architecture in the village, archeological sites, arts and crafts, rituals, festivals, everyday people's lives, hospitality, food; and 3) artificial attractions such as sports events, shopping, exhibitions, conferences and others. Tourism capital can be developed into a tourist attraction in which tourist capital is found in (in situ) and outside (ex situ) its original place [3]. Tourist attractions are distinguished into attractions of tourist barrier and tourist catcher.

Accessibility is all the facilities that make it easy for tourists to reach a destination or related tourist destination [14]. Factors related to tourism accessibility aspects include directions, airports, terminals, time needed, travel costs, frequency of transportation to tourist sites and others. Distance and travel time to an "accessible" destination are important factors in attracting tourists to come to a tourist destination.

Amenity includes a series of facilities to meet the needs of accommodation (lodging places), provision of food and beverages, entertainment, places of shopping (retailing) and other services [15]. French states that amenities are not attractions for tourists, but poor amenities will make tourists tend to avoid the destinations [14]. Facilities needed for "amenities" must be prepared to support the comfort of tourists.

Ancillary service is the availability of public facilities used by tourists who also support the implementation of tourism activities such as banks, ATMs, telecommunications, hospitals and so on [14]. Ancillary service covers the existence of various organizations to facilitate and encourage the development and marketing of tourist destinations [15].

The development of tourism must consider the elements of tourism that determine the success of tourism development. In tourism, there are three core elements that must be

possessed, namely attractions, accessibility and facilities [12]. All objects and attractions are available as tourist attractions, including natural resources, cultural resources, theme parks, sports activities and events.

Community involvement is community participation in the process of identifying problems and potential that exist in the community, selection and decision making about alternative solutions to deal with problems, implementing efforts to overcome problems, and community participation in the process of evaluating changes that occur [16]. Participation supports the community to begin to be aware of the situation and problems it faces and tries to find solutions that can be used to overcome problems (having critical awareness) [17].

Community participation is related to the involvement of all components in the decision-making process towards planning to be carried out in the area of tourist destination. The levels of community participation include Manipulative Participation, Passive Participation, Participation by Consultation, Participation for Material Incentives, Functional Participation, Interactive Participation, Initiative Participation (Self-Mobilization). The eight levels are grouped into 3 groups of participation namely non-participation, tokenism, citizen power [18].

Community-based tourism is the development of tourism by empowering local people which aims to maintain the continuity of culture, customs and local wisdom of a place. Community-based tourism has a goal to get benefit for the people from the existence of tourism objects [19]. Communities are the main actors in the planning and implementation process through various committees. In community-based tourism, Betawi cultural village is one of the attractions that cannot be separated from the role and empowerment of the community.

The development of tourism must involve the local community because they are the people who will build, own and manage the tourism facilities and services directly, so that the community can directly receive the economic benefits. The active participation of the community makes the community a good host of a tourism object, provides the best

according to their capacity, helps maintain security, peace, beauty and cleanliness of the environment, provides good memories and impressions for tourists and instills public awareness in tourism development.

Tourism carrying capacity according to various literatures is the main factor affecting tourists to visit tourist destinations. The carrying capacity of the Setu Babakan tourism area is interesting to study because it has a low number of tourist visits. So that the results of the study can be used as input for the Setu Babakan tourism area management unit to improve the carrying capacity of tourism and other factors that affect tourist visits.

3. RESEARCH METHOD

The study used quantitative research methods to look at the tourism carrying capacity of the Setu Babakan Betawi cultural tourism area and make a carrying capacity diagram. This research was conducted in the cultural tourism area of Setu Babakan. The study population amounted to 213,277, namely tourists Setu Babakan from January to June 2018. The sample size was calculated using Slovin techniques [20]. Sampling is based on the Slovin formula of 100 samples. The number is representative to generalize the results of the study.

Data collection was done using accidental sampling technique, which was distributing questionnaires to tourists found in Setu Babakan cultural tourism area. In addition to distributing questionnaires to tourists, the distribution of questionnaires to the people in Setu Babakan cultural tourism area was also carried out with a sample of 81 respondents taken from 423 populations. Data collection was also done through focus group discussion (FGD), interviews with managers and tourism actors such as traders and studio members.

Data analysis was performed by multidimensional scaling (MDS) analysis to identify the key dimensions that underlie the object evaluation and obtain spatial maps that represent respondents' perceptions and preferences [21]. The dimensions studied are the carrying capacity of the Setu Babakan Betawi cultural tourism area which includes attractions (attractiveness and uniqueness), access, facilities and community involvement.

4. RESULTS AND DISCUSSION

Elements of tourism include attractions that consist of attractiveness and uniqueness, accessibility, facilities in the form of amenities, ancillary and community involvement, are the main carrying capacity in the development of tourist destinations. The tourism carrying capacity index based on the results of the MDS analysis is categorized into four categories in Table 1.

Table 1. Carrying capacity category

Index value	Category
0.00 – 25.00	Very poor
25.01 – 50.00	Poor
50.01 – 75.00	Fair
75.01 – 100.00	Good

4.1 Tourist Attraction

- **Attractiveness**

Cultural tourist attraction is seen from two dimensions, namely attraction and uniqueness. Attributes in the dimensions of attraction includes beauty, scenery, lakes, water bicycle rides, Betawi food, Betawi cultural villages, Betawi art performances, traditional houses, handicrafts and Betawi souvenirs. Based on

the results of the MDS analysis, the index value of the dimensions of attraction was included in the good category which meant it was very supportive, with a value of 78.18. The most sensitive indicator that affected this assessment was the traditional Betawi house which is shown in Fig. 1.

The traditional Betawi house as an attraction for tourism in the Setu Babakan cultural tourism area is the most sensitive factor. Traditional houses that are difficult to find outside Setu Babakan cultural tourist area are one of the attractions that attract visiting tourists. There are 2 models of traditional Betawi houses, namely *kebaya* houses and *Bapang* or *Gudang* houses. Traditional houses have various carvings that have philosophical meanings, spacious terrace houses and low fences. The house has symmetrical openings and striped teeth. Art performances are the second indicator that has a high sensitivity value. Every Saturday and Sunday, Setu Babakan cultural tourism area show a variety of typical Betawi arts such as *lenong*, *gambang kromong*, *tajidor* and others, which are the attractions for visitors to come to the Setu Babakan cultural tourism area. Lake is the third indicator that has a high sensitivity value. Lake is not included in cultural tourism, but lake is one factor that attracts tourists to visit the Setu Babakan cultural tourism area.

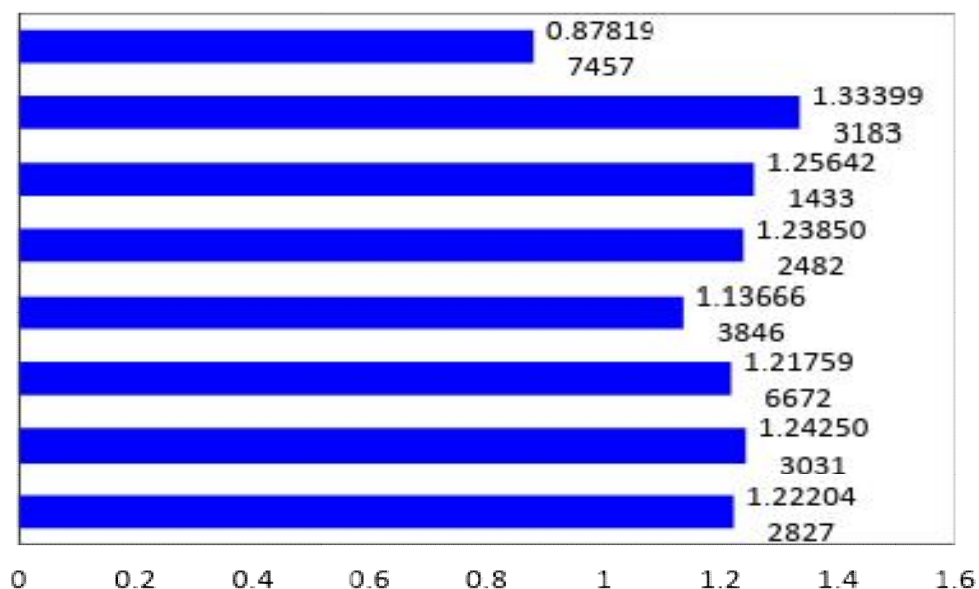


Fig. 1. The role of attributes of tourist attraction dimension

• **Uniqueness**

Setu Babakan cultural tourism area as a center for preservation of Betawi culture is a tourist destination based on the uniqueness of Betawi culture and traditions. Various Betawi cultures and traditions in the form of arts, food, traditional houses, rituals, can be found in the Setu Babakan cultural tourism area.

The attributes of the dimensions of uniqueness are Betawi food, Betawi cultural settlement, Betawi art, Betawi traditional houses, handicrafts and souvenirs as well as tourist areas. Based on the results of the MDS analysis, the dimension of uniqueness index value was included in the fair category that is quite supportive, which was 59.74. The most sensitive indicator that affected this assessment was the Betawi food which is shown in Fig. 2.

Setu Babakan cultural tourism area is a Betawi culinary center. Betawi food that is difficult to find outside the Setu Babakan cultural tourism area can be found in Setu Babakan cultural tourism

area in the form of dishes such as fried sprout/ toge goreng, rujak bebek, ulam rice, soto Betawi, Betawi *Laksa* and so on. Snacks such as egg crust, pickles, dodol Betawi, buaya bread (crocodile-shaped bread), sengkulun, rangi cake, kembang goyang, putu mayang and so on. Betawi drinks such as pletok beer, selendang mayang ice and ice shake. Various foods in the cultural tourism area of Setu Babakan attract tourists to visit.

4.2 Access

The tourism access dimension consists of several attributes, namely the ease of access, the availability of adequate transportation facilities, and the adequate directions/ road signs. Based on the results of the MDS analysis, the access dimension index value was included in the already good category, which was 79.3. The most sensitive indicator that influenced this assessment was road signs for the Setu Babakan cultural tourism area which is shown in Fig. 3.

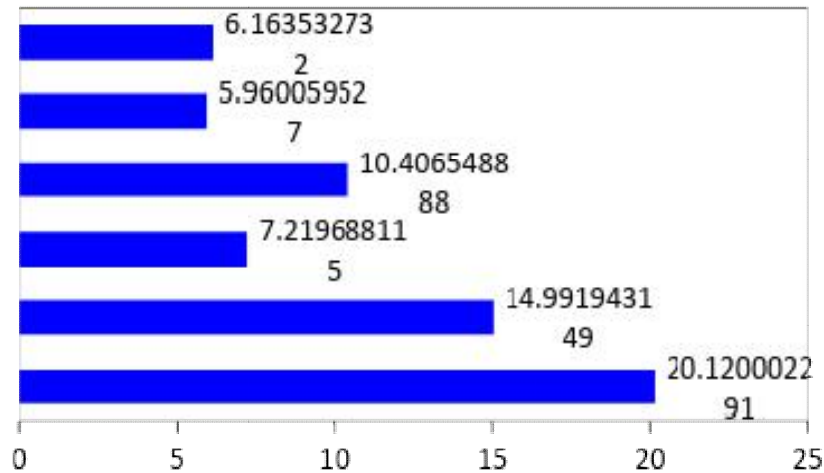


Fig. 2. The role of attributes of tourism object uniqueness dimension

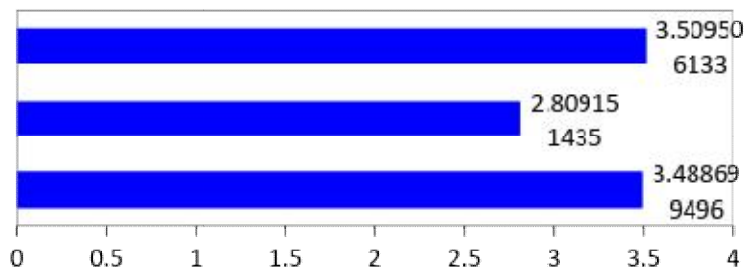


Fig. 3. The role of attributes of tourism access dimension Setu Babakan cultural tourism area is located in Srengseng Sawah village

Jagakarsa sub-district, South Jakarta, an area that is easily accessible by tourists. There are various alternative roads and modes of transportation that can be used by tourists to reach Setu Babakan cultural tourism area. A good and selectable road access is the arterial road (Jl. Raya Pasar Minggu). To get to the cultural tourism area of Setu Babakan, there are two collector roads, namely Jl. Moch. Kahfi II and Jl. Srengseng Sawah. Supported by the availability of the public transportation with the closest train stations, which is Lenteng Agung KRL station and the University of Indonesia KRL Station and Pancasila University with distance of 5 km from Setu Babakan cultural tourism area. Finding Setu Babakan cultural tourist area is also easy because there are many directions/ road signs leading to the location.

4.3 Facility

The dimension of the facility is in the form of amenities for accommodation and ancillary needs in the form of public facilities. The dimension of facilities in the form of facilities and infrastructure consist of various attributes such as parking lots, restaurants, public toilets, trash bins, walkways, information centers, worship places, ATMs and minimarkets. Based on MDS analysis, the index value of the physical condition of the facility dimension was included in the good category, which was 67.65. The most sensitive indicator that affected this assessment was mini markets, the second sensitive indicator was parking which is shown in Fig. 4.

Setu Babakan cultural tourism area has a lot of food, beverage and souvenir shops, but is located in a separate location that can make tourists difficult to fulfill their tourism needs. The community and managers can work together to create a mini market as a center for sales of souvenirs, snacks and drinks in Setu Babakan cultural tourism area. Based on the observations of the cultural tourism area, Setu Babakan had not had adequate parking space yet which had not been well-managed.

4.4 Community Involvement

The dimension of community involvement has several attributes including involvement in development planning, oversight in management, participation in development, involvement in the preservation of Betawi culture, and involvement in management institutions. Based on MDS analysis, the value of the community involvement dimension index is in the poor category, which is 44.69. The most sensitive indicator that influenced this assessment was the involvement in the management of the institutions of Setu Babakan cultural tourism area. The second sensitive indicator was the involvement in the management of the cultural tourism area of Setu Babakan. The three types of involvements in the development of the Setu Babakan cultural tourism area are shown in Fig. 5.

Various community groups and organizations are involved in facilitating and encouraging the development of the Setu Babakan cultural tourism area but it has not been carried out optimally. The community is involved in the art studios involved in Betawi art events and shows. Traders sell in the area around the lake. They sell food, drinks, souvenirs and souvenirs typical of the Betawi. Cultural activists encourage and carry out Betawi cultural activities in Setu Babakan tourist area. Betawi cultural community plays a role in preserving Betawi buildings and plants. As a community who lives in a Betawi cultural village, they are involved in tourism activities. The community has not been much involved in Setu Babakan Betawi cultural tourism area management institutions. The community is only involved in tourism activities such as trading, making souvenirs and Betawi handicrafts, art performances, workshops and other tourism activities.

Overall, based on the results of a 5-dimensional analysis that includes tourism carrying capacity, the tourism carrying capacity index can be seen in Table 2.

Table 2. MDS analysis result

No	Dimension	Carrying capacity index MDS	Category	R ²
1	Attraction	78.18	Good	92.07%
2	Uniqueness	59.74	Fair	90.81%
3	Access	79.30	Good	90.33%
4	Facility (amenities)	67.65	Fair	91.20%
5	Community involvement	44.69	Poor	90.00%

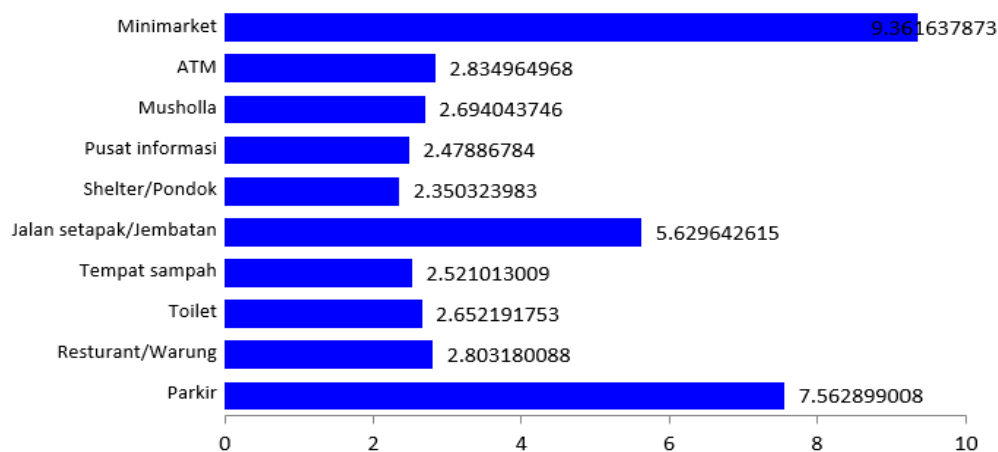


Fig. 4. The role of attributes of tourism facility dimension

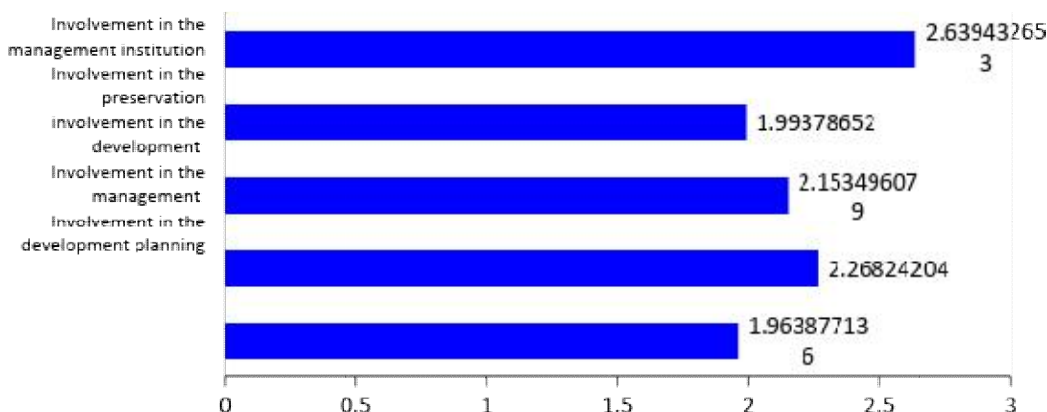


Fig. 5. The role of attributes of community involvement dimension

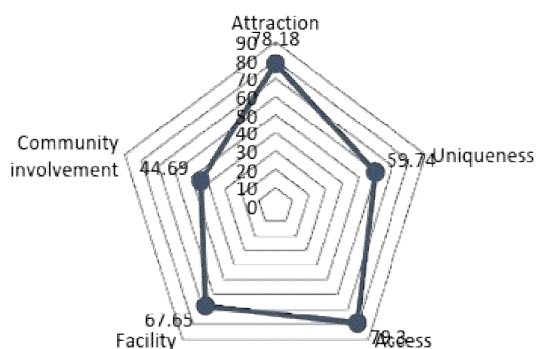


Fig. 6. Kite diagram of carrying capacity index of Setu Babakan tourism area

Based on the value of R^2 in Table 2, the results of the MDS analysis, all dimensions get a value close to 1 (100%). It shows that the model is good and can represent the problem

under study. Analysis of each indicator can be described in the form of a kite diagram in Fig. 6.

5. CONCLUSION

Based on the results of the analysis using MDS analysis of tourism carrying capacity which includes tourist attractions consisting of attraction and uniqueness, tourist access, facilities and community involvement, shows that carrying capacity dimensions of attractiveness and access dimensions are good. Setu Babakan cultural tourism area is an attractive tourism area which is a blend of natural and cultural tourism. Setu Babakan cultural tourism area is easily accessible because of the transportation facilities and adequate directions/ road signs. The carrying capacity of the dimensions of uniqueness and facilities is quite good. Setu

Babakan cultural tourism area displays a variety of unique Betawi cultural attractions and various tourism facilities are available that can be used and provide comfort for tourists such as mosques, mini markets, ATMs, parking lots, restaurants, toilets, trash bins. Tourism carrying capacity which is seen from the dimension of community involvement in the development is still poor. Community involvement in the development of the Setu Babakan cultural tourism area needs improvement.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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