The spatial distribution of tourist attractions in Jakarta

M.H. Dewi Susilowati

Department of Geography, Faculty of Mathematics and Natural Science, Universitas Indonesia, Kampus UI Depok, Depok 16424, Indonesia

Email: maria.hedwig@ui.ac.id; mhdusilowati@gmail.com

Abstract. Jakarta as a tourist destination has a variety of interesting tourist attractions. Various tourist attractions in this city cause tourists to visit, both foreign and domestic tourism. This study aims to analyze the spatial distribution of main tourist attraction in Jakarta. The method used this research is spatial analysis. The result of the research shows that the majority of nature attraction on northern side of city. Snorkelling, diving and beach activities are available at near by Pulau Seribu. The capital Jakarta has interesting, dutch colonial architecture and museums with exhibits from Indonesia’s difference ethnic groups and cultural periods. On the eastern side of the city there is on outdoor cultural park with full-scale replicas of the traditional houses from Indonesia’s thirty-three provinces (Taman Mini Indonesia Indah). The transport system for tourist consists of the network of routes along which the vehicles travel (e.g. roads, railway tracks and sea lanes). The speed of travel of the vehicles along the network govern journey times. At certain points these disparate networks come together to provide interchange nodes where tourist may change from one mode of transport to another. Each form of transport will have different advantages in terms of speed, comfort, cost, convenience and travellers will make appropriate choices between modes.

1. Introduction

Natural, cultural, historical resources is an important component of tourism in Indonesia. Indonesia has a tropical climate and the length of coastline are 99,000 km, interesting attractions for domestic and foreign tourists. Tourism has grown rapidly and become one of the world's leading economic phenomena. Tourism is used by countries for economic development [1,2,3]. Tourism used to development strategy for generating income, creating jobs and stimulating the economy [4,5].

The success of a tourist destination in the world market is influenced by the attractiveness and competitiveness of their [6]. Tourism can play a role in the world market, depending tourist attraction developed and managed properly [7]. The tourism sector is currently one of the leading sectors for the government of the Republic of Indonesia in obtaining foreign exchange [8,9].

Jakarta is the capital city of the Republic of Indonesia, It is a melting pot of representatives from each of these ethnic groups. Comprising more than 300 ethnic groups speaking, population exhibits marked diversity in its linguistic, culture, and religious traditions. Jakarta is covering of 637.44 square km area. Located on the northern coast of West Java, it is the center of government, commerce and industry. Strategically positioned in the archipelago, the city is also the principal gateway to the rest of Indonesia [10].

Jakarta is one of Indonesia's designated tourist areas. It has modern transportation by air, sea, rail, or by land. It has the largest and most modern airport in the country, the most important harbor in Indonesia and is well connected by rail of good roads to other destinations in Java, Sumatra, and Bali.
Indonesia’s main gateway is Soekarno-Hatta International Airport serves a growing number of international airlines and domestic flights.

Jakarta is the capital of a beautiful country called Indonesia and it has become a center of government for decades. It also has a splendid history and culture, such as called Kota Tua (Old Town).

The development of tourism cannot be separated from the increasing number of tourist and the development of the attraction. Tourist destination has certain requirements in order to grow that has a diversity of attractions, availability of accessibility, and facilities as well as the convenience of tourists [11]. This study aims to analyze the spatial distribution of main tourist attraction in Jakarta

2 Methodology

Jakarta has a variety of resources (nature, history and culture). The Spatial Distribution of Tourist Attractions in Jakarta is formed by natural attractions, history and culture attraction. Every tourist attraction has different situation and accessibility, as well as access to tourism attraction. The types and sources of data collected include: (1) the location of attraction in Jakarta consists of natural attractions, history and culture (2) Situation of each tourist attraction; (3) accessibility (road grade, road conditions, mode).

Data processing includes: (1) classification of tourism object type (natural, history and culture); (2) the spatial and tabular data processing technology with Geographic Information System (GIS), (3) create an matrix. Analysis of the data used is spatial analysis with a map overlay to assess the spatial distribution of tourist attractions in Jakarta. Spatial information, which will be correlated using overlay method is a kind of natural attraction, history, culture with situation map and accessibility.

3. Result and Discussions

3.1. Attractions

Jakarta is a tourist destination of the domestic and foreign tourists. This city has a long history in the Dutch colonial era and It has buildings with typical Dutch architecture. The buildings are currently used as historical attractions.

Jakarta also has other tourist attractions in the form of natural, history and cultural tourism. The number of historical attractions are more than compared with cultural attractions. According to the data of the Tourism Office, the number of historical attractions are as many as 16 objects that now functioned as a museum, as for nature tourism, culture and recreation park more than 50 attractions. Tourism is described in a map of 14 points which is the main tourist attraction (Picture 2).

According to Statistik Central Agency (Badan Pusat Statistik) 2016, the most visited tourist attraction during 2015 was Taman Impian Jaya Ancol with the number of visitors as much as nearly 17 million people. This amount reaches 56 percent of total tourist visit in Jakarta. Taman Impian Jaya Ancol is one of Jakarta’s leading destinations besides Taman Mini Indonesia Indah (TMII), Ragunan Zoo, and National Monument (Monas). This data shows that most tourists in Jakarta decided to travel to an artificial recreation area which is a cultural tourism (Badan Pusat Statistik, 2016) [12].

Based on the picture 1, the majority of nature attraction on northern side of city. The Thousand Islands is one of the popular tourist areas in Jakarta. The capital Jakarta has historical attractions such as, dutch colonial architecture and museums with exhibits from Indonesia’s difference ethnic groups.

Cultural attraction is located on the eastern side of the city there is on outdoor cultural park with full-scale replicas of the traditional houses from Indonesia’s thirty-three provinces (Taman Mini Indonesia Indah).
3.1.1. Natural Attractions

1) Kepulauan Seribu

Kepulauan Seribu is one of the most popular tourist areas in Jakarta. It has hundreds of islands that most of them have not settlements. The main island frequented by tourists involve; (1) Tidung Island is the most favorite island and most visited by tourists. Tidung Island has a famous attraction that is a Bridge of Love. This bridge connects Pulau Tidung Besar and Pulau Tidung Kecil. The bridge is made of wood and length 800 meters. Other attractions such as snorkeling, diving; (2) Pulau Untung Jawa is one of the inhabited islands. The people of this island are very friendly and open to tourists. Attractions include playing banana boats, jetsky and diving; (3) Pulau Semak Daun has white sand attractions on the beach. The island is a small uninhabited island and perfect for beach activities; (4) Pramuka Island is an inhabited island that has educational tours through rare hawksbill breeding and turtle conservation. Other attractions on the island are swimming and snorkeling; (5) Harapan Island has the attraction of a wooden bridge used to relax and enjoy the blue ocean and small island clusters. Other attractions such as coral reefs, diving and snorkeling; (6) Bidadari Island is one of the closest islands that is 15 kilometers from mainland Jakarta. Attractions on this island are diving, snorkeling, boating, beach activities [13].

2) Ragunan Zoo (Kebun Binatang Ragunan)

Ragunan Zoo is located in Pasar Minggu, about 20 km from the center of Jakarta. This place is at an altitude of 50 m above sea level, with rainfall of 2300 mm per year, an average temperature of 27 °C and 60% humidity. The zoo has an area of 147 hectares occupied by 2000 animal specimens and is surrounded by more than 50,000 trees that make this place cool. Laid out in a lush tropical setting, such indigenous animals as the komodo dragon, orangutan, tapir, anoa, sumatra tiger, banteng, wild ox, and various brightly colored birds are given ample room [14].
### 3.1.2. Historical Attractions

1) Maritime Museum (Museum Bahari)
Maritime Museum is located in the old Sunda Kelapa harbor area in Penjaringan Subdistrict, Penjaringan District, North Jakarta. The museum was inaugurated inside the former, Dutch East India Company warehouses. The warehouses were built beside the mouth of Ciliwung River. The museum focuses on the maritime history of Indonesia and the importance of the sea to the economy of present-day Indonesia. The museum displays models of fishing boats and other maritime objects from different parts of Indonesia. The museum also exhibits the celebrated Pinisi schooners of the Bugis people of South Sulawesi, which at present make up one of the last sea-going sailing fleets in the world.

2) Fatahillah Museum (The Jakarta History Museum)
The Jakarta History Museum, also known as Fatahillah Museum or Batavia Museum is located in the Old Town of Jakarta. The building was built in 1710 as the Stadhuis, the City Hall of Batavia. The Museum of History of Jakarta was inaugurated on 30 March 1974 for being the center for collection, conservation and research for all kinds of objects of cultural property related to the history of the City of Jakarta, becomes a center for education, study and recreation for the community. This collection is very interesting since the association reflects of the community of Batavia City with various cultural elements from Europe, especially Dutch, China, India and Indonesia. Fatahillah Museum was the town square for the Dutch settlement of Batavia, as such features some well-preserved buildings. Cobblestone square is a bustling hive of activity, particularly at the weekends.

3) Museum Wayang
Museum Wayang is located Pintu Besar Utara Street 27, West Jakarta. It was built in 1912, previously as land of a church, which was built in 1640 under the name of De Oude Hollandsche Kerk (The Old Dutch Church). In 1732 it was renovated and its name was changed into De Nieuwe Hollandsche Kerk (The New Dutch Church). The church building was once totally destroyed by an earthquake. Bataviasche Genootschap van Kunsten en Wetenschappen (Batavia Society of Arts and Sciences), that was an institution dealing with science and Indonesian culture bought this building. Shadow Puppet (commonly known as wayang) in Indonesia, especially on Java Island, was originally a product of the Royal Court culture. It was first used as an instrument of worship to the ancestors, and after the Hindu culture entered Indonesia at the 5th century. This Museum displays various collections of wayang (puppets) and dolls from friendly countries like Malaysia, Thailand, Suriname, China, Vietnam, France, India and Cambodia [13].

4) Monumen Nasional (National Monument)
The National Monument is located the centre of Merdeka Square, Central Jakarta, symbolizing the fight for Indonesia, It is the National Monument of the Republic of Indonesia, built to commemorate the struggle for Indonesian independence. The total height of the monument is 132 metres. Construction began in 1961 under the direction of President Soekarno. The construction of Monas proceeded in three stages. The first period, from 1961/1962–1964/1965 began with the official start of construction on 17 August 1961 with Sukarno ceremonially driving in the first concrete pile. A total of 284 piles were used for the foundation block. A further 360 piles were driven in for the museum foundations, with work being completed in March 1962. The walls of the museum in the base were completed by October. Construction of the obelisk then commenced and was finished in August 1963. Work in the second stage, from 1966 to 1968, was delayed by shortages. In the final phase, from 1969–1976, the dioramas for the historical museum were added. National Monument (Monas) was opened to the public in 1975.

5) Gedung Joang 45
Gedung Joang 45 is located at Menteng Raya Street 31, Central Jakarta. In 1938, a Dutch businessman named LC Schomper, built a hotel called Schomper at Menteng Area. The hotel was built as a place to spend nights for high officials of the Nederland, foreign Entrepreneurs, and high officials of local
government. During the colonization of the Japanese Empire in Indonesia and it was turned into a boarding house and Education center for Indonesian. The name of the Schomper 1 Hotel then turned into Gedung Menteng 31 Building. The Menteng 31 building was used for many purposes. It was once used as office of Ministry of Manpower arrangement, National Boards of the Generation of 1945, and Jointly Secretariat of Nation Works Organization. The building was renovated and repaired Menteng 31 building was officially established as Museum Joang 45 on August 19, 1974.

6) Museum Nasional
The Museum is situated on Merdeka Barat Street. Currently the National Museum houses collections of 109,342 objects under the categories of prehistory, archaeology, ethnography, numismatics-heraldic, geography and historical relics. In 1994, the museum started with is expansion project. The new building, constructed in the same architectural style as the old, comprises an arena for theatrical performances and more spaces for exhibitions. The museum curators provide detailed information and guidance on collections-related subjects during working hours. The daily activities at the National Museum include collecting and protecting collections and providing information on the museum. The Indonesian Heritage Society (HIS) voluntarily assists the museum in handling the inventory of the collections. This museum has supporting with such tourism facilities.

7) Monumen Pancasila Sakti
Monumen Pancasila Sakti is located at Lubang Buaya Subdistrict, Cipayung District, East Jakarta. Tourists can learn a bit history of those revolution heroes and their clothes. The color of the monument is predominantly white and it has Garuda Pancasila statue on its wall. The monument is surrounded by lush trees, so the nuance is comfortable and shady. Some tourists are attracted in the history of the monument, so they come to the site to learn about its history. The landmark becomes a favorite object for photography. It was the pit where revolution heroes were killed. It was the place where the heroes were tortured before getting killed by the communists.

3.1.3. Cultural Attractions
Taman Mini Indonesia Indah (TMII) is represents Indonesia's 33 provinces and their outstanding characteristics, reflected most strikingly in the exact regional architecture of the province. An extensive theme park set in over 100 hectares on the outskirts of Jakarta; the All Indonesian islands are realistically reproduced in miniature in a central. Each pavilions is representative of each province firm the traditional architectural style in miniature to a wonderful display of cultural items and exhibits. It have a bird park with a walk-in aviary, a fauna museum and recreational grounds with a swimming pool and restaurants. A richly decorated building in Balinese architecture, it houses contemporary arts, crafts and traditional costumes from the different regions of the country. Cultural performances, events, and even local delicacies from the provinces are prepared regularly, especially during weekends and holidays, to showcase Indonesia's rich cultural heritage.

3.2. Accessibility
According to Burton (1995) [15], accessibility can not be separated by the availability of transport systems:
(1) Transportation of transport such as cars, buses, trains, aircraft; (2) The road network such as roads, railways, air lines (Burton, Rosemary, 1995).

Transportation is one of the fundamental things in a big city like Jakarta. The density of the population living in the capital requires a good transportation role to support the sustainability of daily activities. However, adequate public transport services and able to meet the expectations of the community is still not fully realized. In addition, traffic congestion is also still a major transportation problem in Jakarta. This congestion problem will also affect the amount of time a person uses to achieve a goal.

According to the Transportation Department, the traffic jam in Jakarta is caused by the increasing number of vehicles, unregulated road users, as well as the unchanged length and width of road segments. In 2013, the number of motor vehicles has reached 16,072,869 units. The amount is not proportional to the
length of the Jakarta road which is only 6,955,842.26 meters, resulting in one motor vehicle actually only has the capacity to move along 0.43 meters on the streets of Jakarta.

Public transportation as one solution to the congestion problem, the government has provided Transjakarta bus (busway) for Jakarta residents. During 2014, the number of buses increased to 669 units serving 111.63 million passengers. However, compared to 2013, the number of people using TransJakarta buses decreased by 0.79%. This is due to the irregular departure schedule of this mode of transportation [16,17].

Other public transportation modes contained in Jakarta are in the form of trains and public transport such as large buses, medium buses, small buses, environmental transports, and taxis. In 2014, the number of public transport was 68,537 vehicles, an increase of 1.74 percent compared to the year 2013 amounting to 67,363 vehicles. Jabodetabek electric train (KRL), the number of units operating in 2014 is as many as 664 units. The entire unit operates 739 trips with more than 500 thousand passengers per day (Badan Pusat Statistik, 2016).

Accessibility to the location of tourist attraction in the Jakarta can be reached by an overland route. The transport system for tourist consists of; (1) the network of routes along which the vehicles travel (e.g. roads, railway tracks and sea lanes). The speed of travel of the vehicles along the network will govern journey times. At certain points these separate networks come together to provide interchange nodes where tourist may change from one mode of transport to another. Each form of transport will have different advantages in terms of speed, comfort, cost, convenience and travellers will make appropriate choices between modes. (2) the means of transport (vehicles such as cars, train and boat).

Jakarta has two international airport, one is the larger Soekarno-Hatta International airport, located in Tangerang, province of Banten. The other is the smaller Halim Perdanakusuma Airport, which is reserved to limited domestic flights.
3.3. The Spatial Distribution of Tourist Attractions

The result of the research shows that the majority of nature attraction on northern side of city. The Thousand Islands (Pulau Seribu) have hundreds of islands that most of them have no settlements. The main island frequented by tourists involve; Tidung Island, Pulau Untung Jawa, Pulau Semak Daun, Pramuka Island, Harapan Island, Bidadari. Good snorkelling, diving and beach activities are available at near by Pulau Seribu. This area have low accessibility and sea lanes.. The capital Jakarta has interesting, dutch colonial architecture and museums with exhibits from Indonesia’s difference ethnic groups and cultural periods. It’s attraction spread on the northern, eastern, souther and western. On the eastern side of the city there is on outdoor cultural park with full-scale replicas of the traditional houses from Indonesia’s thirty-three provinces (Taman Mini Indonesia Indah).

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| Resources | Attraction | Situation | Accessibility |
|-----------|------------|-----------|---------------|
| Natural   | Thousand Islands (Pulau Seribu): Snorkeling, Diving, Jetsky, the beach activities, turtle conservation, coral reefs | North Jakarta Sea, Seaport | Low access (sea lanes) |
|           | Ragunan Zoo: animal, trees | South Jakarta Settlement | High access (roads, railway tracks) |
| Historical| Museum & monument: maritime, history of the Jakarta puppets and dolls, prehistory, archaeology, ethnography, historical relics, history of those revolution heroes | North Jakarta Port West Jakarta Central Jakarta East Jakarta Settlement Trade Areas | High access (roads, railway tracks) |
| Cultural  | Miniature Park (TMII) is represents Indonesia's 33 provinces and their outstanding | East Jakarta Settlement | High access (roads, railway tracks) |
| Other     | Ancol Dreamland; Fantasy World, | North Jakarta Sea, Seaport Trade Areas | High access (roads, railway tracks) |

Source: Data Processing 2017

4. Conclusion

The Spatial Distribution of Tourist Attractions in Jakarta: (1) the majority of nature attraction on northern side of city. This area have low accessibility. On the eastern side of the city there is on outdoor cultural park with full-scale replicas of the traditional houses from Indonesia’s thirty-three provinces. Historical attraction spread
on the northern, eastern, southern, western. The number of historical attractions more when compared with cultural attractions; (2) The transport system for tourist consists of the network of routes along which the vehicles travel (e.g. roads, railway tracks and sea lanes). The speed of travel of the vehicles along the network will govern journey times. At certain points these separate networks come together to provide interchange nodes where tourist may change from one mode of transport to another. Each form of transport will have different advantages in terms of speed, comfort, cost, convenience and travellers will make appropriate choices between modes.

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