

DEVELOPMENT OF MORPHOLOGICAL STRUCTURE IN MOJOKERTO CITY CENTER

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ABSTRACT

Mojokerto owns historical values influenced by Majapahit Kingdom and Dutch Colonial. Mojokerto was once the center of Majapahit Kingdom in XIII-XIV century. On the other hand, the period of Dutch administration in Mojokerto provided significant changes to the morphological structure of its center since this town was the manufacture center of sugar and cane. This study aims at exploring the historical development of morphological structure in Mojokerto city center. The result indicates that Mojokerto is designed for the benefit of sugar manufacture and control over economic activities of Dutch Government. However, as time goes by, the physical element established for the benefit of sugar production had been disappeared, such as trams and sugar manufacturers. Structure of Dutch Colonial relics which is still maintained is the town square as the center surrounded by several important buildings and connected to the north-south main line which is the center of economic activity.

Key words: Mojokerto city center, morphological, structure

1. INTRODUCTION

1.1 Background of Research

Mojokerto owns historical values influenced by Majapahit Kingdom, Dutch and Japanese colonial and post-colonial period (Yulianingsih, 2012). Mojokerto was once the center of Majapahit Kingdom which had stood since XIII-XIV century. The physical evidence is in the administrative area of Mojokerto Regency, precisely in the area called Trowulan. While in Mojokerto City, Majapahit Kingdom relics can be seen through the naming of the streets like Prajurit Kulon, Magersari, Suronatan, and Sentanan.

Mojokerto City had also been controlled by Dutch Government in 1918-1942. During this period, the Dutch Government changed the order of the city and did some development project, such as markets, government buildings, public baths, as well as the repair of roads, villages, and provides the clean water (Yulianingsih, 2012). Mojokerto is located on the edges of Brantas River so it has strategic location and fertile soils for agriculture and plantation. Therefore, Mojokerto was designed to be sugar production center during the Dutch Colonial Era. At that time, Mojokerto became sugar cane and rice paddies fields (Walraven, 1998). Dutch Government also built several factories to process sugar cane from the fields.

As time goes by, the physical structure established for the benefit of sugar production had been disappeared, such as trams and sugar manufactures. On the other hand, there are structure of Dutch Colonial relics which is still maintained. Mojokerto city center has a town square (*Alun-Alun*) as the center surrounded by important buildings, such as Mosques and Kauman in the West, County Government Offices in the East, Defense or Military Office in the North, and the Church in the East side of the Town Square. Another characteristic that shows is the North-South main line that is connected with the town square, namely Mojopahit road. This road becomes the center of economic activity in Mojokerto since the Dutch colonial era to the present. During the Dutch Colonial era, Mojopahit road is used for trade by foreign Asian Group, such as Japanese, Chinese, or Arabic. In addition, there are several heritage buildings which are still maintained in Ahmad Yani road.

Based on the above statement, Mojokerto owns historical background that is reflected from the morphological characteristics of the city center. The historical value is a potency that can be explored for the future planning of Mojokerto. Thus, it is necessary to find the development trend of the morphological structure in Mojokerto city center. The result could become the basis idea for strengthening the identity of Mojokerto and formulate the design arrangement of the Mojokerto city center.

1.2 Location of Research

This study took place in Mojokerto which is a small town in East Java province. Mojokerto is located \pm 50 km in the southwest city of Surabaya and has an area of 16.46 km². It has two districts and 18 villages. In late 2015, the Local Government attempt to expand the area into three districts. In this study, the study area is limited to the downtown area, around the town square (*Alun-Alun*).



Figure 1 Mojokerto City Center as Study Area (google earth, 2016)

2. THEORITICAL REVIEW

2.1 History of Cities in Indonesia

Peter Nas (1986) distinguishes early Indonesia town into two forms, the coastal cities and inland cities. Generally, the coastal cities has the characteristics of heterogeneous, dominated by trading activities, have an open spaces (the town square), and have the ability to activate trading activities. It is also a residential place for various types of community and meeting place for people with various cultural backgrounds. While inland cities has the characteristics of strong traditional and religion, dominated by agricultural activities, historic sites (temples), have an open spaces (the town square), has the ability to activate the activity with a sacred character (traditional and religious). It is also a residence of the King, the government center, and the residences of various strata of society.

2.2 Morphological Structure of Cities in Java

According to Sunaryo (2013), the structure of the cities in Java usually consists of a town square called *Alun-Alun*, surrounded by important buildings, such as the palace called Keraton, Mosque, and market. Meanwhile, according to Rapp (2015), cities in Java generally have Chinatown and areas used as the residence of the Ruler or King. Here is the explanation:

- a. **Keraton** – a center of power which is used as the residence of the royal family and the King. Keraton has the highest position in the structural arrangements of cities in Java.
- b. **Alun-Alun** – a part of Keraton complex that is generally have rectangular shape and wide. Activities in the *Alun-Alun* are also associated with Keraton, as a gathering place for people when there is a special event. While in the colonial period, around the town square there is not only Dutch Government but also the Local Government. There is a mixing between Javanese culture and the Netherlands or *Indisch*. That situation changed when entering 20th century where "westernization" caused the loss of the identity of *Alun-Alun* as a characteristic of cities in Java (Handinoto, 2010).
- c. **Mosque and Kauman** – located on the west side of town square. The architectural style used in the Mosque is Javanese with traditional style. Kauman is a residential area that has an Islamic character and generally located around the Mosque.
- d. **Market** – a specified location for trading activities. The location of the market tends to separate from the palace, the town square, and the mosque. Market rights leased by colonial

or indigenous rulers to the landowner. Landlords can rent the rights to a second tenant which is usually the Chinese people. Their settlements are close to the Market. Therefore, Chinese settlement is often found near the market.

- e. **Pecinan** – also known as Chinatown. *Pecinan* is the first or second area after Dutch settlement which is urbanized (have an urban characteristic). Chinatown always has a strategic location to markets, forts, Dutch settlement, or the town square (*Alun-Alun*).
- f. **The residence of King / Ruler** – an element that generally placed near *Alun-Alun*. Residence of the ruler not only Dutch Government but also Local Government. Both were built around *Alun-Alun* and appear before *Alun-Alun*.

Those elements growth together as a central civic district and the center of community activity, including social activities. Those elements also gradually established a central business district of the city. Many public and business facilities emerged which were organized by the native Javanese and the Chinese, especially along the main roads of the area (Darjosanjoto, 2005).

3. METHODOLOGY

This research is a kind of historical research. There are two analysis methods used in this research. There is diachronic reading which is supported by typological-morphological analysis. Diachronic reading used to trace the historical development of Mojokerto city center. While typological-morphological analysis is used to reinforce the results of diachronic reading through the depiction of maps and forms of its morphological structure.

4. RESULT AND DISCUSSION

4.1 Result

The development of Mojokerto is inseparable from the history of Majapahit Kingdom. Mojokerto became the center of the Majapahit Kingdom but the physical relics that is still visible is located far to the west of Mojokerto City, with a distance of ± 10 km and included in the Mojokerto Regency administrative area. So it is not found the palace (*Keraton*) in the Mojokerto City. The development of morphological structure in Mojokerto is starting from the city center. The changes began to be seen in the mid of 19th century. For more details can be seen in the following explanations:

a. In 1893 (pre-colonial period)

In 1893, the morphological structure in the center city of Mojokerto was not yet fully visible. The development was marked by the placement of the town square as the center close to Brantas River. At that time, Mojokerto was all field and swamp where Brantas River was the main irrigation spring for sugar plantations and agricultural in Mojokerto. Then, the Dutch colonial established governmental system and place it close to the town square to control sugar production and agricultural distribution activities.

On the west side of the town square there were Great Mosque, House of Assistance Resident and the Regent as well as other several important buildings also built around the town square. The main road network was built according to the structure and system of alongside network of north-south road with east-west road intersecting perpendicularly. This kind of road structure was intended to facilitate access to agricultural production areas nearby.

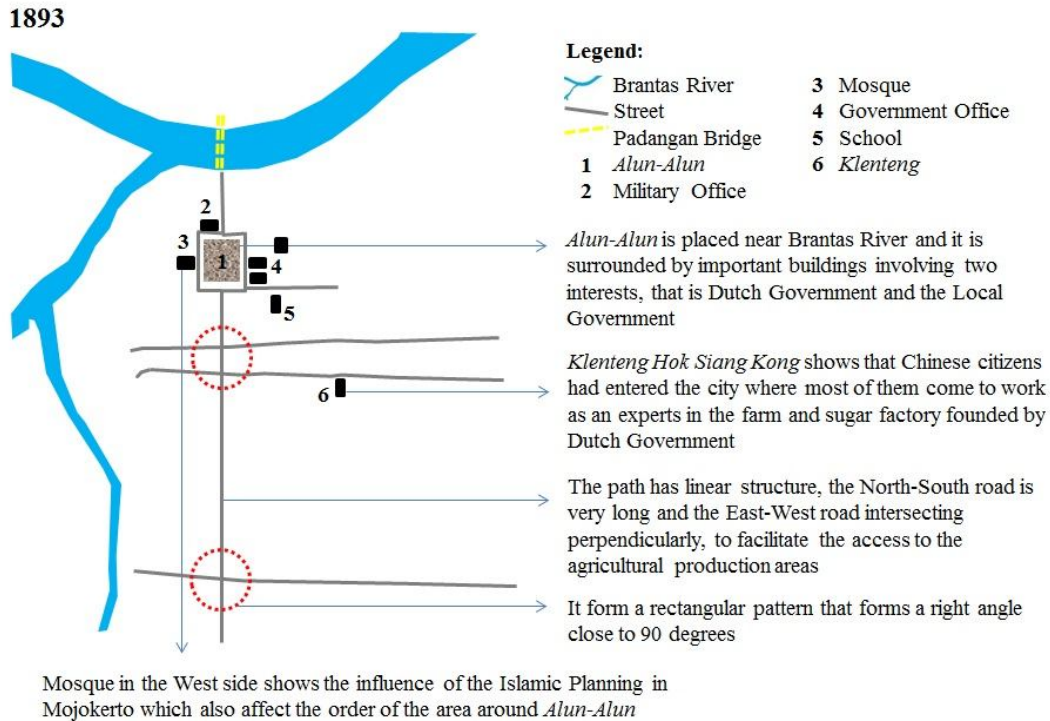


Figure 2 Morphological Structure of Mojokerto City Center in 1893 (Analysis, 2016)

b. In 1939 (colonial period)

In 1939, the development of morphological structure in the center city of Mojokerto followed by growth of individual buildings around town square and at the southern edge of Brantas River. The Dutch colonial government found Sentanan Lor Sugar Plant at the southern edge of Brantas River and the residential of Europeans grew around the plant. Market and Chinese residential were growth along Mojopahit road, at the southern side of town square. In addition, the colonial government also built tramways employed to transport cane and sugar passed through the main shopping area on Mojopahit road and town square. The tramways were built to facilitate sugar manufacture system.

To this year, the main road network structure is still maintained. The development is seen in the addition of road network which is an access to town square and other areas nearby. Morphological structure in the center city of Mojokerto is visible in the recent year. The town square is the center surrounded by important building and there is a main road running from north to south (Mojopahit road).

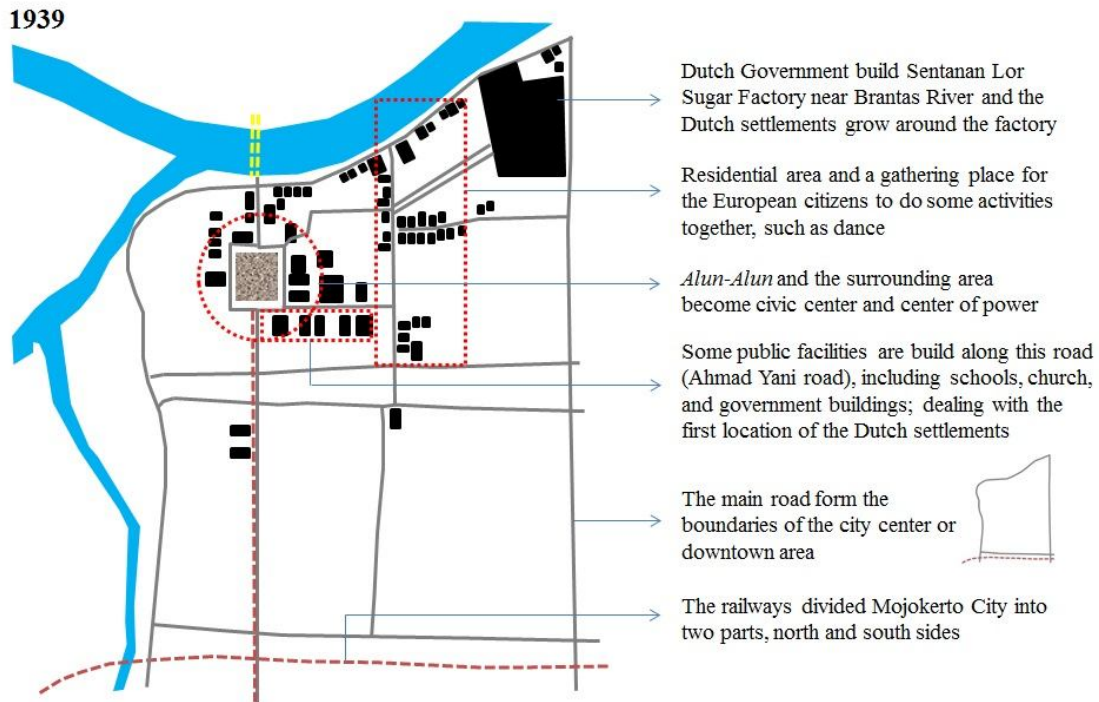


Figure 3 Morphological Structure of Mojokerto City Center in 1939 (Analysis, 2016)

c. In 1945 (independence period)

In 1945, the development was continued by building several blocks in the town square area, edge of Brantas River, and along Jl. Mojopahit. The area growing faster was in the northern side of railways. The main road structure was still retained but the road network was continued to facilitate movement.

On the other hand, Mojokerto had decreased environmental quality. The number of street vendors and vehicles caused pollution, traffic jam, bumpy road, and chaotic condition. Then, the government attempted to clean up and rectify the order of the town to be more prosperous, green and clean. The government added more road network and improved other infrastructures. Specifically, the town square and surrounding areas were evolving as the center of Mojokerto.

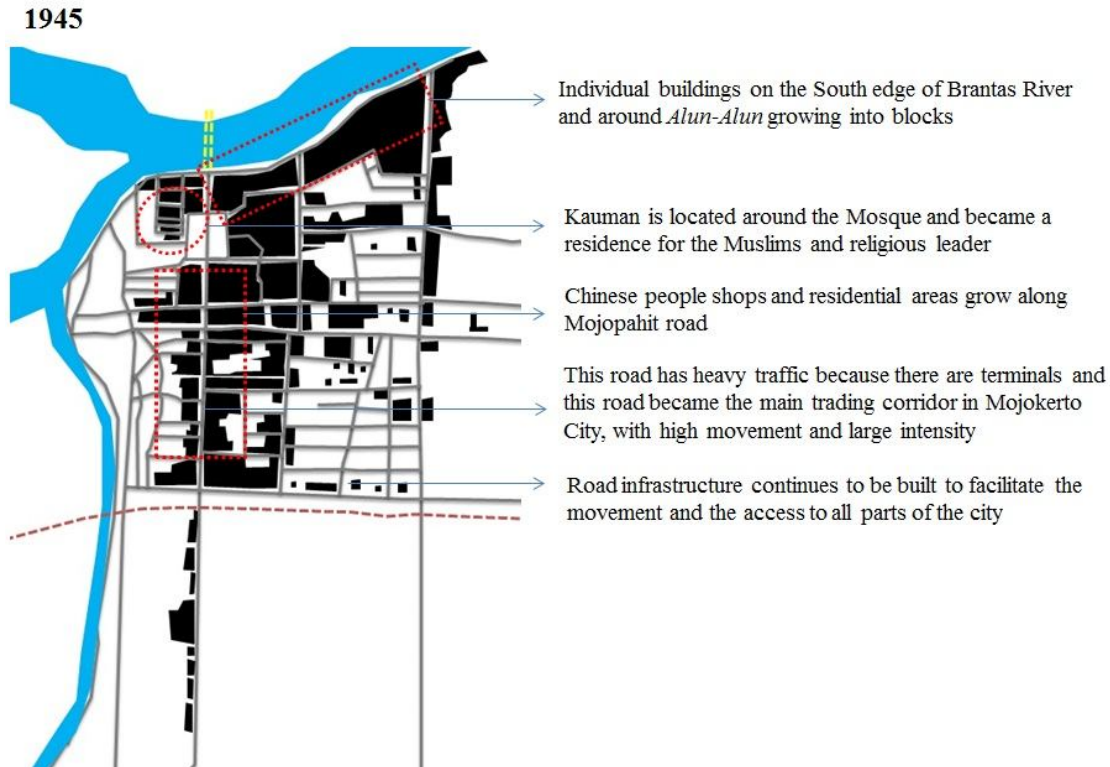


Figure 4 Morphological Structure of Mojokerto City Center in 1945 (Analysis, 2016)

d. In 2003 (modern era)

In 2003, morphological structure of Mojokerto underwent less changes, rather than only development. Morphological structure in the center city of Mojokerto which existed since the Dutch colonial was still retained. The development was more likely in the density of building blocks (residential, shops, office, hotel, etc.) around town square. At the same time, the structure of main road network was also retained and the boundary of center of the town was clearer. The shopping block began to grow in the main road (Street Oriented Building). The town square area of Mojokerto and its surrounding areas became the center of crowd but the identity of town square as the hallmark is simply forgotten.

2003

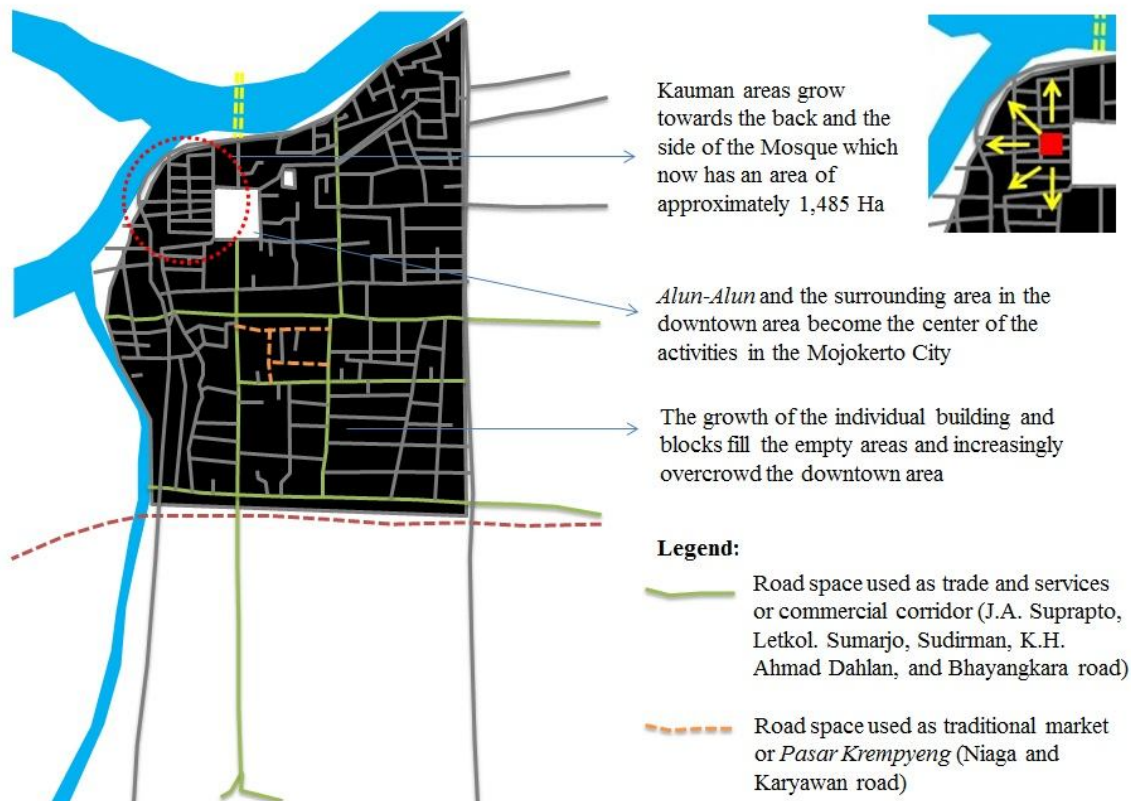


Figure 5 Morphological Structure of Mojokerto City Center in 2003 (Analysis, 2016)

e. In 2016 (at present)

In 2016, the morphological structure in the center city of Mojokerto which is exist since the Dutch colonial is retained. The development in center of Mojokerto is massive since there is no more space. The town square remains as the center surrounded by the governmental buildings in the east, Great Mosque in the west, military office in the north, shopping block on Mojopahit road, and Dutch heritage residential located on the Brantas River banks. Along with its development, the center of Mojokerto community activities shifts to Benpas area which is currently as economic and social center activities. Besides, the shopping block also develop in the main road and trigger the development of trading building in street intersecting with the main road.

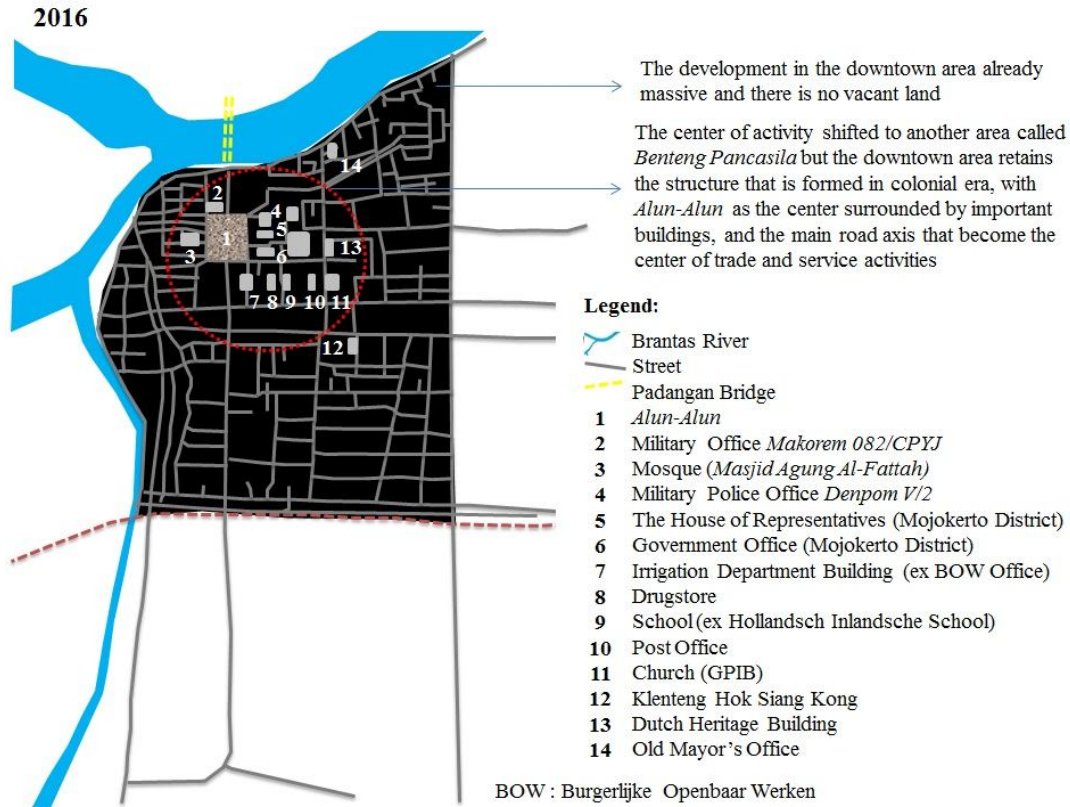


Figure 6 Morphological Structure of Mojokerto City Center in 2016 (Analysis, 2016)

4.2 Discussion

Mojokerto is an inland city that once controlled by the Dutch. Mojokerto formed with a specific purpose, as a center for sugar production and control over the economic interests of Dutch Government. It affects the establishment of morphological structure in its city center. For more details can be seen in the following figure:

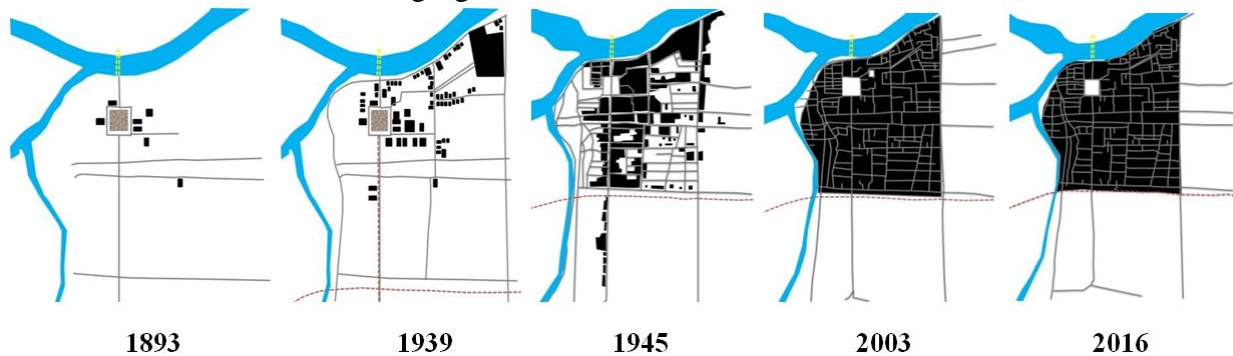


Figure 7 Development of Morphological Structure in Mojokerto City Center (Analysis, 2016)

Based on above picture, the development project in Mojokerto city center began in the mid of 19th century. Mojokerto city center has clear north-south axis standard, which is *Mojopahit* road. The end of the road is connected to *Brantas River* and connected to the town square. Meanwhile, the south side of the road is connected to station. On the east and west side of the main axis, there is transverse road perpendicularly cut the road and form a rectangular pattern to several sides.

In Mojokerto city center, each building extends in all direction and creates a cluster of residential with clear ethnic separation. The Chinese residential is designed around the main north-

south main axis, which is Majapahit road. The European residential is designed close to the center or town square and the southern of Brantas River banks. The Arabic and Moslem residential are in Kauman, in the west side of the town square. Meanwhile the native Javanese community residential spreads in several areas.

The development occurred in Mojokerto city center was more likely happened to the road network and building blocks made densely population in center of Mojokerto. After the independence, Mojokerto was no more as the center of sugar manufacture. Several physical relics began to disappear and converted, such as tram and sugar factory. The structure shown in center city of Mojokerto is now a relic of the Dutch colonial.

5. CONCLUSION

Based on the analysis, it is found that the center city of Mojokerto has undergone a development of morphological structure but still retains its first built structures. The morphological structure in the center city of Mojokerto is highly influenced by the Dutch colonial. At that time, Mojokerto was designed for the benefit of sugar manufacture so that the colonial government built the road network, trams, railways, residential, and governmental system which is intended to support and control the colonial government economic activities.

The structure that is formed in the center city of Mojokerto consists of the Town Square (*Alun-Alun*) as the center, located near the Brantas River. Around it are important buildings that have existed since the colonial era, including the Mosque and Kauman, Government Office, Military Office, Church, and other historic buildings. It also has a benchmark of the North-South axis which is very long with the East-West road that cut it perpendicularly. North-South road has become a major commercial center in Mojokerto since the colonial era.

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