



The role of Eastern Java in the global spice trade network during the ancient period to the 17th century

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Abstract

The historiography of the Indonesian spice trade and routes places eastern Indonesia in a special position. Almost all historical studies are often discussed and concluded about eastern Indonesia, especially Maluku and the surrounding areas, as the primary spice producers and the vital node of the Southeast Asian spice trade network. Studies on archaeological data from the ancient period show that eastern Java had a significant involvement in the spice trade. This article aims to describe the role of eastern Java in the spice trade from the ancient period to the 17th century. The method used is historical research by exploring ancient sources from inscriptions, temple reliefs, and ancient literary texts from libraries and museums. Previous studies published in various books and journals are also used as references. Based on research results, spices from the eastern Java outback are transported to the city ports and traded globally. The city ports are essential to support the spice route network in eastern Java (i.e., Tuban, Gresik, and Surabaya). Those eastern Java port cities have formed global trade networks, especially in Southeast Asia.

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Introduction

Most historical researchers believe that the spice trade in Southeast Asia is centered in Sumatra and eastern Indonesia, especially the Maluku Islands. They consider that the eastern archipelago produces spices, while Sumatra is an international trading port (Hall, 2010; Ptak, 1992; Rabani et al., 2022). Most of the previous researchers deem eastern Indonesia as the leading spice

producer, while other areas are not. This perception was considered for a long time referring to the colonial historiography written by VOC officials (i.e., François Valentijn and Rumphius) in the early period of the Dutch arrival in Indonesia (Amal, 2010). In his *magnum opus* entitled *Oud en Nieuw Oost-Indien*, François Valentijn positions Maluku (Ambon) as an exceptional area. During the 17th to early 18th centuries, a botanist named Rumphius also significantly influenced the historiography of spices, with Maluku as a point of interest. Rumphius popularizes the narrative about Maluku as a major spice producer in Indonesia (Baas & Veldkamp, 2014).

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Since the 10th century, East Java has been the center of the Hindu kingdom after its move from Central Java. Unfortunately, the economic role of East Java in that period was not fully explored and needed to be widely known. The existence of several ports in this area supports this role.

The oldest textual data that can be used as a reference in writing the history of East Java comes from the Dinoyo Inscription found in the Malang area. In 760 AD, the Agastya statue made of sandalwood became obsolete and could not be used anymore, so the king ordered a similar statue made of black stone (Poerbatjaraka, 1926). Rouffaer suspected that the sandalwood, used as the primary material for the Agastya statue, came from Timor (Bosch, 1924). Fischer also expressed the same, stating that sandalwood is a plant originating from Timor and has become a trade product exported to India and Egypt (Fischer, 1938). The sandalwood used as the primary material for making the Agastya Statue by the ancestors of King Gajayana in the Dinoyo Inscription indicates the existence of shipping or trade relations between eastern Java and the surrounding islands.

Shipping and trade in eastern Java increased at the end of the 9th century. The presence of foreign traders strengthens the hypothesis that eastern Java's involvement in global trade began in the 9th century, accelerated in the 10th century, and has accelerated since the 11th century (Rahardjo, 2011). In the mid-early 10th century, Mataram's center of power was moved from central Java to eastern Java. Christie argues that the decision to move the center of power is related to the maritime trade boom since the 10th century (Christie, 1998). The high demand for spices, especially pepper, cloves, and nutmeg as medicinal ingredients, increases the demand for these commodities. Traders from eastern Java became intermediaries who obtained spices from the source, which were then distributed through ports on the north coast of Java or to international trading ports in Sumatra (Schrieke, 1957). During this process, eastern Java played a significant role in the trade and distribution of spices from the Eastern Archipelago. This article aims to describe the role of eastern Java in the spice trade network based on archaeological, epigraphic, and ancient text sources from the ancient period to the 16th century.

Literature Review

The spice trade is connected through trade routes on a local, regional, and global scale (Nugroho, 2021). Until the 16th century AD, there were six trade networks

connecting Indonesia with various countries in Southeast Asia or South Asia. Java is connected with the Sunda Strait, the east coast of East Sulawesi, Maluku, Banda, Timor, the east coast of Kalimantan, and the south coast of Sumatra (Hall, 1985; Ptak, 1992; Rabani et al., 2022). This route is side by side with the Silk Road so that it forms a cultural landscape and encounter in the Malacca Straits since the colonial period (Nugraha, 2022). Based on his research on artifacts under the waters of the Java Sea and inscriptions, K. R. Hall concluded that there was an intensive relationship between Sumatra-Java-Maluku with its main commodities being ceramics and spices (Hall, 2010).

Christie believes that Java's involvement in global trade began in the late 9th or early 10th century AD due to increased trade relations between the Chinese, Indian, and Arabians whose main product was spices (Christie, 1998; Rae & Witzel, 2008). From that period until the middle of the 16th century, trade activity was centered in eastern Java following the transfer of the center of power of the Ancient Mataram. A. S. Nugroho identified the possibility of an ancient port on the east coast of the Brantas delta as the entry point for easterners who would trade in Java (Nugroho, 2020). In the 11th century, ports appeared on the north coast of Java (Kambang Putih) and on the upper reaches of the Brantas River (Hujung Galuh) (Prasodjo, 2022). Prasodjo did not specify the commodities being traded at that time. In the 13th to 15th centuries, Majapahit controlled maritime trade in the archipelago and had relations with China, India and countries in Southeast Asia (Munandar, 2020). It is very interesting that Majapahit, which was centered in the country's interior region (modern Trowulan, Mojokerto-East Java), was able to control such a vast maritime trade. However, this can also become a threat when the Majapahit palace is in conflict, one by one the coastal areas break away and become independent areas under the control of local rulers (Dick, 2022; Nugroho & Nurfaizah, 2022).

Methodology

This study uses historical research methods: source collection, verification, interpretation, and writing. The research data were collected from the analysis of ancient literary works, inscriptions, foreign records, temple reliefs, and literary texts. The use of ancient literary works in the study of Javanese history is highly possible because several libraries in Indonesia still store ancient literary manuscripts till now in the form of *serat*, *babad*,

kakawin, and other traditional literary works (Zoetmulder, 1983). The historical sources in this study were obtained from several places, including the National Museum (in Jakarta) and the Mpu Tantular Museum (in Sidoarjo, East Java). Moreover, the eastern part of Java in this study means the administrative areas or the territory of the East Java Province as regulated in Law Number 2 of 1950 concerning the Establishment of the East Java Province.

Some of the areas in Eastern Java mentioned in this paper are shown in the following map (Figure 1).

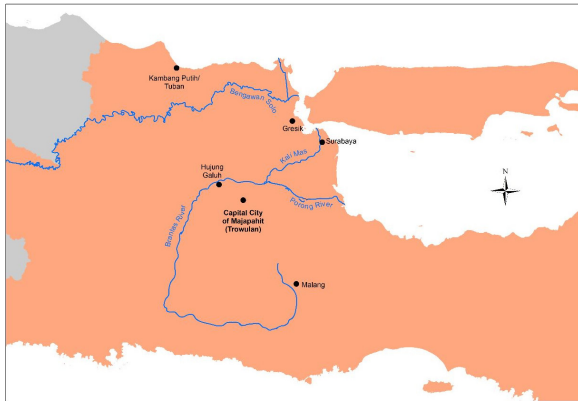


Figure 1 Map of ancient East Java

Source: Berg, (1931); Hall, (2011); Nugroho, (2021)

Results and Discussion

In maritime trade, markets are connected via sea routes and encourage the formation of trading centers at their point of contact (Meilink-Roelofs, 2016). De Graaf explained that, at first, the trading airport was a base where sailors met with supplies for shipping in the form of staple food and water (Graaf & Pigeaud, 2019). This opens up opportunities for local Javanese commodities, especially rice, in the international market (Reid, 2014). Before the arrival of Europeans, local rulers played an important role in trade and shipping. As long as it does not involve the authorities, trade in a larger capacity and capital is carried out by traders from abroad. In old Javanese inscription sources, foreigners are referred to as *wargga kilalan*. They are trade unions of foreign nations who come to live in Java and are subject to special taxes in addition to trade taxes (Boechari, 2018; Nugroho, 2015). Inscriptions found in eastern Java claim the foreigners came from *kliṅ* (Kalingga in modern Puri, India), *aryya* (modern Andhrapradesh, India), *siṅhala* (Sri Lanka), *paṇḍikira* (Pandya and Kera in South India), *drawida*, *kmir* (modern Cambodia), *malyala* or *malyalam*

(in South India), *karṇnataka* (Karnataka), *cala* (Chola), *hara*, *campa* (modern Vietnam), and *rman* (Mon in Burma) (Cane Inscription, 943 AD; Gandhakuti Inscription, 1042 AD). The distribution of inscriptions that mention the presence of foreigners in an area shows that they are not only on the coast but have reached big markets in strategic areas.

Markets in Coastal and Inland Areas: Trading Systems in Trading Centers

The economic activity of the eastern Javanese community is centered on village markets generally held near highway or river traffic, road junctions, connecting routes between villages, and the city center. Based on its location, Soetjipto divides two type of markets: inland and coastal areas (Soetjipto, 1970). Markets in the interior are tied to a *pañcawāra* system that always moves from one village to another. Some villages form a *mañcapat-mañcalima* pattern, in which one main village is surrounded by four other villages that are close to each other. On the other hand, Javanese people recognize a five-day cycle (*pañcawāra* or market day) in their traditional calendar. The market will move from one village to another following the days in the cycle. This pattern causes the exchange of trading commodities at the local level. The market around the main village receives commodities directly from the producers; then, they are distributed to the main village on certain days. Each main village is connected to the most strategically located market. At this level, the number of goods traded is more significant and varied because they come from other villages (Rahardjo, 2011). At one time, various types of merchandise were collected in the main village, which was located in a strategic area or near the center of power. Based on the source of the inscription, several markets in the hinterland have been identified, namely, the village markets of Muncang (Muncang Inscription, 944 AD), Hujung Galuh (Kamalagyan Inscription, 1037 AD), and Canggal (Groeneveldt, 2018).

The inscription descriptions of the Muncang Village market indicate that the area is at the crossroads between villages and not far from the river (Brandes, 1913). Likewise, with other villages such as Palebuhan, Cane, and Patakan, which because of their location, can be reached by river, the market in the village becomes crowded and even visited by foreigners (Brandes, 1913; Stutterheim, 1935). Hujung Galuh in the Kamalagyan Inscription is described as where traders and captain of the ship from surrounding islands brought their merchandise. They sailed through the villages along

the river before finally arriving at Hujung Galuh (Kamalagyan Inscription, 1037 AD). Because it is a place for transporting merchandise from surrounding villages to be transported using river transportation, Hujung Galuh is also said to be a port located in the interior and connected to the coastal area. During the Majapahit era, the coastal area with the hinterland was connected by Cangu, which was a market and a place for boats to rest not far from the royal capital. Yingya Shenglan noted that the Chinese visited Java by walking along the north coast, then entering through the mouth of a small river and arriving at Cangu. From there, they would walk south for a day and a half before arriving at the palace of the King of Majapahit (Groeneveldt, 2018).

Most of the eastern part of Java is drained by the Brantas and Bengawan Solo rivers, which stretch from south to north and west to east. In addition to bringing soil fertility to the surrounding areas, the two rivers also separate the villages along their rivers. This condition does not hinder community trading activities. In the Waringin Pitu Inscription (1447 AD), river transportation is mentioned as the means of travel used by the community, namely, the jorong boat (*parahu jorong*), *ketpak*, and *kuñjalan* (Prihatmoko, 2011). In the Cangu Inscription, two villages separated by a river are connected by the use of fishing boats to cross from one side to the other. Eighty crossing points along the Brantas and Bengawan Solo rivers have been identified based on the Cangu Inscription. The crossings were not only exempt from taxes, but were also bound by royal regulations that applied to traders and their merchandise (Pigeaud, 1960).

The involvement of eastern Java in the global market was accompanied by a change in the policy orientation of the rulers, which at first was more dominant for agricultural interests, starting at the end of the 9th century, more related to trade. In addition to the imposition of special taxes on areas that have been designated as fiefs (*sīma*), those in charge of these areas are also given the privilege of managing the income from all trading activities (*masambyawahāra*) (Baru Inscription, 1030 AD; Cane Inscription, 1021 AD). So that the local economy is not disrupted due to the arrival of foreign merchants and traders, the authorities set limits on goods traded in an area that has been designated as *sīma* land. The commodities subject to the limit are livestock, household utensils, metal artisans, and basic daily necessities such as salt, sugar, and rice. In the Manañjung Inscription, the ruler also limits the purchase of spices to a maximum of one *kaṭi* (about 750–768 grams) per transaction (Stutterheim, 1929). Based on Gandhakuti inscription, traders organisation (*bañigrama* and

bañigrama) have the privilege of collecting taxes in Kambang Sri village (Gandhakuti Inscription, 1042 AD).

Trade commodities from the interior are transported by large traders and distributed to coastal areas for export to other islands. In contrast to the trading system in the hinterland, the coastal areas are less tied to the cycle of *pañcawāra*. Trading activities are influenced by the arrival of ships that want to dock on the coast. Competition among residents in trade with foreign ships docked to the coast is also quite tight. They approached using their boats, even boarding a ship that came to offer merchandise (Groeneveldt, 2018; Soetjipto, 1970). Because of the dependency on the arrival of ships, markets in coastal areas are not permanently fixed but can change locations. One of the privileges granted by the kingdom to the head of the Kambang Putih area is that he is allowed to open an area to be used as a place of trade and may trade throughout the king's territory being "allowed to trade until the limit of the king's power, ... (10) ..., has the authority to open a new place, ... (11)" (Kambang Putih Inscription, n.d.).

The traditional Javanese government system is in the form of a *maṇḍala* pattern with the king and palace as the center so that the further away from the center, the weaker the kingdom's influence. On the other hand, the coastal areas of the 10th and 11th centuries were crowded with foreign ships. The Dhimañāśrama inscription mentions various types of ships and boats for transporting goods in the Brantas Delta region (Dhimañāśrama Inscription, n.d.). One of the interesting elements is the type of ship used: the *lambu*, which has a similar term to *Lambo*. Jopie Wangania identified that the Bugis and Makassarese used the *Lambo* as a long-distance merchant ship with a capacity of 10–15 tons (Wangania, 1981). In the 11th century, the northern coast of eastern Java was also crowded with merchant ships. In the Kambang Putih Inscription, there is the term *banawa karwa tuṇḍan*, which refers to a type of multi-story ship (Kambang Putih Inscription, n.d.).

The arrival of merchant ships to the eastern part of Java was influenced by the seasons and the direction of the wind. Sailors from South and Central Asia can sail across the Bengal Peninsula to the Indian Ocean from May to September, taking advantage of the southwest monsoon and east-to-south ocean currents. On the other hand, sailing to the Bengal Peninsula can be done in January by utilizing the east monsoon winds and ocean currents to the west from the Sumatran coast (Tripati & Raut, 2006). Shipping around the Eastern Archipelago is also affected by the monsoons that change every half year. This means shipping from the western to the eastern

part of the archipelago -and vice versa- cannot be done in one journey but takes months due to stopping and preparing supplies. Cruises from the Eastern Islands to areas in the west and Malacca take advantage of the monsoons that blow in October. The traders who came from mainland Southeast Asia and China sailed south in December, then returned north from June to August (Lapian, 2017).

Spice Trade and Cultivation in Eastern Java

The voyages of foreign nations to the east were mainly aimed at finding pepper, cloves, nutmeg, and sandalwood. Chinese records state that the best quality pepper is obtained from Sunda, followed by Ta-pan (Tuban) and Paciran as the place of production (Wheatley, 1959). Every time it is harvested, Java produces tens of thousands of *jin*, each equivalent to 500 grams (Wuryandari, 2018). Meanwhile, very few textual sources, both local and foreign, mention cloves and nutmeg as trade products (Wolters, 2018). According to Wolters, the reason is that there are too few cloves traded. In 992 AD, the ruler of Java sent ten *chin* of cloves as a tribute to the Emperor of China. This amount is smaller when compared to the clove shipments by Champa and Srivijaya to the Chinese Emperor, which reached more than 30 *chin* (Ptak, 1993). Such indicates that the primary market for cloves was not in Java but in Sumatra. Although the Javanese obtained cloves at the source, the commodity was redistributed to international trading ports in Sumatra or sold in the local market in small quantities.

Spices sought after in the global market have a characteristic spicy aroma and taste. These products are used as spices to add flavor to European cuisine. The people of South Asia were the main suppliers of spices from the East to the European market (Hall, 2019). The increasing demand for spices prompted a more extended voyage by the Indians in search of spices in the eastern world. Since the 7th century, Sriwijaya has been known as an international trading port that provides various spice commodities from the archipelago. In the late 10th and early 11th centuries, Rajaraja I of the Chola Kingdom had political ambitions to control trade in South Asia by expanding into areas from the Bengal Peninsula to Sumatra. In 1017 and 1025, King Rajendra Chola, the successor of Rajaraja I continued his political policy by attacking Srivijaya. The attack weakened Srivijaya's dominance over the Malay Peninsula and the Sunda Strait, thereby paving the way for countries in South Asia and mainland Southeast Asia to make voyages in search

of spices. Along with the arrival of foreigners, several types of spices appeared in textual data sources in Java in the 11th century. The Manañjung inscription found in Malang mentions the existence of a production source area, a collection point, as well as a market for trading spices and grains around Arjuna-Welirang Mountain. Pepper (*Piper nigrum*), bean, fennel (*Foeniculum vulgare*), *kasumū*, *jamuju*, *pañjlan*, noni fruit (*Morinda citrifolia*), and rice are important commodities of the area, which are collected in storage areas and distributed by road or river (Stutterheim, 1929). In the records of the Song Dynasty, several types of spicy-scented and flavored spices were sold in Java, namely, pepper, cardamom, ginger, and cubeb (Wheatley, 1959). In the 12th and 13th centuries, foreigners increasingly recognized eastern Java as a spice-gathering port. On his journey along the Silk Road, Marco Polo said that the spice commodities traded in eastern Java were pepper, nutmeg, spikenard, galangal, cubeb, cloves, and various spices for medicinal purposes. Many traders seeking these commodities brought considerable profits to the Javanese market (Komroff, 1953). On his way to visit areas in eastern Java, Hayam Wuruk, the greatest king of Majapahit, also brought supplies of various types of spices, including pepper (*Piper nigrum*), safflower (*Carthamus tinctorius*), cotton, coconut fruit, tamarind (*Tamarindus indica*), and sesame (*Sesamum indicum*) (Pigeaud, 1960). The Biluluk Inscription, which was inaugurated in 1391, also mentions the trade in pepper (*Piper nigrum*), Javanese chili (*Piper retrofractum*), cubeb (*Piper cubeba*), and cardamom (*Amomum compactum*) in the interior of eastern Java (Oudheidkundige Dienst in Nederlandsch Indie [ODNI], 1919).

Spices grow in fertile areas in mountain valleys or hills. Pārthayajña Poem describes the natural conditions where various plants and spices grow in the cliff area. Not far from there are residential areas and forests that are used as agricultural land (Adiwimarta, 1993). They grow *jalureh*, *uris* bean, spinach (*Amarantus oleraceus*), pumpkin (*Lagenaria vulgaris*), cucumber, finger millet (Eleusine coracana), *jělujur*, foxtail millet (*Setaria italica*), black *ciplakan*, coriander (*Coriander*), garlic (*Allium sativum*), galangal (*Alpinia galanga*), onion (*Allium cepa*), gourd (*Trichosantes dioica*), mung beans, tamarind, mango, and forest banana. Furthermore, the harvest from these plants is carried by residents by land or river transportation. Coriander and ginger are not native to Java but spread throughout the Chinese and Indian regions. Likewise, coriander and cumin spread through the Indian people, while the Chinese people spread onions and garlic (Rahman, 2016).

Besides spices, the main commodity of eastern Java is rice. Mohr sees geographical conditions as the main factor underlying the development of agriculture in eastern Java. The flow of two large rivers that divide the eastern part of Java and the distribution of volcanoes greatly affects the air, climate, soil fertility, and the availability of water sources (Geertz, 2016). The mention of rice as a trading commodity in the sources of inscriptions, both in the interior and the coastal areas, shows the importance of the product for the entire region.

Integration Spice Route under the Singhasari Authority

At the end of the 13th century, Kertanegara, the greatest King of Singhasari, began to expand his kingdom into several areas across the Archipelago. In 1284, Kertanegara sent troops to subdue Bali. This effort aims to subdue Bali, and capture the king to be brought under control of Kertanegara. In 1280 and 1286, Kertanegara sent troops to Malay (eastern cost Sumatra). Rakryān Mahāmantri Dyah Adwayabrahma, Rakryān Sirikan Dyah Sugatabrahma, Samgat Payanan Hang Dipaṅkaradasa, as well as Rakryān Dēmung Pu Wira were ordered by Kertanegara to lead the voyage by bringing the statue of Amoghapāsa to be offered to Śrīmat Tribhūwanarāja Mauliwarmadewa from Dharmmaśraya (Poesponegoro & Notosusanto, 2010). In literary works, the event of the sending of Singhasari's army to Malay is referred to by the term “pamalayu”, which is often interpreted as an attempt at subjugation through military force. On the other hand, the Padang Roco Inscription actually announces the sending of the statue of Amoghapasa as a form of friendship from King of Kings Kertanegara to Śrīmat Mauliwarmadewa (Utomo, 2009). This brought happiness to the king and all the people of Dharmasraya. In addition to the regions of Malay and Bali, the areas outside Java that were successfully conquered by Kertanegara include Pahang, Gurun, Bakulapura, Sunda, Madura, and all of Java (Pigeaud, 1960). Kertanegara's success in building political power with the surrounding countries is confirmed in the Camundi Inscription, which was inaugurated in 1292 AD. The inscription carved on the back of the Camundi Statue flanked by Ganesa and Bhairawa Cakracakra confirms that Kertanegara had subdued other islands (Boechari, 1959).

From an economic point of view, Kertanegara's policy of controlling the islands around Java is also closely related to global trade. Countries that are included in Kertanegara's political policy are areas that have the potential as places of production of essential commodities

or international trading ports. Sunda and some areas of Sumatra produce pepper, while the main Malay products are camphor and frankincense (Wheatley, 1959). Malay is also known as an international trading port between India and China in the middle of the shipping lane. In the 13th century, Malay was a sovereign kingdom. The title of Mahārāja Śrīmat Tribhūwanarāja Mauliwarmadewa shows the power of the Malay King not only in the coastal areas but also in the interior areas (Sastri, 1940). Since the 11th century, Bali has been known as a producer of cardamom, pepper, turmeric, and onions. In the Ujung Inscription (1010 AD), it is mentioned that there was an intensive spice trade interaction between Bali and Java (Goris, 1954). On the other hand, the friendship between Java and the Malay will also benefit shipping and trade activities around the waters of Sumatra. In the 13th century, the waters around the Malay Peninsula were infested with pirates, creating a feeling of insecurity among traders and sailors. The frequent piracy cases in the region affected ships from West Asia to Java ports, causing them to divert through the west coast of Sumatra and the Sunda Strait. The presence of the Javanese fleet in the sea could stop the pirates around Palembang and the southern Malay Peninsula (Meilink-Roelofs, 2016).

Apart from getting pro and contra reactions from within the palace, Kertanegara's political policies also clashed with China. In 1289, Kublai Khan sent his emissary to Java to inform him of the Yuan Dynasty's power and warn Kertanegara to submit to the Emperor. The message from the Chinese Emperor angered Kertanegara; even the face of Kublai Khan's envoy was scratched black before being sent home (Liji, 2012). In Dynasty Records (*Yuan Shi*) chapter 210, of the lands in the four directions that Kublai Khan had conquered, only Java had to be attacked by armed forces (Groeneveldt, 2018). The dispute between Kertanegara and Kublai Khan caught the attention of the lands around Java. When Marco Polo sailed in the Java Sea in 1285, he noted that only one king ruled Java. The king does not submit to or pay tribute to other governments (Komroff, 1953). In *Daoyi Zhilue* (A summary of the populations of the Barbarian Islands), the main purpose of Kublai Khan sending envoys to Java was to collect taxes and tributes, establish government offices, regulate the legal system and social order, open army posts to deliver official documents, exercise legal oversight, and suppress regulation of salt and the use of copper coins (Wuryandari, 2018). For this reason, it was natural for Kertanegara to be very angry. Unfortunately, when Kublai Khan's army arrived in Java, Kertanegara died in an attack from Jayakatwang (Jayakatong). In the 13th century,

a new kingdom emerged, considered the successor of Singasari, and its rulers legitimized themselves as descendants of Ken Angrok (Rajasa).

The Growth of Trade Towns on the North Coast of East Java

Global trade is not only profitable from an economic point of view but has also encouraged cultural exchanges due to interactions between nations. In the 14th century, Majapahit expanded its territory to Maluku, accompanied by a request for tribute. This may also be related to the spice trade. The authorities need to ensure that the stock of spices from the Eastern Islands is sufficient for the needs of the Javanese markets (Meilink-Roelofs, 2016). Not only was Tuban the center of spice gathering for the Majapahit kingdom, but the areas along the northern coast of eastern Java also developed into trading ports. The spice trade not only prospered in the coastal areas but also encouraged the spread of Islam. A tombstone that was thought to be the tomb of the first Islamic propagator in Java turned out to be the weight of a trading ship that proved the existence of merchants from Muslim-majority countries (Guillot & Kalus, 2008).

Entering the 15th century, Majapahit's power was getting weaker after the death of King Hayam Wuruk and Chief Minister Gajah Mada. Power struggles and conflicts between families became the main factors that weakened Majapahit. On the other hand, global trade, which has multiplied, has become unstoppable. As a result, the coastal areas that became the gatherers of spices from the surrounding islands grew into trading cities with their respective leaders. Tuban and Gresik are the two largest cities on the north coast, where there are many Chinese, Indians, and Moors. Of the trading ports scattered on the north coast of eastern Java, only Tuban maintained rulers whom are of indigenous descendance (Cortesao, 1944). The city was surrounded by stone walls 15 feet high and 2 feet thick to protect against enemy attacks. Until the 16th century, Tuban became an important port for Majapahit, connecting the interior with the outside world. The spices traded in this area are pepper, tamarind, and Javanese chili.

Compared to Tuban, Gresik is more suitable as a trading port. The port is naturally formed in a strait that lies between the islands of Madura and Java. The Chinese founded Gresik in Chinese records on an empty beach. The ruler, who was from Canton, sent an envoy to China with a tribute to the emperor in 1411 (Groeneveldt, 2018). In Tome Pires's testimony, Gresik has two rulers, *Pate Cuşuf* or *Yusuf*, and *Pate Zeynal*. They fought each other

and would make peace when the harvest or a merchant ship docked at the port (Cortesao, 1944). Pate Cuşuf was the son of a merchant named Pate Adem, who came to Malacca, then married a Malay woman. Upon his return to Java, Pate Cuşuf continued his father's trade and settled in Gresik. Pate Cuşuf traded spices with his trading ships with the Moluccas and Banda. Furthermore, the cloves are sold through Gresik or distributed to Malacca. Cloves cost between nine and ten *cruzado* per bahar or twelve *cruzado* if rare. The price of cloves in Gresik can be lower, so it attracts the arrival of foreign traders.

Located east of Gresik, Surabaya was not initially known as a trading city. When the Europeans first voyaged to the archipelago, they called Surabaya a "small hamlet" (Rouffaer & Ijzerman, 1929). The European shipping map did not include Surabaya as a trading city on the north coast of Java. Its ruler was known as *Pate Bubat*, while the ruler of Majapahit (Guste Pate) gave him the title of *Juru Pagalacam*, meaning "excellent captain" (Cortesao, 1944). The rulers of the surrounding areas highly respect the rulers of Surabaya because they have 6000–7000 troops. They are people who like to rob in the ocean. Surabaya's main products are agricultural products imported from all regions. In 1599, the ruler of Surabaya appointed a chief merchant in Gresik and a deputy chief *syahbandar* in Jaratan. However, Surabaya has yet to develop as a trading city independently. Export-import activities are still carried out through the Gresik Port.

In the 17th century, Surabaya's territory expanded to include Sedayu, Pasuruan, and Gresik. Every year, six to seven junks loaded with spices are dispatched from Gresik to Banten and other ports. The Bandanese have brought nutmeg and mace to Java, but it is not uncommon for the Javanese to take them from Banda. In Banten, Javanese merchants also met the Chinese (Rouffaer & Ijzerman, 1929). In 1608 the price of nutmeg in Gresik increased from no more than 60 rials per *bahar* (in 1603) to 90 rials per *bahar*, then rose again to 130 rials per *bahar* in 1610 (Meilink-Roelofs, 2016). In 1610, three of the six junks departed from Gresik to Banda with rice and food, then returned with spices from the region. In 1617, Jan Pieterzoon Coen founded a lodge in Surabaya which was used to trade with the surrounding places. Since then, Surabaya has been known as a port city (von Faber, 1931).

The Decline of the Trading Ports on the North Coast of Java

At the end of the 16th century, Gresik and Tuban began to decline as trading ports. In December 1596, when Cornelis de Houtman's group was about to approach the Port of Tuban, they were blocked by a thick layer

of sediment. The ship was 10 miles from the shoreline so they had to use small boats to get to the mainland (Rouffaer & Ijzerman, 1929). In addition, the waters of Tuban are also full of pirates. Because of this insecurity, Tuban was abandoned by Chinese traders (Groeneveldt, 2018). The port of Gresik also experienced siltation in the early 17th century. Ships can no longer dock because of the thick mud that settles on the seabed. The Chinese even said that Gresik was in the interior, so merchant ships only passed by. Towards the end of the 17th century, the port of Gresik began to be abandoned by the Chinese. They headed to Iortan (Jaratan), which was seen as a better place.

Cornelis de Houtman's travel map does not yet show the Jaratan port near Gresik, so at the time of his voyage in the Java Sea Jaratan was not as busy as the Chinese say. Jaratan was recorded during the second voyage of Europeans to the archipelago. They know Jaratan as a very clean and friendly port visited by junks loaded with spices. The *syahbandar* used to trade spices with Europeans. Jaratan was another alternative for merchants when Gresik was experiencing a severe situation (Keuning, 1942). From the Chinese descriptions, it can be described that Jaratan is a bustling coastal area. Initially, trade was carried out on ships in the middle of the sea, but eventually, shops were set up on the coast as more and more traders came to Jaratan (Groeneveldt, 2018). From Jaratan, many junks departed for voyages to Maluku (Rouffaer & Ijzerman, 1929). In the early 17th century, forty to sixty junks departed from Gresik and Jaratan, searching for spices in the Maluku Islands (Schrieke, 1960).

Conclusion and Recommendation

The involvement of eastern Java in global trade was initially only as a transit point for trading ships looking for spice commodities. Eastern Java provides rice that can be used as supplies or resold in their area of origin. Along with the weakening of Sriwijaya due to the Chola attack, several Javanese spices with a spicy aroma and taste began to be sought in the global market. In the 13th century, Kertanegara began to implement his political policies to facilitate the flow of spice distribution. In the 14th century, the northern coastal area of eastern Java grew as a trading port which became a gathering place for spices from the Eastern Islands. Due to natural factors such as thickened silt on the seabed, Tuban and Gresik experienced a decline in the 16th century.

Conflict of Interest

The authors declare that there is no conflict of interest.

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References

- Adiwimarta, S. S. (1993). *Unsur-unsur ajaran dalam Kakawin Parthayajña* [Teaching elements in Parthayajña Poem] [Unpublished doctoral dissertation]. Universitas Indonesia. [in Indonesian]
- Amal, M. A. (2010). *Kepulauan rempah-rempah: Perjalanan sejarah Maluku Utara 1250–1950* [Spice island: Historical journey of North Moluccas 1250–1950]. Kepustakaan Populer Gramedia. [in Indonesian]
- Baas, P., & Veldkamp, J. F. (2014). Dutch pre-colonial botany and Rumphius's Ambonese herbal. *Allertonia*, 13(January), 9–19. <https://www.jstor.org/stable/24367591>
- Baru Inscription , 952 Saka (1030 AD), East Java. [in Old Javanese]
- Berg, C. C. (1931). Kidun Harṣa Wijaya [Lyrics of Harsa Wijaya]. *Bijdragen Tot de Taal-, Land- En Volkenkunde*, 88(1), 49–238. <https://doi.org/10.1163/22134379-90001451> [in Dutch]
- Boechari. (1959). An inscribed lingga from Rambianak [An inscribed phallus stone from Rambianak]. *Bulletin de l'École Française d'Extrême-Orient*, 49(2), 405–408. <https://doi.org/10.3406/befeo.1959.1491>
- Boechari. (2018). Ulah para pemungut pajak di dalam masyarakat Jawa kuno [The act of Tax Collectors in old Javanese society]. In Fakultas Ilmu Pengetahuan Budaya Universitas Indonesia & EFEO (Eds.), *Melacak sejarah kuno Indonesia lewat prasasti* [Tracing ancient Indonesian history through inscription] (pp. 291–306). Kepustakaan Populer Gramedia, FIB UI, EFEO. [in Indonesian]
- Bosch, F. D. K. (1924). De Sanskrit-inscriptie op den steen van Dinaja [The Sanskrit inscription of rock from Dinaja]. In Koninklijk Bataviaasch Genootschap van Kunsten en Wetenschappen (Ed.), *Oudheidkundige verslag 1923* [Archaeological report 1923] (pp. 29–35). Albrecht & Co. [in Dutch]
- Brandes, J. L. A. (1913). Oud Javaansche oorkonden negelaten transcripties [Old Javanese document left transcriptions]. In N. J. Krom (Ed.), *Verhandelingen van het Bataviaasch Genootschap van kunsten en wetenschappen deel LX* [Proceedings of Batavian Society of arts and sciences vol. LX]. Albrecht & Co. [in Dutch]
- Cane Inscription, 943 Saka (1021 AD), East Java. [in Old Javanese]
- Christie, J. W. (1998). Javanese markets and the Asian sea trade boom of the tenth to thirteenth centuries AD. *Journal of the Economic and Social History of the Orient*, 41(3), 344–381. <https://doi.org/10.1163/1568520981436264>

- Cortesao, A. (Ed.). (1944). *The suma oriental of Tome Pires and the book of Francisco Rodrigues*. The Hakluyt Society.
- Dhimañāśrama Inscription, n.d., East Java. [in Old Javanese]
- Dick, H. (2022). Water world to inundation river cities in Southeast Asia, from old to new millenium. In R. Padawangi, P. Rabe, & A. Perkasa (Eds.), *River cities in Asia: waterways in urban development and history* (pp. 37–56). Amsterdam University Press. <https://doi.org/10.2307/j.ctv31nzkv6.5>
- Fischer, C. (1938). Where did the sandalwood tree (*Santalum album L.*) evolve? *Journal of the Bombay Natural History*, 1(9), 458–466.
- Gandhakuti Inscription, 964 Saka (1042 AD), Sidoarjo, East Java. [in Old Javanese]
- Geertz, C. (2016). *Involusi pertanian: Proses perubahan ekologi di Indonesia* [Agricultural involution: The process of ecological change in Indonesia]. Komunitas Bambu. [in Indonesian]
- Goris, R. (1954). *Prasasti Bali I* [Bali inscription I]. Lembaga Bahasa dan Budaja Universitet Indonesia & NV. Masa Baru. [in Dutch]
- Graaf, H. J. de, & Pigeaud, T. G. T. (2019). *Kerajaan Islam pertama di Jawa: Tinjauan sejarah politik abad XV dan XVI* [First Islamic state in Java: Review of political history XV and XVI AD]. Penerbit Mata Bangsa. [in Indonesian]
- Groeneveldt, W. P. (2018). *Historical notes on Indonesia and Malaya compiled from Chinese source*. Komunitas Bambu.
- Guillot, G., & Kalus, L. (2008). *Inskripsi Islam tertua di Indonesia* (The oldest Islamic inscription in Indonesia). Kepustakaan Populer Gramedia. [in Indonesian]
- Hall, K. R. (1985). The opening of the Malay world to European trade in the sixteenth century. *Journal of the Malaysian Branch of the Royal Asiatic Society*, 58(2), 85–106. <https://www.jstor.org/stable/41493019>
- Hall, K. R. (2010). Indonesia's evolving international relationships in the ninth to early eleventh centuries: Evidence from contemporary shipwrecks and epigraphy. *Indonesia*, 90(October), 15–45. <https://www.jstor.org/stable/20798231>
- Hall, K. R. (2011). *A history of early Southeast Asia: Maritime trade and social development, 100–1500*. Rowman & Littlefield Publishers, Inc.
- Hall, K. R. (2019). *Maritime trade and state development in early Southeast Asia*. University of Hawaii Press.
- Kamalagyan Inscription, 959 Saka (1037 AD), Sidoarjo, East Java. [in Old Javanese]
- Kambang Putih Inscription, n.d., East Java. [in Old Javanese]
- Keuning, J. (1942). *De tweede schipvaart der Nederlanders naar Oost-Indie onder Jacob Cornelisz van Neck en Wybrant Warjick 1558–1600 III* [Second shipping of Dutch people in East India under Jacob Cornelisz van Neck and Wiybrant Warwijck 1500–1600 III]. Martinus Nijhoff. [in Dutch]
- Komroff, M. (1953). *The travels of Marco Polo (The Venetian)*. Garden City Publishing Co., Inc.
- Lapian, A. B. (2017). *Pelayaran dan perniagaan Nusantara abad ke-16 dan 17* [Indonesian shipping and trade in the 16th and 17th century]. Komunitas Bambu. [in Indonesian]
- Liji, L. (2012). *Dari relasi upeti ke mitra strategis: 2000 tahun perjalanan hubungan Tiongkok-Indonesia* [From tribute relations to strategic partners: 2000 years of journey China-Indonesia diplomacy]. Penerbit Buku Kompas. [in Indonesian]
- Meilink-Roelofs, M. A. P. (2016). *Persaingan Eropa dan Asia di Nusantara: Sejarah perniagaan 1500–1630* [Competition Europeans and Asian in Archipelago: Trade history 1500-1630]. Komunitas Bambu. [in Indonesian]
- Munandar, A. A. (2020). Majapahit and the contemporary kingdoms: Interactions and views. *Berkala Arkeologi*, 40(1), 1–22. <https://doi.org/10.30883/jba.v40i1.522>
- Muncang Inscription, 866 Saka (944 AD), Malang, East Java. [in Old Javanese]
- Nugraha, W. (2022). Maritime new century: The re-rise of the Spice Route and the re-establishment of the Straits of Malacca in regional trade in Indonesia. *1st International Conference on Social-Humanities in Maritime and Border Area, SHIMBA 2022*. <https://dx.doi.org/10.4108/eai.18-9-2022.2326036>
- Nugroho, A. P. (2015). Penelusuran beberapa fragmen Prasasti Pandan di rumah penduduk (Desa Pandankrajan, Kecamatan Kemlagi, Kabupaten Mojokerto) [Tracing some fragments of Pandan Inscription in the local residence (Pandankrajan Village, Kemlagi District, Mojokerto Regency)]. *Berkala Arkeologi*, 35(1), 73–90. <https://doi.org/10.30883/jba.v35i1.39> [in Indonesian]
- Nugroho, A. S. (2020). Aktivitas perekonomian di Delta Brantas pada abad ke-10 masehi [Economic activity in Brantas Delta in the early 10th century]. *Pattingalloang: Jurnal Pendidikan Dan Penelitian Kesejarahan*, 7(3), 273–283. <https://doi.org/10.26858/jp.v7i3.15900> [in Indonesian]
- Nugroho, A. S. (2021). *Jaringan perdagangan di Jawa bagian Timur pada masa kekuasaan Raja Airlangga, 1019–1047* [Trading network in eastern Java during the reign of King Airlangga, 1019–1047] [Unpublished undergraduate thesis]. Universitas Airlangga. [in Indonesian]
- Nugroho, A. S., & Nurfaizah, D. R. (2022). The international trading network and its islamization process in Java in the fifteenth century. *Arrival, Conflict, and Transformation in Maritime Southeast Asia (C. 1400–1800)*, 95–112.
- Oudheidkundige Dienst in Nederlandsch Indie. (1919). Oorkonden van Trawoelan [Inscription from Trawoelan]. In Koninklijk Bataviaasch Genootschap van Kunsten en Wetenschappen (Ed.), *Oudheidkundige Verslag 1918* [Archaeological report 1918] (pp. 175–177). Albrecht & Co. [in Dutch]
- Pigeaud, T. G. T. (1960). *Java in the 14th century: A study in cultural history*. I. Martinus Nijhoff.
- Poerbatjaraka. (1926). *Agastya in den Archipel* [Agastya in Archipel]. E. J. Brill. [in Dutch]
- Poesponegoro, M. D., & Notosusanto, N. (2010). *Sejarah nasional Indonesia II zaman kuno* [National history of Indonesia part II]. Balai Pustaka. [in Indonesian]
- Prasodjo, T. (2022). *The influence of water and power: Water management in the Brantas River basin from the tenth to the sixteenth century* [Unpublished doctoral dissertation]. University Leiden.
- Prihatmoko, H. (2011). *Pengelolaan transportasi air abad X sampai XV masehi di Jawa Timur berdasarkan sumber prasasti* [Water transportation management in the 10th until 15th century in East Java based on inscriptions]. [Unpublished undergraduate thesis]. Universitas Indonesia. [in Indonesian]
- Ptak, R. (1992). The northern route to the spice island: South China Sea-Sulu Zone-North Moluccas (14th to early 16th century). *Archipel*, 43, 27–56. <https://doi.org/10.3406/arch.1992.2804>
- Ptak, R. (1993). China and the trade in cloves, circa 960–1435. *Journal of the American Oriental Society*, 113(1), 1–13. <https://www.jstor.org/stable/604192>
- Rabani, L. O., Khusyairi, J. A., & Husain, S. B. (2022). Spices, colonialism, and the growth of new economic centers on the east coast of East Sulawesi, 1620s–1920s. *Mozaik Humaniora*, 22(2), 219–230. <https://doi.org/10.20473/mozaik.v22i2.32069>
- Rae, L., & Witzel, M. (2008). *The overseas Chinese of South-East Asia: History, culture, business*. Palgrave Macmillan.
- Rahardjo, S. (2011). *Peradaban Jawa: Dari Mataram kuno sampai Majapahit akhir* [Javanese civilization: From ancient Mataram to late Majapahit]. Komunitas Bambu. [in Indonesian]
- Rahman, F. (2016). *Jejak rasa Nusantara: Sejarah makanan Indonesia* [Traces of the taste in Archipelago: The history of Indonesian food]. Gramedia Pustaka Utama. [in Indonesian]

- Reid, A. (2014). *Asia Tenggara dalam kurun niaga jilid 1: Tanah di bawah angin* [Indonesia in commercial period part 1: Land below the wind]. Penerbit Obor. [in Indonesian]
- Rouffaer, G. P., & Ijzerman, J. W. (1929). *De eerste schipvaart der Nederlanders naar Oost-Indië onder Cornelis de Houtman, 1595–1557 II* [The first ship voyage of Dutch to East Indies under Cornelis de Houtman, 1595–1557 II]. Martinus Nijhoff. [in Dutch]
- Sastri, N. (1940). Śrī Vijaya. *Bulletin de l'École Française d'Extrême-Orient*, 40(2), 239–313. <https://doi.org/10.3406/befeo.1940.4796>
- Schrieke, B. J. O. (1957). *Indonesian sociological studies part two: Ruler and realm in Early Java*. W. van Hoeve, LTD.
- Schrieke, B. J. O. (1960). *Indonesian sociological studies I*. Sumur Bandung.
- Soetjipto, F. A. (1970). Beberapa tjatatan tentang pasar-pasar di Djawa Tengah (Abad 17–18) [Some notes about markets in Central Java (17–18 AD)]. *Buletin Fakultas Sastra Dan Kebudayaan*, 3. [in Indonesian]
- Stutterheim, W. F. (1929). Transcriptie van een defecte oorkonde op brozen platen uit het Malangsche [Transcription of a defective document on bronzen plates from Malang]. In Koninklijk Bataviaasch Genootschap van Kunsten en Wetenschappen (Ed.), *Oudheidkundige Verslag 1928* [Archaeological report 1928] (pp. 105–108). Albrecht & Co. [in Dutch]
- Stutterheim, W. F. (1935). Epigraphica [Epigraphic]. In *Tijdschrift Voor Indische Taal-, Land-, en Volkenkunde Deel LXXV* [Journal of Indian language, land, and ethnology vol. LXXV] (pp. 420–467). Albrecht & Co. [in Dutch]
- Tripati, S., & Raut, L. N. (2006). Monsoon wind and maritime trade: A case study of historical evidence from Orissa, India. *Current Science*, 90(6), 864–871. <https://www.jstor.org/stable/24089206>
- Utomo, B. B. (2009). Majapahit dalam lintas pelayaran dan perdagangan Nusantara [Majaphit in Archipelago shipping and trade route]. *Berkala Arkeologi*, 29(2), 1–14. <https://doi.org/10.30883/jba.v29i2.375> [in Indonesian]
- von Faber, G. H. (1931). *Oud Soerabaia: De geschiedenis van Indie's eerste koopstad van de oud-ste tijden tot de instelling van den gemeenteraad* [Old Soerabaia: The history of India's first commercial town from the earliest times until the institution of the municipal council]. Gemeente Soerabaia. [in Dutch]
- Wangania, J. (1981). *Jenis-jenis perahu di pantai utara Jawa-Madura* [Types of ships in north coast of Java-Madura]. Proyek Media Kebudayaan Direktorat Jenderal Kebudayaan Departemen Pendidikan dan Kebudayaan. [in Indonesian]
- Wheatley, P. (1959). Geographical notes on some commodities involved in Sung maritime trade. *Journal of the Malayan Branch of the Royal Asiatic Society*, 32(2), 3–139. <https://www.jstor.org/stable/41503160>
- Wolters, O. W. (2018). *Kebangkitan & kejayaan Sriwijaya abad III-VII* [Revival and glory of Sriwijaya III-VII AD]. Komunitas Bambu. [in Indonesian]
- Wuryandari, N. W. (2018). Memanfaatkan dokumen Cina klasik: Mengungkap informasi baru sejarah Jawa [Utilizing classical Chinese documents: Uncovering new information about Javanese history]. *Abad Jurnal Sejarah*, 2(2), 73–86. [in Indonesian]
- Zoetmulder, P. J. (1983). *Kalangwan: Sastra Jawa kuno selayang pandang* [Kalangwan: A survey of old Javanese literature]. Penerbit Djambatan. [in Indonesian]