

CONCEPTUALIZING MARITIM-BASED DECENTRALIZATION TOWARD BETTER PUBLIC SERVICE IN THE ARCHIPELAGIC REGION

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ABSTRACT. The purpose of this study is to demonstrate how decentralization affects public services differently in Sumenep Regency's mainland and island regions. Twenty-seven subdistricts make up the Sumenep Regency; nine of these are dispersed as islands, while eighteen are situated on Madura Island. The discrepancies in growth between mainland and island are caused by this geographic structure. The infrastructure, health, and education sectors are the main subjects of this study. According to this study, obstacles that impede the optimization of education in island locations include school references and far from the Education Office and the Ministry of Religion's oversight. In the meantime, there is disparity in the number of medical professionals and healthcare facilities in the industry. Building infrastructure that complements the features of the islands and does not harm the surrounding ecosystem requires the use of appropriate technologies. Since the natural environment has a significant influence on the characteristics of islands, the decentralization proposed cannot be compared to decentralization found on the mainland. This study recommends asymmetric decentralization for island regions as a result. Asymmetric decentralization based on maritime factors refers to decentralization that is applied to regions while accounting for the unique features of islands.

Keywords: Archipelagic; Sumenep Regency; Education; Health; Infrastructure; Decentralization; Maritime based

ABSTRAK. Penelitian ini bertujuan untuk menunjukkan adanya perbedaan implikasi desentralisasi dari sisi pelayanan publik terhadap wilayah daratan dan kepulauan di Kabupaten Sumenep. Kabupaten Sumenep terdiri dari dua puluh tujuh kecamatan, delapan belas kecamatan terletak di Pulau Madura dan sembilan kecamatan tersebar dalam bentuk pulau-pulau. Perbedaan bentuk geografi tersebut menimbulkan disparitas pembangunan di daerah daratan dan kepulauan. Penelitian ini fokus kepada sector pendidikan, kesehatan dan infrastruktur. Penelitian ini menemukan dari segi pendidikan referensi sekolah dan jauhnya dari pengawasan Dinas Pendidikan dan Kementerian Agama menjadi faktor yang menghambat optimalisasi pendidikan di daerah kepulauan. Sedangkan disektor kesehatan adanya ketimpangan dari segi jumlah tenaga medis dan fasilitas kesehatan. Teknologi tepat guna dibutuhkan dalam membangun infrastruktur yang sesuai dengan karakteristik kepulauan dan tidak merusak ekosistem sekitarnya. Dengan karakteristik kepulauan yang sangat dipengaruhi oleh kondisi alam, maka desentralisasi yang diberikan tidak dapat disamakan dengan desentralisasi seperti di daratan. Untuk itu riset ini menyarankan desentralisasi asimetris untuk daerah kepulauan. Desentralisasi asimetris berbasis maritim adalah desentralisasi yang diberikan kepada daerah dengan mempertimbangkan karakteristik kepulauan.

Kata kunci: Kepulauan; Kabupaten Sumenep; Pendidikan; Kesehatan; Infrastruktur; Desentralisasi; Berorientasi; maritim

INTRODUCTION

Indonesia is an archipelagic nation made up of both island-based and mainland regions. Nonetheless, the decentralization process was applied uniformly in both mainland and archipelagic regions. The purpose of this study is to provide evidence that the archipelagic region tends to lag the mainland region due to the uniform policies. This study makes the case that decentralization policies should be customized for the unique geographic characteristics of the region. Decentralization in the archipelagic area should therefore be unique from island decentralization and customized to meet their specific demands. The ability of each region to provide services can be impacted by factors such as situational analysis, geographic constraints, cultural diversity, and socioeconomic status. Consequently, discretion is required to modify service delivery in accordance with regional requirements and conditions (Efriandi et al., 2019).

Previous study show that decentralization is to provide and enhance public services to the community (Katharina & Jaweng, 2020, p. 2). Supposedly, decentralization should increase the responsiveness, effectiveness, and efficiency of public services in the regions (Hadiwijoyo & Anisa, 2021, p. 58; Sujarwoto, 2012). Newly proliferated regions, especially those with archipelagic territories and other unique characteristics, should be given the discretion to manage their affairs differently following very high regional variability, such as offering asymmetric decentralization (Brosio, 2014; Dwiyanto, 2015, p. 31). Moreover decentralization can bring decision-makers at the local level closer to the voters they must serve (Khaleghian, 2004). Many studies associate fiscal decentralization with public service performance (Chu & Yang, 2012; Gradstein, 2017; Kis-katos & Suharnoko, 2017; Sanogo, 2019; Wei et al., 2018), political decentralization with service performance (Besley & Coate, 2003; Busygina et al., 2018; Foucart & Wan, 2018; Lewis & Hendrawan, 2018). However, decentralization

was initially intended as an administrative reform to improve services and economic efficiency, and decentralization was widely regarded as a process to strengthen democracy (Mudalige, 2019).

Many argued that decentralization improves governance practices and the quality of public services using *allocative efficiency*: particularly public services that follow the needs of local communities and *productive efficiency*: i.e., by increasing local government accountability to the community, shortening bureaucracy, and better knowledge of local costs (Bank, 2001). Moreover there are at least three elements involved in providing public services, specifically service delivery organizations, service recipients, and customer satisfaction (Hardiyansyah, 2018, p. 16).

The disparity in inter-regions development is a common aspect in the economic activities of a region. This inequality is primarily caused by differences in the content of natural resources and demographic conditions in an area. The occurrence of inter-regions disparities has implications for the level of inter-regions community welfare ((Hadiwijoyo & Anisa, 2021, p. 139). According to Rustandi et al. (2011), the factors that cause inter-regions development disparities are related to physical and socio-economic variables of the region, which are influenced by several things, particularly (a) geography, (b) history, (c) politics, (d) government policies, (e) administration, (f) social culture and (g) economy (Rustandi et al., 2011). Unfortunately, decentralization based on archipelagic characteristics is still rarely discussed.

Indonesia as archipelagic country should consider its geographical barriers in implementing decentralization. Since archipelagic countries have a different character (distinct) from continental countries. According to Dommen (1980), defining an island as a piece of land surrounded by water is inaccurate. Naturally, islands have the characteristics of (a) earthquakes – many islands emerge from the sea as volcanoes, (b) tropical cyclones – typhoons are part of the environment that will affect the appearance of the island and how its inhabitants live there, (c) the bounty of nature, (d) island biology, (e) epidemics (Dommen, 1980). Unfortunately, small archipelagic countries such as countries in the Pacific Island Countries experience capacity constraints in many things such as public financial management, government procurement, to infrastructure maintenance (Dorman & Cain, 2014).

The main barriers of capacity in island nations like Indonesia are government service provision and economic development. Hard-to-reach places and various characteristics make the cost of services more expensive and complicate matters to achieve maximum benefits from services. The capacity of

national and local governments to support better services in the regions is costly (Dorman & Cain, 2014). The small number of populations in island countries such as in the Pacific correlates with the low capacity and performance of public financial management (Haque et al., 2015). Urbanization in archipelagic nations in the Pacific is increasing, challenging preparing services in urban areas. In facing these challenges, inter-regional cooperation is considered one of the collaborative efforts to solve service problems in archipelagic countries (Mohanty, 2011).

As for Indonesia the notion of archipelagic states started with the Djuanda Declaration in 1957. The Djuanda Declaration is the basis for the birth of the “*Wawasan Nusantara*” and the “homeland,” which is the territorial conception (sea) in 1966. *The Wawasan Nusantara* is the term of Indonesian people’s perspective on themselves and their environment, whether it be land, sea, or air as a single entity in an interconnected existence, and its application becomes a guideline for the application of religious, historical, social, cultural, legal, defense, security, economic, and political life as a unit in the archipelago (Munavvar, 1995, p. 2; Rothwell, 1990; Salampessy et al., 2018). Two years after the birth of the Djuanda Declaration, on February 18, 1960, a Government Decree in Lieu of Law (Perpu) was issued No. 4 of 1960 concerning Indonesian Waters (LN 1960 No. 22), which was later confirmed as Law no. 4/Perppu of 1960. The implication of this law is that, based on the 1939 TZMKO, the size of all of Indonesia is 2,027,087 km². However, with the enactment of Law No. 4/Perppu Year 1960, the total area of Indonesia became 5,193,250 km² or increase by 3,166,163 km². Suropati, Montratama, and Sulaiman discovered that the combined land and sea area increased by 145 percent over the previous area (Suropati et al., 2018).

The Law of The Sea’s implication is toward inward and outward Indonesia’s outlook. Indonesia ratified Unclos 1982 in 1985 through Law Number 17 of 1985 (Darusman et al., 2020). Outward, Indonesia then made many developments in terms of ocean affairs, especially maritime borders related to archipelagic sea lane passage (Puspitawati, 2011). Inward, Indonesia adopted decentralized coastal management with the passing of the fisheries law in 2004 and the coastal and small island management law in 2007 (Wever et al., 2012). This concept gives provinces and local governments more autonomy to manage coastal areas that were previously highly centralized. At least 140 million Indonesians depend on coastal areas for their lives. This has resulted in both the coast and the sea in Indonesia experiencing environmental damage or overexploitation

(Prihatiningtyas, 2019) the boundaries and rights of whose territory shall be established by law.” The consequence of archipelago country is the wideness of the ocean. Also it supported by empirical fact that shows the 70% of the Indonesian region is in the sea. So, management of the sea becomes an important strategic issue to be discussed, because good management of the sea (especially coastal areas. Meanwhile, the law on maritime affairs was only born in 2014 through Law No. 32 of 2014 on Indonesia Ocean's Act.

There is no concept or special treatment for marine areas and islands after the ratification of the Law of the Sea. The law governing integrated ocean management was only born in 2014, namely Law number 32 of 2014 concerning the Indonesia Ocean Act, or 32 years after Indonesia was recognized as an archipelagic state. Although there is a law on regional autonomy starting from Law 22 of 1999, this law does not specifically talk about the maritime affairs but rather on decentralized coastal management. Due to the absence of a specific law on the management of coastal and small islands, Law 27 of 2007 was born, which specifically divides authority between the central, provinces, and districts. Chronologically, Indonesia's attention to maritime affairs came later, after the emergence of various conflicts in the region due to overfishing and environmental degradation in the sea. This can be evidence that after obtaining recognition from other countries and the United Nations regarding Indonesian sovereignty in the sea, the Indonesian government used Unclos 1982 more as a territorial basis or outward-looking. Meanwhile, internal maritime affairs gain more attention in 2007 and the formal law on marine affairs that was cross-sectoral and cross-regional was only born in 2014.

In law number 32 of 2014 concerning marine affairs, the definition of sea, marine, island, archipelago, archipelagic state, marine resources, marine management, management of marine space, protection of the marine environment, marine pollution, central government, local government, and does not speak specifically concerning archipelagic areas, both provinces and archipelagic districts/cities¹. The advocacy for several provinces that claim to have a large number of islands began in 2005 with the Ambon Declaration (Amtu, 2014, p. 9). At that time, there were seven provinces that consolidated to be recognized as archipelagic provinces, namely Maluku, North Maluku, East Nusa Tenggara, West Nusa Tenggara, North Sulawesi, Bangka Belitung, and Papua. The activism of these seven provinces is to get attention from the central in determining the budget of the general allocation fund (DAU) and the

specific allocation fund (DAK). So, the archipelagic waters surrounding their islands can be measured as part of their area and included in determining general and specific block grants. But the struggle has waxed and waned.

There is no sufficient law acknowledging the archipelagic region's characteristics. Natural resources, as regional potential, should be managed and utilized to maximize people's welfare. The principle of the unity of land, sea, and air territories as stated in the Djuanda Declaration of 1957, Unclos 1982, and Law number 6 of 1999 should be *mutatis mutandis* adopted and accommodated in determining the authority of the regional government of the archipelagic province in the sea area (Leatemia, 2015, p. 39). Efforts to propose a draft archipelagic law began in 2014 during the presidency of Susilo Bambang Yudhoyono. Then the draft that was initiated during the Susilo Bambang Yudhoyono period was continued by the Regional Representative Council (DPD), which was submitted in 2017 (D. P. D. R. Indonesia, 2017). In 2019, this draft law was entered into the national legislation process, but so far it has not been approved due to a refusal from the executive. The executive considers that Law 23 of 2014 has adequately accommodated the needs of the archipelagic province² and rejected the draft.

Based on the Bill on Archipelagic Regions proposed by the DPD in 2017, there are 8 provinces which are included in the characteristics of archipelagic regions and 86 districts/cities in 15 provinces which can be categorized as archipelagic regions (D. P. D. R. Indonesia, 2017). Sumenep Regency is the only district on the island of Java which is included in the 86 island regions. Sumenep Regency consists of 27 sub-districts, 4 sub-districts and 330 villages. In 2021 the population in Sumenep Regency is 1,134,810 people. Of the 27 sub-districts in Sumenep Regency, 18 sub-districts are located on Madura Island, while 9 sub-districts are in the archipelago to the east of Madura Island. The sub-districts located in the archipelago are Arjasa on the Kangean Islands, Gayam on the Sapudi Islands, Giligenteng located on Giliraja and Giligenteng Islands, Kangayan on the Kangean Islands, Masalembu which is located on the Masalembu Islands, Nonggunong on the Sapudi Islands, Raas which consists of Jongkat and Goa Islands. Sapeken on the Kangean Islands, Talango on Poteran Island.

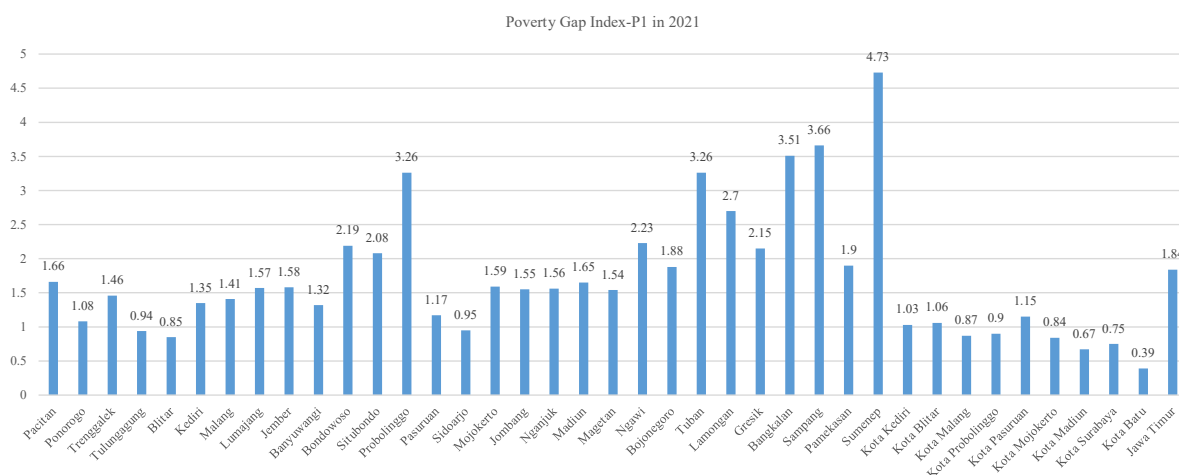
² Several informants from the Ministry of Home Affairs, Ministry of Marine Affairs and Fisheries, Ministry of Finance, and Ministry of National Development Planning (Bappenas) also expressed their rejection of the draft law. Those who feel that Law 23/2014 has recognized archipelagic provinces and the latest general and specific block grant calculation formulation, namely Law No. 1 of 2022, has included sea area, but this latest regulation does not yet have technical rules and was only issued at the beginning of the year, so it cannot be analyzed for implications for the latest general and specific grant calculations.

¹ Referring to Law Number 32 of 2014 concerning Indonesia Ocean Act, article 1 paragraph 1-13.

With regional characteristics consisting of land areas in the Madura Island region combined with island areas spread across the east of Madura Island. Sumenep Regency naturally has complexity in regional management. If we look at the 2021 Poverty Depth Index, compared to other districts/cities in East Java, Sumenep Regency has the highest poverty depth index (P1). As we can see in figure one, Sumenep poverty gap index is 4.73. The score shows a significant discrepancy between each poor person's spending and the poverty line. The average population expenditure is farther from the poverty line the higher the index.

Not only the Poverty Depth Index, based on the Poverty Severity Index in 2021, Sumenep Regency is ranked first as the area with the highest severity level in East Java as depicted in figure 2. Poverty severity index of Sumenep is 1.56. An overview of the distribution of spending among the poor is given by the index. The disparity in spending between the poor rises with an index value.

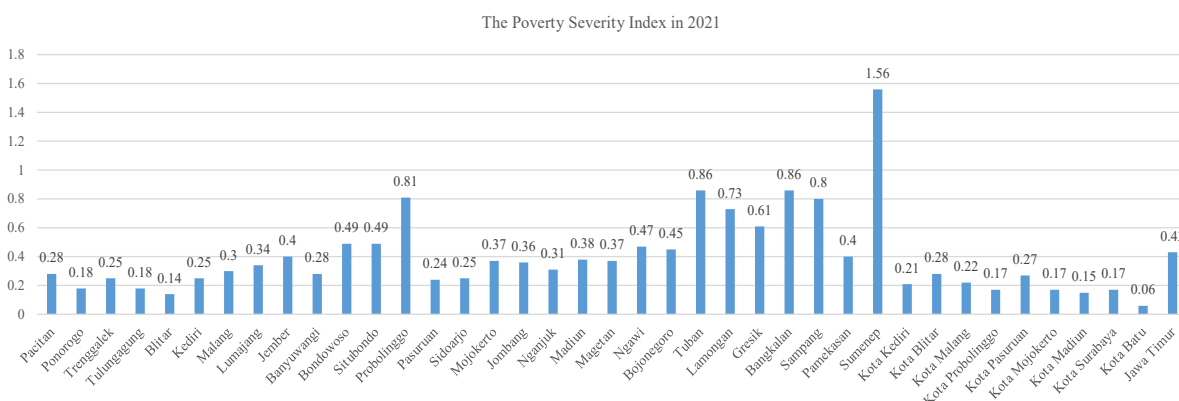
The region is required to provide the following basic services: health, education, and basic infrastructure. Services in the education, health, basic infrastructure are the main subject of this study. Given that the central government has long prioritized education in frontier, remote, and outer regions. Education in the 3T (tertinggal, terdepan, terluar) area has more complicated problems both in terms of students, teachers and learning resources (Rahmadi, 2020). Geographical conditions have a significant impact on the development of a region, in addition to the level of autonomy or degree of regional decentralization to determine the direction of its own development (Mitton, 2016). This is in line with Gennaioli et al (2013) who stated that human resources (level of education), good geographical conditions (lower average temperature, proximity to the sea) and abundant natural resources are related to higher per capita income (Gennaioli et al., 2013). This essay examines public service in the archipelagic region with a focus on infrastructure,



Source: East Java in Figures 2023¹

Figure 1 Poverty Gap Index in East Java in 2021

¹ Process from East Java Central Bureau of Statistic 2023. Link: <https://jatim.bps.go.id/subject/23/kemiskinan-dan-ketimpangan.html#subjekViewTab5>. Retrived Thursday, 4 May 2023



Source: East Java in Figures 2023¹

Figure 2 The Poverty Severity Index in East Java in 2021

¹ Process from East Java Central Bureau of Statistic 2023. Link: <https://jatim.bps.go.id/site/resultTab>. Retrived Thursday, 4 May 2023.

health, and education. This paper makes the case that, to speed up development in the island's subdistricts, asymmetrical decentralization should be granted in terms of administrative and fiscal decentralization due to the complexity of managing the islands.

Decentralization in Indonesia has been extensively studied, but there is still a dearth of specialized research on the topic, particularly when it comes to public service in the archipelagic regions. For this purpose, this study is aimed to provide evidence that research on decentralization for island regions would be worthwhile.

METHODE

This study was carried out using qualitative methods. Semi-structured interviews were used as data collection methods. There are twenty informants in total. Seven individuals who represent local government. With detail as follow the secretary of infrastructure office, the head, and staff of health office. Two staff of statistics bureau, the secretary, the head of division and staff of education office. The staff and general practitioner who represent the subdistrict's health sector. Three subdistrict officers are present. Six residents and three provincial interviewees from Fisheries and Maritime Affairs Agency of East Java are involved in the process. As for secondary sources, the Ministry of Education and Culture's data from the 2016–2023, Sumenep Dalam Angka Tahun 2016–2023 (Sumenep Regency, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023) from Bureau of Statistic is used in this study. In addition, this research also uses data from Public Health Office, Education Office, and Public Works and Highways Office of Sumenep Regency data year 2023. Subsequently, the triangulation technique is used to build a coherent synthesis of research results (Creswell, 2014). There are four forms of triangulation, particularly method, investigator, theory, and data source (Carter et al., 2014)1999. The forms of triangulation carried out in this research are the method, and data sources.

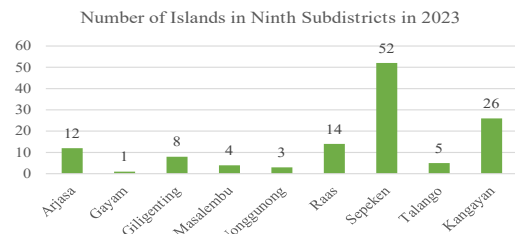
RESULT AND DISCUSSION

The Comparison of Public Service in the Islands and Mainland of Sumenep

Archipelagic according Winarwati from a geographical point of view, is the formation of islands grouping together to form a single unit. From a language point of view, an archipelago means a group of islands and a sea interspersed with many islands (Winarwati, 2016). The Sumenep Regency fits the description provided by Winarwati. There are twenty-seven subdistricts in the region. Nine subdistricts are dispersed throughout Madura Island's

east, northeast, and southeast, while the remaining eighteen subdistricts are located on the Madura Island.

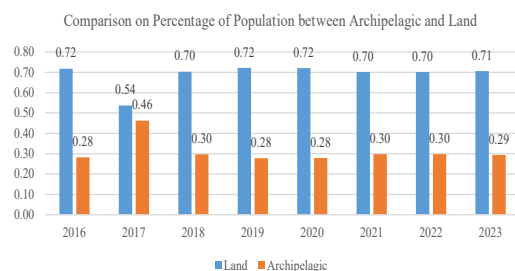
Arjasa, Gayam, Giligenting, Masalembu, Nonggunong, Raas, Sepeken, Talango, and Kangayan are the nine subdistricts. The largest subdistricts, called Sepeken, are made up of 52 groups of tiny islands. Gayam, which has just one island, is the smallest island subdistrict in the meantime. Chart 1 displays the distribution number of islands.



Source: Adapted from Sumenep Regency in Figures in 2023

Figure 3. Number of Islands in the Archipelagic Subdistrict in Sumenep

The total area of Sumenep is 2.098,47 km². There are four village districts and 330 villages. On Madura Island, there are 260 villages and 4 village districts, and 70 villages are dispersed throughout 9 archipelagic subdistricts (Sumenep Regency, 2023). Arjasa, with nineteen villages, is the island subdistrict with the highest number of villages. The population of Sumenep is 1.124.436 in 2020. Chart 2 illustrates that thirty percent of the population lives in the archipelagic subdistricts, with the remaining seventy percent residing on Madura's main island. This indicates that the islands' subdistricts could make up 30% of Sumenep's overall development achievements. Due to their archipelagic form, the island subdistricts are more complex.



Source: Adapted from Sumenep Regency in Figures 2016–2023

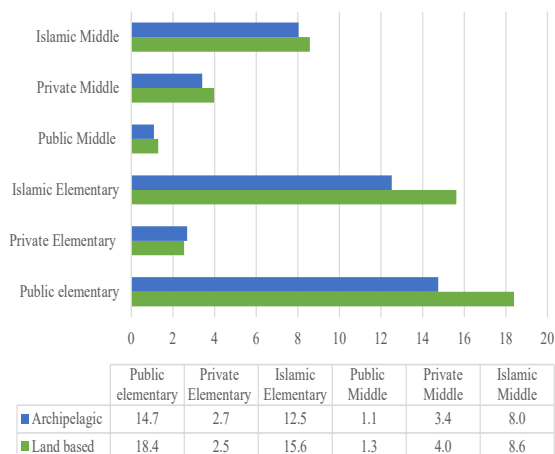
Figure 4. Percentage of population between archipelagic and non-archipelagic subdistrict

The Islands' Inadequate Supervision in Education

The education sectors of playgroup, kindergarten, elementary school, and junior school are included in the regency's purview. whereas the province has jurisdiction over the high school. Even though only 30% of Sumenep's population lives on islands, chart 3 demonstrates that there is not a significant difference in the number of

schools between archipelagic and non-archipelagic subdistricts. This data is interesting because it shows that there are significantly more junior religious schools than public and private schools. One of the informants attested to the fact that Sumenep residents would rather their kids attend religiously affiliated schools than public ones³.

Average Number of Elementary Education School in 2022



Source: Adapted from Sumenep Regency in Figures 2022

Figure 5 Average number of school in both area

What then raises a problem is that supervision of public schools and religious based schools is carried out by two different units. Public schools are directly under supervision of Sumenep Education Agency. Meanwhile religion-based schools are supervised by the Ministry of Religion. The education department is a special office that focuses on dealing with the quality of education. Meanwhile, under the ministry of religion, this function becomes a function under the head of the Islamic education section. Where the Ministry of Religion's duties are not only focused on education.

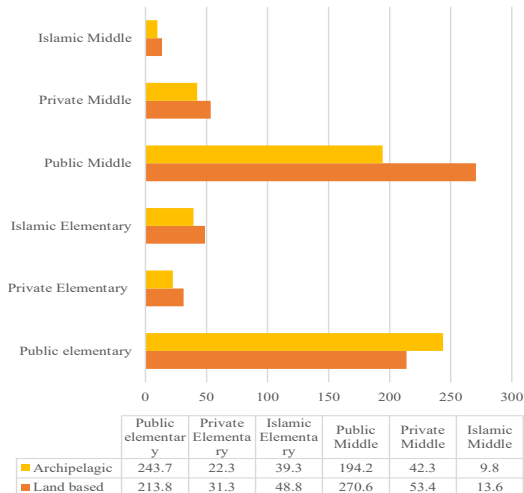
The distance between religious schools in the islands and the Ministry of Religion's oversight will have an impact on the standard of education and the quality of the teaching and learning staff. One of the informants acknowledged that it was easier to keep an eye on mainland schools compared with on island schools⁴.

These schools compete for students given that there are numerous private schools in the archipelago. There are many private schools with fewer than sixty pupils. This implies that schools are unable to receive support from the central government. When receiving aid, the central government mandates that a minimum of 60 students be enrolled. A master's degree is required as the minimal educational requirement to become a high school principal. Because of this, high schools on the islands struggle

to find principals, so they advise one of their teachers to get a master's degree because, in the absence of a qualified principal, the school may have to close.

Chart three indicates that public elementary school enrollment on the mainland is higher than that of the islands when comparing charts three and four. Chart 4, however, demonstrates that there are significantly more public elementary teachers in the archipelagic region. It demonstrates that the number of schools and teachers is out of balance. It should be noted however, the Sumenep Regency Central Statistics Agency provided the data used in this report. However, data from the Ministry of Culture and Education in dapo.kemendikbud.go.id reveals otherwise. According to data from the Ministry of Education and Culture, the proportion of teachers to the total number of schools on the mainland and the islands is directly correlated.

Average Number of Teacher in 2022



Source: Adapted from Sumenep Regency in Figures 2022

Figure 6. Average Number of Teacher between two regions

The islands' teacher stated that the central government does not provide enough information about employee formation. Most educators on the islands are non-tenure. Many honorary teachers work multiple jobs due to their low pay. Thus, they have less time to teach.

Additional issues include the high number of early marriages, the tendency of parents to draw their kids to work for them, the lack of desire to finish college, and the lower ability of island students to compete with mainland students for university spots.

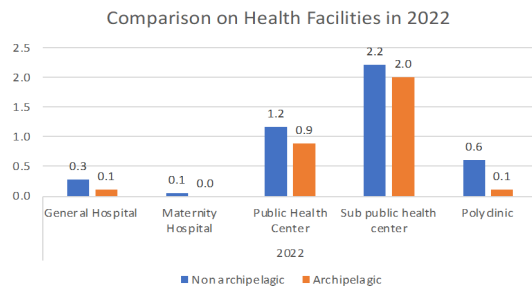
Inequality in the Islands' Health Facilities Compared to the Mainland

At the moment, Sumenep has five hospitals: three private, two public, and one public. Out of the five hospitals, General Hospital Abuya in Kangean is the only one on the island. In the meantime, the other mainland hospitals are the mother and child

³ Interview with the staff of Education Office of Sumenep Regency

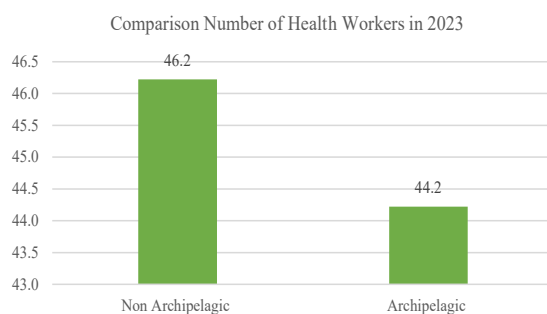
⁴ Interview with the staff of Education Office of Sumenep Regency

hospital of Esto Ebhu, the private hospital Sumekar, the Islamic hospital of Garam Kalianget, and the general hospital Dr. H. Moch. Anwar. The islands don't have any maternity hospitals. Therefore, to give birth in a special maternity hospital on Madura Island, expectant mothers who wish to do so must get ready for the trip well in advance.



Source: Adapted from Sumenep Regency in Figures 2022
Figure 7. Comparison on Health Facilities in 2022

The function of birth attendants, which is still commonly employed in island communities, is fascinating. We discovered that the health center on one of the islands we visited was not open twenty-four hours a day. Based on the observation and interview the community health center is open until noon, and many medical professionals are traveling back to Madura, the main island, from the island. Thus, they do not make the island their permanent home. Pregnant women prefer to see a birth attendant who is available round the clock for this reason, among others. Even though the health agency does not formally acknowledge the existence of birth attendants. This can increase the mother's risk of childbirth and postnatal care.



Source: Adapted from Sumenep Regency in Figures 2023
Figure 8. Average number of Health worker in the two regions

The sixth chart indicates that there are more health workers on the mainland than there are on the islands. This figure makes sense given that there are more medical facilities and a larger population on the mainland. In 2012, the Ministry of Health granted Sumenep a grant for a mobile health center to lessen disparities in access to healthcare. Because it can travel to smaller islands, this fast boat-shaped mobile health center is a great resource for the patients on the islands.

In terms of medical facilities, health centers lack several items, including nRDM O2 or non-rebreather masks to deliver extra oxygen, vein venders, and medications that are not listed in the national formulary (formas). Compared to mainland areas, island areas have different most common diseases. For example, a significant number of patients have been diagnosed with snake bites but the medicines to cure it are limited. Medical personnel do not reside on Giligenting Island itself for example. The health center pays for the boat to and from the island as well as the incentives. Healthcare professionals on the islands do not receive any additional funding.

Lifestyle plays a role in other illnesses. Fish consumption by most islanders leads to allergies and cholesterol problems. Additionally, there is a culture in the community that opposes accepting doctors who are referred. The residents who work outside of Madura, like in Jakarta, contribute additional cultural elements. They had resided in Jakarta during their pregnancy. They neglected to verify the pregnancy. They return to their original location on the island when they are ready to give birth. This puts them at a higher risk of becoming pregnant because their pregnancy is never monitored. Additionally, there are no sea ambulances on the islands. Residents must therefore rent a boat on their own, for between 600,000 and 800,000 rupiah, in case of an emergency. There is no dedicated emergency fund.

On the islands, people tend to live upon one another and continuing to think in conventional ways. For instance, they stopped treating themselves when they developed tuberculosis because they believed the illness to be caused by magic. As a result, the infectious disease spread swiftly throughout the island's villages.

Owing to the islands' dispersion, the health approach aims to enhance public health by means of promotion and prevention. In Sumenep Regency, community health centers are governed by three primary health policies. First, Puskesmas is adaptable enough to be creative, innovative, and efficient with money. The second is BPJS health-based services and universal health care. The community health center is the place to register for BPJS. Third, expedite the accreditation of hospitals to raise service standards.

In the meantime, there are three primary initiatives, particularly for island regions. First, there is a call center 112. Abuya Hospital serves as a facility for referrals. When a ship has an accident, Abuya Hospital is notified right away. The second is the scheduled Kesatria Airlangga Floating Hospital. Third, mobile health services which provided by the provinces. Regretfully, Sumenep Regency is not eligible to request support like archipelagic areas do, including sea ambulance assistance, because it is

not regarded as an archipelagic area by the central government. There are strict requirements that must be fulfilled to obtain it from the central government.

Insufficient Basic Infrastructure in the Archipelagic Regions

In 2023 there are 162 ports in Sumenep in form of dock, pier, jetty, and harbor depending on the scale of the islands. Out of 162 ports, 68 are on the mainland and 94 are dispersed throughout the nine subdistricts of the archipelago. There are 25 ports in Sapeken, a subdistrict comprising 52 islands. An essential component of connecting islands is ports. However, because of the weather, the port is typically closed because of the large waves. The people living in the island areas will be cut off from the outside world once they are unable to mobilize to the main island.

According to the secretary of infrastructure office of Sumenep transporting large equipment through the island regions is another challenge. It is difficult to transport heavy machinery, like trucks, excavators, cranes, bulldozers, and single drum rollers, to the islands since there are not enough transport ships. There are not enough public roads on the islands. The need to consider environmental factors is another barrier to road construction on the island. The island ecosystem cannot be harmed by the materials used.

Apart from the island's public roads, clean water distribution pipes are another crucial piece of infrastructure. Because of the island's generally warm climate, pipes often bend because they cannot handle the heat. Therefore, in encouraging the acceleration of infrastructure in island areas, what is needed is appropriate technology according to natural conditions and environmentally friendly technology. Thus, appropriate technology that considers natural conditions and environmentally friendly technology are needed to encourage the acceleration of infrastructure development in island areas.

Rustandi et al. (2011) state that the physical and socioeconomic characteristics of the region—which are influenced by a variety of factors, including geography, history, politics, government policies, administration, social culture, and economy—are the main causes of inter-regional development disparities. The data indicates that the results of public service, particularly in the archipelagic subdistricts, are influenced by the geographical distinctions between the island region and the mainland. To improve public service in the islands, the provincial and central governments should be aware of this geographic limitation and concentrate on formulating decentralization that support the geographical constraint. The current theories of

decentralization promote interregional competition and regional independence. However, island regions are exempt from this. Archipelagic regions need to be managed as a single entity or as an interconnected entity amongst islands. Therefore, the archipelagic regions should be considered a single unit when granting decentralization.

CONCLUSION

The results of the inquiry demonstrate the disparities between land-based and island-based communities regarding basic infrastructure, health care, and education. Decentralization in the archipelagic context should therefore be asymmetrical with respect to the land-based concept. The idea is to expedite the provision of high-quality services in island regions. This research proposes that regions that are archipelagic or have a larger sea area than their land area are granted maritime-based decentralization. Inequality and inefficiency result when an island is planned to be less dependent on the others. Therefore, for decentralization to occur on a maritime basis, interdependence between islands must be established. The development of one island will impact the growth of other islands due to interdependence. Since of the multiplier effect, it is anticipated that all the islands in an archipelagic region will eventually grow gradually.

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