

## RURALITY AND POPULARITY OF VILLAGE TOURISM RELATION ON SUMENEP VILLAGE TOURISM - INDONESIA

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**Citation:** Firstianto, V., Tyas, W.P., & Damayanti, M. (2024). RURALITY AND POPULARITY OF VILLAGE TOURISM RELATION ON SUMENEP VILLAGE TOURISM - INDONESIA. *Geojournal of Tourism and Geosites*, 55(3), 1018–1027. <https://doi.org/10.30892/gtg.55304-1276>

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**Abstract:** Rurality is a measurement to differentiate a rural from an urban; the lower the level of Rurality, the closer it is to urban characteristics, and vice versa. Related to the concept of authenticity in developing rural tourism, the level of Rurality is predicted to influence the popularity of the village in question. The higher the level of Rurality of a village, the more popular rural tourism will be in that village. Therefore, this research aims to determine the relationship between the level of Rurality and the popularity of rural tourism. This research uses a quantitative approach through three stages of analysis. The first is to analyze social media sentiments to rank the levels of tourism popularity. The next step is calculating the rurality levels using a scoring method. Finally, this study derived the emerging patterns between Rurality and the popularity of tourist villages by comparing the results of the first and second analyses. The findings reveal seven patterns, indicating that Rurality goes hand in hand with the popularity achieved where famous villages have a high level of Rurality and vice versa.

**Keywords:** Rurality, popularity, authenticity, social media, tourism, planning

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### INTRODUCTION

Rurality is one of the crucial indicators supporting strategies for rural development. Rurality is a characteristic representing the physical and socio-economic conditions of the countryside. The degree of Rurality also leads to the formal decision to declare an area rural. Rurality is additionally a factor in developing tourist villages (Izquierdo-Yusta et al., 2021; Rosalina et al., 2021; Serra Cantallops et al., 2015). As such, rurality and tourist villages have a symbiotic relationship. A certain degree of Rurality provides a rural identity, which generates an attraction that can attract tourists and make the villages popular (Aquilino et al., 2021). In contrast, tourist villages also play a role in developing rural areas. For example, a popular tourist village in England is in an area with a high level of Rurality, such as Yorkshire, Cornwall, or Dorset, Cambridgeshire, Lakeland, Cotswold, Hampshire, Lancashire and Oxfordshire. Research on the relationship between Rurality and the popularity of tourist villages, especially island-based tourism, still needs to be completed. Previous research generally focuses on the factors for developing rural tourism (Izquierdo-Yusta et al., 2021; Rosalina et al., 2021; Serra Cantallops et al., 2015). In general, high Rurality is a success factor for rural tourism. However, what is still unknown is whether a variation in Rurality – e.g. high vs. low Rurality – influences the extent of success as a tourist destination. In this vein, Shen et al. (2019) examine the relationship between Rurality and popularity based on the number of visitors to rural tourism in China. It reveals a paradox, as areas with low Rurality seem more popular than areas with high levels of Rurality. Even so, the calculation of Rurality relies only on the physical aspect, namely the location factor. There are other non-physical factors of Rurality, such as culture, politics and institutions (Chigbu, 2013; Shen et al., 2019), which are overlooked in the intersection of tourism and rurality research. Hence, this research aims to bridge this research gap.

Sumenep Regency, Madura Islands, is one of the regencies in Indonesia that is intensively developing tourism. It has different geographical conditions from most other regencies in East Java. Although the regency is small (around 1998 km<sup>2</sup>), it comprises 126 islands. It makes the regency rich in unique natural resources. Additionally, the glory of the Indonesian kingdoms in the past, both during the Hindu-Buddhist and Islamic kingdoms, has also made Sumenep Regency rich in cultural assets. The community's culture is strongly connected to Islamic culture and the heritage of Sumenep Palace. Keris crafts and pilgrimages to the tombs of scholars have been part of community culture. Keris Craft Centre in Aeng Tong-Tong Village, Saronggi District, for example, has become a tourism asset for Indonesia recognized by UNESCO since 2005

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(Ngaisah et al., 2021). Sumenep Regent Regulation Number 15 of 2018 designated 12 villages as tourist village destinations in Sumenep. As time progresses, the number of tourist village destinations in Sumenep grows to 25 villages. These villages have various main attractions, which can be divided into several typologies. These typologies include tourist villages based on (i) natural resources, (ii) cultural resources, (iii) a combination of culture and nature, (iv) creative economic activity, and (v) a combination of culture and creative economy (Table1).

This study aims to determine in which way and how much Rurality relates to the popularity of village tourism. The methodology to investigate this relation is by comparing the patterns in tourism villages with the spatial variations in Rurality. In determining the popularity of tourism, this study considers the combination of the number of visitors and social media sentiment. In addition, it offers a more comprehensive calculation of Rurality, referring to physical and non-physical aspects. This research can also provide an overview of Rurality in island-based tourism villages.

Table 1. Sumenep's Tourism Typology

Typology	Village	Main Attraction
Natural Resource	Bringsang, Lombang, Saronggi	Beach
	Bancamara, Banraas, Kombang, Saur Saebus, Masalema, Sapeken, Ketupat, Pajanangger	Marine Tourism
Cultural resources	Legung Timur	Sand Village
	Semaan	Art and Ritual Culture
	Kalianget Barat	Religious Tourism
Cultural and Natural Resources	Slopeng	Beach and Traditional Art
	Payudan Daleman	Cave and Religious Tourism
	Pandeman	Hill and Heritage Tourism
Creative Economies Activity	Jungkat	Processed Sea Cucumbers and Crabs
	Brakas	Pearl Leather Craft
	Poteran	Bead Belt Craft
Creative economic activities and cultural resource	Aeng Tong Tong	Keris Craft
	Karduluk	Wood Carving Craft
	Kalianget Timur	Old Town and Salt Processing Tourism

## VILLAGE TOURISM AND RURALITY

### 1. Authenticity in Rural Tourism

The concept of authenticity in rural tourism takes centre stage. Frisvoll (2013) delves into the significance of “Authenticity Rural Tourism,” emphasizing the efforts to comprehend and actualize tourist experiences that align with rural areas’ true essence and values. Tourism management can ensure the genuine and meaningful exploration of the countryside by dissecting authenticity elements such as local community life, culture, and traditions. These factors contribute to a better understanding of how rural tourism can be developed and sustained while preserving the authentic charm of the rural environment. In a study conducted by Zheng et al. (2023), authenticity is characterized as a pivotal factor influencing tourists’ perceptions and, subsequently, contributing to the sustainable development of rural tourism. Authenticity, in this context, encompasses the genuine representation of local culture, traditions, and natural landscapes, creating a unique and authentic experience for tourists. Furthermore, according to Jyotsna and Maurya (2019), authenticity in rural tourism is the genuine representation and immersion in the cultural and natural elements of village life. This involves visitors experiencing rural communities’ authentic and unfiltered aspects, including their traditions, customs, and daily activities. In this case, aligning tourist expectations with actual encounters in rural settings is essential to foster authentic and meaningful engagement with the local environment.

### 2. Rural Tourism Development

The tourism sector is gradually shifting. While its original form was mass tourism, it has become much more customizable and alternative. This transition is crucial for rural tourism, which has become one of the most popular forms in many countries. According to Lane (1994), rural tourism is concerned with tourism activities in rural areas. Furthermore, Oppermann (1996) defines *rural tourism* as a tourist activity in a non-urban area with its activities in agriculture, when image satisfaction relates to rural tourism destination loyalty (Campón-Cerro et al., 2017). Greffe (1994) then defines rural tourism in two ways, namely supply and demand. Based on the demand side, it focuses on the activities of tourists looking for experiences outside the metropolitan area. Meanwhile, from the supply side, it means living with the village community. Even so, the fact is that the formation of tourist villages is not always in the countryside. Several studies show that tourism in urban areas has functions, such as in rural areas or small cities. In addition, this definition cannot be interpreted in general terms and, for example, related to the activities and attractions offered. Yagüe Perales (2002) divides tourist villages into two things: traditional, which emphasizes agriculture, and modern, where visitors expect something better, such as architecture, environment and natural uniqueness. Maestro et al. (2007) continued that this tourist village emerged as a particular interest of tourists who want to learn about rural life and return to nature. In the last few decades, rural tourism has also evolved. One of these changes was the formation of a tourism village. Although they seem similar, several things distinguish the two forms of tourism. First, rural tourism emphasizes all forms of tourism activities that occur in rural areas. However, Tourism Village then made the attractions offered specific. Tourism villages are a form of rural tourism that offers rural life. In tourism villages, local communities play an integral role, providing both tangible and intangible experiences that highlight the uniqueness of the village experiences, emphasizing social interactions and catering to tourists seeking authentic rural lifestyles

(Ezeuduji, 2017; Bardone and Kaaristo, 2014; Kastenholz et al., 2012; Nogueira and Pinho, 2015). Moreover, tourism villages are recognized for their role in stimulating economic growth in rural areas (Snieska et al., 2014; Su et al., 2019).

### 3. Rurality

Rurality is a characteristic of an area or village. According to Shen et al. (2019), Rurality is a term used by the community to summarize the characteristics of a rural area. Li and Zhang (2015) define Rurality as a trait reflecting the level of development of a rural area, exposing the internal characteristics of a rural area so that it can create differences between rural and urban areas. Although, this definition seems easy to express, the concept of Rurality is still a matter of debate among researchers. Many researchers agree that Rurality is complex (Aquilino et al., 2021; Chigbu, 2013; Pandey, 2003; Rousseau, 1995). The concept of Rurality is more flexible and is used in various ways, giving rise to different perspectives from various disciplines. From a geographical perspective, for example, Rurality is often associated with location aspects, generally represented in several ways, namely distance to urban centres, area and population density (Shen et al., 2019; Mao et al., 2015). It is different from a sociological perspective, where Rurality is often associated with social aspects of rural community life, such as education, local community livelihood activities and the uniqueness of activities that have become a hereditary tradition (Chigbu, 2013).

In its development, indicators and analyses related to Rurality distinct three types of Rurality, namely:

#### a. Location-Based Rurality

Location-based Rurality is the measurement of Rurality that emphasizes geographical and demographic aspects. Researchers quite popularly used this measurement method in defining rural areas in the early 1950s – 2000s. Even so, until now, it is still widely used in developed and developing countries. Furthermore, Dická et al. (2019) then divide Rurality into three aspects: demographics and type of work, remote areas and housing conditions. Meanwhile, according to Beynon et al., (2016), the level of Rurality is calculated based on population dynamics, migration and social dynamics. Meanwhile Peng et al., (2016) state that the rurality index consists of the ratio of arable land, employment in the primary sector, and agricultural production. It differs from Shen et al. (2019), which uses population, economy, social life and location.

#### b. Individual-Based Rurality

*Individual-based Rurality* is a measurement oriented based on activities and relationships between individuals. In the world of health, it is commonly used in individual-based Rurality. Because a disease attacks individuals directly, a more detailed analysis of the individual's habits is needed. In this case, location-based use did not describe the condition of rural community activities (Mao et al., 2015). In addition to health, individual-based Rurality is one tool used in sociological observations. In this case, it was grouping rural areas based on travelling activities and examining the inter-regional interrelationships. Furthermore, Mao et al. (2015) divides it into macro and micro aspects focusing on measuring individual-based Rurality. The macro aspect consists of demographics, socio-economic and accessibility, while the micro aspect consists of the ring trip from home and geo-referenced locations reported. Meanwhile, Stacciarini et al. (2018) argue that the level of Rurality is measured by integrating aspects of demographic, social and health characteristics concerning the location of the house, places of other activities and the possibility of visits that occur.

#### c. Superstructural-Based Rurality

Superstructural-based Rurality is a more detailed measurement of Rurality in describing rural areas. This superstructural measurement of Rurality focuses on the social conditions of the community. "Superstructural" is a term Karl Marx introduced to his social concept. Karl Marx divides his concept into two things, namely, base and superstructure. Base refers to material and production resources, while superstructure refers to other social aspects. Several indicators exist in the superstructural-based-Rurality, including culture, law, institutions, and rituals (Shen et al., 2019).

## METHODOLOGY

### 1. Data Collection

The data method in this study used both primary and secondary data collection. Primary data was directly gathered through structured observation to obtain rural conditions in tourist villages in Sumenep Regency. In addition, it also conducted a survey based on the number of posts on Instagram, Twitter, and Google Maps, as well as scrapping data on social media Twitter and GMAPs, taken in 2021-2022. At the same time, other supporting data used secondary data collection through documentary and literature studies in the form of institutional data. The population in this study are villages that have been registered as tourist villages. Both are based on Sumenep Regent Regulation Number 15 of 2018 concerning the Designation of Tourism Village Areas in Sumenep Regency and those determined based on the Decree of Inauguration of the Head of the Tourism Office with a total of 25 Villages. The sample in this study used purposive sampling with the criteria for a tourist village set before 2019. It was because the tourist village determined after that date was still in the pioneering stage. In addition, due to the Covid-19 pandemic, the number of visitors to the village is still tiny, and there is no visible pattern of visitors—the tourism villages in this study are 19 villages. There are Aeng Tong Tong, Legung Timur, Lombang, Pragaan, Rombasan, Slopeng, Semaan, Bancamara, Banraas, Kombang, Bringsang, Poteran, Brakas, Jungkat, Saur Saebus, Pandeman, Pajanangger, Kalianget Barat and Kalianget Timur.

### 2. Data Analysis Method

The analysis divides into three stages. The first one performs a ranking of the popularity of tourist villages, then calculates Rurality, and finally performs an analysis to determine the relationship between Rurality and the popularity of tourist villages (Figure 1). Determining the level of popularity of a tourist village consists of two stages. First, do sentiment

analysis using NVIVO on Twitter posts and Google Maps reviews, then rank based on the variable number of tourist visitors, the number of Twitter, Instagram and GoogleMaps posts, the maps rating and the tourism village awards. The higher the village's rank, the more popular the village. The calculation of Rurality is done using scoring analysis. The scoring method is a scoring method in the form of an ordinal scale to categorize data. The number of scales used in each rurality variable in this study divides into five scales that have a value of 1 – 5. The value of 1 is the lowest value, and 5 is the highest. Categorization of each variable is carried out based on field conditions. Table 2 is about the variables of Rurality

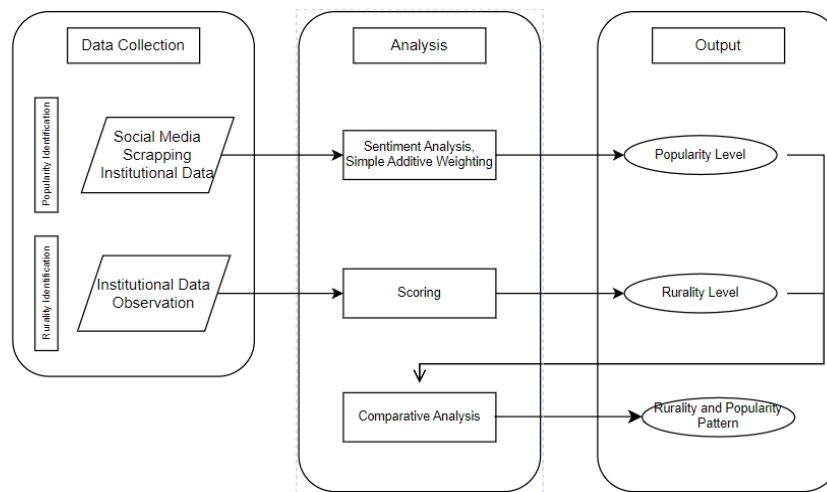


Figure 1. Methodology workflow

Last, comparative analysis is used to obtain the pattern of Rurality and popularity by comparing the level of popularity along with the level and condition of Rurality in each village.

Table 2. Rurality variable list

Variable	Variable Code	Variable Explanation
Accessibility (A)	A <sub>1</sub>	Distance from nearby City
	A <sub>2</sub>	Travel Time From Nearby City
	A <sub>3</sub>	Public Transport Availability
	A <sub>4</sub>	Road Condition
Demography (D)	D <sub>1</sub>	Number of Population
	D <sub>2</sub>	Population Density
Land Cover (L)	L <sub>1</sub>	Agricultural Land
	L <sub>2</sub>	Bareness Land
Social Economy (S)	S <sub>1</sub>	Level Of Education
	S <sub>2</sub>	Type of Work
Infrastructure (I)	I <sub>1</sub>	Wi-Fi on Village
	I <sub>2</sub>	Wi-Fi on Main Attraction
	I <sub>3</sub>	4G Signal on Village
	I <sub>4</sub>	4G Signal on Main Attraction
	I <sub>5</sub>	Lodging
	I <sub>6</sub>	Village Electricity Condition
	I <sub>7</sub>	Electrical Condition of Main Tourist Objects
	I <sub>8</sub>	Village Electrification Level
Culture I	C <sub>1</sub>	Total Heritage Building
	C <sub>2</sub>	Building Aesthetic Aspects
	C <sub>3</sub>	Building Condition
	C <sub>4</sub>	Ritual Tradition of Heritage Building
	C <sub>5</sub>	Number of Village Culture Tradition
	C <sub>6</sub>	Cultural Traditions Performance
	C <sub>7</sub>	Tradition as Tourism Branding
	C <sub>8</sub>	Number of Local Arts
	C <sub>9</sub>	Local Arts Performance
	C <sub>10</sub>	Local Arts as Tourism Branding

## FINDINGS

### 1. Tourist Pattern and Popularity of Sumenep Villages Tourism

Although the tourist villages in Sumenep have various typologies of tourism villages that tourists often visit, they are more likely to be villages with a typology of natural tourism. Tourist villages in both the islands and the mainland of Madura Island are more crowded in areas with natural tourism charms, such as the tourist villages of Lombang, Slopeng, Kombang and Bringsang, famous for beach tourism and the Gili Islands (Figure 2).



Figure 2. Popular rural tourism (Lombang, Slopeng, Bringsang): a. View of Lombang Beach; b. View of Slopeng Beach; c. Sembilan Beach

As in Asian tourism, which generally has a seasonal trend of visitors, tourism in Sumenep also has the characteristics of seasonal trends. Natural and institutional factors influence the seasonal trend of visitors in the Sumenep tourism village. Institutional factors based on the long holiday of the new academic year have become more dominant in tourist villages in Madura's mainland area. It can be seen in the Figure 3 the increase in the number of visitors in June-July and December-January, which coincides with school holidays in Indonesia. Meanwhile, villages in the archipelago depend on natural factors because they need to take the sea route. For example, in Kombang Village, there was a decrease in visitors during the rainy season, especially from March to September. On the contrary, in the dry season, it increased. In addition, it is also influenced by the condition of the waves, which are generally high at the change of seasons, namely between February and March and September and October in 2018-2019.

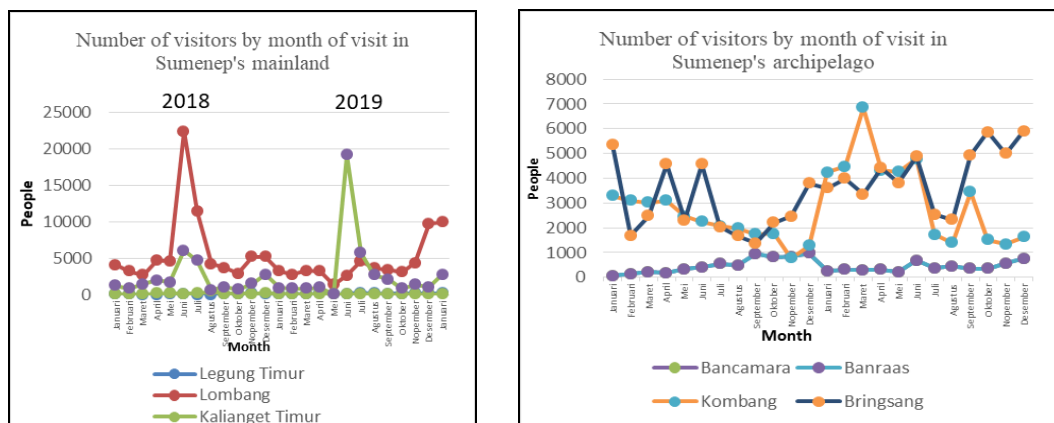


Figure 3. Number of visitors by month of visit diagram (Source: Tourism office, 2022)

The social media post (Table 3) shows that the most significant number of media visitors use to post their tourist attractions is Instagram, with a total of 147995 posts. Then followed by Google Maps with 5796 reviews and Twitter with 836 posts.

Table 3. Social media scrapping result (Source: Author analysis, 2022)

Villages	Twitter			Instagram	Gmaps			Number of Visitors (Last 4 Years)	Popular Value	Ranks
	Total Post	Positive	Negative	Total Post	Total Post	Positive	Negative			
Kombang	133	92%	8%	98289	170	92%	8%	71012	0.88	1
Bringsang	157	92%	8%	24687	2,303	92%	8%	96366	0.88	2
Lombang	94	92%	8%	10487	1280	91%	9%	135023	0.82	3
Banraas	129	86%	14%	3969	57	89%	11%	12829	0.79	4
Slopeng	100	97%	3%	3817	1136	89%	11%	67242	0.78	5
Bancamara	95	82%	18%	3858	238	92%	8%	12829	0.77	6
Kalianget Timur	56	97%	3%	224	268	91%	9%	3692	0.71	7
Aeng Tong Tong	23	100%	0%	562	34	100%	0%	2286	0.66	8
Legung Timur	31	100%	0%	1523	175	91%	9%	3872	0.63	9
Saur Saebus	13	100%	0%	56	29	92%	8%	27	0.46	10
Panjanangger	5	0%	0%	148	48	83%	17%	42	0.40	11
Semaan	0	0%	0%	5	8	100%	0%	508	0.36	12
Brakas	0	0%	0%	0	12	100%	0%	85	0.33	13
Kalianget Barat	0	0%	0%	0	24	100%	0%	460	0.33	14
Karduluk	0	0%	0%	323	0	0%	0%	290	0.28	15
Poteran	0	0%	0%	2	1	0%	0%	56	0.26	16
Pandeman	0	0%	0%	0	13	0%	0%	59	0.25	17
Rombasan	0	0%	0%	45	0	0%	0%	327	0.22	18
Jungkat	0	0%	0%	0	0	0%	0%	96	0.22	18
	836			147995	5796			407101		



Bringsang Village stands out with the highest number of posts and the most extensive social media activity, which aligns with visitor data from the Sumenep Tourism Office. It's worth noting that some villages have no posts due to low visitor numbers (less than 1000 over three years). The villages that excel in visitor numbers, social media presence, sentiment analysis, Google reviews, and tourism awards are Kombang, Bringsang, and Lombang. Additionally, the popularity of marine and coastal tourism highlights tourists' strong inclination towards nature experiences.

## 2. Rurality in Village Tourism

Based on the Rurality variable as stated in Table 2, this part analyses the villages' level Rurality. The characteristics of Sumenep Regency, Madura Island, as an archipelagic district make the location of developed tourist villages spread. There are at least ten tourist villages on the mainland and nine on the islands. It also affects the condition of Rurality in each tourist village. Regarding accessibility, villages in the archipelago far from the sub-district of Sumenep City are classified as difficult to reach. Apart from the long distance, access to public transportation to the village rarely operates weekly, only twice a week.

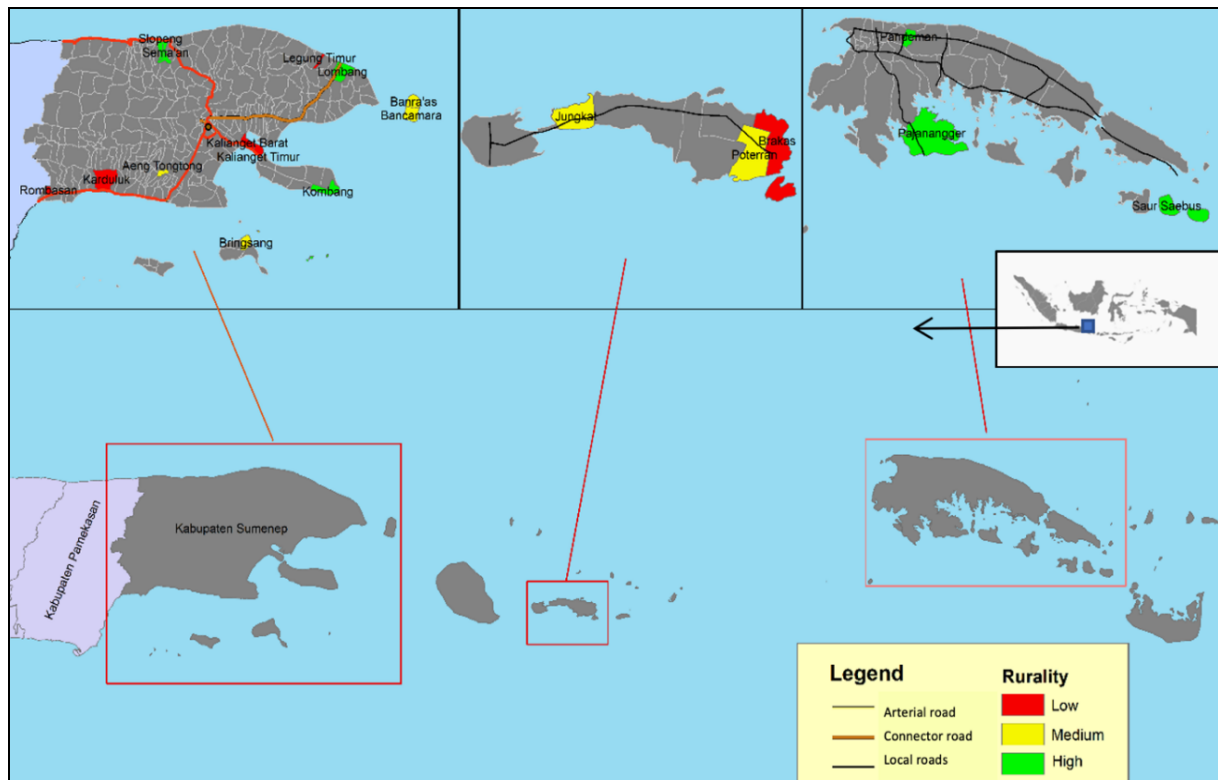


Figure 4. Rurality conditions (Source: Author analysis, 2022)

Based on the population conditions of each village, tourism also varies, with an average population of 4643 people. The highest population in the mainland area is located in Kalianget Timur Village, with 12139 people. On the other hand, the highest population in the archipelago is in Pajanannger Village, with a population of 8740. However, even though the villages on the island have a large population and are not much different from the villages on the mainland, the villages in the archipelago have a large village administration area. It facilitates regional administration because most of the island's population is only concentrated around the port and shoreline. On the socio-economic side, the level of participation in education up to the high school level needs to be improved. Only three villages have a participation rate of 20%, namely East Kalianget Village, West Kalianget Village and Brakas Village. Moreover, many villages still have an education participation rate of less than 5%. It is also in line with the percentage of primary sector jobs, where the average type of work in the primary sector is around 72%. Three villages reach 90%, namely Saur Saebus, Semaan and Sloping. Fisheries still dominate the archipelagic community as the main livelihood. Moreover, one of the largest fish markets in East Java is in Brakas Village, Raas Islands. There is a location where fish are collected from the surrounding islands. However, in East Kalianget Village, the primary sector's employment level has shifted. In East Kalianget Village, the percentage working in the primary sector is only 25%. The rest is the trade and service sector industries.

It also affects the cover of agricultural land. The average agricultural land cover in Sumenep Regency tourism villages is 69%. The most significant agricultural land area is located in villages on the mainland north of the Sumenep city sub-district, with an agricultural area of more than 90%, namely in the villages of Semaan and Slopeng. Although there is still much undeveloped land in the archipelago, most of the area is swamps and cannot be planted.

Basic infrastructures such as health and education are fulfilled evenly to all villages. Educational facilities are also available up to the upper secondary level from private and public schools. What distinguishes the infrastructure condition on the island from the mainland is the water, electricity, and infrastructure related to digitization. Water sources are difficult to find on the islands in the form of lowlands. Communities generally buy water in large quantities to the central

plain areas communally. In addition, much water used for bathing is mixed with sea salt water. None is the case with electrics. Most island electricity, especially in areas far from the mainland, such as Saur Saebus Village, Pajanangger Village and Pandeman Village, has yet to receive electricity sourced from PLN as a State-Owned Enterprise manages the electricity sector. Most people in the archipelago use privately owned generators only at night. This condition also affects the availability of internet signals. As a result, the internet signal in the archipelago is weak. The internet network is not reachable even in places like Saur Saebus Village. The internet network is only available at each village office.

In terms of culture, this research focuses on the condition of local cultural traditions, such as relics of historical buildings, ritual traditions of the local community and arts or even special foods that are still preserved in each village. Of the 19 existing villages, not all still preserve the existing culture. However, most villages still practice cultural traditions on the mainland. The villages include East Kalianget, West Kalianget, Semaan, Saur Saebus, Pandeman, Slopeng, Lombang, East Legung, Aeng Tong Tong and Karduluk. Art products, such as the typical Aeng Tong Tong kris, have even been registered with UNESCO as the village with the most existing Keris masters and Karduluk wood carving products sold to foreign countries. With these characteristics, the level of Rurality in tourist villages also varies, as shown in Table 4 and Figure 4. However, the majority are dominated by villages with a high level of Rurality, so they tend to characterize rural areas rather than urban village.

Table 4. Rurality value (Source: Author analysis, 2022)

	Accessibility	Demographic	land Cover	Socio Economy	Infrastructure	Culture	Rurality Value
Saur Saebus	4.00	4.00	5.00	4.50	4.50	2.00	4.00
Pandeman	4.00	4.00	4.00	4.00	4.13	1.60	3.62
Panjanangger	4.00	3.00	4.00	4.00	4.13	0.70	3.30
Bringsang	2.25	5.00	3.50	3.50	3.13	0.70	3.01
Banraas	2.50	3.00	4.00	4.00	3.63	0.70	2.97
Kombang	3.00	3.50	3.50	3.50	3.38	0.70	2.93
Semaan	1.75	4.00	3.00	2.50	2.50	3.80	2.93
Jungkat	4.00	2.50	3.00	3.50	3.75	0.70	2.91
Bancamara	2.50	2.50	4.00	4.00	3.50	0.70	2.87
Brakas	3.50	1.50	3.50	3.50	3.75	0.70	2.74
Slopeng	2.00	3.50	2.00	3.50	2.63	2.30	2.65
Karduluk	2.50	2.00	3.50	3.00	2.63	1.70	2.55
Lombang	1.50	5.00	2.50	2.50	1.50	2.30	2.55
Rombasan	1.50	4.50	2.50	3.50	2.50	0.70	2.53
Poteran	3.50	1.50	2.50	3.00	3.75	0.70	2.49
Aeng Tong Tong	1.00	3.50	3.50	3.00	1.38	2.50	2.48
Legung Timur	1.50	2.00	2.50	2.50	2.88	2.30	2.28
Kalianget Timur	1.00	1.00	1.00	1.00	3.50	3.20	1.78
Kalianget Barat	1.00	1.00	1.00	1.50	2.50	2.20	1.53

Table 4. Rurality in popularity classification (Source: Author analysis, 2022)

	Accessability	Demographic	land Cover	Socio Economy	Infrastructure	Culture	Rurality Value	Popularity
High Popularity with High Rurality								
Kombang <sup>P</sup>	3.00	3.50	5.00	4.50	3.50	0.70	3.37	0.88
Lombang <sup>D</sup>	1.50	5.00	5.00	4.50	2.00	2.30	3.38	0.82
Slopeng <sup>D</sup>	2.00	3.50	4.00	4.00	3.25	2.30	3.18	0.78
High Popularity with Medium Rurality								
Bringsang <sup>P</sup>	2.75	5.00	4.00	2.50	3.50	0.70	3.08	0.88
Banraas <sup>P</sup>	2.50	3.00	3.00	3.50	4.13	0.70	2.80	0.79
Bancamara <sup>P</sup>	2.50	2.50	4.00	2.50	3.88	0.70	2.68	0.77
Medium Popularity with High Rurality								
Saur Saebus <sup>P</sup>	4.00	4.00	1.00	4.50	4.00	2.00	3.25	0.46
Panjanangger <sup>P</sup>	4.00	3.00	4.00	3.50	4.00	0.70	3.20	0.40
Semaan <sup>D</sup>	1.75	4.00	5.00	4.00	3.00	3.80	3.59	0.36
Medium Popularity with Medium Rurality								
Aeng Tong Tong <sup>D</sup>	1.00	3.50	4.00	2.50	2.00	2.50	2.58	0.66
Medium Popularity with Low Rurality								
Kalianget Timur <sup>D</sup>	1.00	1.00	1.00	1.00	3.00	3.20	1.70	0.71
Legung Timur <sup>D</sup>	1.50	2.00	1.00	3.00	4.50	2.30	2.38	0.63
Low Popularity with Medium Rurality								
Poteran <sup>P</sup>	3.50	1.50	3.00	3.00	3.75	0.70	2.58	0.26
Pandeman <sup>P</sup>	4.00	4.00	2.00	3.00	4.25	1.60	3.14	0.25
Jungkat <sup>P</sup>	4.00	2.50	2.00	2.50	3.63	0.70	2.55	0.22
Low Popularity with Low Rurality								
Brakas <sup>P</sup>	3.50	1.50	2.00	2.50	3.88	0.70	2.35	0.33
Kalianget Barat <sup>D</sup>	1.00	1.00	4.00	2.00	3.00	2.20	2.20	0.33
Karduluk <sup>D</sup>	1.50	2.00	2.00	2.00	3.00	1.700	2.03	0.28
Rombasan <sup>D</sup>	1.50	4.50	2.00	2.00	3.00	0.70	2.28	0.22

### 3. The relation between Rurality and Popularity

Based on the relationship patterns, the villages are classified into seven categories, each of which is further explained hereunder in Table 5, namely:

#### 1. High Popularity with High Rurality

Three tourist villages fall into this group: Kombang Village in the islands area, Slopeng Village and Lombang Village on the mainland. There are several similar patterns in tourist villages belonging to this group. In terms of accessibility, it has a score of 1.50-3.00, indicating that access to the village has very easy to moderate affordability. Meanwhile, it is highly valued based on demographic, socio-economic variables and agricultural land cover. The village has a population density and population that tends to be low, with the majority of the population still working in the primary sector, so there is still a lot of agricultural land cover in the village area. The attractions in this category are natural tourism, like beaches and snorkelling.

#### 2. High Popularity with Low Rurality

In this group, there are 3 Tourism Villages. The three tourist villages on the island area around the mainland include Bringsang Village, Banraas Village and Bancamara Village. The accessibility score, including the medium category, is 2.5-2.75. In addition, this category has a relatively high infrastructure value with a value range of 3.5-4.13. It shows that the availability of infrastructure, especially digital infrastructure, still needs to improve. Besides, the value shown by the culture is also low. In this tourist village, no historical buildings or cultural traditions. Moreover, the villages in this category prioritize their natural tourism rather than cultural tourism in Banraas and Bancamara. Their oxygen tourism has the second-best oxygen content in the world and Bringsang with its beach tourism.

Figure 5 shows the villages classifications based on location and spatial aspects.

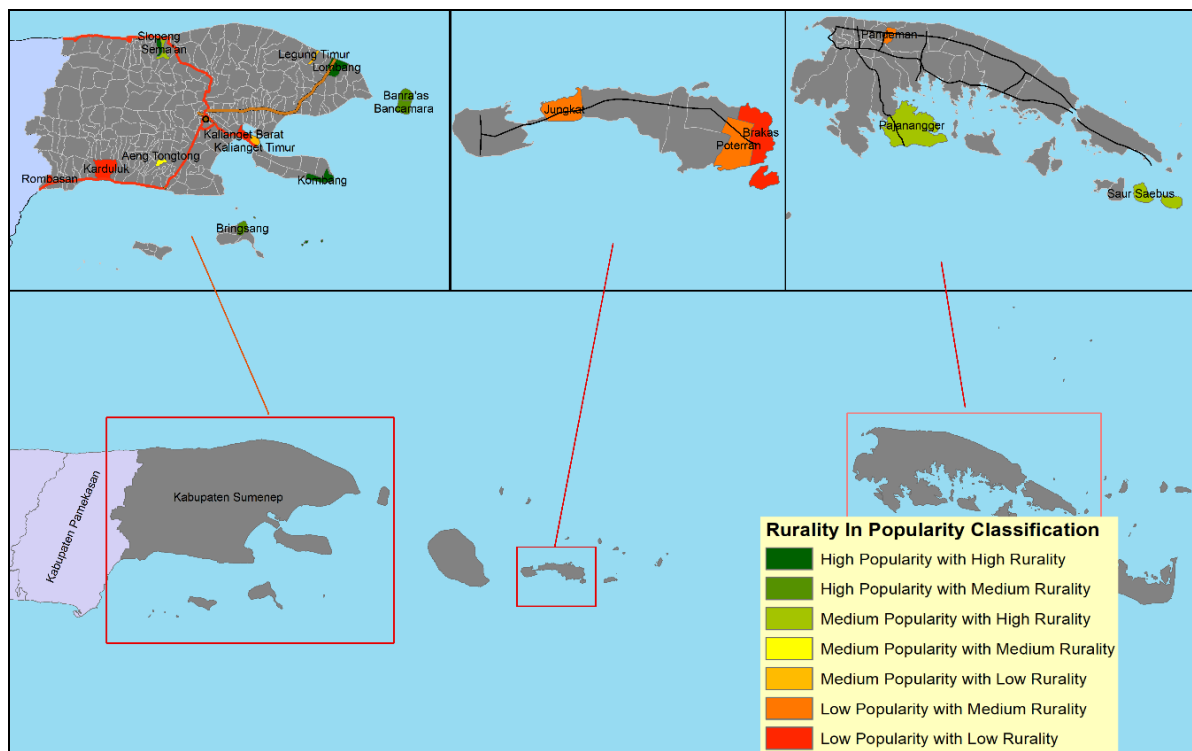


Figure 5. Rurality in popularity classification (Source: Author analysis, 2022)

#### 3. Medium Popularity with High Rurality

Members of this group consist of 3 Tourism Villages. Two of them are villages in the archipelago, namely the Saur Saebus and the village of Pajanangger. At the same time, the rest are on the mainland, in Semaan Villages. Villages in the islands are difficult-to-reach villages with an Accessibility value of 4. Meanwhile, villages on the mainland are in the medium affordability category. Like the first category, it has a high socio-economic value and land cover. The exception is Saur Saebus Village, which has a low agricultural land cover value. Saur Saebus is in the lowlands, and most of its area is in the form of swamps. In this medium category, villages with cultural traditions have started to appear, such as the village in Saur Saebus, which has a legacy that still exists today in the form of a lighthouse and a safe village complete with historical heritage buildings, traditions and traditional arts.

#### 4. Medium Popularity with Medium Rurality

This group only consists of one Tourism Village, namely Aeng Tong Tong. This village is easily accessible. It is very close to the Sumenep city district. It has a relatively complete infrastructure with high demographics and moderate socio-economic value. The village has a moderate population density and population numbers, as well as a level of education and employment in the primary sector. Like the previous characteristics in this category, it also has cultural traditions. Due to its tradition of *keris*, the village of Aeng Tong Tong has also received various awards both on the national and international levels. This typical Aeng Tong Tong *keris* is used as branding for Sumenep Regency, better known as Keris City.



#### 5. Medium Popularity with Low Rurality

This group consists of two Tourism Villages located on the mainland: East Kalianget Village in the east and East Legung Village in the north of the Sumenep City District. Villages with low Accessibility values characterize this category with low demographic, land cover and socio-economic values. Like the previous moderate popularity characteristics, this village also has a cultural tradition. Last Kalianget Village has historical buildings and traditional arts, and East Legung Village with its sand village culture.

#### 6. Low Popularity with Medium Rurality

This group consists of three villages located on the islands. The three villages include Poteran Village, Pandeman Village, and Pajanangger Village. They are difficult to reach with high infrastructure values. Indicates that the primary infrastructure for digitalization still needs to be evenly distributed. In addition, this village has a low cultural value as well. The attractions offered are also not in the form of traditions and culture but the products of the community's creative economy.

#### 7. Low Popularity with Low Rurality

This group consists of 4 villages with three villages located on the mainland, namely Kalianget Barat Village, Karduluk Village, Rombasan Village and Brakas Village in the archipelago. This category has some characteristics. There are low and high Accessibility values with moderate Land Cover, Socio Economy and Infrastructure values. In addition, it also has a cultural value that tends to be low.

### CONCLUSION

This research aims to identify the relationship pattern of rurality and tourism popularity in micro in Sumenep Regency as Research Location. Three variables of tourism popularity and five variables of Rurality consist of accessibility, demography, land cover, socio-economics, infrastructure, and culture. The results from the Sumenep district are institutional data, social media data, and village observations as far as the results are. The pattern of tourist visits still depends on seasonal patterns, both institutional and natural pattern. It could be the main challenge for island regions that experience both of these things, with natural factors significantly reducing the number of visits.

Sentiment from various social media shows neutral and positive comments that give good images of the village. High popularity is spread in the northern sub-district of Sumenep City and the islands of the islands, which are still adjacent to the main plain—the tendency of tourists to prefer tourist villages with their main attractions in the form of nature tourism. It proves that natural capital is important (Rizal et al., 2020); as for village tourism, thus combined with cultural experience in rural tourism, it seems that authenticity is still dominant.

However, the study has several limitations. First, the findings may have limited generalizability beyond Sumenep Regency due to the specificity of the research location and the unique characteristics of its tourism industry and rural areas. Extrapolating these findings to other regions without considering their distinct contexts may not be appropriate. Secondly, data limitations, such as biases in social media data and incomplete institutional data, may have impacted the depth of analysis. Thirdly, the study's cross-sectional nature and limited variables may not fully capture the dynamic and multidimensional aspects of rurality and tourism popularity. Nonetheless, addressing these limitations could provide a more comprehensive understanding of the relationship between rurality and tourism popularity in Sumenep Regency-Indonesia, potentially informing future research and tourism development strategies.

**Author Contributions:** Conceptualization, V.F and W.P.T; methodology, V.F.; software, V.F.; validation, V.F; formal analysis, V.F. ; investigation, V.F. ; data curation, W.P.T. and M.D.; writing - original draft preparation V.F. and W.P.T ; writing - review and editing, V.F., W.P.T and M.D visualization, V.F.; supervision, W.P.T and M.D. ; project administration, W.P.T and V.F. All authors have read and agreed to the published version of the manuscript.

**Funding:** Partly by R.V.O.

**Institutional Review Board Statement:** Not applicable.

**Informed Consent Statement:** Not applicable.

**Data Availability Statement:** The data presented in this study may be obtained on request from the corresponding author.

**Acknowledgements:** This contribution presents some results from research projects partly supported by the Netherlands Enterprise Agency (RVO) in the Research Assignment Cooperation Program (RACP). The authors acknowledge the anonymous reviewer for their thoughtful suggestions and comments.

**Conflicts of Interest:** The authors declare no conflict of interest.

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