Spatial Pattern and Determinant of Poverty Cases in SragenRegency, Java

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Abstract. According to the poverty pattern seen in Sragen Regency, Central Java, poor infrastructure development caused the impoverished population living in a remote place to relocate to regions with more hospitable geographic circumstances and easier access. This study surprisingly revealed a negative relationship between poverty and the dependence ratio in Sragen Regency. This particular situation resulted from the fact that youngsters in this community began working earlier than their peers, providing extra revenue for their families. Even if the rate of poverty has decreased, there is still a continuing cycle of poverty because of the poor quality of education that prevents people from being as productive as they may be. According to this study, in order to solve this problem and prevent low-income families from moving to urban areas, infrastructure development in low-income rural areas should put an emphasis on maximizing the potential to increase production value while also giving the community access to new revenue streams. As a result, their kids will benefit from better educational chances.

Keywords: Urban migration, low-quality education, poverty, inappropriate infrastructure creation, and a vicious cycle of poverty.

1. Introduction

Poverty is a side effect of development with increasingly broad dimensions and can no longer only be measured based on economic indicators. The multiplier effect caused by this condition has spread to the reduced ability of humans to live appropriately [12]. Initially, theories of economic development such as those proposed by Kuznets stood on the understanding that the mechanism of economic growth had a trickle-down nature on the assumption that the process could move all integral parts of its culprit and create conditions of full employment. However, this condition is rare [30]. The worst part is that economic development in developing countries never really involves the grassroots, resulting in severe economic disparities. Economic turnover occurs only in the owners of capital and a small part of its derivatives, while small communities are trapped in a vicious cycle of poverty [27]. In response, Meier and Stiglitz [18] stated that development goals should emphasize the achievement of development results and processes. More than economic development is

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needed to increase per capita income in the long run. More importantly, though, the state ensures that there is an unequal distribution of income and that the population of the poor does not grow. The reliance ratio reflects this standard modification, which requires the definition of poverty to at least take into account people's capacity for prosperity [19].

and disparity ratio [15] as an indicator that shows the strength of the community in bearing the burden mainly related to household expenses. Besides, the element of geography (territorial) also has an essential role in achieving the community's welfare [24]. Resources for the primary sector, accessibility, and infrastructure availability will all have an impact on the territorial component; generally speaking, locations with a strong primary sector content and adequate access have greater welfare levels than those with fewer resources and infrastructure[22] Hence, this study aims to look at how the poor people are concentrated in Skagen and to look dependency ratio, disparity ratio and territorial elements play a role in poverty in Sragen Regency, Java.

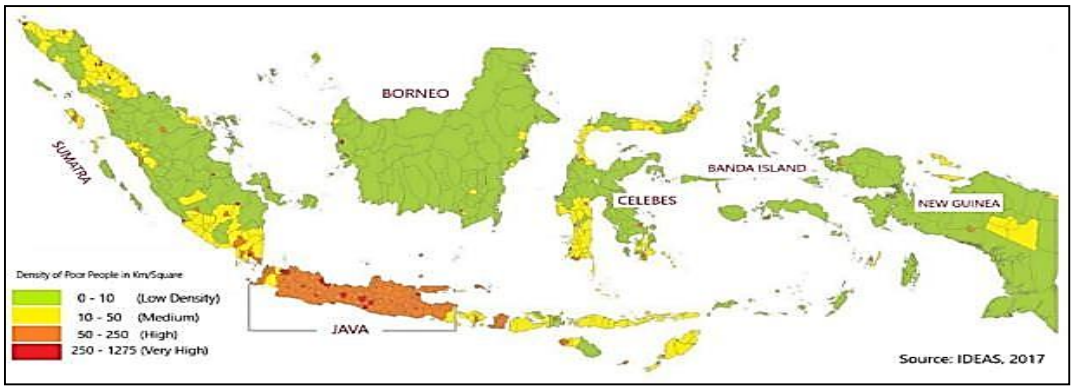

Fig. 1 Map of Indonesia Poverty Density

Although Indonesia has become a middle-class country with an average economic growth of 5% and a GDP worth more than USD 1000 trillion [9], poverty is still inherent in the dynamics of the country's development. Economic decentralization, which is considered a solution to the problem of disparity, is not successful. Priority areas or pockets of poverty are still scattered in metropolitan areas and areas that are far from economic activities forming incidences of urban poverty and rural poverty (Figure 1).

Geographically, Indonesia's poverty alleviation schemes are divided into two big agendas: alleviating incidents in Java and outside Java. Poverty patterns in Java have a double face that is quite interesting to note. On the one hand, cities in Java, such as Jakarta, Bandung, Semarang, and Surabaya, are areas with high economic growth rates; however, this region also has the highest poverty density level than others in Indonesia [16]. Areas with this characteristic are found almost evenly throughout the island [Figure 1]. Mainly in Central Java, this problem indicates the geographical poverty trap at the center of activity, or in other words, poverty in Java is concentrated in urban areas. Central Java is an area between the two poles of the large manufacturing industry agglomeration on the island of Java which is

currently transforming from agriculture to industry and services which are expected to form a new corridor of Indonesian manufacturing agglomeration [5] giving rise to a magnetic force which has an impact on the emergence of migration forces in this region. However, this acceleration may not respond equally between regions, where some regions are growing very fast, and some others need to strive to achieve positive economic growth. On a regional scale, 15 regions among 35 Central Java districts are below the poverty line. It includes the Sragen regency, which has sufficient character to represent poverty incidents that occur in Indonesia. On the one hand, Sragen noted a considerable increase in investment value from USD 200 million in funding 180 projects in the last five years [11]. On the other hand, Sragen is still ranked as the 4th most impoverished region in Central Java [29]. By exploring the phenomenon of poverty that occurred in Sragen, the study results can be considered a representation of the incidence of poverty in Indonesia, particularly in Java, due to the similarity in character of regencies in Java Island.

2. Literature Review

In the studies of economic development, the most relevant theory in explaining poverty is the turnpike theory. It explained that economic development will always have a negative impact due to the inability of a group of people to respond to structural changes and accelerated development programs, leading to unemployment and poverty [25]. In proving this theory's relevance, several studies have been carried out primarily to find out the theoretical reasons why negative externalities from economic growth always occurred. Azariadis [8] explained that the poverty trap resulting from the development program occurred due to subsistence consumption of the people; distorted international trade only in intermediate input commodities; polarized demographic transitions in certain areas. It results in disparity; massive use of technology in the industrial sector to replace human capital resulting in massive unemployment; weak bureaucratic coordination; ineffective subsidies; high dependency ratio; and monopolistic competition in the factor production market, as the complexity of poverty. Sen [26] has already attacked the traditional poverty approach model, which grounds its examination in the financial sector. Sen claims that the classical approach merely highlights a small portion of the massive issue of poverty. There is more to the issue of poverty than just income, consumption, or purchasing power parity; there is a wider aspect to its occurrence. Non-monetary measurements of poverty can show what is called poverty itself. Agree with that, Bourguignon and Chakravarty [12] clarified that the method for measuring poverty is comprehensive by determining poverty lines in each dimension based on incomeand education level indicators. Based on this method, a person is considered poor if he is below one of the prescribed poverty lines. Completing this view, Alkire and Foster [1] claimed that ordinal data with the ability to characterize the rank of household capability in meeting demands was necessary for detecting situations of poverty. Alkire and Jahan (2018) developed a multidimensional poverty index using these ideas, which is based on indices of health, education, and living conditions [2].

Based on the postulated spatial point of view, it can be interpreted that people who can make the most of the space resources will get economic benefits that can be used to improvewelfare. On the other hand, differences in elements, locations, and terrestrial ecosystems also play a role in creating prosperity for the people. Regions with abundant natural resources have many choices to determine welfare. In contrast, regions with limited resources would have

a long way to develop, and the people who live in these poor areas are prone to be trapped in poverty. In these conditions, the people who occupy this space are trapped in poverty. Bird [7] addressed this situation as a geographical trap of poverty the high poverty rate in an area caused by the isolation of physical, natural, social, political, or human resources. The geographical poverty trap arises in areas that naturally have low land potential (marginal) or can also occur in politically and economically isolated areas and are not integrated into transportation and communication networks so that the people in this space have many limitations to create prosperity.

Daimon first researched the geographical poverty in Indonesia in 2001. This study found that poverty traps in remote areas in Indonesia were due to a lack of government intervention. Using the econometric approach, Daimon confirmed that the relationship between the isolation of the region indicated by the lack of access has a long-term relationship with the incidence of poverty in Indonesia [9]. Besides, Asia's regional autonomy, including Indonesia, has created an indirect effect known as "infrastructural involution." Which focus on eliminates the isolation barrier, promoting migration (Xiang &Lindquist [13]. The increased accessibility provides an opportunity for a low skilled workerin an isolated area to be "bilocality migrant" (people who live in a rural area for several months in a year and spend the rest of it in the urban area) to other areas with good economic activities [31]. This labour mobility put a strain in many urban areas as the population grows, while rural areas also suffer from a lack of productive labour thatworsens their development status. Hence, the shifting in the paradigm of geographical poverty trap where infrastructure construction leads to the migration of poor low-skilled workers from rural to urban areas creates urban poverty.

3. Research Methods

3.1 Data

Sragen Regency village community-based data, as well as qualitative and quantitative methods, were used to conduct this study. For this study, new survey data were given by the National Team for The Acceleration of Poverty Reduction and Statistics Indonesia of 2015. Published in 2018, consisting of all poor households in every district within Sragen Regency. The survey was conducted on three groups: a poor community in rural, urban, and transition areas. Sragen Regency was chosen because it has poverty and geographic data distribution trends similar to conditions in Indonesia. Sragen Regency has the highest rate of infrastructure development in Java based on the data from the Indonesian Investment Coordinating Board [11] which leads to ease the migration for the people to find a better livelihood. The immediate consequence was an increased number of poor people in urban areas and a decreased rural population.

The qualitative data were summarized in the form of an informative and comprehensive exploration narrative. The quantitative data were presented in numerical matrices, tables, and figures related to the trend of an object, and all data obtained were analyzed exploratively - comparatively using statistical methods and spatial analysis in the modeling of Geographic Information Systems (GIS).

3.2 Geographic Information System

This study used two methods in data processing. First, the data were processed using a spatial approach with ArcGIS 9 tools and Geoda to obtain an overview of the distribution, density, and geographical vulnerability conditions in the analysis unit. Following Arif and Purnomo [5], When data were categorized in an ordinal manner using Jenks Natural Breaks Classification rules—a technique for classifying data intended to identify optimal value settings into distinct classes—spatial data grouping became more significant. The method used to do this was to maximize each class's deviation from the other group's approach while limiting its variance from the class average. Stated differently, the goal of this approach is to minimize variation within the classroom while optimizing it within the classes that are being created. The following formulas were employed in the computation:

$$SSD_{i\ldots j} = \sum_{k=i}^{j} A[k]^2 - \frac{\left(\sum_{k=i}^{j} A[k]\right)^2}{j-i+1}$$

where A is the sample analysis's number of observations, which has a value of 1 to N, and isin the range of values $1 \leq i < j < N$, while i ... j is the class average that is limited by i and j. The stages in this analysis were carried out in ArcGIS to simultaneously obtain a map of the distribution, the density of the poor, and the degree of geographical difficulty of each unit of analysis in Sragen Regency.

3.3 Ordinary Least Square (OLS)

In the second stage, the analysis was carried out to identify a statistical relationship between poverty and its influencing factors. Based on Sen [26], Azariadis [8], Bourguignon and Chakravarty [12] Alkire and Jahan [2] also Bird [23], the factors that are suspected to influence poverty, consist of three main dimensions, i) dependency, ii) disparity and iii) geographic vulnerability, drawn from a 2018 report by the Ministry of Finance, the National Team for the Acceleration of Poverty Reduction, and Statistics Indonesia. The independent instruments in the model are explained as follows:

Table 1 Dimensions and Indicators for Poverty Determination

Variable Name	Symbol	Dimensions and Indicators
Poverty	Pov	Based on the village, the total number of impoverished people in the Sragen area
Dependency Ratio	DR	Dependency ratio; the comparison between the number of non-productive societies and the working-age communities. Used as a variable that shows the consumption power of the poor
Disparity Ratio	Gini	Disparity Ratio, calculated using the Gini indexapproach

Variable Name	Symbol	Dimensions and Indicators
Geographic Vulnerability Index	GVI	Geographical Vulnerability Index (representing the concept of geographical traps); is an index compiled onindicators of Availability of Basic Services, Condition ofInfrastructure, and means of transportation. GVI calculation for each village is formulated as follows: GVI = Σ (V1 x B1 + . + Vn x Bn) x 20, where; GVI is worth 0-100, getting closer to 100, means that the region is geographically more vulnerable. Whereas, Vn is the score of the n^{th} variable and Bn =scale/weighting of the n^{th} variable.

Then the model was arranged based on the function Pov = f{DR, Gini, GVI}, so that the econometrics model to observe the relationship between poverty and its explanatory variables is written as follows:

$$LogPov_i = \beta_0+\beta_1 DR+\beta_2 Gini_i+\beta_3 GVI_i+\varepsilon_t \quad (2)$$

Econometrics model analysis was performed in Geoda software using the ordinary least square (OLS) method. Phenomena that occur within the scope of space often have correlations between events, for this reason,

Using the local Moran's I statistics, or LISA, Anselin [10] developed a formula to calculate the association between these events in spatial elements by examining the neighborhood's impact:

$$I_i = \frac{x_i-\bar{X}}{s_i^2} \sum_{j=1,j\neq i}^{n} w_{ij}(x_i-\bar{X}) \quad (3)$$

where xi is the attribute for feature i, $\bar{X}$ is the average corresponding attribute, wi,j is thespatial weighting of feature i and j, and:

$$S_i^2 = \frac{\sum_{j=1,j\neq i}^{n} w_{ij}}{n-1} - \bar{X}^2 \quad (4)$$

where xi, j is the spatial weighting of features I and j, xi is the attribute for feature I, X is the average related attribute, and:

$$z_{I_i} = \frac{I_i - E[I_i]}{\sqrt{V[I_i]}} \quad \text{where: } E[I_i] = -\frac{\sum_{j=1,j\neq i}^{n}}{n-1} \quad \text{and } V[I_i] = E[I_i^2] - E[I_i]^2 \quad (5)$$

For standardized spatial weighting matrices, the range of values from the Moran Index is $-1 \leq I \leq 1$. A negative spatial autocorrelation is indicated by a value of $-1 \leq I < 0$, and a positive spatial autocorrelation is shown by a value of 0

4. Results And Discussion

4.1 Description of Sragen Regency

Sragen, an urban periphery of Java, serves as a link between Central and Eastern Java. Sragen is located around 550 kilometers east of Jakarta, the capital of Indonesia, between 7°15' and 7°30' South Latitude and 110°45' and 111°10' East Longitude (Figure 2). The region is located in the basin valley of the Solo River, which flows eastward and has low to moderate topography rising between 70 and 480 meters above sea level. The majority of the land is covered by agriculture, with the remaining portion being industrial property. The population of Sragen was 986,708 in 2019.

On the other hand, Sragen has experienced quite significant changes in land use, national infrastructure projects, and the numbers of incoming investments that have helped accelerate land-use change in Sragen. On the regional income side, economic drivers' main contribution comes from the industrial, trade, and agriculture sectors.

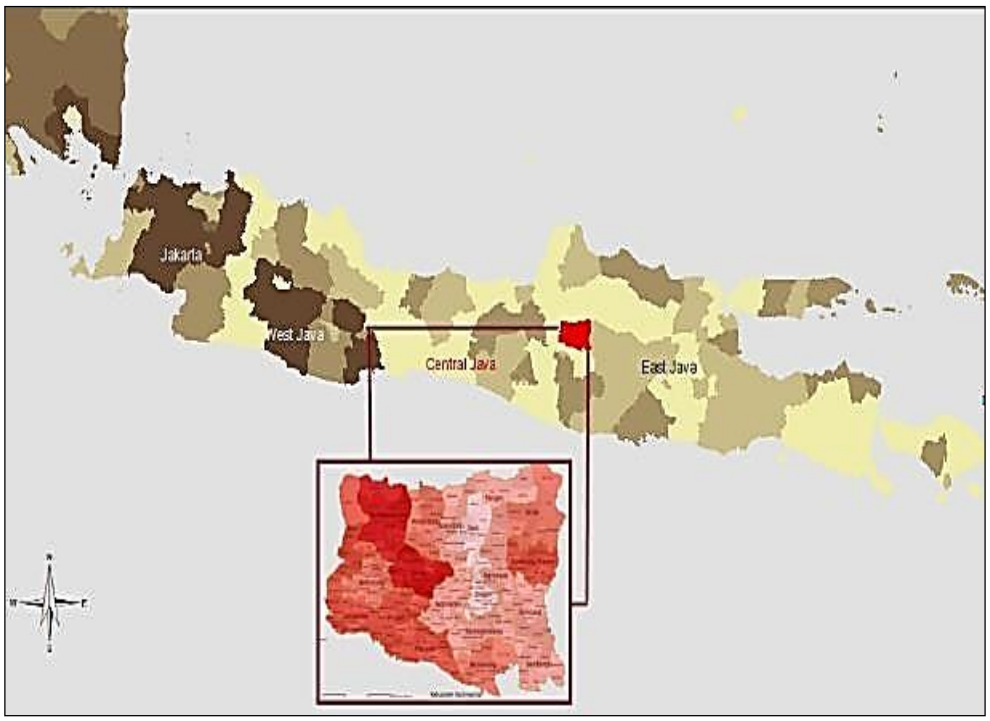

Fig 2 Location of Sragen

4.2 Sragen Population Distributions

Sragen Regency has quite diverse regional characteristics, ranging from low contour areas in the south to highlands in the west. This difference has implications for differences in the number of population distribution. Areas with low contours generally receive more

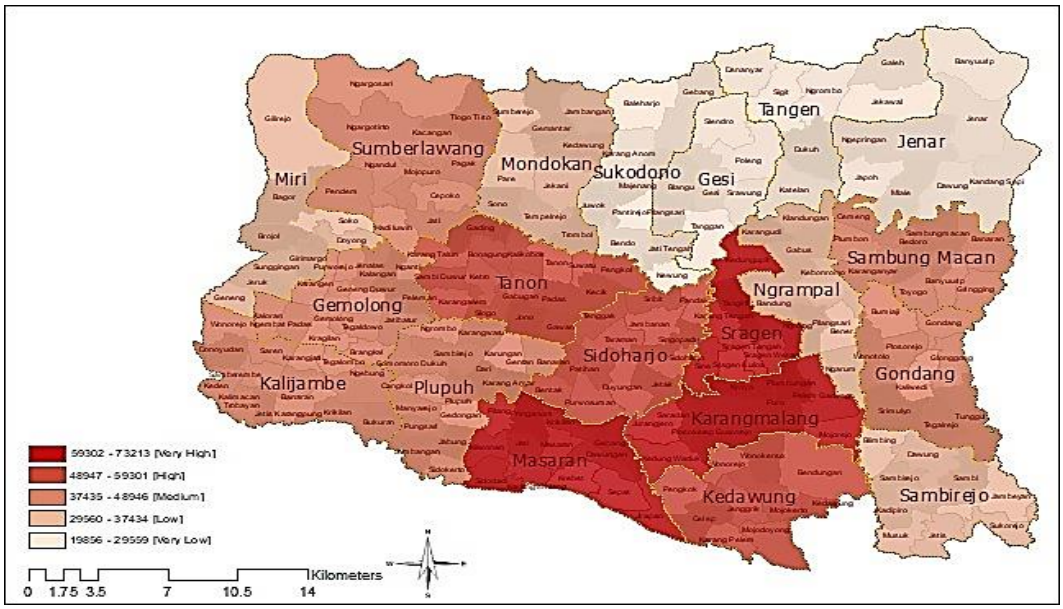

Fig. 3 Distribution of Sragen Population

pressure for population growth than other regions with plateau contours [3]. In the lowlands, patterned areas generally have a higher potential to be developed mainly in the agricultural sector. Besides, the population concentration is closely related to the centre of activity and governance. Most of the Sragen people group in the middle region cover Masaran, Sragen, and Karangmalang sub-districts (Figure 3). These three regions are the centre of the economic activity of Sragen. On the other hand, the population distribution inthe north and east of Sragen is relatively low due to hilly topography. Besides, the distance from the city centre also plays a role in distributing the population in Sragen.

4.3 Distribution and Density of Sragen Poor People

The concentration of the sparse population of Sragen is mostly in the Sumberlawang, Tanon, and parts of the western region of Sragen. Except for Masaran, these areas are low hilly topography with a slope of between 15-25% and are used for horticulture farming. Whereas, the central region of Sragen as a centre of activity has a low number of poor people (Figure 4).

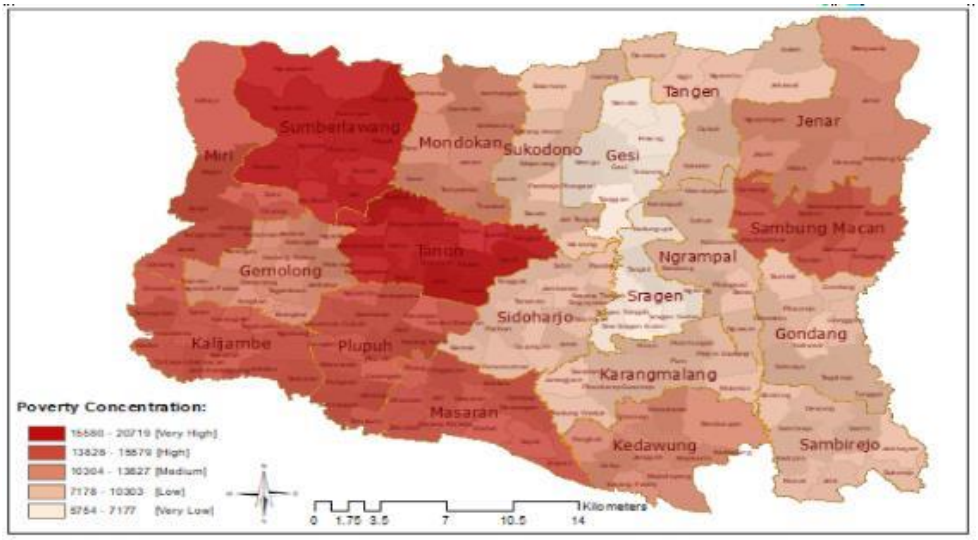

Fig. 4 Poverty Concentration

On the other hand, if the density of impoverished individuals is a computer, the sub-district surrounding Sragen has the largest density of impoverished individuals (13–23 per Km2), which is associated with the existence of social services and marketplaces (Figure 5).

These findings show two understandings of the occurrence of poverty grouping patterns in Sragen. Firstly, the incidence of poverty is influenced by conditions in areas far from the city center and causes inequality in income distribution [15]. These regions are agriculture-based rural areas so the poor in this region are referred to as rural poor. Secondly, the density of poverty in the sub-district cities in the Sragen region indicates urban poverty, which is poverty that occurs at the center of urban activities. Following [5], poverty in urban areas is more influenced by factors such as the absorption in urban employment and internal migration and the dependency ratios [19].

Both forms of poverty found in Sragen, are having the same poverty patterns that occur in Indonesia. In areas outside Java, the poor are scattered to remote areas far from the centre of economic activity, but in big cities, the density of poor people is very high and increasingly persistent due to rapid population growth [4] the job opportunities are minimal.

Thus, it is necessary to identify the precipitating factor in the concentration of poverty in Sragen. The conceptual picture of poverty determinants in Sragen on a small scale and Indonesia can be obtained on a large scale as proposed by [3], geographic elements that isolated and unintegrated areas would impact create a geographical trap of poverty. In Indonesia, each region's geographical carrying capacity is calculated based on the Geographical Vulnerability Index (GVI), which is an index compiled to determine the typology of an area based on the difficulty of accessing an area.

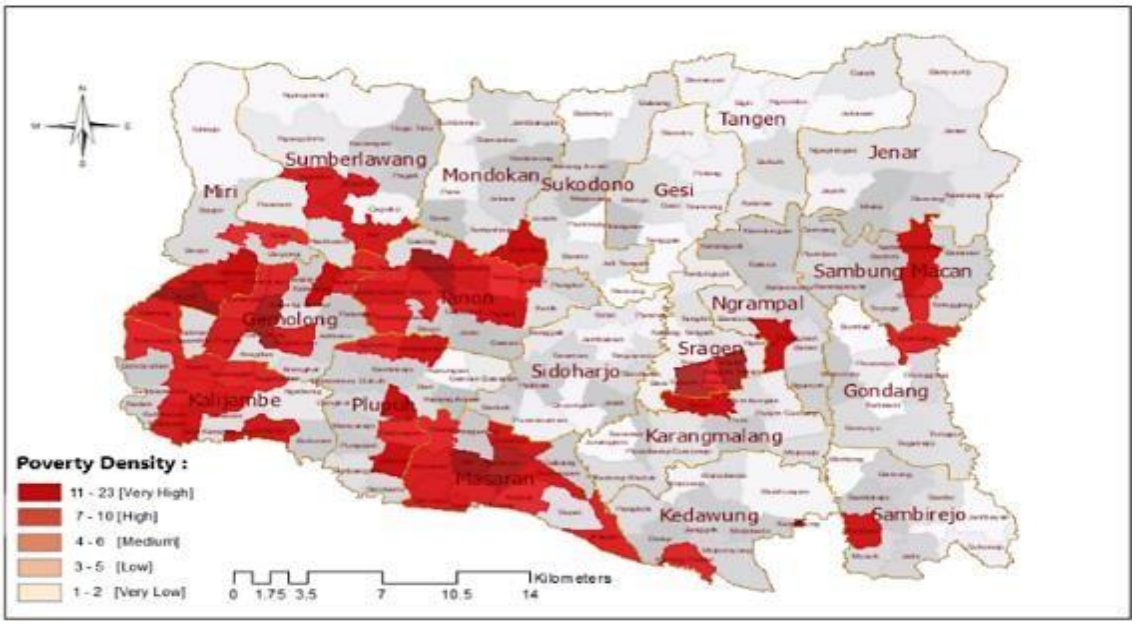

Fig. 5 Poverty Density

4.4 Geographical Vulnerability Index (GVI)

The GVI is created using the same scoring methodology as each evaluation instrument. The selection of this instrument was done by the Republic of Indonesia's Minister of Finance (PMK) Regulation No. 93/PMK.07/2015, which addresses the processes for the allocation, distribution, usage, monitoring, and assessment of village funds.

The Geographic Vulnerability Index (GVI) is built on three elements based on this PMK: 1. Availability of basic services, such as health and education; 2. State of the infrastructure supporting facilities for economic activity and energy availability; 3. Accessibility/transit, including availability of roads and transit options. Every variable from every component factor is weighted in the GVI calculation. The score of each variable multiplied by its weight after it has been weighed represents the added value.

GVI findings indicate that high vulnerability areas were spread evenly and did not form symmetrical/orderly patterns. They also occur in areas with low and very low vulnerabilities (as in Figure 6). Thus, it can be concluded that the geographical vulnerability index in Sragen is not spatially related between regions. It is reinforced by the Moran analysis, which shows a value of 0.134 (Figure 7). Because the Moran value is near zero, the relationship between the regions in the GVI event is positive but not substantial or weak because this value is within the range of 0

It was found that most of the Sragen areas were categorized as medium vulnerability (26%), while areas with high vulnerability (11%) were discovered in 22 regions in the west and north. Whereas 36 villages spread in the capital region of the sub-district and surrounding areas have a very low vulnerability (17%) (Table 2).

Fig. 6 Geographical Vulnerability

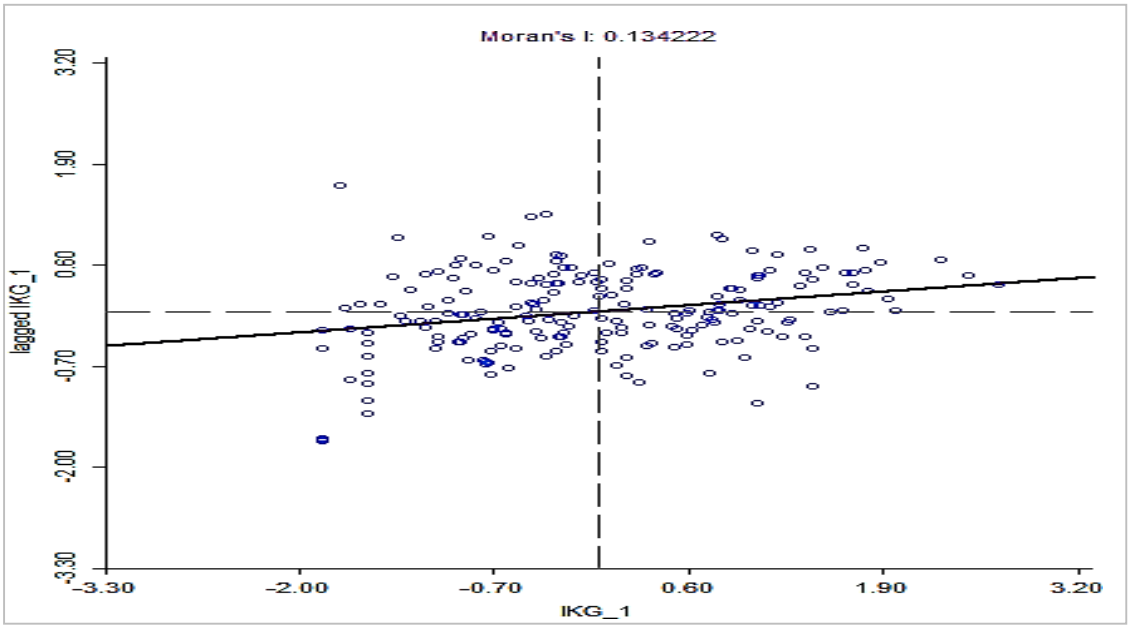

Fig. 7 Moran Scatter Plot

Table 2. Geographic Vulnerability Classification

Classification	Range	Total	%
Very low	17 – 23	36	17
Low	24 – 28	48	23
Medium	29 – 34	53	26
High	35 – 41	48	23
Very High	42 – 52	22	11

4.5 Determinant Factors of Poverty

Ordinary Least Square Analysis Results
Table 3 displays the following findings from the model's econometric analysis:

Table 3 Estimation Regression Model

$LogPov_i$ =	7.83157-0.00062 DR_i-1.19411 $Gini_i$–	0.00677GVI_i	
	(0.0017) ***	(0.2715)	(0.0833)*
R^2 = 0.058702; DW-Stat = 1.699364; F-Stat = 4.219896; Sig. F-Stat = 0.006391			

Note: ***Significant at α = 0.01 *Significant at α = 0.10 Numbers in parentheses are the probability of the t-statistic value.

As with the regression procedure, the model obtained from the estimation cannot be used before it is tested to detect classical assumption problems, following Gujarati [20], a regression that can predict well must have at least five tests. Table 4 displays the test results. Statistical analysis models have escaped the classical assumption procedure so that the estimated parameters could be used in forecasting poverty events in Sragen.
This study identified an inverse relationship between the dependency ratio and the incidence of poverty in Sragen; the higher the dependency ratio, the lower the poverty incidence in Sragen (Table 3). This finding is different from Ndanshau [19], who reported a direct relationship between dependency and poverty. Corresponding to Ndanshau's 1998 finding, this study conducted a household survey of low-income families in 3 areas, namely urban, rural, and transitional areas, to collect information on the dependency ratio in Sragen. The findings indicated that there were a considerable number of juvenile laborers in the research area, especially in Sragen's western region. On average, children in this area only receive schooling until age 12 and proceed to become informal workforce to help the family's economy, some of them have to balance education and work simultaneously. The phenomenon of child labor is directly related to poverty primarily caused by the low income generated by the head of the household [17]. Therefore, it is concluded that the negative correlation between the dependency ratio and poverty level in the Sragen Regency is mediated by the child labor phenomenon. The more dependent (children) they have, the more income-generating capacity they have, these communities have seen having a large family as an investment for their future.

Table 4. Classic Assumption Test Results

1. Autocorrelation Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	2.483398	Prob. F (2,200)	0.0860
Obs*R-squared	4.991833	Prob. Chi-Square [30]	0.0824

2. Residual Normality

Test Jarque-Berra = 4.581866

Probability = 0.101172

3. Heteroskedasticity Test: Breusch-Pagan-GodfreyObs* R-square = 4.815509

Prob Chi-Squared [27] = 0.1858

4. Multicollinear Test

Variable	VIF
DR	1.010072
Gini	1.397905
GVI	1.386866

5. Ramsey Reset Linearity

	Value	df	Probability
F-statistic	0.565617	(1, 202)	0.4529

The relationship formed between the Gini index and poverty in Sragen is known to have a negative direction. However, the probability explains that there is no statistical relationship between these two variables. Thus, it is known that the gap pattern in Sragen is relatively flat and evenly distributed in all regions, and ranges from 0.22 to 0.35, so it is concluded that there is no significant gap in Sragen.

Geographic Vulnerability is interpreted as a geographical trap that triggers poverty [7] which indicated by the higher the geographical vulnerability, the higher the poverty polarization. Daimon in 2001 [9] explained that Indonesia's isolated regions, such as NusaTenggara and Papua, had the highest amount of poverty among other regions in Indonesia.The results of this study contradict the two findings of earlier research (Daimon, 2001; Bird et al., 2010). Specifically, the vulnerability index shows a negative correlation with the incidence of poverty, which can be statistically explained by saying that poverty will decrease with increasing geographical vulnerability and vice versa.

It implies that there has been a change in the spatial polarization of poverty. The poor began to migrate to the central areas of economic activity and left their home regions. The community realized the geographical poverty trapand began to leave it. The density of the poor explains how polarization is occurring, wheresub-district cities have a higher density than other regions (Figure 5). This finding clarifieshow the pattern of micro-scale migration in Sragen. The same pattern occurs at the macro scale, where major cities in Indonesia receive increasingly heavy population pressure, while rural areas are increasingly deserted and abandoned.

4.6 Patterns and Direction of Movement of the Poor

The results above demonstrate that there is a connection between poverty incidence and regional vulnerability. figure 8 shows the analysis of Local Moran's I statistics (LISA) spatial correlation, the dark shaded area shows the level of significance between the two variables. It is known that the central region (Sragen City, Masaran, and Sumberlawang) areareas that experience a direct correlation between geographic vulnerability and the incidence of poverty. The direction of spatial movement between a geographicalvulnerability is negatively correlated with poverty levels (Figure 9). The rose-coloured (Sragen City and its surroundings, Masaran and Gemolong) have spatial clusters of degrees(high-low), so this region has a large number of poor people and a low level of geographicalaccessibility (inverse relationship). Thus, it can be concluded that the direction of the movement of the sparse population of Sragen is towards the central region of Sragen regency.

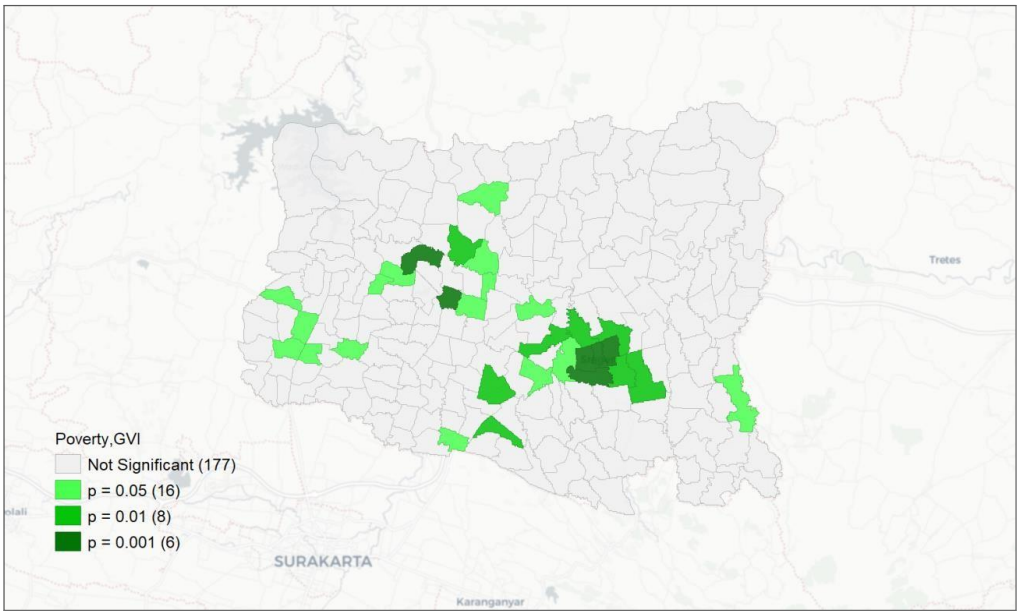

Fig. 8 LISA Significancy Map

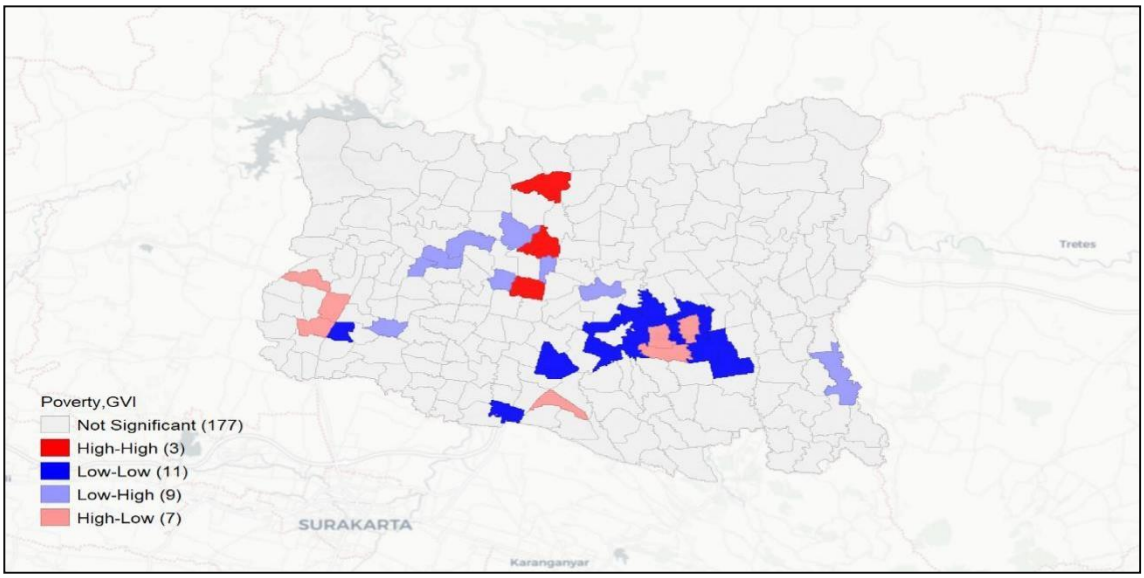

Fig. 9 LISA Cluster Map

5. Conclusion

The isolated region that suffers from poverty's geographical trap has seen a substantial change due to a condition known as infrastructure involution, which leads to internal migration and moving poverty trap to the urban areas. This study has notable findings fromthe demographic perspective, where a higher dependency ratio in the study area resulted in a lower poverty rate. The dependents (refers to children) in these households enter the workforce earlier than the legal working age, contributing to family income instead of draining the resources. Limited capacity to meet their basic needs has forced these familiesto send their children to work and sacrifice their chance for better education. Both phenomena have exposed to poor planning in infrastructure development. Ideally, detailedplanning in the development will put the village as an upstream structure, enabling the urban regions to develop according to their potential, followed by the development of distribution network to form the basis for the economic activity. Child labor phenomenon is common, particularly in developing countries. Indonesia is no exception. Long term solution is required because frequently, the reason is not merely economic but also a socialissue. The subsidy for education provided by the government will not address the issue as long as communities still consider their children as a production factor. Despite the decreasing poverty rate, the vicious cycle of poverty is still imminent due to the lack of education that lowers labor productivity—the study limits examining the existence of poverty trap in an isolated Sragen Regency area. The result indicates that poverty in Sragentends to move towards the center of economic activity, meaning the poverty trap in Sragen mostly occurred in centers of economic activity. Future research can concentrate on how low-income families who migrate affect employment prospects and how migration affects both the origin and the destination of economic patterns in rural and urban locations. From the standpoint of equity, the

phenomenon this investigation has uncovered will further widen the divide between rural and urban communities.

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