A RELATIONSHIP ANALYSIS BETWEEN THE POVERTY RATE AND THE REGIONAL DEVELOPMENT LEVEL IN KULON PROGO REGENCY, INDONESIA

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ABSTRACT

This study aims to identify the level of poverty and the level of regional development, along with an analysis of the relationship and typology between the two, in Kulon Progo Regency. The analysis unit in this research was 12 subdistricts in Kulon Progo Regency. The method used in the research is descriptive quantitative, with secondary data analysis using factor analysis, natural breaks, Pearson Product Moment correlation test, alignment levels, regional typologies with scatter plot, and spatial analysis. Meanwhile, regional development policy recommendations are also prepared, based on the type of area resulting from the typology using a SWOT analysis. The results showed that there are variations in poverty and regional development levels. The correlation test between the poverty rate and three factors in the regional development rate showed a fairly strong negative relationship with input and output factors and a strong negative relationship with process factors, which means that the higher the poverty level, the lower the level of regional development, and vice versa. Meanwhile, regional development policy recommendations are prepared based on four quadrants of the resulting regions, namely Quadran I (developed regions), Quadran II (developing regions), and Quadran III and IV (underdeveloped regions).

KEY WORDS: *poverty level, regional development level, regional development policy recommendations, Kulon Progo Regency, Indonesia.*

Introduction

Tackling poverty is a priority for developing countries (Begum, 2001). It can be described as a complex and multidimensional problem. It is seen as a product of the inequal distribution of development outcomes, as a result of differences in opportunities for each party to contribute to development in order to achieve well-being (Muta'ali, 2015). Todaro (1983) pointed out that the eradication of poverty and the growth of inequality are at the heart of all the problems of development that actually define the principles of development policy objectives. Reducing poverty is one of the main goals of governments, international organisations, non-governmental organisations, and society (Ite, 2005). Efforts to reduce poverty are also part of one of the

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SDG goals. Therefore, the issue of poverty is considered to be a fundamental issue and an important aspect of development (Mei et al., 2022).

The district of Kulon Progo, one of the districts in the province of DI Yogyakarta, is also experiencing regional problems related to poverty and regional development. The district of Kulon Progo is one of the districts that have villages with a fairly high level of poverty when compared to villages in the plains (Pitoyo, Alfana, 2015). This phenomenon shows that the geographical conditions of a region also determine how the region itself develops. This is in line with the opinion of Anjani and Ma'rif (2020), which stated that difficult geographical conditions, such as being located in mountainous areas with varying levels of access, make infrastructure development more difficult. According to BPS data (2021), poverty in the Kulon Progo district for the period 2017 to 2021 continued to be at the highest position in DI Yogyakarta. In fact, the poverty rate in the district of Kulon Progo is almost twice as high as the national figure for poverty. When compared to four other districts/cities in DI Yogyakarta, poverty in the Kulon Progo district has been at the highest level in the past five years. The high poverty rate in the district of Kulon Progo also contributes to the high level of poverty in the province.

Meanwhile, problems related to regional development in the Kulon Progo district are shown by the presence of inequalities and gaps that hinder the development of the region (Anjani, Ma'rif, 2020). Furthermore, Anjani and Ma'rif (2020) in their research mentioned that the district of Kulon Progo is assessed to have less maximum regional development, although it can be said that this district has a wealth of natural resources that have the potential to continue to be developed. Sari (2019) mentioned that local resources that exist in the district of Kulon Progo, in the form of natural resources, human resources and social resources, cannot be easily exploited and developed by the community. It could be a trigger for the emergence of poverty problems and the development of the region in the Kulon Progo district.

From these problems and background, three problem formulations were then prepared in the research. First, what is the variation and distribution of poverty levels in Kulon Progo Regency? Second, what are the variations and distribution of regional development levels in Kulon Progo Regency? And what is the relationship and typology between the level of poverty and the level of regional development in Kulon Progo Regency? Nakabashi (2018) noted that poverty has an impact and influence on the level of development of a region. This is because in building a region, it is necessary to take into account the socio-economic conditions of the community (Prakoso, 2018). The W. K. Kellogg Foundation (2004) and Knowlton and Philips (2013) described a logical development model consisting of input, activities or process, output, outcome, and impact. A logical model is a visual and systematic presentation of ideas that depicts the relationship between the existing resources, planned activities, and changes or expected outcomes. Every development is expected to increase the development of the region and the well-being of the community. Therefore, in order to reach this goal, it is necessary to identify the conditions of the community so that it is carried out correctly.

1. Methodology

Research Analysis of the Relationship Between Poverty Levels and Regional Development Levels in Kulon Progo District is a study that uses quantitative descriptive methods. Quantitative research is a study that uses methods to test certain theories by studying intervariable relationships (Creswell, 2009). According to Rukajat (2018), the descriptive method not only provides a picture of a phenomenon, but also explains relationships, tests hypotheses, makes predictions, and obtains the meaning and implications of a problem to be solved. The data used in this research are secondary data obtained from the Central Statistics Agency (BPS), the Ministry of Education, the Higher Education Hall, the Regional Financial and Asset Authority (BKAD), the Women's Social Development and Child Protection Department of the Kulon Progo district, as well as other library sources that have a relevance to the research topic. Because the data used is secondary data, then the availability of the data is very important, so it is a determining factor in the selection of research variables.

However, the selection of this variable research seeks to reflect the level of poverty and the level of development in the region of Kulon Progo. The technique used in the collection of secondary data is a docu-

mentation method by making data input from BPS and data applications to the Department of Education, the Higher Education Hall, the Regional Financial and Asset Authority (BKAD), and the Women's Development and Child Protection Department of Kulon Progo. The secondary databases in this study are districts and counties in numbers, DTKS (Integrated Social Welfare Data), and other data issued by related agencies. The use of DTKS data to measure poverty rates refers to the Multidimensional Poverty Index (MPI). The MPI is an index used to measure poverty by looking at multidimensional poverty structures, such as education, health and quality of life. Since 2010, the United Nations Development Programme (UNDP) and the Oxford Poverty and Human Development Initiative (OPHI) have agreed on a new poverty measurement index through the MPI included in the Human Development Report (HDR, 2010; Budiantoro et al., 2013). The MPI covers three dimensions, namely education, health and quality of life, with ten more comprehensive indicators in measuring poverty. These indicators include health dimensions (natality and infant deaths), educational dimensions (school age and attendance in education), and quality-of-life dimensions (fuel for cooking, sanitation, clean water, lighting sources, floor conditions, and ownership of assets).

The use of the above indicators and variables refers to relevant previous studies. Ghosh (2011), in his research, examined issues of education, health and human development in 15 states in India. The study examined in detail regional gaps in human development, and their relationship with per capita income and social sector spending. According to Di Liberto (2008), human resources and development have a close relationship. Furthermore, Liberto (2008) mentioned that education affects the development of the Italian region. In this case, the variables used are the number of educational facilities, the number of teachers, and number of graduates per capacity. Fedotov (2017) stated that regional budgets can be used to estimate the socio-economic development of a region. In this case, we use the variable budget purchase of each quota in the Kulon Progo district.

Subsequently, Suparmi et al. (2018) investigated regional disparities at a provincial level in Indonesia based on the PHDI (Public Health Development Index). Regional disparities are influenced by composite indices of public health infrastructure, services, behavioural risk factors, and health outcomes. In this case, a variable amount of facilities and health resources will be used. Ahner et al. (2019) compiled a composite index in measuring regional development that includes political, military, economic, social and infrastructure indicators. The relevant variable in this study is the use of the amount of infrastructure/facilities. Meanwhile, Banu and Fazal (2013) used infrastructure indicators, consisting of transport, education, healthcare and marketing facilities, to measure the development of a region. The collected data is then processed through sorting, tabulation of data, and spatial mapping. The data analysis techniques consist of descriptive analysis, inferential analysis and spatial analysis, detailed into natural breaks, factor analysis, Pearson Product Moment correlation test, level of alignment, area typology and scatter plot, as well as SWOT analysis, to meet the research objectives.

2. Results and discussion

2.1. The identification of poverty

One of the main problems facing the region is poverty. The poverty in a region can be seen from the number of Poor Households (RTM) and Poor House Members (ARTM) in the region. The amount of RTM and ARTM can be seen through Integrated Social Welfare Data (DTKS) that is funded twice a year (every six months) by the district/city government which has authority in the social field. The number of Poor Households (RTM) in the district of Kulon Progo in 2020 was 64,319 households. The number of poor household members (ARTM) was 217,543 people, or 51.02% of the total population in the Kulon Progo district. The poverty rate is determined on the basis of five indicators in the DTKS, namely educational conditions, health, programme participation, property ownership, and housing descriptions. The data scale is a ratio data that is then summarised to be divided into three poverty classes using natural breaks on ArcGIS Software. There are three classes of poverty in the district of Kulon Progo: low, medium and high poverty.

The results of the study showed that the poverty rate in the Kulon Progo district has a mostly moderate level, which is 42%, or as much as five out of 12 subdistricts. Meanwhile, the high poverty rate has a percentage of 33%, or as much as four subdistricts, and the other three subdistricts have a low poverty rate of 25%. The subdistricts which have the largest percentage of the poorest population are the subdistricts of Kalibawang, Samigaluh and Nanggulan. The poorest part of the population is in the subdistricts of Wates, Temon and Galur. From the percentages, Kalibawang is the most prominent subdistrict, because it has the largest proportion of poor population, which is 86.67%, while the subdistrict of Wates has the smallest proportion, namely 38.22%. In general, poverty in the district of Kulon Progo seen in the DTKS was quite high, because all of the subdistrict has a percentage of poor population above 35% (more than a third of the total population).
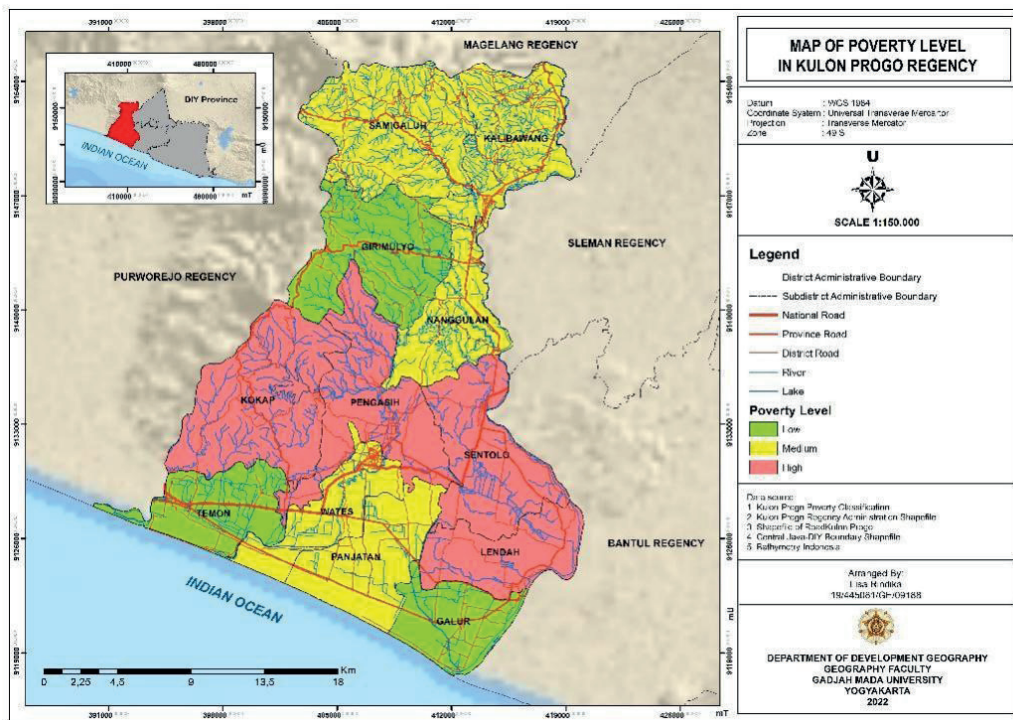

Figure 1. A map of the poverty level in Kulon Progo Regency in 2020

Source: Compiler analysis, 2023.

The spread of poverty levels in the district of Kulon Progo can be seen in Figure 1. According to the picture, the highest level of poverty is in the middle part, consisting of the subdistricts of Kokap, Lendah, Pengasih and Sentolo. When taking the poorest percentage of the population, the four subdistricts had percentages ranging from 47% to 56%. That is about half of the population in the four subdistricts are among the poor. However, when taking the total number of the five DTKS indicators used, these four subdistricts actually have the highest number of ARTM and RTM well-being when compared to others. The higher the total score in the five DTKS indicators, the higher the poverty rate. High levels of poverty can be caused by low aspects used in the measurement, whether of education, health, programme participation, ownership of assets, or housing description. Meanwhile, subdistricts with low poverty rates are scattered, or not grouped. The lowest levels of poverty are in the subdistricts of Galur and Temon, which are in the south, and the subdistrict of Girimulyo, which is in the north. As with low poverty levels, the average poverty rate is spread over the north and the south, where the northern part consists of the subdistricts of Samigaluh, Kalibawang and Nanggulan, while the southern part is made up of the subdistricts of Wates and Panjatan.

2.2. Identifying the regional development level

The level of regional development is a form of measurement of the progress and success of a region using specific indicators. The level of development of the region in the district of Kulon Progo is measured using three indicators, namely, input, process and output. Measurement is carried out by identifying the conditions and characteristics of each region through the indicators used. By measuring the development of the region, then the status of the level of development of each subdistrict in the district of Kulon Progo will be known. Regional development is a series of development processes that can be seen from input, process and output. Although there are no absolute indicators used in measuring regional development, in its measurement it must still use the logic of the development model that contains the least input, process and output factors. The indicators used in measuring the level of development in the district of Kulon Progo can be seen in Table 1.

Table 1. Indicators of the regional development level in Kulon Progo Regency

Indicator	Data/variable	Data source
Input	Budget	Central Bureau of Statistics, Office of Education, Centre for Secondary Education, Agency for Regional Finance and Assets
	Number of elementary school teachers	
	Number of junior high school teachers	
	Number of senior high school teachers	
Process	Number of educational facilities	
	Number of health facilities	
	Number of economic facilities	
Output	Number of elementary school graduates	
	Number of junior high school graduates	
	Number of senior high school graduates	

Source: Compiler analysis, 2023.

Each indicator and the variables in it must then be tested using factor analysis using SPSS. With factor analysis, a new simpler variable/shock factor will be produced that can explain a phenomenon or problem, in this case the level of development of the region. The results of the research showed that the level of regional development of the three factors indicated different variations. The level of development of the region is determined according to the accumulation of the three indicators used using the natural breaks found on ArcGIS Software. The classification of the level of development of the region is divided into three classes, namely, low, medium and high development. Each level of development of the region has its own indications. Low regional development indicates a region that is lagging behind, regional development indicates an area that is developing, while high regional development indicates an advanced region. However, the overall level of development of the region in the district of Kulon Progo can be seen in Figure 2.

The pattern of the spread of the classification of the level of development of the region in the district of Kulon Progo can be observed in the picture above, where there is only one subdistrict that has a high level of territorial development, namely the city centre (the subdistrict of Wates). Meanwhile, the subdistricts directly bordered by the city centre have a low level of development in the area, namely the subdistricts of Temon, Panjatan and Pengasih, as well as the mountainous area of the subdistrict of Girimulyo. The rest of the subdistricts have a moderate level of development in the territory, consisting of the subdistricts of Kokap, Samigaluh, Kalibawang, Nanggulan, Sentolo, Lendah and Galur, which are grouped mostly in the eastern part.
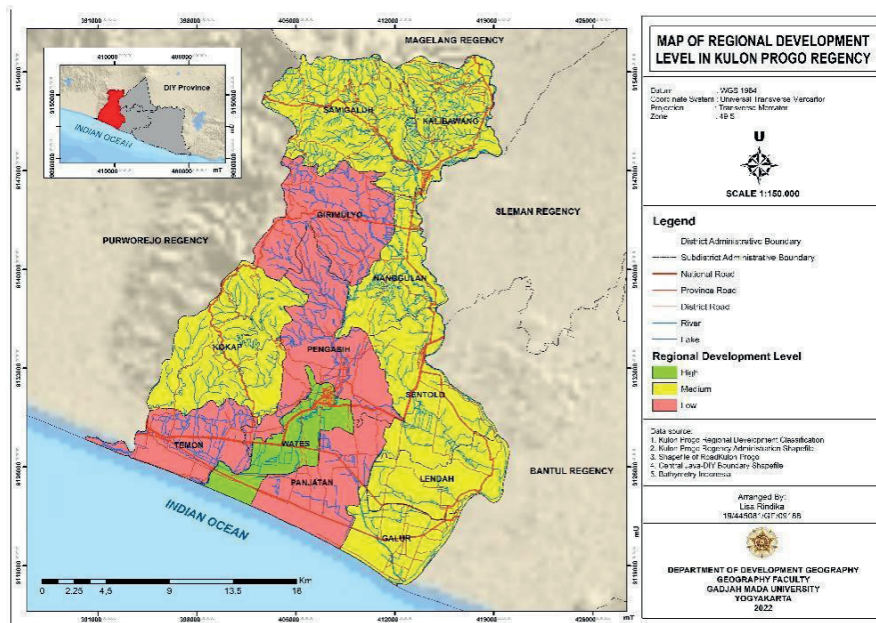
Fig 2. A map of the regional development level of Kulon Progo Regency in 2020

Source: Compiler analysis, 2023.

The high classification of the level of development of the region in the district of Kulon Progo is influenced by its geographical conditions. The district of Kulon Progo has various geographical conditions, divided into coastal areas, plains and mountains. Many subdistricts in the district of Kulon Progo with a low level of development in the region have the topography of an area of mountains, such as the subdistricts of Girimulyo, Kokap, Samigaluh and Kalibawang. The topographical conditions of the mountains have a slight impact on the accessibility of areas that tend to be more difficult to reach compared to plains areas, such as the subdistrict of Wates. As is noted by Liu et al. (2020), that accessibility is related to territorial development. It can also be associated with the density of population in mountainous areas. Subdistricts located in mountainous areas have a low population density, unlike the density of the population in the plains.

In addition to mountainous areas, subdistricts with a classification of the level of development of low to medium regions are also found in the southern part, which is the coastal area, such as the subdistricts of Temon, Panjatan and Galur. Development in coastal areas faces a number of challenges leading to the slower development of the region. According to Nel and Connelly (2020), coastal areas are areas where society is dependent on local resources, generally experiencing isolation problems and other challenges. From the point of view of the purchasing budget, a subdistrict in the coastal area has a size of budget that tends to be smaller than other subdistricts, especially the subdistrict of Wates. The smaller the budget received, the fewer the opportunities to undertake development that can solve problems in the coastal area. As a result, construction cannot answer the existing questions. When reviewed from the availability of means and pricing, subdistricts in the coastal area also tend to have a lower number of basic service facilities. Basics become important, because they have are the needs of society to be met.

In addition, the distance factor to the city centre, in this case the district capital, is also important to consider. Subdistricts with a low to medium level of regional development, especially those in mountainous areas, such as Samigaluh, Kalibawang, Girimulyo and Nanggulan, are a long distance from the city centre. The distance from the city centre causes low accessibility to reach existing growth and service centres. In general, facilities and public services are close to the city centre, which is assisted by the availability of transport (Amini-Behbahani et al., 2020). When seen from its poverty level, the subdistrict that was in the mountains, except the subdistrict of Girimulyo, did not have a low poverty rate. That is, the poverty that occurs also affects the level of development of the region.

On the other hand, the subdistrict of Wates has a high level of regional development classification. The function as the capital of the district of Kulon Progo is one of the reasons for the high level of development in the region of the subdistrict of Wates. Nevertheless, the rapid development of the region in the subdistrict of Wates has not been able to influence the development of the surrounding areas. The subdistricts which directly border the subdistrict of Wates actually has a low level of territorial development, namely the subdistricts of Temon, Pengasih and Panjatan, as shown in Figure 2. A good growth centre is a centre that is capable of driving the growth of the surrounding area. Therefore, it is necessary to build a growth centre that can provide benefits to the surrounding area.

2.3. An analysis of the poverty and the regional development level

The poverty rate is measured using Integrated Social Welfare Data (DTKS) from the Women's Empowerment and Child Protection Service of the Kulon Progo district, including education, health, property ownership and programme participation indicators, as well as housing information. The level of development of the region is measured using input factors (number of budgets, number of elementary school, junior and senior high school teachers), process factors (educational facilities, health and economy), and output factors (number of graduates from elementary school, junior and senior high school, and also health). The level of poverty and the level of regional development are classified according to three categories: high, medium and low.

Correlations

		Kemiskinan	Faktor Input
Kemiskinan	Pearson Correlation	1	-.658[*]
	Sig. (2-tailed)		.020
	N	12	12
Faktor Input	Pearson Correlation	-.658[*]	1
	Sig. (2-tailed)	.020	
	N	12	12

*. Correlation is significant at the 0.05 level (2-tailed).

Figure 3. Correlations between poverty rates and TPW (input factor)

Source: Compiler analysis, 2023.

Correlations

		Kemiskinan	Faktor Proses
Kemiskinan	Pearson Correlation	1	-.681[*]
	Sig. (2-tailed)		.030
	N	12	10
Faktor Proses	Pearson Correlation	-.681[*]	1
	Sig. (2-tailed)	.030	
	N	10	10

*. Correlation is significant at the 0.05 level (2-tailed).

Figure 4. Correlations between poverty rates with TPW (process factor)

Source: Compiler analysis, 2023.

Correlations

		Kemiskinan	Faktor Output
Kemiskinan	Pearson Correlation	1	-.615*
	Sig. (2-tailed)		.033
	N	12	12
Faktor Output	Pearson Correlation	-.615*	1
	Sig. (2-tailed)	.033	
	N	12	12

*. Correlation is significant at the 0.05 level (2-tailed).

Figure 5. Correlations between poverty rates with TPW (output factor)

Source: Compiler analysis, 2023.

The Pearson Product Moment correlation test was carried out on poverty levels with three factors in regional development, namely inputs, processes and outputs, seen in figures 3, 4 and 5. Based on the tests that were conducted, the relationship between poverty levels and three factors in the level of regional development indicates a negative relationship. In other words, the higher the poverty rate, the lower the level of development of the region, and vice versa. The relationship between the poverty rate and the TPW input has a Sig. (2-tailed) value of 0.02 with a correlation value of -0.658. That is, there is a fairly strong negative relationship between poverty levels and the input factor TPW. The poverty rate with TPW process factor has a Sig. (2-tailed) value of 0.03 with a correlation value of -0.681. That is, there is a strong negative relationship between poverty levels and process factors. Meanwhile, the poverty rate with TPW process factor has a Sig. (2-tailed) value of 0.03 with a correlation value of -0.615. That is, there is a fairly strong negative relationship between poverty levels and output factors. The results of the identification of high, medium and low classifications between poverty levels and the level of regional development are then used as a basis for determining the pattern of the relationship between the two variables. The pattern of the relationship between the level of poverty and the rate of development of the region of a subdistrict in the district of Kulon Progo yielded seven patterns of relationship.

Table 2. The number of poverty level relationship patterns and TPW

Regional development level	Poverty level		
	High	**Medium**	**Low**
High	–	1	1
Medium	3	3	1
Low	1	1	2

Source: Compiler analysis, 2023.

The seven patterns can be observed in Table 2 above. The relationship is said to be good when the existing subdistrict has low poverty with a high TPW. But there is no subdistrict that has low poverty with a high TPW. In other words, there is nowhere in the region that is fully developed. Most people have good or bad relationships. In addition to being used to seeing patterns of relationships, the identification results of

the classification of poverty levels and the level of regional development are also used to identify the degree of alignment of the relationship between the two. This level of alignment is used to analyse the correlation between poverty and regional development that occurs in the Kulon Progo district. In this case, the level of clarity is divided into harmonious relationships, quite harmonious, and disharmonious. The percentage level of alignment can be seen in Figure 6 below.
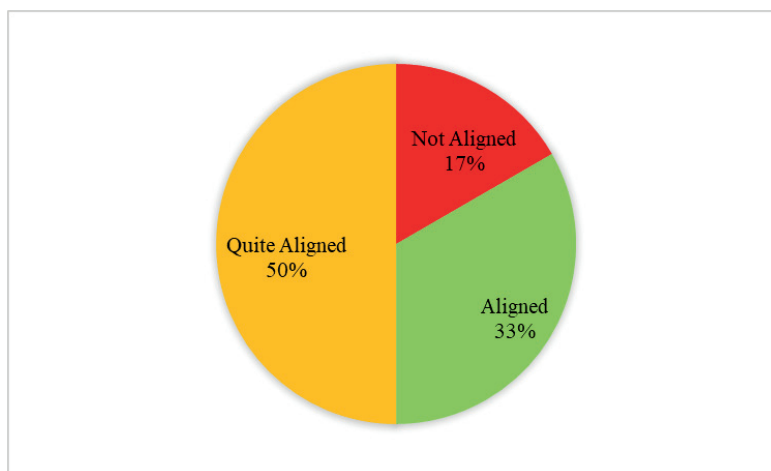

Figure 6. The percentage level of alignment

Source: Compiler analysis, 2023.

The results of the study show that as many as 50% of the 12 existing subdistricts had a fairly harmonious relationship. That is, most of the relationships between the level of poverty and the rate of regional development that occur in the district of Kulon Progo are still normal. The results of the identification of patterns of the relationship between the level of poverty and the degree of regional development are then used as a basis for determining the typology between the two relationships. The relationship patterns can then be categorised into four (4) types of territories, namely Quadran I, Quadran II, Quadran III, and Quadran IV. Typological analysis is a form of regionalisation based on the similarity of regional characteristics. The layout of this typology aims to simplify the territory, so that it will facilitate the establishment of a policy. The division of the area into four types of region can be presented in the form of a scatter plot, as shown in Figure 7.

Table 3 shows the typological spread of the territory into four quadrans. Quadran I is a subdistrict that has a low poverty rate with a high TPW, namely the subdistricts of Wates and Nanggulan. With this relationship, type I belongs to advanced territory. The region belongs to the developed region because it has superior relationships to other regions, i.e. it tends to have low poverty and high regional development. This type of advanced territory is expected to be a reference for other regions in the district of Kulon Progo, because it has the potential to become an independent territory with its capabilities and characteristics. Quadran II is a subdistrict with a low poverty rate and a low TPW, consisting of the subdistricts of Kalibawang, Girimulyo, Temon, Panjatan and Galur. In this connection, these territories belong to developing territories, and are expected to be developed territories. This is achieved by optimising the potential and ability they have to solve existing problems. Quadran III is a subdistrict with a high poverty rate and a low TPW, which consists of the subdistricts of Pengasih and Sentolo. Meanwhile, Quadran IV is a subdistrict with a high level of poverty and a high TPW, which consists of the subdistricts of Samigaluh, Lendah and Kokap. Quadran III and Quadran IV in this case are included in the type of region that is behind, because they have relatively high levels of poverty. Thus, the areas in Quadran III and IV are the main priorities in the development of the region of subdistricts in the Kulon Progo district.
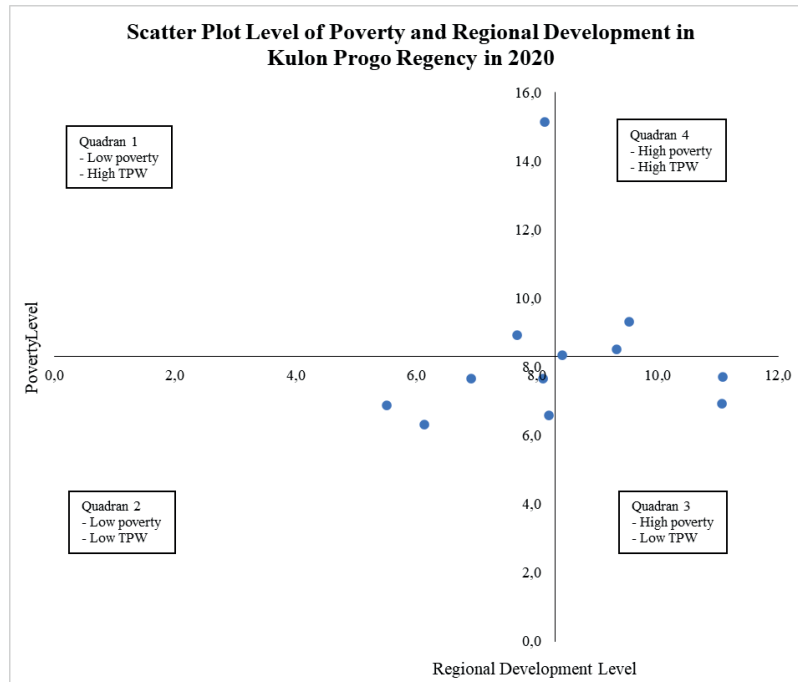
Figure 7. A scatter plot of poverty and the regional development level

Source: Compiler analysis, 2023.

Table 3. Regional typology distribution

Type	Characteristics	Subdistrict	Amount
I	Low poverty; high TPW	Wates and Nanggulan	2
II	Low poverty; low TPW	Kalibawang, Girimulyo, Temon, Panjatan and Galur	5
III	High poverty; low TPW	Pengasih and Sentolo	2
IV	High poverty; high TPW	Samigaluh, Lendah and Kokap	3

Source: Compiler analysis, 2023.

2.4. Recommendations for regional development policy

The development of the region is carried out by utilising the resources that exist in a region to improve the well-being of the population (Gupta, 1977). To achieve these goals, good development planning is required, one of which is through the preparation of regional development policy recommendations. This compilation is based on a SWOT analysis of four regional quadrans that have been identified through the relationship between poverty levels and the level of regional development. SWOT analysis is used to identify the strengths, weaknesses, opportunities and threats of each type of region. In other words, before conducting regional development, it is necessary to analyse the conditions, potential and problems that exist in a region. Based on the identification and analysis that have been done, it is known that the level of poverty and the rate of regional development in the Kulon Progo district in 2020 have a different level in each of its regions. This is due to the difference in conditions for each indicator used to measure both variables, as well as other factors inherent to the region. The policy recommendations for regional development in the district of Kulon Progo are structured according to the characteristics that appear in each quadran of the region.

Quadran I (advanced area) has the most advanced characteristics of the region when compared to the other two types. Its policy recommendations are focused more on optimising the functioning of the city and creating good conditions. As a developed region, the role of the subdistrict in this region is expected to be able to be a centre of growth that can drive development in other regions, especially in the region behind. To support its role, it is also necessary to plan, and to plan a good city, so that it can create a good-quality environment for its inhabitants. In addition to being a growth centre for the surrounding region, the role of this developed region is also expected to be able to reach a wider market. Therefore, it is necessary to make efforts to increase the competitiveness of the region.

The policy recommendations on Quadran II (developing areas) are focused on optimising basic services and improving regional accessibility, as well as efforts to empower the community. An increase in the quantity and quality of social and economic facilities is carried out with the aim of making it easy for the whole of society to access basic services. This is also supported by the construction of a road infrastructure. With this development, interdisciplinary interaction, as well as between the centre and the region, is expected to be improved. In addition, efforts are needed to improve the quality of human resources through various empowerment activities to produce a competent workforce, in accordance with the qualifications of the labour market. It is important to prepare to welcome a new airport in the Kulon Progo district. There is a hope that governments and communities will be able to leverage this momentum to boost economic growth and reduce poverty.

Quadrans III and IV, as the remaining areas, should be prioritised in development. The policy recommendations in the region are focused on increasing facilities and economic activity to reduce poverty and boost regional development. Basically, the areas in the third and fourth quadrans have high poverty conditions. Therefore, one of the policies that can be enacted is to evaluate and improve the less effective poverty alleviation programmes. The primary emphasis to be made is to make efforts to improve the quality of human resources. This is because, in development, both the physical and non-physical participation of society is necessary. In line with these efforts, the government can expand employment opportunities by developing institutions, building small and medium-size enterprises, and more. Competent workers will be able to take advantage of these opportunities to increase their income and their well-being.

These efforts should also be supported by improving access to education, health and economic needs throughout the community, including by extending programmes and social protection for poor households. Facilitating access will be more easily achieved with the construction of socio-economic facilities to support community activities and enhance the links between the centre and the region. In addition, the development of the economic sector is one of the keys to reducing poverty rates. This can be done by managing the potential of existing natural resources, and the development of the industrial, agricultural and tourism sectors, based on the empowerment of the community. By increasing economic activity, the advanced benefits of reducing poverty will be achieved through the increasing welfare of the population in this type of region.

Conclusions

There are variations in poverty levels in the district of Kulon Progo that are divided into high, medium and low poverty rates. The higher the classification, the higher the poverty level. The poverty rate is mostly dominated by moderate poverty, which applies to five subdistricts (Samigaluh, Kalibawang, Nanggulan, Wates and dan Panjatan). There is a variation in the level of development of the region in the district of Kulon Progo, which is divided into levels of high, medium and low development. The level of development of the region is dominated by the middle classification, namely the subdistricts of Samigaluh, Kalibawang, Nanggulan, Sentolo, Lendah, Galur and Kokap.

The level of poverty and the level of regional development (divided into input, process, and output factors) were tested using the Pearson Product Moment correlation test. The results of the study showed that the level of poverty and the rate of regional development have a negative relationship, meaning that the lower the poverty level the higher the degree of development of the region will be, and vice versa. Based on its typological identification, there are seven patterns of relationships. These relationship patterns are used to know the level of alignment, with the

result that most of the subdistrict has a fairly harmonious relationship. According to the typology obtained, there are four quadrans in the territory according to the poverty and development of its territory, namely Quadran I (advanced territory), Quadran II (developing territory) and Quadrans III and IV (reserved territory).

Acknowledgments

References

Ahner, D. K., Thompson, J. L., Justice, K. M. (2019). Development of Composite Indices and A Regional Assessment Framework for Analyzing Nation-State Health. *Journal of Defense Modeling and Simulation*, 1–8. DOI: https://doi.org/10.1177/1548512919850385.

Amini-Behbahani, P., Meng, L., Gu, N. (2020). Walking Distances from Services and Destinations for Residential Aged-Care Centres in Australian Cities. *Journal of Transport Geography*, *85*, 1–8. DOI: https://doi.org/10.1016/j.jtrangeo.2020.102707.

Anjani, K. O. P., Ma'rif, S. (2020). Analisis Tipologi Keterkaitan Interaksi Desa Kota dengan Kemiskinan di Kecamatan Kokap, Kabupaten Kulon Progo. *Teknik PWK (Perencanaan Wilayah Kota)*, *9* (2), 107–122.

Banu, N., Fazal, S. (2013). Development of Infrastructure Facilities in Public Sector on the Urban Fringe of Aligarh City. *Journal of Infrastructure Development*, *5* (2), 151–168. DOI: https://doi.org/10.1177/0974930614527946.

Begum, H. (2001). Poverty and Health Ethics in Developing Countries. *Bioethics*, *15* (1), 50–56.

BPS Kabupaten Kulon Progo. (2021). *Ringkasan Eksekutif Kondisi Kemiskinan Kabupaten Kulon Progo Tahun 2021, BPS Kabupaten Kulon Progo*. SSN / ISBN: 978-623-6934-28-9.

Budiantoro, S., Fanggidae, V., Saputra, W., Maftuchan, A., Artha, D. R. P. (2013). *Multidimensional Poverty Index (MPI): Konsep dan Pengukurannya di Indonesia.* Economic Policy Working Paper.

Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. SAGE Publications.

Di Liberto, A. (2008). Education and Italian Regional Development. *Economics of Education Review*, *27*, 94–10. DOI: https://doi.org/10.1016/j.econedurev.2006.08.004.

Fedotov, D. Y. (2017). Forecasting of Regional Economic Development and Budget Based on The Example of Irkutsk Oblast. *Studies on Russian Economic Development*, *28* (4), 416–422. DOI: https://doi.org/10.1134/S1075700717040050.

Ghosh, M. (2011). Regional Disparities in Education, Health and Human Development in India. *Indian Journal of Human Development*, *5* (1), 5–28. DOI: https://doi.org/10.1177/0973703020110101.

Gupta, J. Das. (1977). Nation, Region, and Welfare: Ethnicity, Regionalism, and Development Politics in South Asia. *Annals of the American Academy of Political and Social Science*, *433*, 125–136.

Ite, U. E. (2005). Poverty Reduction in Resource-Rich Developing Countries: What have Multinational Corporations Got to do with it? *Journal of International Development*, *17*, 913–929. DOI: https://doi.org/10.1002/jid.1177.

Knowlton, L. W., Philliips, C. C. (2013). *The Logic Model Guidebook: Better Strategies for Great Results.* SAGE Publications.

Mei, E. T. W., Muta'ali, L., Baiquni, M., Rijanta, R., Prakoso, B. S. E., Christanto, J., Widiyanto, D., Fajarwati, A., Hasanati, S., Nugroho, A. S., Nurani, I. W., Ghiffari, R. A., Wahyudi, D. S., Saiddinullah, A., Al Tumus, M. G. R., Rahman, D. F. (2022). Regionalization of Java Island: Poverty, Pandemic and Gender. *Jurnal Geografi*, *14* (1), 120–144.

Muta'ali, L. (2015). *Teknik Analisis Regional: untuk Perencanaan Wilayah, Tata Ruang, dan Lingkungan.* Yogyakarta: Faculty of Geography Publishing House (BPFG) Gajah Mada University. ISBN 978-979-8786-53-2.

Nel, E., Connelly, S. (2020). Regional Economic Transformation: Changing Land and Resource Access on The West Coast of New Zealand's South Island. *Land Use Policy*, *93*, 1–9. DOI: https://doi.org/10.1016/j.landusepol.2019.04.008.

Nakabashi, L. (2018). Poverty and Economic Development: Evidence for The Brazilian States. *Economia*, *19* (3), September–December, 445–458.

Pitoyo, A. J., Alfana, M. A. F. (2015). Strategi Rumah Tangga Miskin Perdesaan Keluar dari Kemiskinan: Kasus Tiga Desa di Kulon Progo, Daerah Istimewa Yogyakarta. *Populasi*, *23* (2), 55–70. DOI: https://doi.org/10.22146/jp.15695.

Prakoso, F. B. (2018). *Analisis Tingkat Perkembangan Wilayah Kecamatan di Kabupaten Klaten Tahun 2005–2015.* Skripsi thesis. Universitas Muhammadiyah Surakarta.

Rukajat, A. (2018). *Pendekatan Penelitian Kuantitatif.* Penerbit Deepublish.

Sari, F. N. (2019). Membangun Kemandirian Ekonomi untuk Mengentaskan Kemiskinan dalam Program "Bela Beli Kulon Progo." *Telaah Bisnis*, *20* (1), 31–42.

Suparmi, Kusumawardani, N., Nambiar, D., Trihono, Hosseinpoor, A. R. (2018). Subnational Regional Inequality in The Public Health Development Index in Indonesia. *Global Health Action*, *11*, 1–13. DOI: https://doi.org/10.1080/16549716.2018.1500133.

Todaro, M. P. (1983). *Economic Development in the Third World*. Ghalia Indonesia.

W. K. Kellogg Foundation. (2004). *Logic Model Development Guide, Battle Creek*. W. K. Kellogg Foundation.

SKURDO IR KULONO PROGO REGIONO PLĖTROS TARPUSAVIO RYŠIŲ ANALIZĖ

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Santrauka

Šio tyrimo tikslas – nustatyti skurdo ir regioninio išsivystymo lygį, išanalizuoti, kaip jie susiję, ir jų tipologiją Kulono Progo regione. Šio tyrimo analizės objektas – 12 Kulono Progo regiono seniūnijų. Atliekant tyrimą taikytas aprašomasis kiekybinis metodas ir antrinių duomenų bei faktorių analizė, Pearsono koreliacijos testas, kurie derinami su sklaidos diagramomis ir erdvine analize. Tuo tarpu regioninės plėtros politikos rekomendacijos rengiamos atsižvelgiant į vietovės tipą, gautą iš tipologijos, taikant SSGG analizę. Rezultatai atskleidė, kad skurdas ir regionų išsivystymo lygis skiriasi. Koreliacijos testas tarp skurdo lygio ir regioninės plėtros rodiklio veiksnių atskleidė gana stiprų neigiamą ryšį su sąnaudų bei išeigos veiksniais ir stiprų neigiamą ryšį su proceso veiksniais. Taigi kuo didesnis skurdo lygis, tuo žemesnis regiono išsivystymo lygis ir atvirkščiai.

Skurdo lygis Kulono Progo regione skiriasi, jis skirstomas į aukštą, vidutinį ir žemą. Kuo aukštesnis balas, tuo didesnis skurdo lygis. Vyrauja vidutinis skurdas, būdingas penkioms seniūnijoms (Samigaluh, Kalibawang, Nanggulan, Wates, dan Panjatan). Kulono Progo regiono išsivystymo lygis skiriasi pagal tam tikras seniūnijas. Dominuoja vidutinis regiono išsivystymo lygis, t. y. Samigaluh, Kalibawang, Nanggulan, Sentolo, Lendah, Galur ir Kokap.

Skurdo ir regiono išsivystymo lygiai (suskirstyti į sąnaudų, procesų ir produkcijos veiksnius) tikrinami pasitelkus Pearsono koreliacijos testą. Tyrimo rezultatai atskleidė, kuo žemesnis skurdo lygis, tuo aukštesnis regiono išsivystymo lygis ir atvirkščiai. Remiantis tipologiniu identifikavimu, sukurti septyni santykių modeliai. Tyrimo rezultatai atskleidė, kad skurdo ir jos teritorijos išsivystymo aspektu skiriami keturi teritorijos kvadrantai: I kvadranas (išsivysčiusi teritorija), II kvadranas (besivystanti teritorija), III ir IV kvadranai (rezervuota teritorija).

PAGRINDINIAI ŽODŽIAI: *skurdo lygis, regioninės plėtros lygis, regioninės plėtros politikos rekomendacijos, Kulono Progo regionas, Indonezija.*

JEL KLASIFIKACIJA: R11.