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The Relation of Human and Village Development in Indonesia

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Abstract: *Indonesia experienced a recession in the third quarter of 2020 due to the Covid-19 pandemic. This economic crisis is expected to last for quite a long time. Previous studies have shown that the prolonged economic crisis has a significant effect on the decline in human quality. The government must be able to control this by continuing to stabilize human development even though the pandemic is ongoing. One way is to continue providing basic services for the community. Basic services can easily be managed by the central government through the village government which is regulated by law. This research shows that there is a significant positive relationship between human development and rural areas. Another fact obtained is that there are 14 provinces categorized as regions with vicious development where their human and rural development are below the national figure. Papua and West Papua are provinces with the deepest development gap compared to other provinces.*

Keywords: HDI, VDI, Quadrant Analysis

JEL: https://www.aeaweb.org/jel/guide/jel.php

1. INTRODUCTION

The Indonesian recession really happened. Many things have been done to prevent the Indonesian economy from recession, but in fact the impact of the corona virus is too massive. After in the second quarter of 2020 Indonesia recorded a contraction of economic growth, in the third quarter of 2020 Indonesia's growth continued to contract by 3.49 percent (year on year).

This incident cannot be left unchecked. The household business sector, which usually triumphs in times of crisis, also experiences obstacles to develop and grow to help the economy. In contrast to the economic crisis in 1998 where micro and small businesses were able to grow and survive, in this crisis there was not much that the micro and small business sector could do. Moreover, many micro and small businesses do not understand online transactions and the like. According to Suci (2017) states that with all the successes that have been achieved by Micro and Small Enterprises surviving the number of times during the 97/98 monetary crisis, it has weakness points that must be resolved immediately, such as a lack of capital both in quantity and source, lack of managerial ability and lack of skills. operations in organizing and marketing limitations. This limitation is exacerbated by the imposition of restrictions on buying and selling interactions even though licensing has been cut and all injections of capital funds have been disbursed.

The biggest worry of prolonged economic contraction is the decline in the quality of human life. According to Setiawan & Hakim (2013), the contraction of the Gross Domestic Product and Income Tax due to the 2008 economic crisis has an effect on the Human Development Index in the long and short term. An unstable economy for a long time will change the existing lifestyle. Many of them will reduce the nutritional quality of food they normally eat, are reluctant to seek treatment in order to maintain their health, and delay their education to a higher level. This decline in quality will in fact have a negative impact on the economy for a much longer period

ahead. Human quality is the basic capital for a country to compete to increase production and value added with other countries.

The government must be alert to this threat. The decline in quality of life must be overcome by improving the smallest sector. In fact, the smallest sector in this life order is the household sector. Starting from the housing sector, which tries to meet basic daily needs, financial activities on a large scale began. When households try to meet their food needs, the food sector moves. When households meet their housing needs, the real estate and property sectors move. When households want to entertain themselves, the sports and tourism sectors to various types of entertainment activities live and grow. However, to regulate the household sector, which number in the millions, is of course very difficult. The various types of houses and their wide distribution in various islands in Indonesia are the toughest challenges in managing them. As a result, what the government can do is regulate the life order one level above the household sector, namely the government at the village and lurah levels.

The development of the village sector is very important at this phase. The development of the village sector can be vertically regulated and monitored by the central government. The authorities exist and they are connected to each other. Village development is a reflection of the resilience of a region. Law Number 6 of 2014 concerning Villages is the basis for how the close relationship between the central government and local governments is down to the human level.

According to Bhakti, Istiqomah & Suprapto (2012) the importance of improving basic services such as education and health, poverty alleviation, income distribution is one of the factors needed to improve the quality of people in an area. In Law Number 6 of 2014 concerning Villages, these variables are clearly stipulated in Article 75 paragraph 1 where the village head is the holder of the power to manage Village Finance in order to fulfill basic services, including health education and basic infrastructure. In other words, if each village uses village finances to increase village development, it can affect human development during the current pandemic. The urgency of using village finances to be more flexible is expected to be an convenience to maintain human quality, which is feared to decline during a pandemic.

Theoretically, rural development does not only affect human quality but can be the opposite. Good human development can be a capital for good village development too. Village officials who provide basic services to the people around them certainly come from human resources in the village. Therefore, this study aims to look at the relationship between village development and human beings in 2014 and 2018 which is adjusted to the Village Potential data collection which is carried out every four years throughout Indonesia without exception.

2. LITERATURE REVIEW

In this study, the approach to the quality of human development is approached by the human development index. According to UNDP, the Human Development Index (HDI) measures the achievement of human development based on a number of basic components of quality of life. As a measure of quality of life, HDI is built through a three-dimensional approach. These dimensions include long life and health; knowledge, and a decent life. The HDI figures provide a comprehensive picture of the level of achievement of human development as a result of development activities to be carried out by a country/region. The higher the HDI value of a country/region, the better its human development achievement. In addition, to see the progress of human development, there are two aspects that need to be considered, namely speed and status of achievement. HDI is published regularly in annual reports.

Each component of the HDI is standardized with the minimum and maximum values before being used to calculate the HDI. The formula used is as follows.

Health Dimension :

$$I_{health} = \frac{AHH - AHH_{min}}{AHH_{max} - AHH_{min}}$$

Education Dimension :

$$I_{HLS} = \frac{HLS - HLS_{min}}{HLS_{max} - HLS_{min}}$$

$$I_{RLS} = \frac{RLS - RLS_{min}}{RLS_{max} - RLS_{min}}$$

$$I_{education} = \frac{I_{HLS} + I_{RLS}}{2}$$

Expenditure Dimension

$$I_{expenditure} = \frac{\ln(expenditure) - \ln(expenditure_{min})}{\ln(expenditure_{max}) - \ln(expenditure_{min})}$$

where AHH is Life Expectancy, HLS is ecpectation rate od school years, and RLS is average lenght of school.

Previously, the HDI was calculated using the arithmetic average formula, but in the new method, the HDI is calculated as the geometric average of the health, education and expenditure indexes. This is because the use of the arithmetic average formula in calculating the HDI illustrates that low performance in one dimension can be covered by high performance from other dimensions. Meanwhile, using geometric averages in compiling HDI means that the achievements of one dimension cannot be covered by the achievements in other dimensions. This means that to achieve good human development, the three dimensions must receive equal attention because they are equally important. The following is the calculation formula for calculating the HDI of the new method.

$$IPM = \sqrt[3]{I_{health} \; x \; I_{education} \; x \; I_{expenditure}} \; x \; 100$$

On the other hand, measuring the quality of village development is needed to oversee village development according to the 2015-2019 RPJMN targets. Until now, the measurement of village development using Village Development Index (VDI) has been carried out twice, in the framework of planning and evaluation. At the planning stage, the measurement was carried out in 2015, measuring villages registered in the Minister of Home Affairs Regulation (Permendagri) No. 39/2015. Meanwhile, the village data used is the Village Potential Data (Podes) in 2014. The second calculation was carried out in 2018 using lists and village data from the 2018 Village Potential Data Collection. section in 2014 and 2018.

Village development is a complex multidimensional concept. It is hoped that the measurement of the level of progress in village development will still refer to the complexity of the concept. Nonetheless, BPS continues to strive for simplification in terms of measurement instruments and techniques. The indicators used are attempted as much as possible to describe the real conditions of the village development level that are photographed at a time. This section will present a description of the concept of village development in relation to efforts to compile a Village Development Index (VDI).

The dimensions and variables of VDI are based on Law No. 6/2014 on Villages, in particular Article 74 concerning Village Development Needs and Article 78 concerning Village Development Goals. Basically, in calculating the VDI 2018 it is still the same as the VDI 2014 regarding dimensions and variables, methods and measurements, as well as the formulas used. Village development is described by the following 5 dimensions. Basic services, Infrastructure, Accessibility / Transportation, Public Service, and Government Administration

Indonesia has 34 provinces in it. However, VDI data is only calculated in 33 provinces, because all areas in DKI Jakarta are not categorized as villages. Therefore, only 33 provinces were analyzed in this study.

VDI is structured to show the level of development growth in a village. VDI has a range of 0 to 100 and to facilitate interpretation, it is categorized into three categories, namely independent villages, developing villages and underdeveloped villages.

First, Independent village is the village with the best category. Technically, an independent village is a design with an VDI value of more than 75. If a village or area is categorized as this, it can be stated that the village has the availability and access to adequate basic services, adequate infrastructure, easy accessibility / transportation, public services good governance, as well as very good governance. Second, a developing village is a village that has sufficient availability and access to basic services. Technically, a developing village is a village that has an VDI score of more than 50 but less than or equal to 75.

The last category as well as the most worrying category is the underdeveloped village category. Underdeveloped villages are declared as villages with minimal access and access to basic services. Technically, underdeveloped villages are villages that have an VDI score of less than or equal to 50.

3. METHOD

The relationship between village development and human development can be explained by various methods. The method commonly used in general is the Pearson correlation analysis on the two variables if the data shows a normal distribution. However, before looking at the correlation analysis further, the HDI and VDI data will be discussed in more depth through descriptive statistical analysis. The stages of descriptive analysis carried out are as follows

First, scatter plot. Friendly & Denis (2005) int he book of the history of behavior science made a statement about this graphic. Of all the graphic forms used today, the scatterplot is arguably the most versatile, polymorphic, and generally useful invention in the history of statistical graphics. Its use by Galton led to the discovery of correlation and regression, and ultimately to much of present multivariate statistics. In this study, the scatter plot will be used to test how strong the relationship between 2 (two) variables is and determine the type of relationship of the 2 (two) variables whether the relationship is positive, the relationship is negative or there is no relationship at all. The shape of the Scatter Diagram is a graphical representation consisting of a set of points from the value of a pair of variables (Variable X and Variable Y). The relationship will be assumed to be positive if the pattern formed is from bottom left to top right, while it will be negatively related if the pattern is formed from top left to bottom right. It could be that the VDI and HDI variables do not have a relationship if there is no definite or messy pattern.

Second, quadrant analysis. With quadrant analysis, provinces in Indonesia will be divided into four quadrants. Each quadrant has its own interpretation because what will be the intersection point between the X and Y axes is the VDI and HDI values of Indonesia both in 2014 and 2018. In detail, the categorization of the four quadrants is described in the following table:

Table 1. Detail Explanation of Quadrant Analysis

Quadrant	Explanation
(1)	(2)
I	VDI and HDI for province X are above the national figure
II	Province X has an VDI above the national figure, but the HDI is below the national figure
III	VDI and HDI are below the national figure
IV	Province X has an HDI above the national figure, but the VDI is below the national figure

The X axis will show the HDI value while the Y axis shows the VDI value. This means that in a certain year, a province can be categorized as a province with the VDI and HDI above the national statistical average, or it could be that on the other hand, both the VDI and HDI of the

province fall below the average national score.

Ezkirianto & Alexandi (2013) categorize that when the HDI and / or other factors are below the national figure, it is called a vicious condition (quadrant III). Meanwhile, for quadrant II it is called looped village development while quadrant IV is called looped human development. In this research quadrant I will be called normal development because of the harmony between village development and the quality of the people in it.

After descriptive analysis, the VDI and HDI data will be analyzed using the statistical correlation measurement method. Two variables are said to be correlated if changes in one variable are accompanied by changes in other variables, either in the same direction or in the opposite direction. The correlation coefficient measures the strength and direction of the linear relationship of two variables. It must be remembered that a small (insignificant) correlation coefficient does not mean that the two variables are not related. It is possible that two variables have a strong relationship but the coefficient of correlation is close to zero, for example in the case of a non-linear relationship. Thus, the correlation coefficient only measures the strength of linear relationships and not non-linear relationships. It must also be remembered that the existence of a strong linear relationship between variables does not always mean that there is a causality, cause-effect relationship.

Assumptions for correlation analysis:

1. The paired data sample (x, y) comes from a random sample and is quantitative data.
2. Data pairs (x, y) must be normally distributed.

Correlation analysis is very sensitive to outliers data. The existence of outliers will result in shifting the average value so that the data cannot be normally distributed. Therefore, a statistical identification was carried out whether the VDI and HDI data in 2018 and 2014 were all normally distributed using the Shapiro-Wilk test.

The VDI and HDI data will be tested using the Shapiro-Wilk normality test. The Shapiro-Wilk test is a normality test that is widely used, especially after the existence of many statistical programs in circulation. According to Razali & Wah (2011) Shaprio-Wilk is the most powerful normality test compared to other normality tests such as Liliefors or Kolmogorov Smirnov. In addition, the advantage of this test is that it is simple and does not cause differences in perception between one observer and another, which often occurs in normality tests using graphs. The Shapiro Wilk method uses basic data that has not been processed in the frequency distribution table. The data were sorted, then divided into two groups to be converted into Shapiro Wilk. You can also continue the transformation in the Z value to calculate the area of the normal curve. Given an ordered random sample, y1 <y2 <.... <yn, the original Shapiro-Wilk test statistic (Shapiro, 1965 in Razali, et al 2011) is defined as,

$$W = \frac{(\sum_{i=1}^{n} a_i y_i)^2}{\sum_{i=1}^{n} (y_i - \bar{y})^2}$$

where yi is the ith order statistic, $\bar{y}$ is the sample mean,

$$A_i = (a_1, \dots, a_n) = \frac{m^T V^{-1}}{(m^T V^{-1} V^{-1} m)^{1/2}}$$

And $m = (m_1,.....,m_n)^T$ are the expected values of the order statistics of independent and identically distributed random variables sampled from the standard normal distribution and V is the covarian matrix of those order statistics.

Initial estimates in this study VDI and HDI numbers are not normally distributed due to outliers from provinces in eastern Indonesia. Therefore, an abnormal correlation data analysis is needed.

The Spearman test is a correlation method proposed by Carl Spearman in 1904. Siegel (1992) in his book nonparametric statistics for the social sciences states that this method is needed to measure the closeness of the relationship between two variables that do not have to follow a

normal distribution. The calculation of the rank correlation coefficient is denoted by ρ. the calculation steps are as follows:

a) The observed value of the two variables to be measured, the relationship is given a level. If there is the same observation value, the average level is calculated.
b) Each pair of levels is calculated the difference.
c) The difference in each pair of levels is squared and counted.
d) The value of ρ (Spearman correlation coefficient) is calculated by the formula:

$$\rho = 1 - \frac{6 \sum b_i{}^2}{n(n^2 - 1)}$$

where,

ρ is Spearman's correlation coefficient.; bi shows the difference between rank pairs, and; n indicates the number of rank pairs.

The initial hypothesis to be tested states that the two variables studied with the level value are independent, which there is no relationship between one variable and another.

4. RESULTS AND DISCUSSION

We cannot deny that geographic factor determines the progress of an area in any field as well as the development of this village. Geographical conditions that are too broad make it difficult for residents to access the facilities provided by the village government and the central government. Not to mention the challenge of Indonesia, which is an archipelagic country, which reinforces the assumption that between regions will have unequal easy access.

The village development index obtained from the Village Potential Data Collection has a unit of analysis down to the village level. To visualize them one by one into a graph is certainly not easy and difficult to interpret. Therefore, before discussing more deeply, the distribution of village development from 2014 to 2018 between the major islands in Indonesia is described as follows.

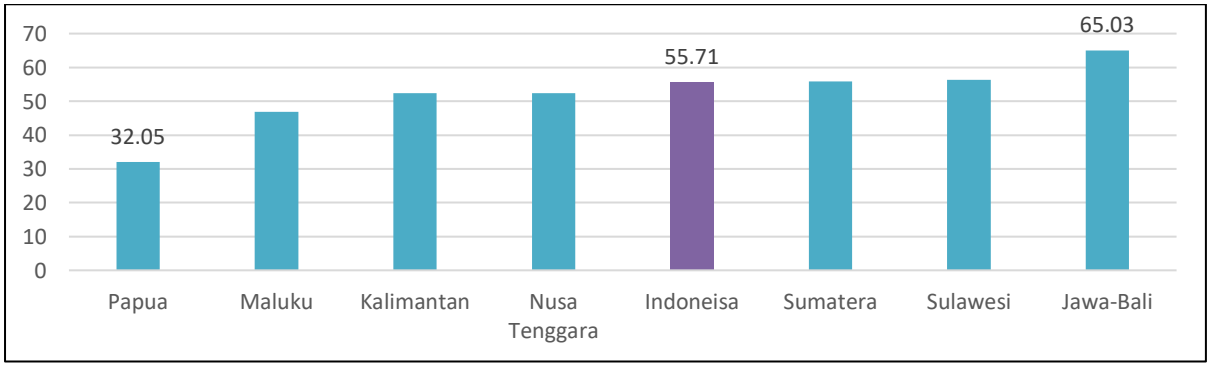

Figure 1. Village Development Index by Islands in Indonesia 2014

The stage of village development in Indonesia is still categorized as a developing village (55.71). There are 3 islands that are relatively better than the national figure, namely Sumatra, Sulawesi, and Java-Bali. The other four islands namely Nusa Tenggara, Kalimantan, Maluku and Papua are below the national figure. As previously thought, areas in eastern Indonesia had less access to basic village services, especially Papua only recorded an VDI of 32.05 points while Java-Bali Island shot up with an VDI of 64.03 points. This means that there is a fairly unequal gap of 32.98 points. This is a big challenge in how rural development can have a relationship or affect the development of human quality in it. Interestingly, from the data above, it is known that there is one large island in the eastern region, namely Sulawesi, which has an VDI figure above the national figure. Of course the presence of Sulawesi can break the assumption that eastern Indonesia is not always worse off than Indonesia in the West.

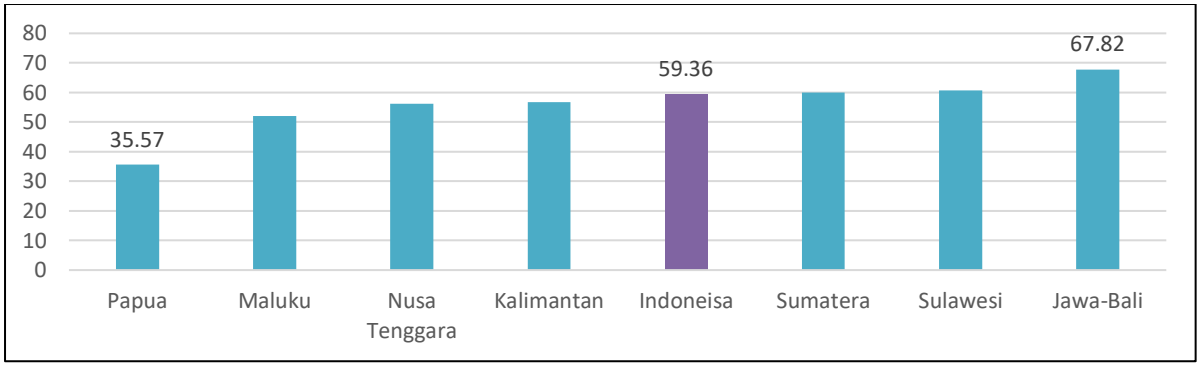

Figure 2. Village Development Index by Islans in Indonesia 2018

Village development cannot be forced to be better in a short period of time. It is evident from the picture above, that the VDI of the major islands in Indonesia in 2018 does not show a change compared to the VDI in 2014. The four years that have passed have shown an overall increase. Nationally, what was originally at 55.71 points rose to 59.36 in 2018. Papua as the island with the lowest VDI has also shown an increase during the four years running, from 32.05 in 2014 to 35.57 in 2018. Interestingly, although simultaneously it shows an increase, the gap between the highest and lowest VDI is still in the same position, which is around 32.35 points, namely between the Java-Bali's VDI and the Papua's VDI. Four years is not enough time to close this gap, but it could be that this joint increase shows that the central and regional governments remain united in increasing access to basic services in all regions, namely not only in western Indonesia, especially Java-Bali.

The second step is to categorize each province based on village and human development variables. As previously stated in the literature review, provinces in Indonesia will be divided into 4 categories, namely normal, looped village development, vicious, and looped human development. The HDI and VDI data for 2014 show the following categories.

Table 2. Classification of Provinces by Village Development Category in 2014

Quad	Category	List of Province
(1)	(2)	(3)
I	Normal	West Sumatera, Riau, Di Yogyakarta, Banten, Bali, East Kalimantan, and North Sulawesi
II	Looped Vilage Dev.	Jambi, South Sumatera, Lampung, Kep. Bangka Belitung, West Java , Central Java, East Java, NTB, South Kalimantan, South Sulawesi, dan Gorontalo
III	Vicious Dev.	Aceh, North Sumatra, Bengkulu, East Nusa Tenggara, West Kalimantan, Central Kalimantan, North Kalimantan, Central Sulawesi, Southeast Sulawesi, West Sulawesi, Maluku, North Maluku, West Papua, Papua
IV	Looped Human Dev.	Kep Riau

- Indonesia's VDI in 2014 was at 55.71 points. Nationally, it is still in the category of developing villages. Meanwhile, Indonesia's HDI in 2014 reached 68.9. Nationally, this figure is in the "medium" group regarding the quality of humans from the dimensions of economy, health and education.
- There are 7 provinces with normal and good categories in terms of village development and human beings. This means that in addition to the six provinces being categorized as having village development above the national average, human development is also in a fairly high group.
- There are 14 provinces that are in the vicious development category. This means that these four provinces have not been able to realistically increase human and village

development simultaneously. These fourteen provinces must be given more attention by getting more attention from the central government so that all provinces do not fall behind in the national development plan going forward.

- There are 11 provinces which are categorized as looped village development. In terms of village development, these eleven provinces have been very good by providing facilities for basic village services, but they are still unable to improve human quality development in them. Seeing this category, it is possible that village development that touches basic services will not have a close relationship with human development in it.

In the next four years, namely in 2018, BPS conducted data collection on Village Potentials again. From this activity, VDI 2018 data was retrieved.By carrying out the same steps by making four quadrants with cutting points for the national HDI and VDI numbers, the following results were obtained

Table 3. Classification of Provinces by Village Development Category in 2018

Quad	Category	List Of Province
(1)	(2)	(3)
I	Normal	Riau, DI Yogyakarta, Banten, Bali, East Kalimantan and North Sulawesi
II	Looped Vilage Dev.	Jambi, Lampung, Kep. Bangka Belitung, West Java, Central Java, East Java, West Nusa Tenggara, South Kalimantan, Central Sulawesi, South Sulawesi, and Gorontalo
III	Vicious Dev.	Aceh, North Sumatra, South Sumatra, Bengkulu, East Nusa Tenggara, West Kalimantan, Central Kalimantan, North Kalimantan, Southeast Sulawesi, West Sulawesi, Maluku, North Maluku, West Papua, and Papua
IV	Looped Human Dev.	West Sumatra, and Kep. Riau

- Indonesia's VDI in 2018 is at 59.36 points. Nationally, it is still in the developing village category, the same as in 2014. Even though the numbers have increased, during that four period of time it is not enough to increase the quality of village development into the category of developed villages. This is because infrastructure development in one of the dimensions of village development is a variable that is difficult to develop and increase rapidly. In the 2019 BPS Publication on the Village Development Index, the dimension of infrastructure is still the dimension with the smallest value, which is only 44.63 points. Even though the improvement in infrastructure conditions has experienced the second fastest increase in the last four years with 5.42 points. The dimension of this infrastructure condition is only inferior to the dimension of the administration of the Village which rose 9.81 points and shot up to 71.40 percent from 2014.
- Indonesia's HDI in 2018 reached 71.39. Nationally, this figure is in the "high" group regarding the quality of humans in fulfilling the dimensions of the economy, health and education. The 2018 VDI and HDI figures will be a cutting point for categorizing provinces in Indonesia.
- There were only 6 provinces in the normal category in 2018, whereas in 2014 there were 7 provinces. The province that fell into the category was West Sumatra Province. This province is experiencing a slowdown in the development of village quality, so it is categorized into quadrant IV, namely looped human development.
- In 2018, there were still 14 provinces in the vicious development category (quadrant III) but with slightly different members. South Sumatra Province falls into this category, even though in 2014 it was still included in the second quadrant in the looped village development category. This means that there is a slowdown in the growth of rural development, which makes the VDI figure for South Sumatra fall

below the national figure. Meanwhile, Central Sulawesi Province has experienced an accelerated growth in rural development so that it has entered a better category, namely looped village development.

From the description of the quadrant analysis above, it can be concluded that there is an indication of a relationship between village development and human development in almost all provinces in Indonesia. What is of greater concern from the data above is that 14 of the 33 provinces which are the unit of analysis in this study, are still below the national figure both in terms of village development and human development. Geographical factors are thought to be a strong reason for the existence of provinces that are lagging behind in national development. This is because the fourteen provinces are far from Jakarta or the island of Java, which has long been known as the key to Indonesia's development. This fact cannot be ignored because no province should be left behind in its development. Nationally this will hamper development for the next few years.

The maximum speed of development in Indonesia is the minimum speed of development in the regions. Therefore, the identification of provinces with the least developed development needs to be given more attention. Moreover, the Covid-19 pandemic will inevitably divert the government to continue the development that has been announced. As of early November 2019, which began to touch 500 thousand people infected with Covid, the government shifted several new applications in future development. Village government services have to be reduced, the development of infrastructure availability is hampered and capital goods are not absorbed.

The identification of provinces that are lagging behind can easily be identified using a scatter plot. From the VDI and HDI scatter plot images in 2018, it is evident that there are several provinces where village and human development are far behind compared to other provinces. Provinces with lagging development can be identified by looking at a point in a circle that is quite far away from the intersection of the X and Y axes. From this figure, it is known that these points are Papua and West Papua Provinces. Their plots are quite far apart from other provinces. This condition will simultaneously hold back village and human development at the national level.

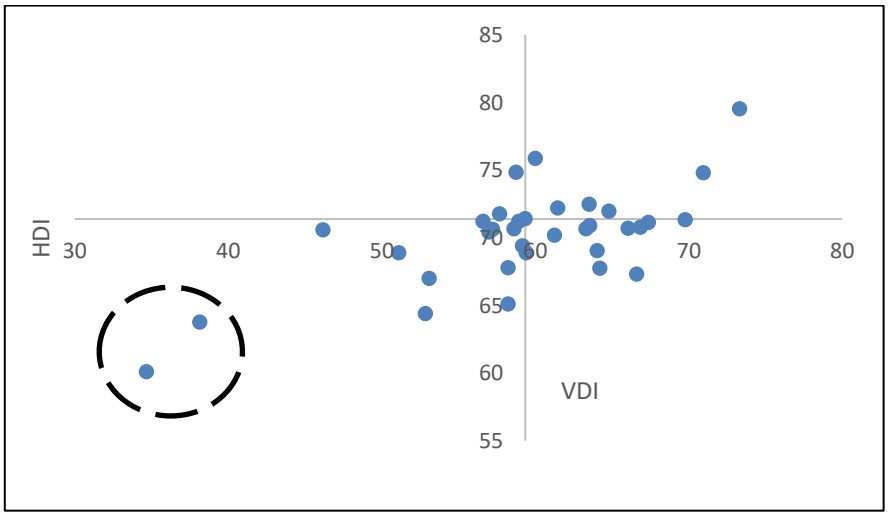

Figure 3. Scatter Plot of All Provinces by HDI and VDI in 2018

Geographical factors are not a definite reason to explain this fact because Maluku and North Maluku provinces are closer to the point crowd than other provinces. In other words, there is hope that Maluku and North Maluku Provinces can minimize the development gap between them and other provinces. What is happening inside Papua and West Papua can actually be a new background for further research. It could be due to security factors, culture or social interactions that are far different from other provinces. Particularly for the security factor, this is the issue most frequently heard regarding the obstruction of development in Papua and West Papua. The tragedy at the end of 2018 in which dozens of workers on the Trans Papua route bridge project in Nduga District were shot dead by the Armed Criminal Group is one of the reasons the development investment climate in Papua and

West Papua is not promising. Infrastructure development which is actually able to open up isolation and a way out of backwardness is in fact not as easy as planned. The research material from Hanim et.al (2010) states that security is one of the variables that most influences development investment in an area such as economic stabilization, administration, government, policy, and institutional factors.

If you look at the publication of the potential of villages in 2018 and 2014, there are interesting facts where the percentage of underdeveloped villages outside Papua and West Papua reaches an average of 23.84 percent, Papua and West Papua Provinces dramatically reached 86.45 percent and 90.74, respectively. percent. And, in 2018, when underdeveloped villages in other provinces had decreased on average to 13.75 percent, Papua and West Papua still held a record at 83.21 percent. This is a strong reason why the two provinces are still lagging behind other provinces. These two provinces have different burdens to complete first. Like comparing it when other regions are able to run, these two provinces have just learned to walk. It's absolutely not fair enough.

Table 4. Tests Of Normality

	Shapiro-Wilk		
	Statistic	df	Sig.
VDI18	,906	33	,008
HDI18	,944	33	,091
VDI14	,954	33	,179
HDI14	,949	33	,126

Based on the Shapiro-Wilk normality test conducted with SPSS 20, it was found that the VDI and HDI data were not normally distributed. Only VDI 2018 data are normally distributed (Sig. <0.005), while the other three variables are not normally distributed. Therefore, the appropriate use of the correlation statistical test is the Spearman correlation statistic. Using the same application, a correlation test was carried out with the following results.

Table 5. Tests of Spearman Correlation

Indicators	Spearman's rho	Sig. (2-tailed)
VDI 18 & HDI 18	0.519	0.002
VDI 14 & HDI 14	0.526	0.002

The next result comes from the Spearman correlation coefficient statistic. VDI and HDI data show a close relationship. Their relationship is positive, where when the development of the village is good, the human development in it is good and vice versa. Statistically, the relationship cannot be categorized as strong because the correlation coefficient is only 0.519 in 2018 and 0.526 in 2014. Even though it is not strong enough, it is significant enough because the significance value of 0.002 is sufficient to draw the conclusion that with a 95 percent confidence level it is known that village development and human development have a relationship with each other, assuming the other variables are constant. This fact is still not sufficient to prove human development or village development first should be the main priority of development in an area. This is because the two of them can influence each other when viewed from the concept and definition.

CONCLUSION

Based on the results and discussion of this study, there are several important points that can be concluded. Using descriptive analysis methods, quadan and correlation analysis are sufficient to explain statistically the closeness of the relationship between village development described by VDI and human development described by HDI. With the Spearmen correlation coefficient value reaching a value of 0.519, it indicates that these two variables have a unidirectional relationship. This means that if village development is optimized, human development will also run optimally and vice versa.

Based on the quadrant analysis, it was found that in 2014 there were 14 out of 33 provinces or around 42.42 percent of the analysis unit which was relatively below the national average, both from village development and human development. The number of provinces that were included in the vicios development category did not change in 2018. This indicates that village and human development are long-term projects that cannot be changed in a short period of time.

However, quadrant analysis gives us an idea of how several provinces can change categories in a short time, namely West Sumatra. This province, which was originally categorized as a province with normal development in 2014, has experienced a slowdown in the growth of the quality of village development in the past four years, but human development growth is still normal. Due to the slowdown in growth, West Sumatra province is included in the looped human development category. Interestingly, this case also shows that village development does not always have to be pursued in advance to achieve human development. However, there is not enough evidence to conclude that village development has an impact on the development of human quality in an area.

HDI and VDI that are not normally distributed are indicated by the existence of provinces with outlier status. Provinces that are suspected of being outliers are Papua and West Papua provinces where in the scatter plot the distance between these two provinces is so far from other provinces. The delay in the development of village and human development cannot be denied because the starting point between Papua / West Papua and other provinces is very different. Like a competition, when other regions are able to run, these two provinces have just learned to walk.

SUGGESTION

Based on the above conclusions, there are several suggestions for the government as well as to make further research related to village and human development. The first suggestion to the government is to pay attention to village development and human development simultaneously. These two variables are quite strongly related. Concurrent development across the province will raise the village and human development categories to a higher category level.

The second suggestion to the government is to pay more serious attention to prioritizing development in the eastern regions, especially Papua and West Papua. The development in these two provinces is so far from other provinces. This development gap that is too far hinders national development and seems to have drifted away over time. Concerns about social jealousy among the nation's children are of greater concern if the development of village servants and human quality is uneven. After that, the development focus can be directed to the other twelve provinces which are categorized as provinces with the vicious development category.

Third, especially for further research is to do a breakdown on provinces in the vicious development category. By dismantling the shaping dimensions of village and human development in fourteen provinces that are in the vicious category, it can be seen what components must be addressed first. Each region has its own development problems, therefore knowing the detailed causes of the uniqueness of the problems of each region can be an effective and efficient way to improve the development of village and human services. A case study for each area that is prone to development will be a more beneficial outcome for the government, especially local governments.

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