



## **Determinants of Village Proliferation: Evidence from West Kalimantan Province**

**Santi Rahmawati<sup>1</sup>, <sup>✉</sup>Eny Sulistyaningrum,**

<sup>1</sup>Faculty of Economics and Business, Universitas Gadjah Mada

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### **Article Information    Abstract**

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This research was conducted to determine the dominant factors which influenced the proliferation of village. As commonly known, these factors are used to accelerate development based on community aspirations. West Kalimantan Province was selected as the object of research since this province is the third largest province in Indonesia but only has few numbers of municipalities. In order to speed up the development in West Kalimantan, the local government needs to proliferate the region into small ones. It will make the regional government easier to manage its control than that of municipality with a larger area. This research used logit estimation in analysis and employed data from the Statistics Indonesia of West Kalimantan Province. The findings show that there were a number of factors affecting the proliferation of villages in West Kalimantan Province in 2008–2018, namely population, unemployment, poverty and regional head periods. Conversely, variables that did not significantly influence were HDI, GRDP and regional income variables. Meanwhile, other factors that also had a significant effect, but reduce the chances of proliferation of village were average rubber production and the percentage of state electricity consumption.

## INTRODUCTION

Village is considered as a meaningless level of the government, but it has power to drive the economy of a region. According to Sudarsono (2015) village is the smallest formal authority and region to control, regulate and manage the needs and interests of local people based on the socio-cultural condition. In a village, the interaction between the village government and community is direct and very close. It makes the village government easily get the community aspiration. Recently, since the regional autonomy was implemented in 1999, villages with larger area, especially in outer java tend to split into smaller ones in order to make the government be more efficient in managing the people. The proliferation of village is important to support local development.

Indonesia as a developing country which has different local characteristics should adopt the bottom-up system approach to suit regional needs. To meet the regional needs, proliferation of a village is needed to aims an increase regional competitiveness. This in line with implementation of the mandate of Law Number 23 of 2014 on Regional Government, in particular article 258 which states that the ultimate goal of development is consider to increase regional competitiveness. However, the development is still unsuccessful, especially in term macroeconomic approach that pays little attention to the imbalance in social development between regions. Broadly, it can be seen from the condition of economic growth, unemployment rate, poverty rate and human development index which are used as the basis of regional macroeconomic indicators.

This research was carried out to investigate the factors that influenced village proliferation through endogenous development theories as a development strategy that originates from internal and participatory nature based on local needs and local specialties as expressed by Muhlighaus and Walty (2001). One of the bottom-up development paradigms is known as the endogenous development for rural areas. Then, Lowe et al. (1996) explain that the basic characteristics of

endogenous development for rural areas are: (1) using separate and unique resources of an area with the principle of sustainable development; (2) having dynamic power of village community initiatives; (3) functioning rural areas to increase economic activity with heterogeneous public services; (4) having limited community in terms of the ability of social groups to participate in economic and development activities in an area; (5) focus on rural development.

Annibal, Liddle, and McElwee (2013) found that village development carried out from the local level or initiated by the community has a positive effect on village development. Thomas (2016) conducted a juridical study of village formation and expansion in Minahasa Regency. This research is used as a reference for village proliferation processes and procedures in accordance with the laws and regulations on village proliferation. Pierskalla, Juan and Montgomery (2017) researched the territorial expansion of the colonial state evidenced from German East Africa 1890–1909. This research was conducted in Germany and had a state scope with the duration of 20 years with 3 states used area variable and a dummy variable regarding the availability of facilities or infrastructure in the form of stations which were divided into 25 types. Another research by Moore (2017) on American political development om terms of expansion and sovereignty beyond the states found that the proliferation was performed at the states level. The findings of Moore (2017) support the assumption that political power greatly influences territorial expansion at the state level.

Kuncoro (2010) emphasizes that the development process is tied to institutional and cultural resources dominant in society, so economic development must rely on the strength of the institutional or institutional system of a region. The main value from the side of this institution is that institutional development and development will reduce transaction costs in production, increase trust between economic and social actors, as well as improve networks and mechanisms in economic transactions. In other words, institutions can affect people's productivity

economically and in turn affect the development process. It can be concluded that the performance of local government depends on the efficient use of the local potential of the community in coordination with the multi-level government institutions starting from rural to national area.

In addition, Khodabandehloo (2014) studied the networking for regional development. The results of this research indicate that regional development which involves stakeholders and a hierarchical system that is based on leadership will provide significant changes. It is almost the same as this research which relates the division of villages to the role of regional heads in the region. In line with Khodabandehloo (2014), Yusni et al. (2014) studied community welfare after village proliferation in Sumberbrantas Village, Batu City. The research revealed that the welfare of the people in Sumberbrantas Village after doing proliferation of village for 6 years has shown quite good changes, or the proliferation of the village has affected the development of the community in the village. Considering all the previous literatures, this research tried to fill the gap of regional proliferation by using a quantitative approach that is still not widely used to analyze factors that influence village proliferation. In addition, this research observed the proliferation at the district level, while other similar studies (Moore, 2017; Pierskalla, Juan and Montgomery, 2017) were at the state level. For more, even though the research by Yusni et.al (2014) was done at the village level, it used qualitative method to measure the impact of village proliferation, while this research used a quantitative method by analyzing the factors that influence village expansion.

Based on Law Number 6 of 2014 concerning Villages in Article 8, village proliferation is an act of holding a new village outside the village that has been formed. The formation of this village is one of the village's arrangements aimed at equal distribution of development results, especially for areas that have a large population and area. Furthermore, the formation of villages according to Government Regulation Number 43 of 2014 concerning Regulations for Implementing

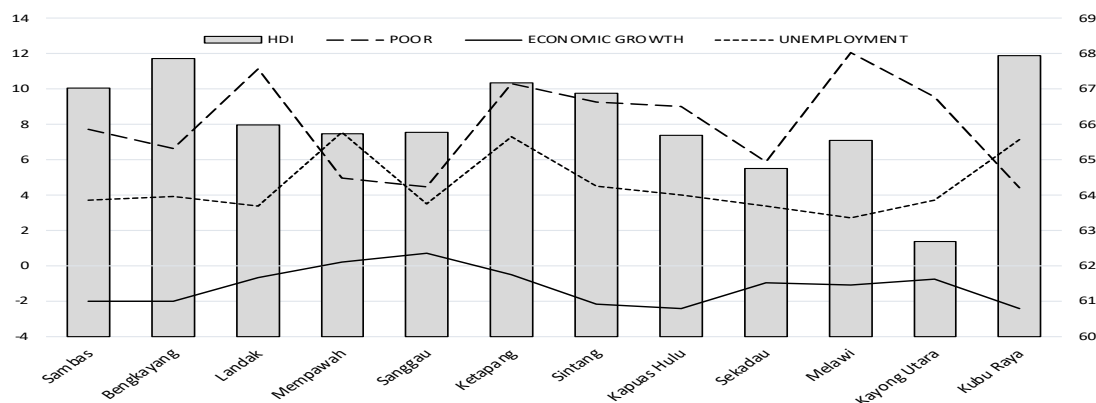
Constitution Number 6 of 2014 concerning Villages, in particular article 2 can be proposed by the government or regency government. Therefore, the proliferation of villages is the formation of new villages aimed at equitable development initiated by the community through the government or regency government. Based on the above constitutions, there are proliferation of village requirements that must be filled, namely population, social conditions, economic resources, human resources, natural resources. In addition there is also one aspect that greatly influences the proliferation of villages, namely the regional head. It is because the formation of villages must be formed through regional regulations with the approval of the regional head and the Regional People's Representative Assembly (DPRD). Therefore it is necessary to analyze the factors which influence the proliferation of villages in West Kalimantan Province to 12 regencies. West Kalimantan Province was selected as the object of research since this province is the third largest province in Indonesia, but has few municipalities. In order to speed up the development in West Kalimantan, the local government needs to proliferate the region in to a small region.

This research used 9 variables to explain and control the symptoms of village proliferation. Hence, this research explains the existence of a reciprocal relationship between the 9 factors that influence proliferation of village and the dependent variable of proliferation of village. The nine factors are Gross Regional Domestic Product (GRDP), unemployment rate, poverty rate, HDI, population, period of head of region, regional income, average rubber production, percentage of state electricity consumption. Thus, the hypotheses in this research are as follows: (1) poverty rate and unemployment rate have a negative influence on the proliferation of villages in West Kalimantan Province; (2) human development index, GRDP, population, period of head of region, total regional income, average rubber production and percentage of state electricity consumption have a positive influence on the proliferation of villages in West Kalimantan Province in 2008-2020. Since 2009

when regional autonomy law was implemented, West Kalimantan province has formed at least 6 new municipalities.

Based on Figure 1, at the beginning of the pandemic the economic growth at all districts in West Kalimantan experienced a contractionary

economy. In 2019-2020, it ran normally as Sambas had economic growth 4,89%, Bengkayang 5,23%, Landak 5,01%, Mempawah 5,81%, Sanggau 4,30%, Ketapang 6,72%, Sintang 5,09%, Kapuas Hulu 4,03%, Sekadau 5,88%, Melawi 5,44%, Kayong Utara 5,04% and Kubu Raya 5,82%.



**Figure 1.** Macro Development Conditions for the Regency in 2019-2020 in West Kalimantan.

Source: Statistics Indonesia of West Kalimantan Province, 2021

Regarding these conditions, it can be seen that there is a minimum number of villages in an area as a requirement to become a new municipality, including the achievement of macro indicators for an area. It is interesting to study that in order to speed up the development in West Kalimantan, the local government needs to proliferate the region into a small region. It makes regional government easily to manage its government than that of municipality with larger area. In addition, West Kalimantan province plays important role in Indonesian development as a border province between countries. To meet the need for equitable development, West Kalimantan Province still needs regional expansion.

With this regard, the proliferation of the province from the territory of the Province of West Kalimantan must at least consist of 5 regencies with each regency has at least 5 sub-districts. Then, each sub-district is divided into minimum of 10 villages. If the minimum number of villages is not met, regional proliferation will be difficult. Based on the data from Statistics Indonesia from 2008 to 2018 the conditions of regional development in West Kalimantan Province was imbalanced in terms of unemployment rate and poverty level for the parent autonomous regions such as Sintang

Regency, Ketapang Regency, Sambas Regency, Sanggau Regency and Kapuas Hulu Regency as well as the new autonomous regions. This is not in line with economic growth that has been almost evenly distributed so that economic progress does not always go hand in hand with improving social conditions in the community.

In addition, this development can be observed from the measurement of the quality of human life with the Human Development Index (HDI) as the average value of the achievements in terms of human development, including long and healthy life, education and have a decent quality of life based on the definition from the Statistics Indonesia. From 34 provinces in Indonesia, West Kalimantan Province is still ranked 5th lowest in terms of the quality of human resources or at rank 30. According to Todaro and Smith (2015, 27) development is not only in terms of income, but other social conditions such as economic growth, unemployment rate, poverty rate and HDI must be balanced.

The COVID-19 pandemic also affects the time span used in this research so that the condition of West Kalimantan changes in general. Based on statistical data from the Statistics Indonesia, the general impact of the pandemic experienced by West Kalimantan

includes: West Kalimantan experienced a recession as it contracted by 3.40% (y-o-y) in the first quarter and 4.46% (y-o-y) in the second quarter; West Kalimantan tourism growth decreased drastically from 4.17 percent in 2019 to -23.44 percent in the third quarter of 2020; An increase in unemployment of 33,222 people; People's purchasing power decreases and tends to only buy basic needs.

**Table 1.** Macroeconomic Indicator 2019-2020

Macro Indicator	2019	2020
Economic Growth	5,09	-1,82
Unemployment	4,16	5,81
Poverty	7,28	7,24
HDI	67,65	67,66

Source: Statistics Indonesia of West Kalimantan Province, 2021

Based on the table above, the data that can be used is only up to 2018 because in 2020 there was a COVID-19 pandemic so that economic growth experienced a contraction. Meanwhile in 2019, there was no change in the change of regional heads in West Kalimantan.

As a result of the pandemic, the impact does not only occur in the health sector but in all fields including social and economy. This urges the regional government to make adjustments to the old policies by taking into account the conditions of the COVID-19 pandemic because it affects the realization of three main indicators, namely economic growth, open unemployment and poverty. For 2019, the data available are only about macro development conditions, and the regional head election that is postponed until 2024, so the usable data are only up to 2018.

Based on the proposed data of proliferation of village in the Government Bureau of Regional Secretariat of West Kalimantan Province as on December 2018, the regions that submitted proposals for proliferation of village were parent autonomous regions such as Sanggau Regency and Sintang Regency. Furthermore, Sekadau Regency and Kubu Raya Regency which are part of a newly created region or new autonomous regions also proposed proliferation of village. In 2018 there were 22

new village proposals submitted by the regency government.

However, the reason for the proliferation of villages is not always based on accelerating development rather than the political reasons of regional leaders, the insistence of elite village officials and the interests of other local governments so that there are several conditions for the proliferation of villages not being fulfilled or even seeming forced. In addition, the proposal for the proliferation of villages is not always submitted by new autonomous regional governments, but also parent autonomous region that has advanced either to form a new village or change the status of the village into a village. Therefore, it is still questionable whether the proliferation of villages in West Kalimantan Province is really for accelerating and equitable development because there are areas that considered capable of dividing villages, but the regional government does not propose proliferation of village.

## RESEARCH METHODS

This research used secondary data obtained in annual form from the Statistics Indonesia (BPS) of West Kalimantan Province in 2008-2018, village data from the Government Bureau of West Kalimantan Province Secretariat in 2008-2018, and data on regional macro development conditions from the West Kalimantan Province Development Planning Agency or *Bappeda* in 2008-2018 with the analysis of logistic estimation models. For the West Kalimantan data, in 2019 there were only 4 key performance indicators available (economics growth, poverty, Human Development Index and unemployment) at this time, so the researchers decided to only use data until 2018.

The type of data used in this research was quantitative, and those were calculated using arithmetic operations. The data collection technique used was study analysis through statistical data from the Statistics Indonesia and the implementation of regional head policies. Then, observations were then carried out using a research instrument in the form of an observation

sheet. According to Gujarati and Porter (2015, 172) the purpose of a research with qualitative dependent variables is to find the probability of an event. Furthermore, Winarno (2017, 6.10) concludes that the logit regression model is a regression model used to analyze the dependent variable in the form of categorical data with a possibility between 0 and 1.

If the probability of  $P_i$  is the probability of village proliferation from Y, then the probability of village proliferation is written with (Gujarati and Porter 2015, 187):

$$P_i = \frac{1}{1 + e^{-Z_i}} = \frac{e^{Z_i}}{1 + e^{Z_i}} \dots \dots \dots (1)$$

Where in the description,  $Z_i = \beta_0 + \beta_1 X_{i1} + \dots + \beta_n X_{in}$ . Instead of the probability of failure is mathematically stated:

$$1 - P_i = \frac{1}{1 + e^{Z_i}} \dots \dots \dots (2)$$

Thus, can be obtained the result as follows:

$$\frac{P_i}{1 - P_i} = e^{Z_i} \dots \dots \dots (3)$$

The value of  $P_i / (1 - P_i)$  is called the odds ratio which is the chance ratio or the ratio between the probability of proliferation of village and the probability of not doing proliferation of village. Interpreting the logit model requires a value or amount called the odds ratio which is the chance of a successful event divided by the probability of a failure event.

Through taking the natural logarithm, the equation above changes to (Gujarati and Porter 2015, 188):

$$L_i = \ln \left( \frac{P_i}{1 - P_i} \right) = Z_i = \beta_0 + \beta_1 X_i \dots \dots \dots (4)$$

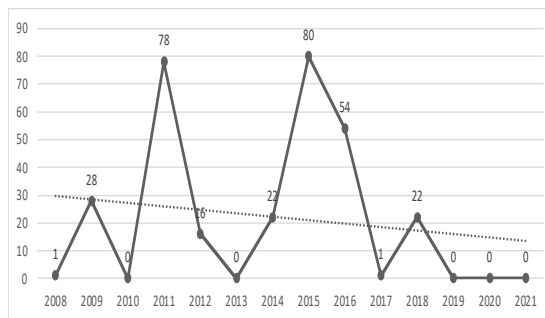
The logit model that has  $\beta_1$  slope coefficient measures the change in L for each change in one unit at  $X_1$  which explains how the log odds ratio of proliferation of village changes with changes in the independent variables used. Coefficient  $\beta_0$  is the value of the log ratio of probability of proliferation of village when there is no change in each independent variable used or equal to 0. However, this research emphasized the marginal effect, namely the percentage point change in the probability of the event consequent

on one unit change in the independent variable in question (Cameron 2005, 215) which shows the change (increase or decrease) in the chance of an event due to changes in every 1 unit of the independent variable in the model.

In estimating the logit model there are several tests to see the feasibility of the logit model used (Gujarati and Porter 2015, 189). Those are: (1) assess the feasibility of the model through the goodness of test value measured by the chi square value in the statistical value of the Hosmer and Lemeshow test. It must show a probability number  $> \alpha$ , meaning that the model is able to predict its observational value or the model can be accepted; (2) assess the whole model that is the likelihood ratio that follows the chi square distribution by showing the probability number  $< \alpha$ , indicating all variables used simultaneously have an influence on proliferation of village; (3) the coefficient of determination test is used to find out the ability of the independent variable to explain the variability in the dependent variable and in logistic estimation. It can be seen in the value of Pseudo R-Square. Specifically, the logit estimation model in this research is as follows.

$$L \left( \ln \left( \frac{P_i}{1 - P_i} \right) \right) = \alpha_i + HDI_i + unemployment_i + poor_i + \ln\_grdp_i + \ln\_population_i + new\_regent_i + \ln\_local\_revenue_i + electricity_i + rubber_i + e_i \dots (4)$$

Where, proliferation of village<sub>i</sub> is dummy variable with = 1 if the regency gets a proliferation of village or the number of villages increases and = 0 if it doesn't get a proliferation or an increase in the number is intercept coefficient;  $HDI_i$  is human development index;  $unemployment_i$  is percentage of unemployment (unit%);  $poor_i$  is percentage of poor population (unit%);  $\ln\_grdp_i$  is GDP value (million rupiah);  $\ln\_population_i$  is total population (thousand people);  $new\_regent_i$  is dummy variable with 1 = new regional head while 0 = regional incumbent or incumbent head;  $\ln\_local\_revenue_i$  is total regional income (million rupiah unit);  $electricity_i$  is percentage of consumption of state-owned electricity (unit%);  $rubber_i$  is average rubber production (units per ton); and  $e_i$  is error individual unit to i.



**Figure 2.** Number of proliferations of village in West Kalimantan Province.

Source: West Kalimantan Province Regional Secretariat Government Bureau 2008-2018

Then, the hypotheses in this research are the increase in the human development index, an increase in GRDP, an increase in regional income, an increase in the population, an increase in the amount of rubber production, an increase in the number of access to state-owned electricity and a decrease in the unemployment rate, a decrease in poverty and a change of regional head in an area, the higher the chance of proliferation of village in that area.

The empirical model in this hypothesis used data until 2018 because in 2019 there was no change of regional head and no data on variables other than macro indicators. Moreover, in 2020 there was a COVID-19 pandemic which resulted in the economy of West Kalimantan experiencing a contraction due to most of the budget allocation for dealing with Covid-19

## RESULTS AND DISCUSSION

The development of village proliferation can be seen from the number of villages that have increased annually for 14 years from 2008 to 2021 in West Kalimantan Province. Based on the results of the review of proliferation of village and facilitation reports for the establishment of sub-districts/villages in West Kalimantan Province, the proliferation of village has a positive impact indicated by the following descriptions: (1) improvement in public service delivery; (2) increase in village creativity with innovation in development; (3) better control of village officials to regulate the area since it is pretty small; (4) opening new jobs in terms of filling public

positions; (5) improvement in the community's economy based on regional potential. Conversely, if a village is not ready to make a village proliferation or seems to be forced during the village preparation period, it will have a negative impact on the development of the village itself.

**Table 2.** The impact of Village Proliferation

	Requirement	Impact on the Regency	Impact on the Village
1.	Total population	There is an oversized organizational structure in the regency because the number of villages is not balanced with the number of residents served.	Total population and number of village government institutions will make village government administration ineffective.
2.	Human Resources (HDI)	The regency government must extra carry out community empowerment activities in the proliferation of village.	The proliferation of villages is difficult to be independent because the human resources used are still sourced from outside the village.
3.	Economic resources (GRDP and regional revenue)	The regency government will be constrained from carrying out regional development priorities because the budget is not ready from regional revenues	New villages have difficulty implementing development programs because they only rely on funds from the central government
4.	Natural resources (rubber)	The regency government budget must be given extra to new villages because there is no natural resource used as an economic resource	New villages have no power to run their own economy and must find other resources, as a result the parent village gets burdened.
5.	Social conditions	The poor and unemployed in the new village	The new village is ineffective because its community is still

Requirement	Impact on the Regency	Impact on the Village
(unemployment and poor)	will be the burden of the regency to open new jobs	in a low social condition which must depend on the parent village.
6. Facilities and infrastructure	The regency government budget will increase because they have to build facilities and infrastructure in the new village	The village government will be constrained from carrying out operational government activities

Source: Review of proliferation of village and facilitation reports on the formation of subdistricts, villages / villages in 2016-2018.

Based on the conditions for village proliferation, there will be an impact if the village proliferation does not meet the indicators of village proliferation requirements. From the results of the tests, the results of data analysis are presented in table 3.

**Table 3.** Logit Model

Independent Variable	Coefficient
C	-50,322*** (16,308)
HDI	0,014 (0,135)
GRDP	1,509 (1,244)
Unemployment	-0,580 ** (0,272)
Poor	-0,516*** (0,167)
Population	9,995*** (3,288)
New_Regent	1,565** (0,781)
Local_Revenue	-1,047 (0,673)
Electricity	-0,069** (0,032)
Rubber	-0,000*** (0,00)

Note: in brackets are standard errors and asterisks showing statistical significance \*\*\* 1%, \*\* 5%, \* 10.

Source: Data Processed, 2022

Based on table 3 above, there are 6 significant variables with 3 significant variables. At  $\alpha = 0.01$  were poor level, population and average rubber production, while the 3 significant

variables at  $\alpha = 0.05$  were the unemployment rate, regional head and state electricity consumption. Furthermore, in the logit model analysis there are several tests conducted to see the feasibility of the logit model used (Gujarati and Porter 2015, 189), including: (1) Hosmer Lemeshow's goodness of fit test to show whether the logit binary model is accepted with a probability of 0.0877 or greater than 0.05 to indicate the model is able to predict the value of its observations or the model can be said to be acceptable because it matches the observational data; (2) the likelihood ratio to show a probability number  $< \alpha$  with a logit model probability of 0.0019 indicating the independent variables simultaneously influence the dependent; (3) the coefficient of determination test to check whether the model has a Pseudo R value of 27.96% which means that the ability of the independent variable influences the dependent variable by 27.96% while the rest is influenced by variables outside the model.

Furthermore, the logit regression was then analyzed using the average marginal effect (AME). Average Marginal Effect shows predictions of probability or change in the chance of village proliferation from each change of 1 unit variable HDI, GRDP, unemployment, poor, population, total regional income, new regional head, electricity and rubber.

**Table 4.** Average Marginal Effect (AME) of proliferation of village

Independent Variable	Average Marginal Effect
Unemployment	-0,055** (0,025)
Poor	-0,049*** (0,014)
Population	0,951*** (0,281)
New_Regent	0,148** (0,071)
Electricity	-0,006** (0,003)
Rubber	-0,000*** (4,01)

Note: in the brackets are standard errors and asterisks showing statistical significance \*\*\* 1%, \*\* 5%, \* 10.

Source: Data Processed, 2022



The biggest change in the influence on the opportunity for proliferation was given by the variable population with an average marginal effect of 0.951, meaning that an increase in the population of 1000 people can increase the chance of village proliferation by 0.951 times because the minimum requirement of village proliferation must have a population of 1500 people.

The next variable that had a great influence is the new regional head as a dummy variable with the newly elected regional head given a value of 1 or more likely to split the village compared to the incumbent regional head. The average marginal effect value of this variable was 0.148, meaning that the regency with new regional heads can increase opportunities for proliferation of village by 0.148 times.

The unemployment variable had an average marginal effect of -0.055 which means that if unemployment increases by 1% it will reduce the chance of proliferation of village by 0.055 times. Likewise, the poor variable which gained average marginal effect or negative with a value of -0.049, indicating that if an increase in the percentage of poor people increases by 1% it will reduce the chance of village proliferation by 0.049.

The next variable is electricity with an average marginal effect of -0.006 which means that if there is an increase in the distribution of the percentage of households using state electricity by the community by 1% it will have an effect in the form of a decrease in the opportunity to expand the village by 0.006. Furthermore, the rubber variable as a natural resource variable gained an average marginal effect of -0.000, meaning that if there is a change in the average production of 1 ton of rubber per year, it will not have an effect on the opportunity for proliferation of village.

According to the processed data, there were 4 variables affected villages in West Kalimantan Province in 2008-2018 and provided opportunities for proliferation of village, namely population, poverty rate, unemployment rate and regional head period. On the other hand, the electricity and rubber variables provided

opportunities, but relatively small for proliferation of village.

Variable population has been a major factor in the proliferation of villages in the past 11 years. This was because the village and district governments tended to apply for expansion only by looking at the population without considering the quality of existing resources in the new village candidates as in the 2016-2018 proliferation of village. Based on data from the Statistics Indonesia in 2018 the average population per village in West Kalimantan Province were 2,099 people and the regency that had a population of more than 3000 people per village were only in Bengkayang Regency, Mempawah Regency, and Kubu Raya Regency. Therefore, the provincial government and the central government has regulated the fulfillment of these population requirements in providing an assessment of proliferation of village related to the addition of 1000 inhabitants.

Another influential variable was social conditions, namely poverty and unemployment. The regencies that have divided the villages in large numbers are such as Sintang Regency with 109 villages and Kapuas Hulu Regency with 70 villages had the lowest unemployment rates among 12 other regencies, 2.6% and 2.2%. Furthermore, the low poverty level was experienced by Kubu Raya Regency by 5.4% and Sekadau Regency by 6.55%. Each of these two regencies for 11 years has divided 32 villages for Kubu Raya and 27 villages for Sekadau. Therefore, in conducting proliferation of village, the regency in general should be able to reduce the level of poverty and unemployment that it has so that it does not become a burden in development in new villages. Although the purpose of regional expansion is equal distribution of community welfare, both villages, sub-districts, regencies and the parent autonomous region must have good social conditions in order to be able to help prospective new areas formed.

A variable that was not included in the terms of expansion in Law Number 6 of 2014 concerning Villages, especially article 8, but had a significant influence was the periods of regional

heads. In fact, there is a need need for political aspects in analyzing the factors that influence proliferation of village because village proliferation is formed by regional regulations, while the regional head becomes the authority holder to approve the village proliferation, so regional regulations must be made and approved by the regional head and Regional People's Representative Assembly (DPRD). In addition, based on the Law Number 23 of 2014 concerning regional government, in particular article 65 states that the authority of regional heads is to propose draft local regulations. Then, this variable was employed as a dummy variable in this research to suspect a positive influence on the opportunities for proliferation of village. Thus, it was found that the regencies with new regional heads tended to expand their villages compared to regional incumbent heads.

The results of the processed data are in line with the existing hypothesis that the more often the head of the region changes, the greater the opportunity for proliferation of village. This is due to the new regional heads who want to have the sympathy of the community and carry out their political promises to support regional expansion which has been a hot issue of the people of West Kalimantan as expressed in the background of making the regional design in West Kalimantan Province 2012-2025 (2012, 4-15). That design was made based on the new regional expansion which contains the estimated number of regional expansions in a certain time period as in article 56 paragraph (4) and paragraph (5) in the Law Number 23 Year 2014 on regional government.

Furthermore, natural resources as seen from the average rubber production had a significant effect but did not increase opportunities for proliferation of village. This is due to the approach of natural resources that is commonly done by small holder rubber plantations. It is because plantations as the leading sector of West Kalimantan are also dominated by oil palm plantations owned by the people and companies. The selection of rubber as the only variable was due to data on average production of palm oil heads owned by the

people or managed by the company that were incomplete for each regency for the last 11 years. Here, rubber had a negative effect on the expansion probability of -0.00 and was considered to have no effect whatsoever based on the average marginal effect so that the negative effect of rubber does not fit the hypothesis.

Next is the electricity variable as one of the approaches in terms of facilities and infrastructure. In general, there are still 5 regencies which had an average distribution of the percentage of state electricity usage below 60%, namely Landak Regency, Sanggau Regency, Sintang Regency, Sekadau Regency and Melawi Regency. Therefore, this research used state electricity as an indicator of ownership of public facilities and infrastructure. The results of data processing showed that electricity gave the opposite results from the proposed hypothesis. This is due to the fact that proliferation of village was dominated by villages that did not have access to use state-owned electricity, such as in Sintang Regency with 109 new villages with only 49% of households receive state electricity facilities. Likewise, Kapuas Hulu Regency with 70 new villages only has 60% of households accessing to state electricity facilities. In addition, based on the results of the village formation facilitation report in West Kalimantan Province in 2016-2018, people who have used state-owned electricity facilities will never withdraw themselves due to community concerns. If they follow the administrative territory of a new village dominated by households with limited facilities and infrastructure, electricity facilities cannot be enjoyed routinely anymore. In addition, the average marginal effect of electricity was very small, only 0.006, so the direction of the influence of this electricity variable was not in accordance with the hypothesis and did not significantly affect the chances of proliferation of village.

## CONCLUSION

This research concludes that there are a number of factors affecting the proliferation of villages in West Kalimantan Province in 2008–2018, namely population, unemployment, poverty and regional head periods. Conversely, variables that did not significantly influence are HDI, GRDP and regional income variables. This finding is in line with Kokotovic's (2016) which examined a panel regression analysis of human capital relevance in the selected Scandinavian and European Countries and found that human capital has no significant impact on economic growth in more developed countries than development through regional proliferation. In addition, Peltzman (2016) found that the economic activity of a region only affects the fiscal capacity of the region, not on the development and proliferation. These findings are also in line with this research.

However, there are also variables that have a significant influence but do not change opportunities for proliferation of village, namely the average rubber production and the percentage of state-owned electricity consumption. In accordance with the conclusion, the formulation of policies that can be proposed are as follows: (1) if the regency wishes to propose village proliferation, then it should fulfill various conditions of village proliferation as the findings in the research are that it has a minimum population of 1500 people for new villages; (2) regencies that wish to propose proliferation of village are recommended to minimize the percentage of unemployment and poverty levels in the area before proposing proliferation of village so that they will not become a burden of development programs in new villages to improve social condition. Considering that village is a smallest formal authority and region to control, regulate and manage the needs and interests of local people based on the socio-cultural condition, this is the important reason why village proliferation is a good tool to accelerate the local development. In the village, the interaction between village government and the community is direct and very close. To adopt

this policy in local government, this is very important to understand what factors that affect village proliferation and is it a positive impact or otherwise.

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