POVERTY ANALYSIS: POVERTY DETERMINANTS IN WEST KALIMANTAN PROVINCE 2010-2018

M.Zainal, SE
Prof. Dr. M. Umar Burhan, SE.,MS
Dr. Iswan Noor, SE.,ME.

ABSTRACT

West Kalimantan Province is the province with the highest number of poor population compared to other provinces in Kalimantan. Even though there is a decrease in poverty level, the decrease is not significant and the poor population in Kalimantan is still concentrated in West Kalimantan. This study aims to determine and analyze the factors that influence poverty levels such as economic growth, education, health and labor force participation rates. on poverty levels in the City and Regency of West Kalimantan Province 2010-2018. This study uses secondary data from the Central Statistics Agency (BPS). The method used in this research is panel data regression method with test aids, namely Eviews 9. In this study it was found that the effect of economic growth was not significantly negative effect, while education, health and labor force participation rates had a significant negative effect on poverty levels in the City and West Kalimantan Province Regency 2010- 2018.

Key words: economic growth, education, health, labor force participation rates, poverty rate in West Kalimantan Province

INTRODUCTION

Poverty is an economic and social problem which is the main discussion in any country. Every government of a country always prioritizes poverty alleviation to be one of the programs in the country, and Indonesia is no exception. Indonesia is currently a developing country, from the time it first became independent until now it has not been separated from the problem of poverty. This fact illustrates that poverty is a serious problem that must be overcome in Indonesia.

Meanwhile the problem of poverty in West Kalimantan, is still a high percentage and number of poor people compared to other provinces in Kalimantan. West Kalimantan is the object of research because in West Kalimantan the number of poor people is compared to all the provinces in Kalimantan. Besides that West Kalimantan is an area directly adjacent to Malaysia so it is important to look at poverty determinants in West Kalimantan. The following table shows the number of poor people in each province in Kalimantan as follows:

Table 1: Total Poor Population in Kalimantan (in thousands)

Provinsi	2016	2017	2018
(1)	(2)	(3)	(4)
Kalimantan Barat	381,92	387,43	387.08
Kalimantan Tengah	143,48	137,88	139,16
Kalimantan Selatan	184,16	194,56	189,03
Kalimantan Timur	211,24	218,67	218,90
Kalimantan Utara	47,03	48,56	50,35

Source: BPS processed data, 2018

Based on the table above poverty experienced by many people in the province of West Kalimantan. With a poor population of around 380 thousand people in the last 3 years, meanwhile the second position is occupied by the province of East Kalimantan with an average of 218 thousand poor people, while the poor population is occupied by the least in North Kalimantan with the number of poor people over the last 3 years only around the average 50 thousand, while Central Kalimantan which is a province ranked second to the smallest level of poverty. Of course this fact illustrates how concentrated poverty in Kalimantan is centered in West Kalimantan. If calculated more than 30-40 percent of the poor population is in the province of West Kalimantan, of course this is an emergency situation considering all the provinces in Kalimantan have abundant natural resources, especially in West Kalimantan, but the reality is not the case, West Kalimantan itself is provinces that border directly with Malaysia, should have more attention for the central government in development development. therefore the problem of poverty should be a shared responsibility especially the government as a buffer to the process of improving life in government and immediately seek to get out of the problem of poverty. from previous research on poverty many found in the study factors associated with human

capital always have a significant effect on the level of poverty that exists. For that reason, in the research, we want to further explore what human capital is most influential on poverty levels in West Kalimantan. Based on the problem formulation above, the purpose of this study is to find out:

1. The effect of economic growth on poverty in the province of West Kalimantan.
2. How does the level of education affect poverty in the province of West Kalimantan.
3. What is the effect of health on poverty in West Kalimantan.
4. How is labor force participation in poverty in West Kalimantan.

THEORETICAL REVIEW

Poverty is a condition where not fulfilling the minimum needs of an individual a day (BPS, 2019). The minimum needs consist of minimum food needs equivalent to 2100 calories and non-food needs such as housing, clothing, education and health. Commodity packages of basic non-food necessities are represented by 51 types of commodities in urban areas and 47 types of commodities in rural areas. Many things can cause poverty. According to Sharp (1996), the main causes of poverty are:

1. Limited source
2. Low income
3. Access to health, very limited education and limited employment.
4. Underdeveloped and protected business assets
5. Low productivity
6. The magnitude of the burden of economic dependence on households
7. There is discrimination

Economic Growth and Poverty

Many factors can influence poverty, one of which is economic growth. Increasing economic growth means the production of goods / services produced increases. Thus more and more workers are needed to produce these goods / services so poverty is reduced and decreases. In the Southeast Asian region, with economic growth, employment can absorb more than a third of the population (Fan and Zhuang, 2009). According to Ayinde et al. (2008) when an increase in economic growth can reduce unemployment so as to reduce poverty.

further according to Cervantes and Dewbre (2010); Ching, Dano, and Jhamtani (2009); and Fan and Zhuang (2009), the development of the capacity of the economy has important essence to reduce poverty and hunger according to the target of the Millennium Development Goals (MDGs) in 2015. This is proven by the reduction of poor population in 29 countries in 2009 as a result of increasing per capita income, (Cervantes and Dewbre, 2010). This is inseparable from the concentration of poverty in rural areas and most of their livelihoods are in the agricultural sector. The latest data, according to BPS (2018), compares the poor population of Indonesia in urban areas to 10.14 million, while in rural areas it is 15.81 million. This also applies in West Kalimantan Province. Poverty in West Kalimantan, poverty is more in rural areas at 8.84% compared to cities at 4.58 in 2018.

Education and Poverty

Apart from economic growth, education can also affect poverty levels. The basic assumption of human capital theory is that a person can increase his income through increasing education. Every additional one year of school means, on the one hand, improving one's work ability and income level. Education is an investment for the formation of quality human capital. According to Jeffrey Sachs in his book "The End of Proverty" one mechanism in poverty reduction is the development of human capital, especially education and health (Sachs, 2005). Whether or not an area of education level can be seen from the average length of school. The higher the average length of school, the better the level of education. Education level is important in the distribution of income and poverty. This is in accordance with Dejanvry et al (2000), which states that education reduces inequality and poverty directly, namely: by increasing productivity for the poor, improving their opportunities to find work with better wages, and opening lines of vertical relationships for children they. Indirectly, education provides more ability for the poor to get their share of total income.

Low education will result in low work productivity of the population. Low productivity results in low income generation, low income so that they cannot meet their basic daily needs, basic needs in question such as clothing, food and shelter. So that with low income and unable to fulfill their basic needs, the number of poor people is high

Health and Poverty

Another factor that also affects poverty levels according to Suryawati (2005) is health. Health problems are things that are vulnerable to be faced by the poor, this is caused by their economic limitations in an effort to improve themselves and meet their respective needs. The level of health will greatly affect the level of community welfare and have a close relationship with poverty.

Health is an important factor in the success of development, especially to improve social welfare. People who have a good level of health will have a high level of work productivity, a high level of income, a high level of education and a number of other positive things.

Level of Labor Force Participation And Poverty

Another factor which also has an effect on poverty level is the level of labor force participation. There is a correlation between the level of labor force participation and the level of poverty (Chendrawan, 2013). This is stated in the results of his research in Banten province which shows a negative relationship between labor force participation and poverty. Labor force participation is important because one of the economic indicators in measuring the level of prosperity of an area is income. Someone who does not work and does not work full of course will not have an income and income is not optimal, the state of community income reaches a maximum if the condition of the level of full employment can be realized

RESEARCH METHOD

In this study the analysis used is panel data regression analysis because the data analyzed in this study are panel data and panel data have many advantages. According to Gujarati (2012) many benefits can be taken from the use of panel data, the following benefits using panel data:

1. Technical estimation of panel data can overcome heterogeneity in an explicit way by providing subject-specific variables.
2. Panel data is able to provide more informative, varied information, reduce colinearity between variables, increase the degree of freedom and be more efficient.
3. By studying repetitive cross section observations, panel data is better for studying the dynamics of change.
4. Panel data is best at detecting and measuring impacts that simply cannot be seen in pure cross-section data or pure time series.
5. Panel data makes it easy to learn complex behavioral models
6. Panel data can minimize the bias that occurs due to a large regressions.

We use secondary panel data obtained from the Central Statistics Agency.

The data is data on poverty, economic growth, education, and health and labor force participation rates. For each of our data we use a period of 9 years (2010-2018) and the number of districts and cities is 14 regions so that the number of observations is 126.

In the panel data model, the equation of the model using cross section data can be written as follows:

$$Y_i = \square_0 + \square_1 X_i + \square_i \; ; i = 1, 2, ..., N \; .... (3.1)$$

Where N is the number of cross-section data

While the equation of the model with time-series are:

$$Y_t = \square_0 + \square_1 X_t + \square_t \; ; t = 1, 2, ..., T \; ....(3.2)$$

Where T is the number of time-series data

Since panel data is a combination of time series and cross sections, the model can be written with:

$$Yit = \alpha + \beta_1 X1 \; it + \beta_2 X2 \; it + \beta_3 X3 \; it + \beta_4 X4 \; it + e \; it \; ………3.3)$$

Where:

T = amount of time or year
N = number of regencies / cities
T x N = number of panel data
Y = Poverty Rate
X1 = Economic Growth
X2 = Education level
X3 = health
X4 = Level of labor force participation
α = constant number
β 1 .. β 4 = regression coefficient of each variable
e = error

Meanwhile in the panel data there are several regression models namely the Common Effect Model, Fixed Effect Model, and Random Effect Model.

RESULTS AND DISCUSSION

The model chosen in this study is the Random Effect Model. Henceforth, by looking at the results of panel data regression with random effect models. by looking at the results of the random effects regression model we can determine the regression equation in this study. The following is a summary of the results of the random effects regression model:

Table 2: Random Panel Model Regression Data Output

Variabel	Coefficient	t-statistic	probability
C	58.11602	5.276727	0.0000
X1	-0.007444	-0.160139	0.8730
X2	-0.596493	-4.774584	0.0000
X3	-0.581313	-3.570484	0.0005
X4	-0.068204	-4.543401	0.0000
Probabilitas (F-Statistic)		0.000000	
R^2		0.469932	

The regression equation obtained from the table above is as follows.

Y = 58.11602 - 0.007444 (X1) - 0.596493 (X2) - 0.581313 (X3) - 0.068204 (X4) + e

From the above equation, it can be described or interpreted the relationship between the independent variable and the independent variable as follows:
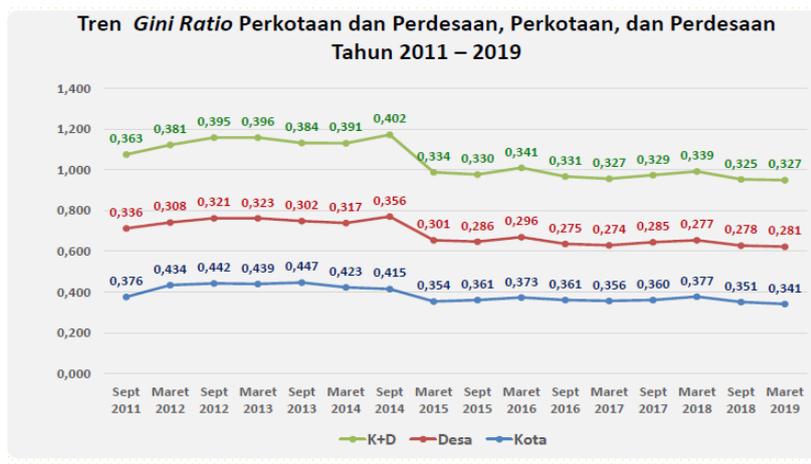
a) A constant of 58.11602 means that if there are no independent variables of economic growth (X1), education (X2), health (X3) and labor force participation rate (X4), then the poverty rate will increase by 58.11602.
b) Economic growth variable (X1) is negative, and has no significant or insignificant effect on poverty levels in West Kalimantan Province in 2010-2018.
c) Educational variable (X2) is negative, and has a significant effect on poverty levels in West Kalimantan Province in 2010-2018. Where when there is an increase in education by 1 percent then the poverty level will decrease by 0.596493 percent.
d) Health variable (X3) shows a negative value and significantly or significantly influences the poverty rate in West Kalimantan Province in 2010-2018. Where when there is an increase in health by 1 percent, the poverty level will decrease by 0.581313 percent.
e) Variable labor force participation rate (X4) is negative, and has a significant effect on poverty levels in West Kalimantan Province in 2010-2018. Where when there is an increase in labor force participation rate of 1 percent, the poverty rate will decrease by 0.068204 percent.

Economic Growth and Poverty

Based on the results of research on economic growth has a negative pattern of relationship to poverty levels in districts and cities in the province of West Kalimantan, in accordance with the coefficient value which is negative that is equal to 0.007444. From the results of this study also showed that the variable of economic growth did not significantly influence poverty levels in the regencies or cities of West Kalimantan Province. That means that when there is an increase in economic growth of 1 percent, the poverty rate does not decrease significantly.

These results are not in accordance with the research hypothesis and theoretical basis in the beginning of the study. This can occur due to uneven distribution of income in other words economic growth is not enjoyed by the whole community only certain groups. the imbalance of the income distribution can be seen from this coefficient. The following data is about the unequal distribution of income seen from the Gini Koofisien in West Kalimantan Province

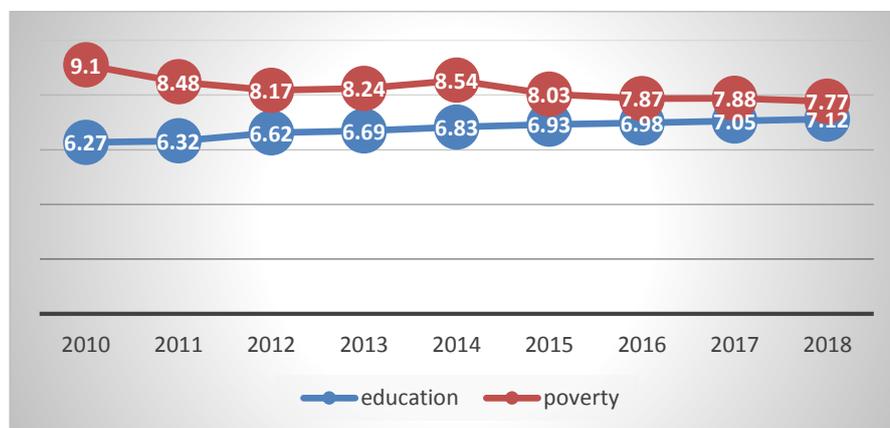**Figure 1: Gini Koofisien West Kalimantan Province 2010-2018**

Based on the figure above it can be seen that there is an imbalance of income distribution. then, According to Todaro (2000), economic growth and income distribution must go together, todaro further explained that the choice that can be taken is not a development strategy that maximizes rapid economic growth, the results of which are only enjoyed by a handful of rich people in a particular country or also not a strategy that focuses on a more equitable distribution of income, meaning that the two things are important to achieve together. In addition, as a result of the insignificant effect of economic growth on poverty levels in the province of West Kalimantan, economic growth is largely contributed by the capital-intensive sector, according to BPS, (2018), such sectors as mining 21.56%, electricity 21.94, information and communication 10.28, while the agricultural sector as the majority of livelihoods has a growth rate of only 4.44%, which is contained in the Economic Growth Rate of West Kalimantan Province according to business sectors.

Besides Todaro, Kuznet also explained through the hypothesis known as the reversed U curve, according to Kuznet (in Mankiw, 2007), in the short term there is a positive correlation between economic growth and income inequality. But in the long run the relationship between the two becomes a negative correlation. That is, in the short term the increase in income will be followed by an increase in the income and poverty gap, but in the long run the increase in income will be followed by a decrease in the income and poverty gap. Not to mention that growth that demands structural adjustments that are recommended to increase economic growth actually worsens poverty in developing countries. Thus economic growth will be better if coupled with the distribution of income so that the poverty rate in West Kalimantan Province decreases.

Education and Poverty

Based on the results of the study the level of education has a negative pattern of relationship to poverty levels in districts and cities in the province of West Kalimantan, and has a significant relationship in accordance with the value of the coefficient that is negative that is equal to. -0.596493 to the level of poverty in the regency or city of West Kalimantan Province and a perfect probability of 0.00000. This means that the effect of education on poverty levels in the province of West Kalimantan can explain by -0.59649 percent, this is quite strong with evidence in the field, when the average length of school increases, poverty will decrease. with the title "analysis of the relationship between education, per capita income and unemployment to poverty in Indonesia". The following are education and poverty levels in West Kalimantan Province.

Figure: 2: Average Length of School and Poverty in West Kalimantan Province, 2010-2018 (years and%)
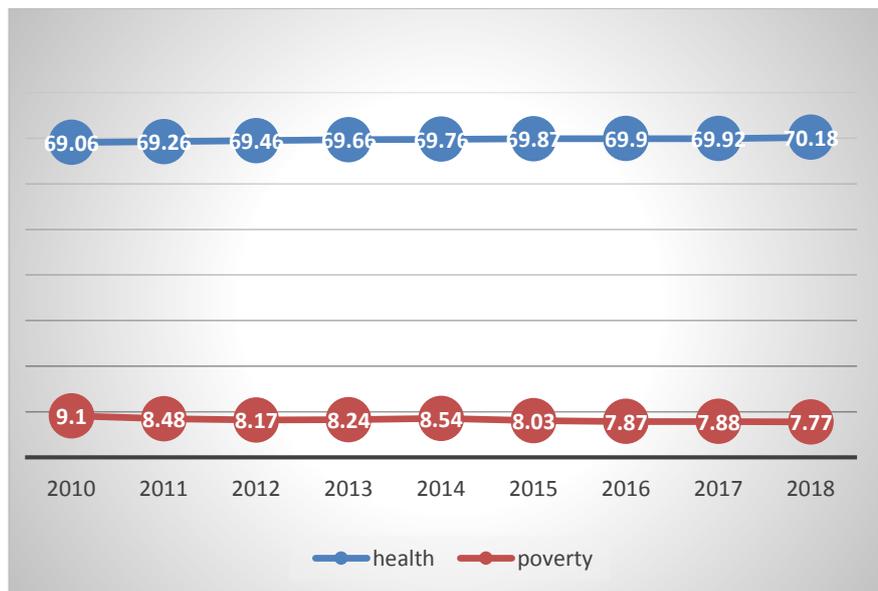
Based on the Figure above it can be seen that the higher the level of education in the province of West Kalimantan, the less the level of poverty. When an area has a high level of education then automatically community productivity increases, because of increasing community productivity, income will increase as well, According to Simmons in Todaro (2006), to save from the poverty line one of the solutions is education. This is illustrated through someone who wants a good income and a high salary so he must be highly educated to get that.

There is a strong relationship between the poor population and education. Education is considered to be able to break the poverty chain directly, because with a high level of education a person can find work with many job qualifications and not limited to just one qualification and in selecting the informal and formal sectors. The results of this study are consistent with research conducted by Andi (2017) on "Analysis of the Effects of Urbanization, Human Development Index, and Economic Growth on Poverty Rates in Indonesia in 2011-2015 (Case Studies in 33 Provinces)" which states that the human development index influences significant impact on poverty levels in Indonesia.

Health and Poverty

Based on the results of health research has a negative sign and its influence is significant on poverty levels in West Kalimantan Province. This means that when there is an increase in health of 1%, it will reduce poverty by 0.581313%. This negative and significant result is in line with research conducted by Anisa Putrizahara with the title "Analysis of the Effects of Education, Health, and Number of Women Working against Poverty in East Java" where in their research health has a negative and significant effect on poverty in East Java Province. The results of this study are in accordance with the hypothesis determined at the beginning of the study. Health is one of the factors that influence poverty. In developing countries health indicators show mortality rates correlated with poverty levels when compared to developed countries (Atmawikarta, 2011). According to Handayani (2018: 1032), someone who is classified as poor has a low level of consumption, of course, will have an impact on nutritional problems, where someone who has poor nutrition can produce low productivity, causing low income so that someone will fall back into poverty. Meanwhile, according to Arsyad (2010), there is a need for government intervention to reduce poverty by improving health because of government intervention, of course health levels will grow better and productivity increases so as to increase wages so that they can meet even minimum needs and even more. Following is the comparison between health and poverty levels in West Kalimantan Province.

Figure: 3: Life Expectancy and Poverty Rate in West Kalimantan Province, 2010-2018 (years and%)

Based on the Figure above, health seen through life expectancy in West Kalimantan Province illustrates an increase in health accompanied by a decrease in poverty or a decrease in the percentage of poor people in West Kalimantan. This is in line with the calculation results presented, that health has a negative relationship with poverty. Where, if health improves then this is followed by a decrease in poverty levels in West Kalimantan Province.

Improved health shows the improved quality of existing human resources. One of the improvements in human capital investment in the health sector is very much needed. Because any activity without health will not produce productivity that can increase one's income. Of course increasing its income can be obtained from increasing productivity so that it can increase income and avoid poverty.

Labor Force Participation and Poverty Rate

The results of this study indicate the level of labor force participation has a negative sign and significantly influences the poverty rate in West Kalimantan Province with a probability of -0.068204. An increase in the variable labor force participation rate (X4) by 1% will reduce poverty (Y) by 0.068204%. This result is in line with research by Tony S Chendrawan, (2013) in Banten province. The study was titled "The Effect of Labor Force Participation Rate (Tpak) on Poverty Levels in Banten Province in the 2010-2011 Period". With the results of a negative and significant relationship to the level of poverty, it is in accordance with the research hypothesis determined at the outset. According to Widyasworo (2014) individual income affects family income, and family income affects state income. In conditions of lack or poverty in the economy of a country or family causes another member in the family to contribute in earning a living. The following picture is the level of labor force participation with the level of poverty in West Kalimantan province.

Figure: 4: TPAK and Poverty in West Kalimantan Province, 2010-2018 (years and%)
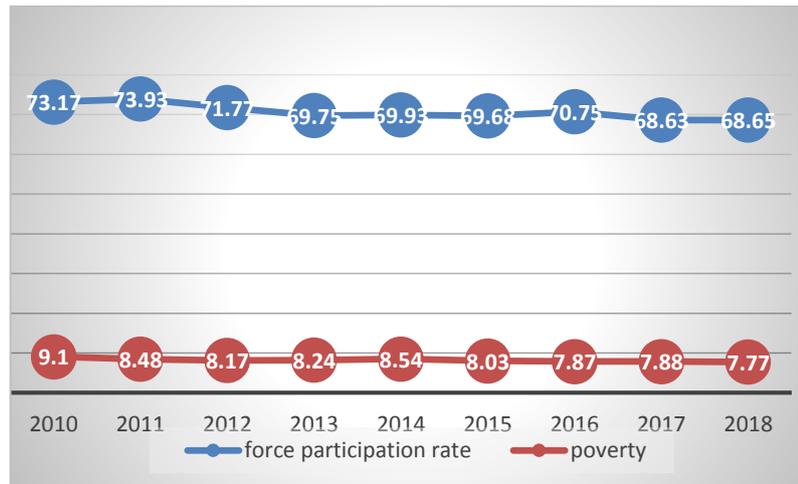

Figure 4 shows the labor force participation rate and the percentage of poor people in West Kalimantan Province in 2010-2018. According to Widyasworo (2014), the higher the labor force participation rate, the income of poor families can increase which can then improve the welfare of the family so that they can meet their basic needs, then slowly this can get the family out of poverty. So by increasing the level of labor force participation, reducing poverty.

CONCLUSIONS

This study tries to examine how the macroeconomic variables are economic growth, education, health and labor force participation rates on poverty levels in the province of West Kalimantan in 2010 to 2018.

Based on the results of the research using panel data method using Eviews 9 and the results of the discussion in the previous chapter have been voiced, the research results can be concluded as follows:

1. Economic growth, education, health and the level of labor force participation together - have a significant influence on poverty levels in the Districts and Cities of West Kalimantan Province in 2010 to 2016.
2. Economic growth has no significant effect on reducing poverty and has a negative relationship pattern. The insignificant economic growth can be caused by the lack of equitable distribution of income in districts and cities in West Kalimantan Province. Economic growth that should be enjoyed by most people actually only enjoyed by certain circles, it is evident from the data of economic growth which is only concentrated in a certain region and its growth fluctuated in the span of 2010 to 2018.
3. Education has a significant influence on poverty levels in the districts and cities of West Kalimantan Province and has a negative relationship pattern. The significant influence of education proves that investment in the form of human capital has a profound effect on poverty in West Kalimantan Province, when HDI increases, productivity increases automatically income increases so poverty can be reduced.
4. Health also has a significant influence on poverty levels in the districts and cities of West Kalimantan Province and has a negative relationship pattern. Significantly health proves very much that like education, human capital based investment has a very big influence on poverty in the Province of West Kalimantan, that is when increasing the level of public health, the community can move well by increasing each potential so that even high productivity can be achieved and get high wages too so that it can be free from the problem of poverty.

Based on the results and discussion that has been described, it can provide suggestions as follows:

1. The government should increase and accelerate accessibility between regions with infrastructure development and coupled with the construction of educational facilities and infrastructure, so that public education in the interior of West Kalimantan can be touched by decent and equal quality education compared to other regions.
2. The government should improve and prioritize economic growth in labor-intensive sectors, so that economic growth achieved can provide benefits for the overall welfare of the community in the form of poverty reduction.
3. The government should open up wide employment opportunities to offset the growth in the workforce so that labor force participation increases, this can be achieved if the government should facilitate the emergence of large, medium, small and micro industries both in urban areas, and specifically in rural areas. So that more jobs are opened, the unemployment rate will decrease, a person's income can be increased, and their economic conditions will also increase. The government can increase state spending to create a multiplier effect, for example is the development of infrastructure in remote and inland areas that are expected to increase economic growth, investment climate so that the number of unemployed decreases. The government should also include entrepreneurship material since sitting in elementary school, so that later a lot of entrepreneurial activities will emerge that can later open up a lot of jobs
4. The government should immediately improve health facilities and equipment, especially in rural areas. in the health sector the government needs to be more active in repairing and adding community health centers and increasing the number of medical personnel so that each health service can always run as it should. Besides facilitating access to health services, freeing health costs for the community, improving the quality of teachers is a priority that must be done by the government.

ACKNOWLEDGEMENT

REFERENCES

Arsyad, Lincolin. 2010. *Ekonomi Pembangunan*, *Edisi Kelima*, UPP STIM YKPN, Yogyakarta

Atmawikarta, Arum. 2011. *Investasi Kesehatan untuk Pembangunan Ekonomi*. Laporan Komisi Makroekonomi dan Kesehatan Bappenas

Ayinde, O. E., Ayinde, K., Memudu, I. J. B., & Ojehomon, V. I. (2007). Empirical Analysis of Agricultural Growth and Unemployment in Nigeria. Journal of Agricultural Research, 3(7), 465–468.

Badan Pusat Statistik Kalimantan Barat 2018, Kalimantan Barat Dalam Angka Tahun 2018, BPS berbagai edisi dan tahun, Pontianak.

Badan Pusat Statistik. Kemiskinan Di indonesia berbagai edisi: Jakarta

Tony S. Chendrawan. 2013. *Pengaruh Tingkat Partisipasi Angkatan Kerja (Tpak) Terhadap Tingkat Kemiskinan Di Provinsi Banten Periode 2010-2011.*artikel Jurusan Ilmu Ekonomi dan Studi Pembangunan Fakultas Ekonomi dan Bisnis UIN Syarif Hidayatullah Jakarta

Cervantes G. D. and Dewbre, J. (2010). *Economic Importance of Agriculture for Poverty Reduction, Working Papers No. 23. OECD Food, Agriculture and Fisheries*, OECD Publishing, France.

Ching, L., L., E. Dano, and Jhamatani, H. (2009*). Rethinking Agriculture*. Third World Resurgence No. 223. Third World Network, Penang.

Dejanvry, A., Sadoulet, E. .Growth, Poverty and Inequality in Latin America: A Causal Analysis.. *Review of Income and Wealth Series* 46, No. 3, September 2000: 267-287.

Gujarati, Damodar N. 2012. *Dasar-Dasar Ekonometrika*: Buku 2 Edisi 5. Jakarta: Salemba Empat.

Fan, Z. and Zhuang, J. (2009). *Agricultural Impact of Climate Change: A General Equilibrium Analysis with Special Reference to Southeast Asia*, ADBI Working Paper No. 131. Asian Development Bank, Mandaluyong City.

Handayani, Asih.2018. *Pengaruh Tingkat Pendidikan, Kesehatan, dan Pengangguran terhadap Tingkat Kemiskinan di Kabupaten Bojonegoro tahun 2002-2015*. Jurnal EKBIS vol.XIX/No.1. Edisi Maret 2018

Mankiw, G. 2007. *Makroekonomi :* edisi 6. Jakarta: Erlangga.

Suryawati Chriswardani. *2005. "Memahami Kemiskinan Secara Multidimensional."Jurnal Manajemen Pelayanan Kesehatan 08(03).*

Widyasworo, Radhitya. 2014. *Analisis Pengaruh Pendidikan, Kesehatan, dan Angkatan Kerja wanita terhadap kemiskinan di Kabupaten Gresik (Studi Kasus Tahun 2008-2012)*. Jurnal Ilmiah Fakultas Ekonomi dan Bisnis Universitas Brawijaya

M.Zainal, SE
Postgraduate Faculty Economy and Business
University of Brawijaya, 65300 Malang, Indonesia
Email:mzainal565@gmail.com

Prof. Dr. M. Umar Burhan, SE., MS
Faculty Economy and Business
University of Brawijaya, 65300 Malang, Indonesia
Email: umar_burhan@yahoo.com

Dr. Iswan Noor, SE., ME.
Faculty Economy and Business
University of Brawijaya, 65300 Malang, Indonesia
Email: iswan@ub.ac.id