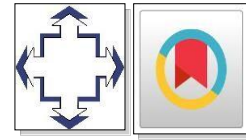


# Poverty Rates and The Factors Influencing Poverty Alleviation: A Case Study in The Province of West Kalimantan, Indonesia



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## ABSTRACT

There is a trend of decreasing the poverty rate in Indonesia. But in the Province of West Kalimantan, there are still five districts with poverty rates that are above the average national rate, namely Melawi, Landak, Ketapang, Sintang, and North Kayong districts. The purpose of this study is to estimate the relationship between government transfers which are proxied by the amount of GAT (General Allocation Transfer) Funds, economic growth, and the quality of human resources in terms of education and health which are proxied by the average years of schooling and public-health insurance membership. Once these factors can be identified, it is hoped that the government will find it easier to reduce poverty levels. Based on Nested Test, model that passes the goodness of fit test is The Common Effect model so this model is used in estimating and interpreting in this research. It shows that there is no difference in the behavior of the research variables, either between time or between individuals. The findings of this study that the economic growth variable is not significant in reducing the poverty level, the variable of literacy level have a significantly negative effect on the poverty level, the variable of public-health insurance membership has significantly positive on the poverty level, and the central government transfer variable proxied by GAT has significantly positive effect significant to the poverty level.

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## 1. Introduction

The Poverty in Indonesia is gradually declining from time to time. Even so, the government keeps putting in a great deal of effort to reduce the poverty rate because one of the main indicators of the success of national development is the rate of reduction in the number of poor people. Likewise, all necessary measures to reach the objectives of regional development are carried out in an integrated and sustainable manner according to the priorities and needs of each region (Didu & Fauzi, 2016). However, despite the anti-poverty measures implemented since independence, poverty is still rampant and afflicts a large proportion of the population especially those in the rural areas (Julius & Bawane, 2011). Data from the Central Bureau of Statistics (2020) states that the number of poor people in Indonesia in September 2019 reached 9.22%. Nonetheless, this figure decreased by 0.19% against that in March 2019 and decreased by 0.44% compared to that in September 2018. Meanwhile, the poverty rate for the Province of West Kalimantan in 2018 was 7.37% and was below the national level, which was still at 9.66% based on data in September 2018. However, there are still five districts with poverty rates above the national figure, namely Melawi, Landak, Ketapang, Sintang, and North Kayong.

Most of the world's poor live in rural areas, and some are rural residents who migrate to other areas (urban) in search of a better livelihood. Most of the poor in these villages are farmers (Abro, Alemu, & Hanjra, 2014; Rodriguez-Pose & Hardy, 2015). In Indonesia, based on statistical data released by the Central Bureau of Statistics (2020), the number of poor people in rural areas is higher than that of urban areas. In March 2018, the number of poor people in urban areas reached 10.14 million or 7.02%, while the poor in rural areas was 15.81 million or 13.20%.

West Kalimantan is the province with the highest poverty rate in Kalimantan (Syahroni, 2018). Based on Central Bureau of Statistics (2017) data, in September 2017, the number of poor people in West Kalimantan still occupied the highest position in Kalimantan. With a total population of 388.81 thousand people, there were 7.86% poor people. Meanwhile, in the same year, the Province of East Kalimantan had 218.67 thousand people with a percentage of poor people at 6.08%, the Province of South Kalimantan with 194.56 thousand people and 4.70% of poor people, the Province of North Kalimantan with 48.56 thousand people and 6.96% of poor people, and the Province of Middle Kalimantan with 137.88 thousand people and 5.26% of poor people.

The strategic plan for poverty alleviation in the Province of West Kalimantan is implemented through six main programs. These programs are improving human resource intelligence, increasing the degree of community welfare, increasing apparatus resources and public services, improving basic infrastructure, increasing financing capacity development, and increasing equitable development, justice, peace, and cultural resilience (Central Bureau of Statistics, 2017). One of the indicators to improve people's welfare is by looking at the level of economic growth of an area. Economic growth is one of the necessary conditions for poverty alleviation efforts because when economic growth occurs, it increases the income of this area.

Fiscal decentralization is one part of fiscal policy carried out in Indonesia. The transfer of power to local governments aims to improve the stability of the democratic system, increase effectiveness and efficiency, stimulate the formation of local and national economic development bases, increase government transparency, and increase community involvement in decision making (Isufaj, 2014). On the other hand, fiscal decentralization also encourages local governments to increase their independence as measured by the ability of the regions to finance the economic development process in their regions with their regional revenue. One of the sources of Regional Revenue is local tax revenue. The more prosperous the residents of an area are, the higher the community's ability to pay taxes. This indicates that the more independent a region, the greater its possibility of reducing poverty (Saputra & Mahmudi, 2012).

Fiscal decentralization in Indonesia is like two sides of a coin. On the one hand, it can improve public services, but on the other hand, the higher the balance of funds provided by the central government to the regions, the higher the probability of corruption in local governments. Thus, it proves that the implementation of decentralization in Indonesia has an ambiguous impact. Despite making regions more responsive and flexible in providing public services, but on

the other hand, the application of decentralization also makes corrupt practices not only occur in the central government but also spread to local governments (Anan, 2012; Akbar, 2013; Hartanto & Probohudono, 2013; Fatoni, 2018). Fiscal policy is one of tools for poverty alleviation programs (Rodriguez & Wai-Poi, 2021). The finding of Jouini et. al. (2018) supports this statement. Apart from being in the form of a balanced fund, another method to overcome the fiscal gap in financing poverty alleviation programs is by tax redistribution at the regional level (Rao, 2004). This method will have an impact on increasing regional flexibility in designing poverty alleviation programs. Redistributive taxation at the sub-national level has the potential of inducing the migration of capital. Besides, there is also a moral hazard problem as the local governments, in their attempt to attract capital, might indulge in a "race to the bottom" that could result in non-optimal poverty alleviation efforts. At the same time, it seems that there are significant information and transaction cost advantages in implementing anti-poverty policies by local governments. In addition to tax redistribution at the regional level, as has been done in many countries (see Rao, 2004), Indonesia uses other tools to overcome fiscal gaps, especially to increase the ability of regions to finance poverty alleviation programs, namely by balancing funds from the center to the government. regions in the form of general allocation funds (GAF) and special allocation funds (SAF).

Increasing welfare through the provision of public services by the government to communities in the regions does cost money. The local governments cover these costs in two ways: from central government transfers to local governments and through the existing sources of income in the region. The revenue sources managed by the local government consist of Local Government Revenue, General Allocation Fund (GAF), Special Allocation Fund (SAF), and Profit-Sharing Fund (PSF). The amount of GAF and SAF transferred by the central government to regional governments is determined by the fiscal gap that each regional government has. In 2020, the amount of General Allocation Fund (GAF) for all regencies/cities in West Kalimantan reached IDR 12.32 trillion, while the physical Special Allocation Fund (SAF) was only IDR 2.35 trillion, Non-physical Special Allocation Fund (SAF) IDR 2.98 trillion, and regional incentive funds for the Province of West Kalimantan and districts/cities IDR 295.77 billion (Central Bureau of Statistics, 2020). The finding from Nursini and Tawakkal (2019) showed that regional government revenues and intergovernmental transfers had a statistically significant effect on reducing poverty in some provinces in Indonesia.

Human Development Index (HDI) indicates the success of regional development. HDI is a composite to assess the level of welfare, level of education, and level of health. Education, both formal and non-formal, plays a vital role in increasing the knowledge and skills of the workforce. Therefore, HDI is created to emphasize that not only economic growth but also people and their abilities could be the key criteria to evaluate the country's development (Hudáková, 2017). In this research, the quality of human resources is proxied by only one measure, namely the HDI. Whereas HDI itself consists of composites that describe purchasing power indicators, health indicators and education indicators. Therefore, to obtain more meaningful research results in policy making, it would be better if the quality of human resources was approached with each of these indicators.

Poor health caused by diseases will have an impact on productivity. Meanwhile, productivity will affect the quantity and quality of activities undertaken to produce goods and services, so that it will have an impact on income. Therefore, basic human needs in the form of health insurance, work accident insurance, death insurance, pension security, and old age benefits must be guaranteed by the government, especially those related to guaranteeing health needs (Fahroez & Sihaloho, 2018). In addition, the existence of health insurance through public health insurance membership will provide health care insurance for the community. This will impact people's ability to purchase health care, changing their health status from sick to healthy (Massardi, Adj, & Pradiptyo, 2014). In addition, public health insurance provides significant financial benefits, especially to low-income families (Wherry, Kenny, & Sommer, 2015). However, Shrestha's research (2021) found that although healthcare use increased among health

insurance for poor (Askeskin) recipients, the results suggested no significant improvements in health outcomes.

From this explanation above, it is interesting to examine how the variables of government transfer funds, health insurance for poor, average years of schooling, and economic growth affect poverty alleviation efforts in The Province of West Kalimantan. Government Funds Transfer has significantly negative effect to poverty level. Economic Growth has significantly negative effect to poverty level. Average years of schooling has significantly negative effect to poverty level. Public-Health Insurance membership has significantly negative effect to poverty level.

## **2. Literature Review Economic Development**

There are human development impacts on poverty in three different ways. These are (i) capability building through economic growth, (ii) capability expansion through poverty reduction, and (iii) capability expansion through social services (Anan & Ravallion, 1993). While the first route belongs to the category of "growth-led security," the other two can be categorized as "support-led security." Economic growth is good for poverty alleviation, but it is not enough. The extent to which growth reduces poverty depends on how we measure poverty and the absorptive capacity of the poor, and the pace and pattern of growth (Skare & Druzeta, 2016; Fosu, 2011; Mulok, 2012, Zaman & Khilji, 2013). The government's public service delivery, such as increasing public access to education and health, is one form of social services needed in poverty alleviation. Increasing level of education and health is the way to developed human capital (Cooray et al., 2011; Reza, F., & Widodo, 2013)

Poverty, apart from being described as a failure to meet the standard of food needs, is also more generally based on a comparison to the standard poverty line, which is said to be poor if the income is lower than the poverty line. Furthermore, poverty seen from the inequality approach is an inequality that occurs in a group of people, especially in the poorest group with other communities. The broadest theoretical approach to welfare is one of the theoretical approaches expressed by Amartya Sen in 1987 (Haughton & Khandker, 2012), which argues that welfare comes from the ability to carry out a function in society. Thus, poverty arises when people do not have the main abilities, do not have an income or get an adequate education, have a poor health condition, feel insecure, have low self-esteem or a feeling of helplessness, or do not have rights such as freedom to speak. Furthermore, the financial costs of schooling are often high, making it difficult for poor household to afford schooling for their children. Such financial costs include school fees and other direct costs such as the costs of transport, school uniforms, and schoolbooks. In addition to financial costs, there are also non-financial costs, such as the opportunity cost of sending children to school because many children, particularly in rural region, may be involved in agricultural work or domestic duties (for example, fetching wood or water) (Julius & Bawane, 2011).

Education is a valuable investment for economic development. Although getting a higher level of education requires more time and budget in the next period, the community will benefit from it. People with higher education tend to get higher incomes than those who are less educated. The higher the education is, the higher the income will be. Improvements in education provide several benefits in reducing poverty levels (Majid, 2014). It is supported by finding from the studies conducted by Awan et al. (2011), Thapa (2013), as well as Arsani, Ario, & Ramadhan (2020). A high education workforce will have high productivity in producing goods and services. It will impact the wage rate received since higher productivity implies higher wages and higher income. High income will increase people's purchasing power so that their basic needs can be met. These basic needs that can be met lift people from the poverty line.

The inflation rate in the healthcare sector is usually higher than the general inflation rate, probably due to special characteristics of the healthcare system. Usually, prices of health services have grown faster than those in other sectors. It has been demonstrated that the pattern of inflation rate in the health sector grows faster than general consumer price index (CPI); the

same rule applies to other goods and services of the health system (Charlesworth, 2014; Cao, Ewing & Thomson, 2012; Malay, 2011). This fact has led to the emergence of insurance institutions that can be used as a mechanism to finance health care. Nevertheless, the effects of health insurance on poverty have been difficult to ascertain (Remler, Koreman, & Hyson, 2017). However, Khullar & Chokshi (2018) said that poor health also contributes to a lower income, creating a negative feedback loop, sometimes referred to as the health-poverty trap. It is supported by the findings of Mukharjee (2015), Joinson, Daphne & Glyn, (2016) and those of Green, Stritzel, & Smith (2018).

Most individuals prioritize their health and consider access to quality health care to achieve their health goals. Grossman (1972) developed an economic framework for analyzing the demand for health care using two approaches: first, health care as an input in the production function for health; and second, health care as the output produced by health care providers (doctors, nurses, hospitals, etc.). However, in most analyses, the first approach is more widely used. The functional relationship of this approach can be written as follows:

$$\text{Health status} = H(\text{health treatment, other inputs, times}) \dots\dots\dots (2.1)$$

Simply put, producing good health requires a combination of health care with other inputs and time. So better health services will benefit individuals and society as a whole if they lead to better health. A good population health status increases productivity, increases per capita income, and increases welfare, and reduces poverty.

In Indonesia, there is health insurance that is managed by a state-owned company called Healthcare and Social Security Agency (BPJS Kesehatan). This program is a new health insurance program from the government that was officially implemented on January 1, 2014. BPJS services are mainly offered in the form of health protection for registered participants. By joining this program, these participants can get health care benefits and protection in meeting their basic health needs. This BPJS program aims to improve health and empower people to maintain, improve health status, heal, and restore public health. The increase in health costs is due to changes in disease patterns, developments in health and medical technology, and geographic conditions in which nearby health facilities are scarcely available. Low health status negatively affects the productivity of workers, which in turn becomes a burden on society and the government (Rismawati, 2015).

### **Fiscal Decentralization**

Fiscal decentralization is one of the key concepts in the public finance theory and a commonly used policy measure in public sector reforms (Yushkof, 2015). With the devolution of power from the central government to regional governments, it is expected that local governments will be able to carry out more aspirational development because they have been given the right to explore all potential sources of revenue for regions to finance the needs of their regional governments. It is also hoped that the community can directly feel the meaning of development itself. Baskaran and Feld (2014) identify four potential channels of the relationship between fiscal decentralization and economic growth: heterogeneity of preferences, market preservation, structural change, and political innovation

Fiscal decentralization enters a poverty alleviation strategy in several ways. The proximity of policymakers to the target groups reduces information and transaction costs of identifying the poor and helps design potentially successful 'capacity improving' and 'safety net' policies (Rao, 2004). Moreover, decentralization moderates the positive effect of good governance on poverty reduction, and the magnitude of the relationship between poverty and decentralization is stronger in poorer municipalities than in the richer ones (Canare & Francisco, 2019). The existence of this transfer from the central government to the regional government will increase the number of development funds for the regions, especially those regions that are less able to explore potential revenue to finance the regional development process. The transfer system should ensure that poorer localities have adequate resources to deliver the desired

'package' of services without adversely affecting their incentive structure (Rao & Das-Gupta, 1995). Local governments, then, can be assigned to functional responsibilities for a wide range of pro-poor public services, which are well-placed to provide efficient and responsive services. It can be said that the issue then becomes one of understanding of how local governments can best finance such service delivery functions in ways that positively foster pro-poor outcomes (and avoid the regressive ones).

The government has implemented various programs in its efforts to reduce poverty. These programs are designed to meet Indonesians' basic needs and to improve the socio-economic welfare of the poorest members of our communities. Social and economic development needs to be encouraged throughout the country, but it should be accelerated in underdeveloped areas to create a more prosperous, democratic, and justice society. Some programs that have been set up to date in Indonesia can be put into three clusters, namely integrated family-based social assistance programs, community development poverty alleviation programs, and micro, small enterprise empowerment poverty alleviation programs (Adji & Rachmad, 2017). Similar poverty alleviation strategies were also implemented in Bostwana (Magombeyi & Odhiambo, 2017). However, the complementarity of various approaches to poverty alleviation programs must be implemented simultaneously for a comprehensive poverty alleviation drive (Singh & Chudasama, 2020).

In line with the increasing need for development funds, regions are required to increase their independence, so that the fiscal gap is getting smaller. The smaller the fiscal gap, the smaller the transfer of balancing funds from the center to the local governments. Regional independence can be seen from the realization of revenue from local revenue originating from taxes and other legal sources. The higher the revenue of local government revenue shows an increase in the ability of the community to pay taxes which can also be interpreted as a reduction in the level of regional poverty. It is generally assumed that by bringing decision-making about the provision of public goods and services closer to citizens, decentralization allows poor people to voice themselves more clearly, facilitates communication and information flows between local policy-makers and their constituents, and fosters improved accountability.

A high education workforce will have high productivity in producing goods and services. It will impact the wage rate received since higher productivity implies higher wages and higher income. High income will increase people's purchasing power so that their basic needs can be met. These basic needs that can be met lift people from the poverty line.

### 3. Research Method

The object of this research is 12 districts/cities in The Province of West Kalimantan. This study uses secondary data over five years, starting from 2015 to 2018. The data sources used in this study are the official publications from the Bureau of Central Statistics, Bank of Indonesia, and others publications from legal agencies related to the research.

The variables used in this study and operational definition of these variables are as follows:

Table 1 The Operational Definition of Research Variables

Variable	Operational Definition	Unit of Account
Poverty Rate	The poverty rate is proxied by the number of poor households in the districts/cities in The Province of West Kalimantan in 2014 – 2017	Person
Government Transfer	Government transfers are proxied by the amount of General Allocation Funds (GAF) and Special Allocation Funds (SAF) received by each district/city government in West Kalimantan Province in 2014 – 2017	Billion IDR

Average Years of Schooling	The achievement of the average years of schooling for each district/city in The Province of West Kalimantan in 2014 – 2017	Years
Economic Growth	The level of economic growth achieved by each district/city in The Province of West Kalimantan in 2014-2017.	Percent
Public-health insurance membership	The number of individuals who participated in the BPJS in each district/city in The Province of West Kalimantan in 2015 - 2017	Person

Methods of data analysis in this study using panel data regression analysis with the Pooled Least Square (PLS) technique. The model is estimated using panel data for all districts and cities in The Province of West Kalimantan using time series data from 2014 to 2017 as well as cross-section data for 12 districts/cities.

The mathematical model formulated is as follows:

$$Pov_{it} = \alpha_0 + \alpha_1 Gr_{it} + \alpha_2 Trans_{it} + \alpha_3 AYS_{it} + \alpha_4 BPJS_{it} + \varepsilon_{it} \dots \dots \dots (3.1)$$

Where

- Pov : Poverty Rate
- Gr : Economic Growth Rate
- Trans : Fund transferred to local government
- AYS : Average years of Schooling
- BPJS : The number of public-health insurance membership
- ε : Standard error of estimation

#### 4. Results and Discussion

##### Data Analysis

This study uses secondary data sourced from official publications of the Bureau of Central Statistics, the Ministry of Finance, and Local Governments. The data used are described below. Poverty Rate is the dependent variable in this study. The poverty rate is proxied by the number of poor people in each district/city that is the object of research. From the figure 1, it can be seen that during the observation period there were several districts/cities that had poverty levels above the average poverty rate in The Province of West Kalimantan. These districts/cities are Pontianak City, Kubu Raya Regency, Sintang Regency, Sambas Regency, Ketapang Regency, and Landak Regency. For Pontianak City, it is very reasonable to have the highest number of poor people in West Kalimantan Province. This is because the population of Pontianak City is the most densely populated in The Province of West Kalimantan. Meanwhile, for Kubu Raya Regency, because of its location close to the provincial capital, it is also natural when there is a relatively high population density so that the number of poor people is also higher than the average number of poor people in the province of West Kalimantan. Matters of a regional concern is when the population of a district/city is relatively small but has several poor people above the average number of West Kalimantan provinces such as Districts of Sambas, Landak, Ketapang, and Sintang. The government should take the key responsibility of identifying the poor and making the poor to be so that every policy developed should be geared in improving the lives of the extreme poor. Cards can be issued to the identified and certified poor so that they can access basic needs and social amenities at a subsidized price if not free (Julius & Bawane, 2011). The factor that has contributed to the increase in the poverty rate in Indonesia is the skyrocketing prices of necessities. During the period from September 2019 to March 2020, the prices of necessities nationally experienced an increase (Central Bureau of Statistic, 2020).

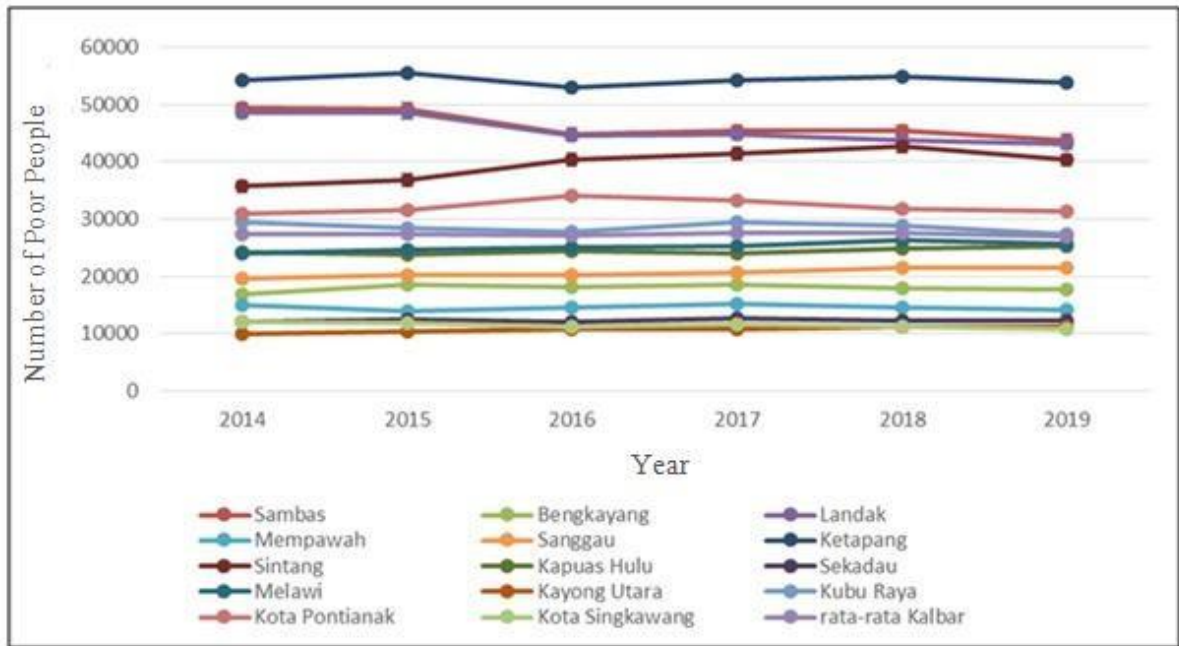


Figure 1. The Poverty Profile in The Province of West Kalimantan in 2014 - 2019 (person)  
Source: Central Bureau of Statistics, 2020.

The first independent variable is economic growth. It is the level of economic growth achieved by each district/city in The Province of West Kalimantan in 2014-2017. The unit of account used is percent.

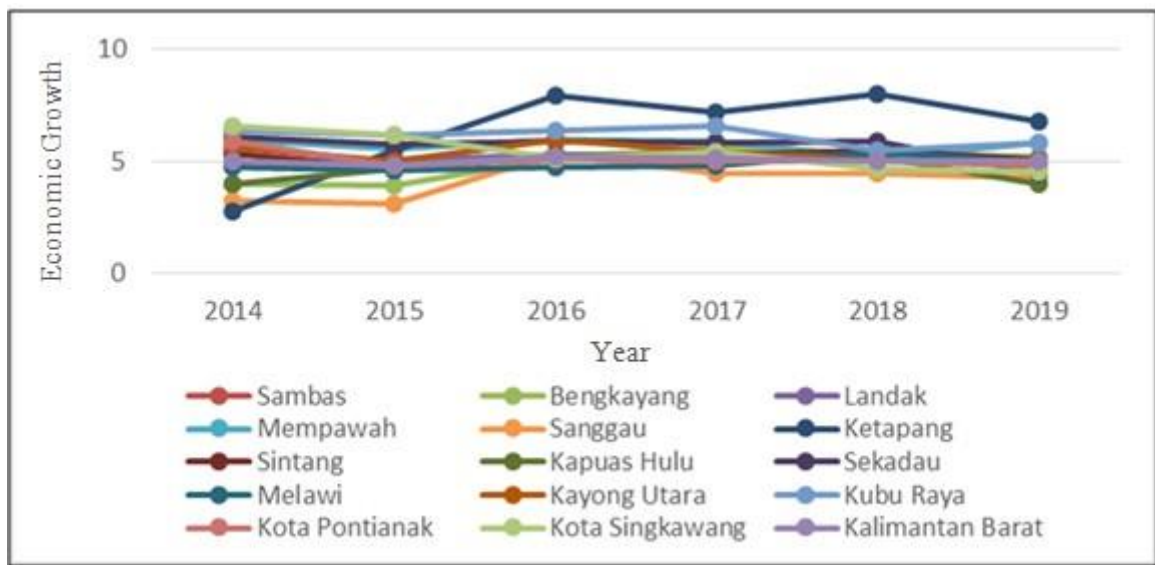


Figure 2. Economic Growth in the Province of West Kalimantan in 2014-2019 (%)  
Source: Central Bureau of Statistics, 2020.

During the observation period, there were several districts with growth rates below the average growth rate of The Province of West Kalimantan (5.05%). These districts are Melawi Regency, Sanggau Regency, Bengkayang Regency and Sekadau Regency. Meanwhile, other regencies / cities have achieved economic growth above the average growth of the Province of West Kalimantan.



The average years of schooling in this research is the average of school enrollment achieved by the district / city that is the research object. The average of school enrollment reflects the attainment of the highest level of education received by the people in the districts/cities that are the research objects.

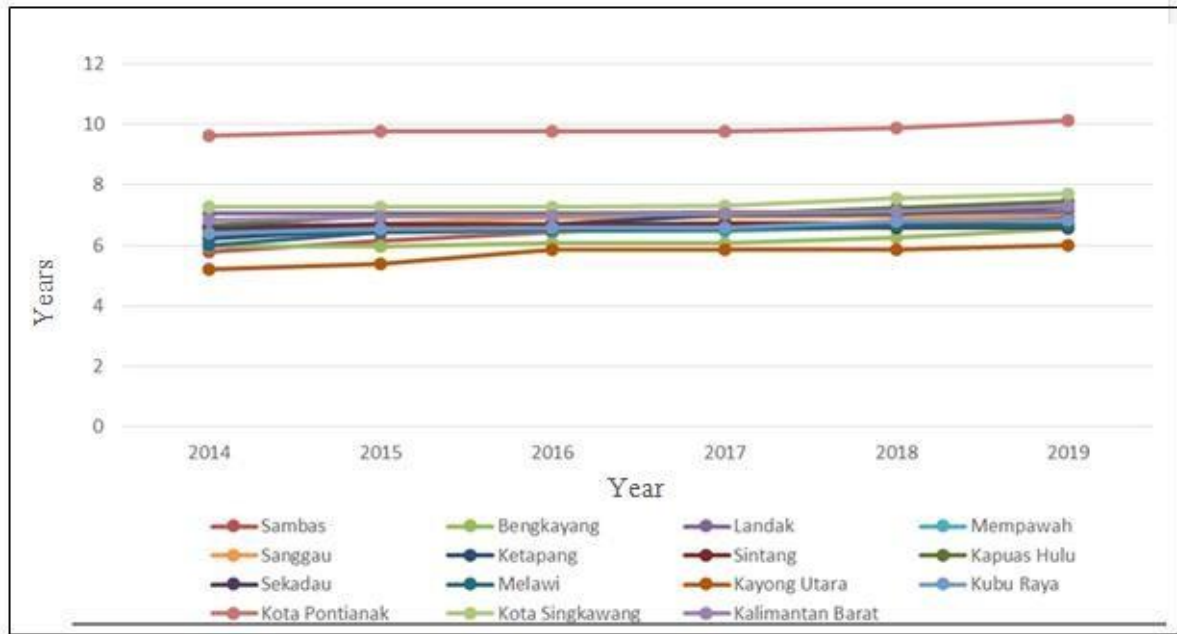


Figure 3. The average years of schooling in The Province of West Kalimantan in 2014 – 2019 (years)

Source: Central Bureau of Statistics, 2020.

Based on Figure 3, it can be seen that Pontianak City has the highest average years of schooling compared to other districts/cities in the Province of West Kalimantan and has average years of schooling higher than one at the Province of West Kalimantan level. Meanwhile, North Kayong Regency has the lowest average years of schooling.

Government Transfer in this research is proxied by the amount of the General Allocation Fund (GAF) and Special Allocation Funds (SAF) received by each district/city that is the object of research from the central government. The amount of GAF and SAF for each district/city is different and the amount of GAF received by each region can change every year.

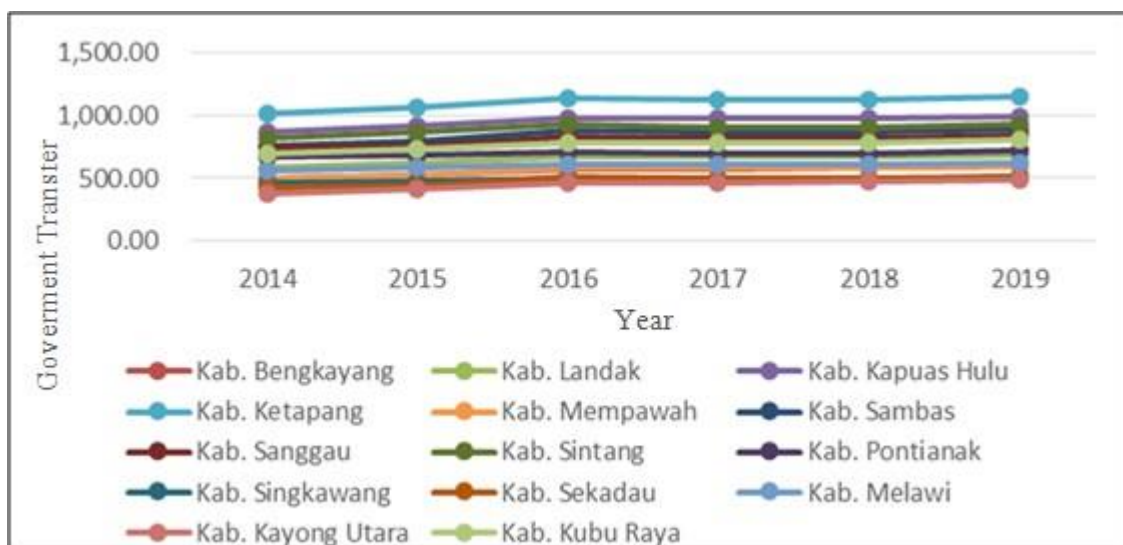


Figure 4. General Allocation Funds (GAF) received by district/city in The Province of West Kalimantan in 2014 – 2019 (Billion IDR)  
Source: Central Bureau of Statistics, 2020.

During the observation period, the highest General Allocation Funds recipient districts in the Province of West Kalimantan were Ketapang and Kapuas Hulu districts. These two districts are relatively poor compared to other districts/cities in The Province of West Kalimantan. The amount of General Allocation Funds received by each district/city is adjusted to their respective conditions. The poorer an area, the greater the General Allocations Funds (GAF) receive. This is intended so that relatively poor districts / cities can catch up with the development process.

Public - health insurance membership in this research is the number of residents in the district/city of the object of research who are public – health insurance participants, both participants aying for insurance premiums themselves or those financed by the government.

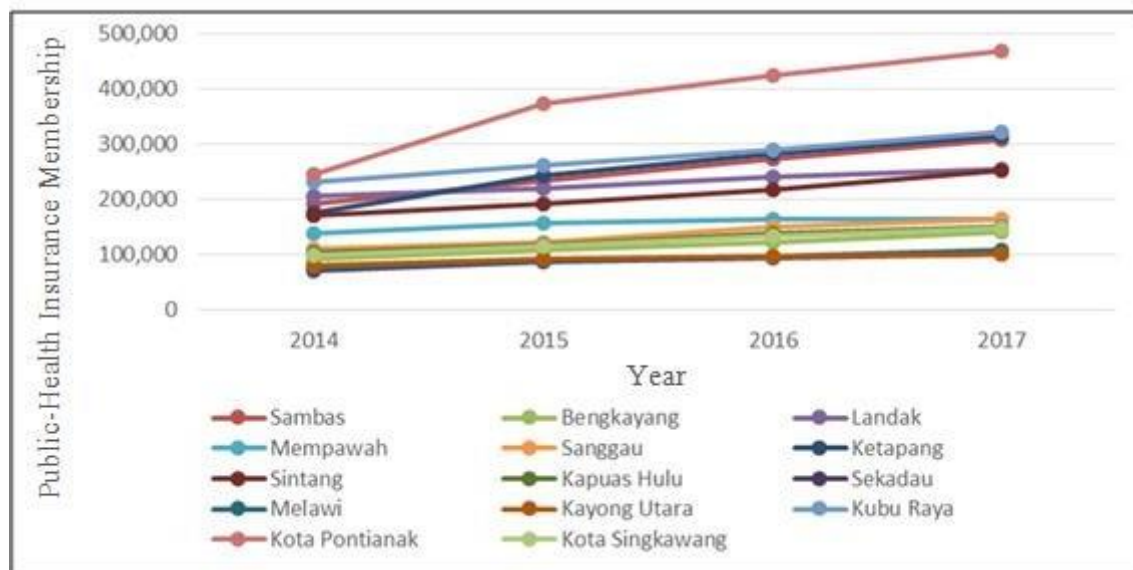


Figure 5. Public - health insurance membership received by district/city in the Province of West Kalimantan in 2014 – 2019  
Source: Central Bureau of Statistics, 2020.

Pontianak City and Kubu Raya district are two research objects with the highest number of public – health insurance memberships. It is caused by the level of public understanding of the importance of health insurance is high because these two research objects are areas with a higher level of development than other areas that are the object of this research. This has an impact on higher access to health service facilities for the community in both areas so that people feel a great need to have health insurance.

**Estimation Result and Analysis**

Based on the model that has been formulated as presented below

$$Pov_{it} = \alpha_0 + \alpha_1 Gr_{it} + \alpha_2 AYS_{it} + \alpha_3 BPJS_{it} + \alpha_4 Trans_{it} + \varepsilon_{it} \dots \dots \dots (3.2)$$

the estimation results are shown in Table 2.

	Common Effect	Fixed Effect	Random Effect
Constants	26058.50 (1.95)**	37012.59 (4.37)*	34061.88 (4.28)*

Gr	-2026.92 (-1.60)	41.47 (0.14)	-206.69 (-0.69)
AYS	-4228.87 (2.65)*	-1299.85 (-0.82)	-2000.73 (-1.49)
BPJS	0.10 (4.95)*	0.01 (1.38)	0.01 (1.16)
Trans	34.02 (4.97)*	-4.16 (-0.50)	9.39 (1.37)
F Stat	27.99	357.71	1.00
R <sup>2</sup>	0.69	0.99	0.07
Adjusted R <sup>2</sup>	0.66	0.99	-0.00

Remarks:  
 Value in the bracket represent the t-statistic  
 \*\* Denote significantly at  $\alpha = 0.05$   
 \* Denote significantly at  $\alpha = 0.01$

Source: Analyzed by Eviews 10, 2021.

With a one-way test at a 5 percent confidence level (t-table value = 1.96), the analysis using the Common Effect model showed that the three variables, namely the average years of schooling, public – health insurance memberships, and the General Allocation Funds variable passed the significance test. Based on Table 3, shows that the best model is the Common Effect model so that the constant and coefficient values are obtained in the Table 3.

Table 3. The Estimation Result with Common Effect Model

Variable	Coefficient	t-Statistic
Constanta	26058.50	1.95**
Gr	-2026.92	-1.60
AYS	-4228.87	2.65*
BPJS	0.10	4.95*
Trans	34.02	4.97*
R-squared	0.69	
Adjusted R-squared	0.66	
F-statistic	27.99	
Prob (F - statistic)	0.00	

Remarks:  
 \*Denote Significantly at  $\alpha = 0.01$ ;  
 \*\* Denote Significantly at  $\alpha = 0.10$

Source: Analyzed by Eviews 10, 2021.

The Regression Result is

$$Pov_{it} = 26058.50 - 2026.92 Gr_{it} - 4228.87 AYS_{it} + 0.10 BPJS_{it} + 34.02 Trans_{it} + \varepsilon_i \dots (3.3)$$

Based on the result from estimation equation above, it can be explained that several variables that significantly affect poverty. These variables are government transfer, average years of schooling, and public - health insurance membership. Government transfers have a positive and significant relationship to the poverty rate. This indicates when central government transfers to regions increase by IDR 1 billion, poverty will increase by 34.02 people, ceteris paribus. The average years of schooling variable significantly negative effect on the poverty level. If the average years of school increases by 1 year, poverty will decrease by 4228.87 people, ceteris paribus. Public – health insurance (BPJS) membership has a significant and positive direction relationship. If the number of BPJS participants increases by 1 person,

poverty will increase by 0.09 people, *ceteris paribus*. This may be due to the high cost of BPJS insurance premiums for some individuals/households so it will be a burden on the community and it will reduce the community's purchasing power for commodities, in addition to health service commodities covered by Public – health insurance (BPJS).

Another finding of this study is that the effect of the amount of government transfer funds is a significantly positive effect on poverty. Government policy through the instrument of decentralization of the balanced fund should have a positive effect in increasing the community welfare because this transfer will increase development funds for regions with high fiscal gaps. However, the findings in this study that transfers of the central government to regions in the form of balancing funds have an opposite effect to the objectives of decentralization and economic theory. This may be due to the inaccurate allocation of the General Allocation Funds as balancing funds by local governments. So that the greater the General Allocation Funds received, the more poverty in the regions will increase. This is also very likely because the poorer a region, the greater the balance funds that will be received by districts/cities, so that regions may report high levels of poverty to get even greater General Allocation Funds (flypaper effects). Besides, the issue of accountability from local government officials will also determine the quality of GAF management (Fatoni, 2018). If there is an increase in the General Allocation Funds received by the region by IDR 1 billion, there will be an increase in poverty by 34.03 people, *ceteris paribus*.

By the principles of economic theory where government spending is expected to be able to build a higher quality of human resources so that an increase in the quality of these human resources will encourage increased productivity and regional economic activity (economic expansion occurs). The next impacts are there are increasing in community income and community welfare. But there is ample evidence that social security for the poor and vulnerable groups often does not reach its targets due to administrative and bureaucratic problems (Wardhana, 2014). In addition, there are research findings that decentralization in Indonesia has actually increased the level of corruption (Harjanto & Astuti, 2017). When social responsibility is low, the goal of poverty alleviation will be difficult to achieve (Sarker & Rahman, 2014). However, if there is a miss allocation of government funds transfers, it could only be that there is an increase in poverty.

Education is a factor for economic prosperity and social development in modern society (Stryzhak, 2020) and widely accepted as the main exit route from poverty. It is the backbone of the growth and development of individuals and the nation (Julius & Bawane, 2011). The average years of schooling will determine the quality of science and knowledge that society will be accepted. The findings of this study are that the average school enrollment has a negative and significant effect on poverty. The longer the average school enrollment is, the more community knowledge will be increased. This increase in knowledge will encourage an increase in community productivity. The higher the productivity, the impact on increasing people's income and in turn, will encourage a poverty reduction. If the average school enrollment increases by 1 year, there will be a decrease in poverty by 4228.87 people, *ceteris paribus*.

The government as a public policymaker should give more serious attention to the education sector in Indonesia, starting from basic education until higher education level. Providing scholarships for students, especially for students who come from poor households, is necessary to increase the average of school enrollment. This is because the chances of dropping out of school for students from poor households are relatively large. With the increasing allocation of scholarships, it is expected that more students from poor households will be able to enjoy higher-level education so that there will be an increase in knowledge in society generally and in turn will reduce the level of regional poverty. Increasing the allocation of this scholarship can be done by increasing the number of recipients and the nominal amount of the scholarship.

Health is one of the main factors in determining the quality of human resources. Because only healthy human resources can be actively involved in the production of goods and services in an economy. With the insurance for health care costs by the public – health insurance (BPJS), it will make it easier for the community to recover their health status when there is a risk of

illness so that when the illness period gets shorter due to the health practices received, there will be an increase in productivity in the community and turn, this will have a negative effect against poverty. However, the research found that public – health insurance (BPJS) participation had a positive and significant effect on poverty levels. If there is an increase of 1 public – health insurance participant, there will be an increase in poverty by 0.06 people, *ceteris paribus*. This may be due to BPJS fees that the community has to pay. It could be that the amount of public – health insurance premium is too high for most Indonesians so that a large enough portion of the community's income is used to pay premium dues every month and this has an impact on decreasing people's purchasing power for commodities other than health insurance premiums.

## Discussion

This research has limitations on the selection of an explanatory variable, namely the number of general allocation funds. The poorer a region will increase the number of general allocation funds it receives. So it appears that the level of regional poverty which is often correlated with the number of poor people in the area will affect the number of general allocation funds that will be received. While in this study it is hypothesized that the amount of general allocation funds affects the level of poverty, whereas the level of poverty affects the number of general allocation funds. For future research, testing should be carried out to determine which variables explain and which variables are the explanatory variables.

## 5. Conclusion

Based on the results from research about the effect of economic growth, the average years of schooling, BPJS membership, and the number of public transfers funds in the form of GAF on poverty in The Province of West Kalimantan, it can be concluded as follows. Economic growth in The Province of West Kalimantan is insignificant in reducing poverty levels. This may be due to uneven development projects in the regions. Development projects should use more labor-intensive technology than capital-intensive projects.

Local governments have a significant role to play in the delivery of pro-poor public services. As already noted, many – if not most – public services that are closely associated with poverty alleviation are generally believed to be best delivered by local governments. Incidence studies (which examine who benefits from public services), for example, show that local sectors, such as education and certain public health services, are indeed among the most pro-poor areas of public spending. The average school enrollment has a negative and significant effect on poverty levels in The Province of West Kalimantan. The longer the average of school enrollment will have an effect on the level of science and knowledge the community has and in turn will increase the productivity and income of the community. This in turn will reduce the level of poverty.

Public – health insurance (BPJS) membership has a positive and significant effect on poverty levels in the Province of West Kalimantan. This may be because the number of monthly premiums that must be paid to BPJS participants is too high for most Indonesians, especially for household with lower - middle income level. These high monthly BPJS premiums can reduce people's purchasing power for other commodities, which will have an impact on increasing poverty.

The amount of government transfers proxied by General Allocation Funds has a positive and significant effect on the poverty level. On the other hand, the poorer a region will cause that region to receive more General Allocation Funds. Regulations regarding the amount of General Allocation Funds can cause a moral hazard in the regions. Or it could be that this significant positive relationship is caused by the misallocation and mismanagement of the General Allocation Funds by regional officials which has led to an increase in the poverty level.

## References

- Abro, Z.A., Alemu, B.A., & Hanjra, M.A. (2014). Policies for Agricultural Productivity Growth and Poverty Reduction in Rural Ethiopia. *World Development*, Vol. 59, 461-474.
- Adji, A. & Rakhmad, S.H. (2017). Indonesia Poverty Reduction Strategies: Shifting Policies to Promote Employment in the Poorest Four Deciles. *Economics and Finance in Indonesia*, Vol 63, No. 1, 13-37.
- Akbar, M.R.H. (2013). Analisis Determinan Ekonomi Korupsi di Era Desentralisasi pada 12 Ibu kota Provinsi Indonesia. *Jurnal Ilmiah Mahasiswa FEB*, 1(2). <https://jimfeb.ub.ac.id/index.php/jimfeb/article/view/612>
- Anan, E. (2012). Desentralisasi Fiskal dan Tingkat Korupsi di Indonesia. *EBBANK*, 3(2), 371–382. <http://ebbank.stiebbank.ac.id/index.php/EBBANK/article/view/50>
- Anan, F & Ravallion, M. (1993). Human Development in Poor Countries: On the Role of Private Incomes and Public Services. *Journal of Economics Perspectives*, 7(1), 133-150. <http://DOI.10.1257/jep.7.1.133>
- Arsani, A., Ario, B., & Ramadhan, A. (2020). Impact of Education on Poverty and Health: Evidence from Indonesia. *Economics Development Analysis Journal*, 9 (1), 87-96. <https://doi.org/10.15294/edaj.v9i1.34921>
- Awan, M., Malik, N., Sarwar, H., & Waqas, M. (2011). Impact of Education on Poverty Reduction. *International Journal of Academic Research*, Vol.3, Part II, 659-664.
- Baskaran, T & Feld, L. (2013). Fiscal Decentralization and Economic Growth in OECD Countries Is there a relationship? *Public Finance Review*, 41 (4), 421- 445.
- Canare, T. & Francisco, J.P. (2019). Decentralization, Fiscal Independence, and Poverty in the Philippines. *Public Budgeting and Finance*, Vol 39, Issue 4, Winter, 94-117. <https://doi.org/10.1111/pbaf.12241>
- Cao, Q., Ewing, B.T., & Thompson, M.A. (2012). Forecasting medical cost inflation rates: A model comparison approach. *Decis Support Syst.*, 53 (1), 154-60. <https://doi.org/10.1016/j.dss.2011.12.012>
- Central Bureau of Statistics. (2017, 2020). *Indonesia Dalam Angka*.
- Central Bureau of Statistics. (2020). *Berita Resmi Statistik Nomer 56/07/Tahun XXIII*, 15 Juli. Retrieved from <https://voi.id/en/economy/37805/causes-of-poverty-definitions-and-data-on-the-poor-in-indonesia>
- Charlesworth, A. (2014). Why is health care inflation greater than general inflation? *J Health Serv Res Policy*. 19(3), 129-30 <https://doi.org/10.1177%2F1355819614531940>
- Cooray, A., Kumar, S., & Queen, M. (2011). What Explains Cross-Country Growth in South Asia? Female Education and the Growth Effect of International Openness (No. 145; Issue June 2014).
- Dana Desa untuk Kalimantan Barat. (2020). Retrieved from <https://pontianak.tribunnews.com/2019/11/16/dana-desa-untuk-kalimantan-barat-tahun-2020-mencapai-rp-2042-triliun>
- Didu, S., & Fauzi, F. (2016). Pengaruh Jumlah Penduduk, Pendidikan dan Pertumbuhan Ekonomi Terhadap Kemiskinan di Kabupaten Lebak. *Jurnal Ilmu Ekonomi*, 6 (1), 100-114.
- Fahroez, A.F., & Sihaloho, E.D. (2018). Pengaruh Penderita Penyakit, Kemiskinan, Dan Pengangguran di Indonesia Terhadap Permintaan BPJS Kesehatan. *Jurnal Ekonomi*, 2(1), 8-18.

- Fosu, A. K. (2011). Growth, inequality, and poverty reduction in developing countries, *Working Paper No. 2011/01, UNU-WIDER*.
- Fatoni, A. (2018). Fiscal Decentralization Dilemma in Indonesia: Between Corruption Accountability and Probability at Local Levels. *Jurnal Bina Praja*, 12 (1), 103-112. DOI: 10.21787/jbp.12.2020,101-110
- Green, M.J., Stritzel, H., & Smith, C. (2018). Timing of poverty in childhood and adolescent health: Evidence from the US and UK. *Social Science & Medicine*, Vol 197, 136-143. <https://doi.org/10.1016/j.socscimed.2017.12.004>
- Grossman, M. (1972). *The Demand for Health: A Theoretical and Empirical Investigation. National Bureau of Economic Research and Columbia University Press. New York.*
- Harjanto, J.T. & Astuti, E.S. (2017). Analysis for corruption and decentralization (Case study: earlier decentralization era in Indonesia). *Jurnal Perspektif Pembiayaan dan Pembangunan Daerah*, Vol. 4. No. 4, April – June, 2338-4603.
- Hartanto, R., & Probahudono, A.N. (2013). Desentralisasi Fiskal, Karakteristik Pemerintah Daerah dan Tingkat Korupsi Pemerintah Daerah pada Tahun 2008 dan 2010. *Proceeding Simposium Nasional Akuntansi XVI Manado*.
- Houghton, J. & Khandker, S.R. (2012). *Pedoman Tentang Kemiskinan dan Ketimpangan*. Jakarta: Salemba Empat.
- Hudáková, J. (2017). Relationship Between Gross Domestic Product and Human Development Index. *The Proceeding of 4th International Multidisciplinary Scientific Conferences on Social Sciences & Arts SGEM*.
- Isufaj, M. (2014). Decentralization and The Increased Autonomy in Local Governments. *Procedia Social and Behavioral Science*, Vol 109, 8 January, 459-463. <https://doi.org/10.1016/j.sbspro.2013.12.490>
- Joinson, C., Daphne, K., & Glyn, L. (2016). Family socioeconomic position in early life and onset of depressive symptoms and depression: a prospective cohort study. *Soc. Psychiatry Psychiatric Epidemiol*, 52, 95 -103. <http://DOI.10.1007/s00127-016-1308-2>
- Jouini, N., Lustig, N., Moumimi, A., & Shimeles, A. (2018). Fiscal Policy, Income Redistribution, and Poverty Reduction: Evidence from Tunisia. *The Review of Income and Wealth*, Vol 64 (1), 225 - 248. <https://doi.org/10.1111/roiw.12372>
- Julius, M.K., & Bawane, J. (2011). Education and Poverty, Relationship and Concerns. A Case for Kenya. *Problems of education in the 21<sup>st</sup> century*, Vol 32, 72-85.
- Khullar, D., & Chokshi, D.A. (2018). Health, Income & Poverty. *Health Affairs*, October 4, Retrieved from <https://www.healthaffairs.org/doi/10.1377/hpb20180817.901935/full/>
- Magombeyi, M.T. & Odhiambo, N.M. (2017). Poverty dynamics in Botswana: Policies, trends, and challenges. *Cogent Social Sciences*, 3, 1-12. <http://DOI:10.1080/23311886.2017.1329246>
- Majid, A. (2014). *Strategi Pembelajaran*. Bandung: PT RemajaRosdakarya.
- Malay, D.S. (2011). Payments for surgical services and the medical inflation rate. *J Foot Ankle Surg*, 50(1), 74 -76. <https://doi.org/10.1053/j.jfas.2010.11.001>
- Massardi, R., Adji, A., & Pradiptyo, R. (2014). The Effect of Medical Test to Belief Updating and Willingness to Pay for Health Insurance Premium: Evidence from Laboratory Experiment. *The Open Public Health Journal*, Vol 10, 2017, 41-51. <https://benthamopen.com/contents/pdf/TOPHJ/TOPHJ-10-41.pdf>
- Mukharjee, K. (2015). Poverty as a cause and consequence of Ill Health. *International Journal of Epidemiologic Research*, Vol 2(4), 209 - 220.

- Mulok, D., Kogid, M., Asid, R., & Lily, J. (2012). Is economic growth sufficient for poverty alleviation? Empirical evidence from Malaysia. *Cuadernos de Economia*, 35(97), 26-32. [http://dx.doi.org/10.1016/S0210-0266\(12\)70020-1](http://dx.doi.org/10.1016/S0210-0266(12)70020-1)
- Nursini, N. & Tawakkal. (2019). Poverty alleviation in the context of fiscal decentralization in Indonesia. *Economics and Sociology*, 12(1), 270-285. <https://doi.10.14254/2071-789X.2019/12-1/16>
- Rao, M.G., & Das-Gupta, A. (1995). Intergovernmental Transfers and Poverty Alleviation: Environment and Planning. *Government and Policy*, Vol. 13, No. 1, 1-23.
- Remler, D.K., Korenman, S.D., & Hyson, R.T. (2017). Estimating The Effects Of Health Insurance And Other Social Programs On Poverty Under The Affordable Care Act. *Health Affairs*, Vol. 36, NO. 10. <https://doi.org/10.1377/hlthaff.2017.0331>
- Reza, F., & Widodo, T. (2013). The Impact of Education on Economic Growth in Indonesia. *Journal of Indonesian Economy and Business*, 28(1), 23–44.
- Rismawati. (2015). Pelayanan BPJS Masyarakat di Puskesmas Karang Asam Kecamatan Sungai Kunjang Kota Samarinda. *Jurnal ilmu Administrasi Negara*, 3 (5), 1668-1682.
- Rodriguez, L. & Wai-Poi, M. (2021). Fiscal Policy, Poverty and Inequality in Jordan: The Role of Taxes and Public Spending. *Policy Summary of World Bank Report*. <https://www.worldbank.org/en/country/jordan/publication/fiscal-policy-poverty-and-inequality-in-jordan-the-role-of-taxes-and-public-spending>
- Rodriguez-Pose, A. & Hardy, D. (2015). Poverty and Inequality in the Rural Economy from a Global. *Applied Geography*, Vol 5, 1-13.
- Saputra, B., & Mahmudi, M. (2012). Pengaruh Desentralisasi Fiskal terhadap Pertumbuhan Ekonomi dan Kesejahteraan Masyarakat. *Jurnal Akuntansi & Auditing Indonesia*, 16 (2), 185–199.
- Sarker, A.E. & Rahman, M.H. (2014). The Role of Social Accountability in Poverty Alleviation Programs in Developing Countries: An Analysis with Reference to Bangladesh. *Public Organization Review*, Vol 14, Issue 1, <http://DOI:10.1007/s11115-014-0275-x>
- Shrestha, R. (2021). Health Insurance for the Poor, Healthcare Use and Health Outcomes in Indonesia. *Bulletin of Indonesian Economics Studies*, Vol 57, Issue 1, 85-110.
- Singh, P.K., & Chudasama, H. (2020). Evaluating poverty alleviation strategies in a developing country. *PLoS ONE*, 15(1): e0227176. <https://doi.org/10.1371/journal.pone.0227176>
- Stryzhak, O. (2020). The relationship between education, income, economic freedom and happiness. *SHS Web of Conferences* 75, 03004. <https://doi.org/10.1051/shsconf/20207503004>.
- Skare, M. & Druzeta, R.P. (2016). Poverty and Economic Growth. *Technological and Economic Development of Economy*, 22(1), 156-175.
- Thapa, B.S. (2013). Relationship Between Education and Poverty in Nepal. *Economic Journal of Development Issues*, Vol. 15, No. 1, 148-161.
- Wardhana, D. (2019). Decentralization, Democratization, And Social Protection In Indonesia: A Systematic Review of the Literature. *The Indonesian Journal of Development Planning* Volume III No. 2 – August, 164-184.
- Wherry, L., Kenney, M., & Sommer, B.D. (2016). The Role of Public Health Insurance in Reducing Child Poverty. *AcadPediatr*, Apr; 16(3 Suppl): 98–104. <http://DOI.10.1016/j.acap.2015.12.011>



- Yushkof, A. (2015). Fiscal Decentralization and Regional Economic Growth: Theory, Empirics, and Russian Experience. *Russian Journal of Economics*, Vol 1, 404-418. <https://doi.org/10.1016/j.ruje.2016.02.004>
- Zaman, K. & Khilji, B.A. (2013). The relationship between the growth-inequality-poverty triangle and pro-poor growth policies in Pakistan: the twin disappointments. *Economic Modelling*, 30, 375-393. <http://dx.doi.org/10.1016/j.econmod.2012.09.023>
- Rao, G.M. (2004). *Poverty Alleviation under Fiscal Decentralization*. Retrieved from <http://www1.worldbank.org/publicsector/decentralization/March2004Course/PovertyAlleviation.pdf> at March 31, 2021.
- Syahroni. (2018). *Angka Kemiskinan Kalbar Tertinggi Sekalimantan*. Retrieved from <http://pontianak.tribunnews.4com/2018/09/25/berdasarkan-angka-bps-angka-kemiskinan-kalbar-tertinggi-se-kalimantan>