

Can Economic Growth, HDI, and Zis Contribute to Poverty Reduction In South Kalimantan?

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ABSTRACT

This study investigates the impact of economic growth and the Human Development Index (HDI) on poverty, with Zakat Infaq Sedekah (ZIS) as a moderating variable. This study is quantitative, and the analytical methods consist of panel data regression analysis and Moderated Regression Analysis (MRA) aided by Eviews 9 data tools. The findings revealed that economic growth has a positive and substantial influence on poverty, whereas HDI has a negative and significant effect on poverty. However, ZIS does not mitigate the impact of economic development on poverty, nor does it modify the impact of the HDI on poverty. This result indicates that the ZIS does not help decrease poverty in South Kalimantan.

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Introduction

The state, through the government in it, is obliged to carry out development for all its people towards better conditions. Nevertheless, according to Hasan and Azis (2018), the main problems faced by development are underdevelopment, dependence, helplessness, ignorance, and low health, all of which boil down to poverty. Poverty is the incapacity to meet the fundamental requirements of clothes, food, housing, health, education, and safety.

Poverty is a problem almost experienced by all countries worldwide, especially developing countries, including Indonesia. The poverty rate in Indonesia is as follows (kalsel.bps.go.id)

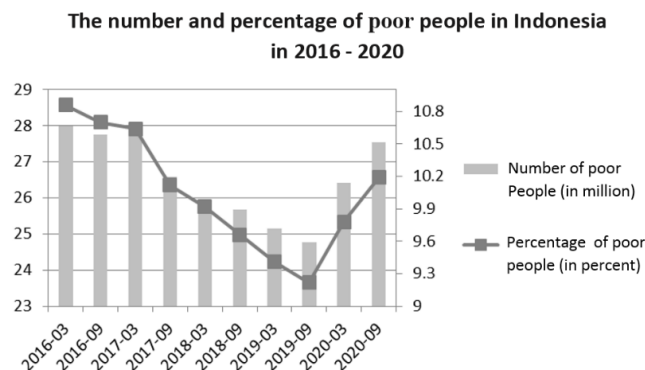


Figure 1. The number and percentage of poor people in Indonesia

Based on Figure 1, poverty in Indonesia experienced a negative trend until the 2nd semester of 2019. However, poverty has increased again since the emergence of the corona outbreak at the end of 2019. One of the provinces with the lowest poverty in Indonesia is South Kalimantan, with a percentage of 4.83%, making South Kalimantan the province with the third lowest percentage of poor people in Indonesia (Diskominfo Kalsel, 2021).

Poverty is caused by many causes, including but not limited to economic growth and the human development index (HDI). Therefore, economic growth is essential for overcoming poverty (Rustan, 2019). According to Rapanna and Sukarno (2017), with economic growth, it is expected that people's income as a factor of production will also increase. According to Ishak, Zakaria, and Arifin (2020), economic growth is an indicator of well-being in an area. Economic growth means increasing productivity to increase employment, which in turn will reduce poverty.

The prevalence of poverty is due to the backwardness of both humans and natural resources. If a man does not have the skills, then he will not have income which causes his purchasing power to decrease so that it enters the circle of poverty (Prasetyoningrum and Sukmawati, 2018).

Enhancing the caliber of human resources helps reduce poverty. Human development aims to improve people's ability to lead productive and enjoyable lives, such as good health, longevity, education, and sufficient income to meet all basic needs (Pudjianto and Syawie, 2015). Previous research by Soleh and Wahyuni (2021) shows that HDI significantly negatively affects poverty.

In truth, not all economic expansion has a beneficial effect on poverty. Economic growth can exacerbate income disparity and the number of poor (Istiqamah, Syaparuddin, and Rahmadi, 2018). Since the impact of economic growth is not evenly felt by all people between rich and poor, the inequality of human development causes income inequality.

A fair concentration is needed to enjoy economic growth, and human development reduces poverty. To ensure sacrilegiousness, Islam has ZIS. If ZIS increases, the savings of the poor will also increase, and investment to improve the economy and income of the poor will also increase (Hasan and Azis, 2018). That way, the poor can enjoy the benefits of economic growth and human development.

Several studies related to ZIS as a moderation variable have been carried out, including research by Inayah (2020) shows that ZIS can moderate the impact of HDI on poverty. However, Soleh and Wahyuni's (2021) research shows that zakat cannot moderate the impact of HDI on poverty. Similarly, research by Ridlo and Sari (2020) shows that ZIS cannot moderate the impact of economic growth on poverty.

Research Methods

Data and data sources

This research uses panel data totaling 30 data from 6 regencies/cities in South Kalimantan in 2016-2020. The regencies/cities sampled were Tanah Laut, Baruto Kuala, Hulu Sungai Selatan, Hulu Sungai Utara, Banjarmasin, and Banjarbaru. In addition, this study drew data from kalsel.bps.go.id and past research.

Data analysis techniques

The approaches of panel data regression analysis and moderated regression analysis (MRA) were utilized in this research project to analyze the data. Panel data mixes cross-section and time series data (Caraka, 2017). Moderated Regression Analysis (MRA) is a type of multiple linear regression in which the regression equation includes a part that describes how the variables are related to each other (multiplication of two or more independent variables) (Satrianto, 2020). According to Caraka (2017), In panel data regression, the common effect model, the fixed effect model, and the random effect model can be utilized. The selection of model estimates is conducted using three tests, specifically:

Chow test (Likelihood test)

Chow test is a test to determine between Common Effect or Fixed Effect models.

The criteria in the chow test are:

Accepting the common effect model if the chi-square cross-section prob value > 0.05

Accepting the fixed effect model if the chi-square cross-section prob value < 0.05

Hausman test

Hausman test is a test to determine between Fixed Effect or Random Effect models. The criteria in the Hausman test are:
 Accepting the random effect of the model if the chi-square cross-section prob value > 0.05
 Accepting the fixed effect model if the chi-square cross section prob value < 0.05

LM test

LM test is a test to determine between common effect or Random Effect models. The criteria for the LM test are:
 Accepting the common effect model if the chi-square cross section prob value > 0.05
 Accepting the random effect model if the chi-square cross section prob value < 0.05

After the panel data regression model is selected, the classic assumption test is carried out on the model. Next, a test of the classical assumptions of multicollinearity and heteroskedasticity was carried out for the common and fixed effect models. Meanwhile, the random effect model was tested for normality and multicollinearity. Finally, if it has been free from classical assumptions, a hypothesis test is carried out using the partial test T.

Criteria in the partial test T are:

If t statistical < degree of significance, then that free variable affects bound variables

If t is statistical > degree of significance, then the free variable does not affect the bound variable.

Results and Discussion

To investigate the influence of economist growth and human development index on poverty with ZIS as a moderation variable using data regression, the panel begins by selecting the most appropriate model (Chow test, Hausman test, and Bruesch-Pagan test) among CEM, FEM, and REM. The F and t-tests are then utilized for the traditional assumption tests of normality and multicollinearity and the Hypothesis test.

Panel data model selection

Chow Test

Table 1. Chow test result

Effects Test	Statistic	d.f.	Prob.
Cross-section F	48.939925	(5,20)	0.0000
Cross-section Chi-square	77.485903	5	0.0000

Source: data processed

The results of the chow test above show that the Cross-section F value is 48.939925 with a probability value of $0.0000 < 0.05$, so the model used is a fixed effect.

Hausman test

Table 2. Hausman test result

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	2.691883	4	0.6106

Source: data processed

The results of the Hausman test above show that the random Cross-section value is 2.691883 with a probability value of $0.6106 > 0.05$, so the model used is a random effect.

LM Test

Table 3. Bruesch-Pagan test result

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	42.27598 (0.0000)	1.113908 (0.2912)	43.38989 (0.0000)

Source: data processed

The results of the Bruesch-Pagan test indicate that the cross-section Breusch-Pagan value is 42.27598 with a probability value of 0.0000 0.05, indicating that a random effect model was employed.

From the estimation test of the panel data model above, the appropriate regression test used in this study is the random effect regression test. Here are the results of the random effect model test.

Table 3. Random panel data regression result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	17.55570	3.764223	4.663832	0.0001
X1	0.055016	0.021108	2.606383	0.0152
X2	-0.181142	0.053144	-3.408485	0.0022
X1_Z	-1.66E-11	8.57E-12	-1.942752	0.0634
X2_Z	2.20E-13	5.26E-13	0.418693	0.6790
Effects Specification				
			S.D.	Rho
Cross-section random			0.994795	0.9637
Idiosyncratic random			0.193064	0.0363
Weighted Statistics				
R-squared	0.599263	Mean dependent var		0.431415
Adjusted R-squared	0.535145	S.D. dependent var		0.275659
S.E. of regression	0.187945	Sum squared resid		0.883081
F-statistic	9.346256	Durbin-Watson stat		1.466979
Prob(F-statistic)	0.000092			
Unweighted Statistics				
R-squared	0.289134	Mean dependent var		4.989333
Sum squared resid	15.03110	Durbin-Watson stat		0.086185

Source: data processed

The random effect regression model obtained from the test results of the model estimate is as follows:

$$Y = 17,55570 + 0,055016 X1 - 0,181142 X2 - 1,66E-11 X1_Z + 2,20E-13 X2_Z$$

Classical Assumption Test

Based on the results of the best model selection test above, the suitable regression model used is a random effect model, then the classic assumption test of normality and multicollinearity is carried out,

Normality

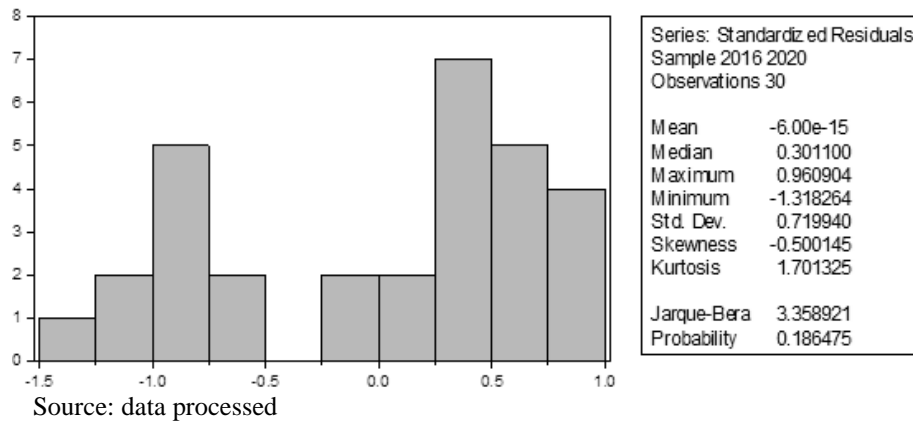


Figure 2. Normality test result

The normality test results above show that the Jarque-Fallow value is 3.358921 with a probability of $0.186475 > 0.05$, meaning that the data is normally distributed.

Multicollinearity

Table 4. Multicollinearity test results

	Y	X1	X2	X1_Z	X2_Z
Y	1	0,130776	-0,68218	0,078101	-0,16275
X1	0,130776	1	0,087884	0,664012	-0,45407
X2	-0,68218	0,087884	1	0,013931	0,287157
X1_Z	0,078101	0,664012	0,013931	1	-0,16843
X2_Z	-0,16275	-0,45407	0,287157	-0,16843	1

Source: data processed

The results of the multicollinearity test above show no high correlation between independent variables not exceeding 0.80, so there is no multicollinearity between free variables.

Hypothesis Test
Economic growth

Economic growth significantly affected poverty in south Kalimantan in 2016-2020, as shown by the test results: a positive coefficient value of 0.055016 with a probability value of 0.0152 0.05. This result means that a 1% increase in economic growth will result in a 0.005% increase in poverty. Therefore, the results of this study are not in line with previous studies by Reki et al. (2021) that economic growth has a significantly and negatively affected poverty.

If the poor enjoy only a small portion of the full advantages of economic expansion, poverty will be addressed on a microscopic scale. (Pangiuk, 2018). But, on the other hand, this circumstance might create prospects for a rise in poverty owing to rising income disparity induced by economic development that disproportionately benefits the wealthy. (Soleh, 2015).

The positive influence of economic growth on poverty is due to the rapid progress in capital-intensive sectors that contribute significantly to a region's economic growth. Meanwhile, labour-intensive sectors make a relatively small contribution to the economic growth of a region. As a result, the increase in the economic growth rate that occurs in an area is only enjoyed by the upper middle class, whose economy is supported by industrial sectors such as mining and large trade. In contrast, most rural communities, whose economy is supported by the agricultural and fisheries sectors and micro-enterprises, will be poorer due to the low contribution to economic growth.

Human Development Index

The test results indicate a negative coefficient value of -0.181142 with a probability value of $0.0022 < 0.05$. Consequently, the HDI negatively impacted poverty in south Kalimantan between 2016 and 2020. Therefore, this study's results support a previous study by Soleh and Wahyuni (2021) that found HDI significantly and negatively impacted poverty

The HDI/quality of life index reveals the quality of human resources. Low HDI will result in low population work productivity (Andhykha, Handayani, and Woyanti, 2018). Creating a well-educated, thoughtful, skillful, and healthy society is one way to boost productivity by enhancing the quality of human resources. When productivity increases, income will also increase so that people's ability to meet their living needs will also increase. The ability of HDI to reduce poverty in South Kalimantan shows that most people have accessed aspects of development quite well. This condition can be seen from the average value of HDI in South Kalimantan during the 2016-2020 period, which is relatively high, 70.40, and continuously increases yearly.

ZIS moderated economic growth

Based on the test findings, a negative coefficient value of $1.66E-11$ and a likelihood value of $0.0634 > 0.05$ indicate that ZIS cannot moderate economic growth's impact on South Kalimantan's poverty during 2016-2020. This study's results support the previous study by Ridlo and Sari (2020), which found that ZIS can not moderate economic growth's influence on the poverty rate.

High economic growth does not necessarily indicate fair equality and vice versa. Achieving fair equality does not necessarily mean high economic growth, either. Both must be achieved at the same time. Economic growth must spread to every class of society to reduce poverty, including the poor (Safuridar, 2017). Islam has a socially nuanced income distribution system, such as ZIS, created to ensure income balance and economic distribution to help the poor meet their living needs (Anwar, 2019).

In general, ZIS funds can increase the purchasing power of their recipients. This increase in purchasing power will encourage increased production capacity of goods and services and economic growth. However, if these aspects have not been managed optimally, such as uneven income distribution and suboptimal zakat management, then people's productivity and income will remain low, so ZIS has not been able to increase economic growth and reduce poverty.

ZIS moderated HDI

The test results show a positive coefficient value of $2.20E-13$ with a probability value of $0.6790 > 0.05$, so ZIS cannot moderate the influence of the human development index on poverty. The results of this study are not in line with previous studies by Inayah (2020) that ZIS can moderate the effect of HDI on poverty.

Similar to the role of ZIS in moderating the effect of economic growth on poverty, ZIS can moderate the influence of the human development index on poverty because ZIS plays a role in the distribution of income from the rich to the poor. ZIS is one of the essential sources of state revenue. In addition, ZIS is a tool of independent social assistance which becomes a moral obligation for the rich to petrify the poor (Nafi'ah, 2021). With the existence of ZIS, the poor can get education, health, and increased purchasing power.

This study's findings do not support the prevailing theoretical explanation. The collection of funds for ZIS is not yet functioning at its highest potential. In addition, the allocation of the ZIS money is primarily intended for consumptive purposes. Because of this, the ZIS funds are less capable of increasing people's productivity and capacity to achieve human development's three fundamental aspects: health, education, and buying power.

Conclusion

Economic expansion has a positive effect on the poverty rate in South Kalimantan. This conclusion suggests that a growing economy leads to a rise in poverty since not everyone can enjoy its benefits. In South Kalimantan, however, HDI reduces poverty. The yearly increase in the HDI rate has increased productivity and lowered the number of poor. However, ZIS cannot moderate the effect of economic growth on poverty, nor can it moderate the effect of HDI on poverty. Therefore, this study concludes that ZIS cannot relieve poverty in South Kalimantan. This result may also indicate that the ZIS management is not yet optimal, as it has not been able to decrease the number of poor people and provide equal distribution.

If future researchers are interested in conducting similar or follow-up research, it is best to take the entire population of a relatively small population and a larger number of observations so that the resulting conclusions can be better. For the government, it is expected to be able to create an even distribution to reduce poverty and inequality through the management of ZIS as a productive fund with economic empowerment programs in the form of business capital loans, assistance, and training for micro-entrepreneurs.

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