

Study of the Effect of Zakat on Reducing Poverty in Districts/Cities in Aceh Province 2011-2018

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Abstract

Poverty is a condition in which someone is unable to fulfill his primary needs. Poverty is caused by low human resources, lack of access to capital, and low levels of productivity of goods and services. One indicator of reducing the poverty rate can be done by optimizing zakat funds. The purpose of this study is to determine whether the existence of zakat funds can reduce poverty. This is quantitative research that used secondary data, and the data was analyzed by using the panel data regression technique. The results showed that zakat has a significant negative effect on the poverty rate. The result implies that zakat can be used as an instrument of fiscal policy by district/city governments in combating poverty rate.

Keywords: zakat, poverty, panel data regression analysis.

Introduction

Development is an effort made to develop economic activities to create prosperity and change the standard of living equally. To increase the standard of living is often measured by the level of income per capita. In the economic aspect, the development carried out by the government is still failing. One of the government's failures can be seen from the number of poor people who continue to increase annually. Poverty is a problem in part of human life, and it has been around since time immemorial. Poverty is not a problem that concerns an individual or a person but involves all aspects such as the surrounding community, region, and country (Chaniago, 2015).

The problem of poverty occurs in all provinces in Indonesia, especially Aceh. Poverty in Aceh is still very high. High poverty rates are caused by low human resources, lack of access to capital, and low levels of productivity, both goods and services. In the last eight years, the number of poor people in Aceh Province has not significantly declined. Figure 1 illustrates the number of poor people in 2012, which has increased (737 thousand people), while in 2018 (667 thousand people), the number of poor people has decreased.

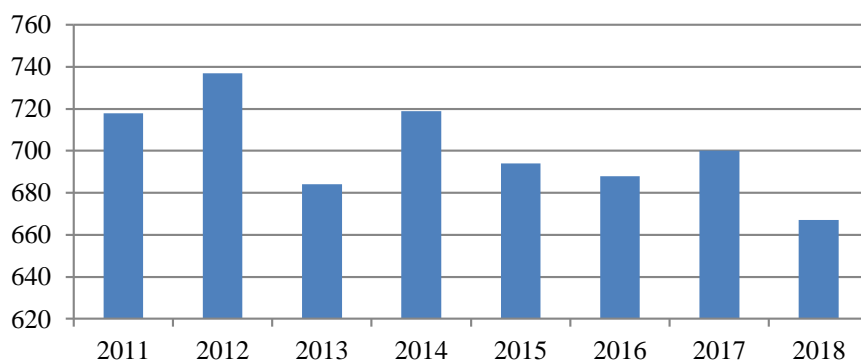


Figure 1. Number of poor people in Aceh

This poverty problem has become a note for the Aceh government to seriously take the number of poor people in Aceh province. To overcome this problem, a policy to eradicate poverty is needed. One way of reducing poverty can be done by optimizing zakat funds.

The management of zakat is regulated by Law No. 11 of 2006, (Regarding the Government of Aceh) and Qanun No. 10/2007. In Article 191 of the law, it is stated that the Baitul Mal Agency is the official institution for managing zakat and other religious assets in Aceh (Armiadi, 2008).

The objective of the paper is to analyze the implementation of zakat on poverty in Aceh 2011-2018. The significance/benefit of the findings can be used as a contribution of thought to enrich research references related to the amount of zakat realization as an instrument for reducing the poverty rate in Aceh.

Literature Review

Poverty

Poverty is defined as an individual's inability to meet minimum basic needs for a decent life. Furthermore, it is stated that poverty is a condition that is below the standard value line of minimum needs, both for food and non-food, which is called the poverty line or poverty limit (Rejekiningsih, 2011).

Living in poverty is not only living in a lack of money and low-income levels, but also many other things, such as health levels, low education, and vulnerability to the threat of crime. Poverty can be divided into four forms (Suryawati, 2005):

- a. Absolute poverty is income below the poverty line or insufficient to meet the food, clothing, health, and education needed to live and work.
- b. Relative poverty is a condition of poverty due to the influence of development policies that have not reached all people, causing income inequality.
- c. Cultural poverty is the attitude of a person or society due to cultural factors, such as not wanting to improve the level of life, laziness, wastefulness, and not being creative even though there are external parties.
- d. Structural poverty is a condition of poverty caused by low access to resources that occurs in a socio-cultural and socio-political system that does not support poverty alleviation but often causes poverty to flourish.

Al-Qardhawi expressed his views on efforts to alleviate poverty through six solutions (Qadir, 2001):

1. Every Muslim must work hard and improve work ethic.
2. Rich people support and ensure the economic life of low-income families.

3. Increase and professionally intensify the implementation of zakat.
4. Intensifying the collection of aid from sources, both from non-governmental organizations and the government.
5. Encourage rich people to give alms to those who need it most.

Therefore, it can be concluded that Islam's intent and purpose in poverty alleviation are that Islam wants every human being to prepare for his best life and to be able to make the best use of everything in it. Thus, humans will be able to worship Allah SWT with great reverence and with perfect preparation and will be able to concentrate more on getting to know Allah SWT and getting closer to Him and getting to know a better and better afterlife and more eternal.

Zakat

In the theological perspective, zakat worship is a medium for approaching a servant's self to Allah SWT. It is because tithe (issuing zakat) is one of Allah SWT's orders that a servant must carry out, so that paying zakat is a form of obedience of a Muslim to Allah SWT's orders; the more obedient a servant (human) carries out His commands, the closer to Allah SWT (Hidayat, 2014).

From this terminology, it can be understood that zakat is the handover or payment of mandatory rights in assets to be given to entitled people (Inoed, 2005). Thus, it can be concluded that zakat as the third pillar of Islam, which is the obligation of a certain amount of property issued by those who have reached the nisab, is given to those who have the right to receive it to clear property or wealth and can purify the soul for muzakki. Al-Qur'an mentions the word zakat side by side with prayer, in the sense that the command to issue zakat is very obligatory by Allah SWT for those who are able. Zakat is obliged to be given to the group of people entitled to pay it when our assets have reached the nisab.

Zakah and Poverty

Fikriyah (2016) the results of his research indicate that there is a simultaneous significant influence between zakat and economic growth on the poverty rate in Indonesia in 2002-2013. Partially, the zakat variable has a significant effect on the poverty level in Indonesia 2002-2013. While the economic growth variable did not have a significant effect on the poverty rate in Indonesia that year.

Panel Data Analysis Regression

The panel data regression model is formulated as follows:

$$IZ_{it} = a + bAK_{it} + e_{it} \quad (1)$$

Where:

- a : Constant
- IZ_{it} : Zakat instrument in district / city i in year t
- AK_{it} : Poverty rate in district / city i in year t
- b : Coefficient
- i : District / city
- t : Year
- e : Error

Panel Model Determination

In determining the regression estimation model using panel data, three approaches can be made: Common Effect Model, Fixed Effect Model, and Random Effect Model (Walpole, 2005).

1. *Common Effect Model*

This model is the most straightforward panel data model approach because it only combines time series and cross-section data. In this model, neither the time dimension nor the individual is considered, so it is assumed that the data will be the same in various periods. This method can use the Ordinary Least Square (OLS) approach or the small quadrant technique to estimate the panel data model.

2. *Fixed Effect Model*

The model assumes that the differences between individuals can be accommodated from the other interceptions. This model estimates the panel data using dummy variables to capture the difference in interceptions.

3. *Random Effect Model*

This model estimates panel data where the disturbance variables may be interrelated over time and between individuals. The advantage of using the Random Effect model is that it eliminates heteroscedasticity. This model is also called the Generalized Least Square (GLS) technique.

To analyze panel data, a proper model specification test is required to describe the data. To choose the most appropriate model, several tests can be done, among others: by using the Chow Test and the Hausman Test.

1. Chow Test

The chow test is used to find out what panel model is suitable for use between the Common Effect Model and the Fixed Effect Model, and it is necessary to do a z-test. The Chow test hypothesis is:

H_0 : *Common Effect Model*

H_1 : *Fixed Effect Model*

For the F statistic's value, if the probability value of the F-statistic is smaller than the significant level of 5% (0.05). The model used is the Fixed Effect Model. In contrast, if the probability value of the F-statistic is greater than the significance level of 5% (0.05), then the model used is the Common Effect Model.

2. Hausman Test

The Hausman test is performed to compare the most suitable panel model between the Fixed Effect Model and the Random Effect Model. The Hausman test hypothesis is:

H_0 : *Random Effect Model*

H_1 : *Fixed Effect Model*

For statistics, the Hausman test follows the chi-square statistical distribution, where if the probability value of the chi-square statistic is smaller than the significance level of 5% (0.05). The model used is the Fixed Effect Model, but if the chi-square probability value is greater than the level of significance 5% (0.05), the panel model used is the Random Effect Model.

Significant Testing (T-test)

This test determines whether the independent variable, namely zakat, simultaneously has a significant effect on the dependent variable. This test is performed with the t-test at a 95% confidence level and an error rate of 5%.

R² Test (Coefficient of Determination)

The coefficient of determination R², in essence, measures how far the model's ability to explain the variation in the independent variable. The fundamental weakness of using the coefficient of determination is that it can affect the number of independent variables included in the model.

Research Method

The data used in this research is time-series data arranged based on time sequences or data collected from time to time. The time used can be weeks, months, years, and so on. The data needed in this study are data on the number of zakat funds in Aceh Province in 2011-2018 and data on the number of poor people in 2011-2018. In contrast, this study's data source is data from zakat distribution institutions, namely Baitul Mal Aceh and data on the number of poor people obtained from BPS Aceh.

Result and Discussion

The analysis of zakat's effect on poverty in this study uses panel data regression analysis with three models, namely common, fixed, and random. After the results of the common effect and fixed effect models are obtained, the Chow test is then performed. This test is needed to choose the most appropriate model between common and fixed. Here are the results:

Table 1. Model selection

Effects Test	Statistic	d.f.	Prob.
Cross-section F	1458.384193	(22,160)	0.0000
Cross-section Chi-square	976.290654	22	0.0000

The chow test results in the table above show that the cross-section probability value is 0.0000 or <0.05 , so H_0 is rejected. Therefore, the chosen model is a fixed effect. Next, we will regress with the random effect model.

In the table of fixed effects and random effects, it is necessary to do the Hausman test to test which model is more appropriate to use between the fixed effect and the random effect. Therefore, the Hausman test is carried out to find out.

Table 2. Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.181040	1	0.0071

The results of the Hausman test in the table above show that the cross-section probability value is 0.0071 or <0.05 , therefore the model chosen is a fixed effect.

T-test

A partial test or t-test is used to test each independent variable's effect on the dependent variable. If the probability value of t is less than 0.05, the result is significant, meaning that there is an influence from the independent variable individually on the dependent variable.

Table 3. T-test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10.74704	0.158076	67.98667	0.0000
LOGZAKAT	-0.019554	0.007220	-2.708278	0.0075

The table above shows that the results of the t-test on the variable amount of zakat have a probability of 0.0075, which means <0.05 , so it can be said that the variable amount of zakat has a (significant) effect on poverty.

Coefficient of Determination (R^2)

The coefficient of determination (adjusted R-Square) measures how far the model's ability to explain the variation in the dependent variable.

Table 4. Goodness of fit

R-squared	0.995181	Mean dependent var	10.31904
Adjusted R-squared	0.994488	S.D. dependent var	0.653683
S.E. of regression	0.048530	Akaike info criterion	-3.092180
Sum squared resid	0.376819	Schwarz criterion	-2.672841
Log likelihood	308.4806	Hannan-Quinn criter.	-2.922217
F-statistic	1436.636	Durbin-Watson stat	0.721892
Prob(F-statistic)	0.000000		

Based on the table above, the adjusted R-square (R^2) number is 0.994488. It shows that the percentage of the contribution of the independent variable's influence on the dependent variable is 99.44%. Alternatively, it can be interpreted that the independent variables used in the model can explain 99.44% of the dependent variable. Other factors outside the regression model influence the remaining 0.56%.

Conclusion

This study says that zakat has a significant effect on reducing the poverty rate. With this result, it is hoped that the government can optimize zakat funds and distribute them to people who are in need or on target. The process of implementing zakat on the poverty rate in the district/cities of Aceh in 2011-2018 shows a significant effect for the next research to change the variable under study in order to get different results so as to produce new references.

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