

## Investigating the Impact of Zakat on Poverty Alleviation: A Case from West Sumatra, Indonesia

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### ABSTRACT

*Muslim population in West Sumatra is vast, thus, it has significant potential of zakat. In the province, the regulation of compulsory zakat which is directly deducted from the local State Civil Apparatus (ASN) salaries has been practiced. This regulation has a positive impact on the collection of zakat funds in West Sumatra, yet the position of zakat in reducing poverty in the province demands a discussion in scholarly work. This study appointed 200 respondents and employed poverty indicators to investigate the impact of Zakat on poverty alleviation in the province. The results indicated that zakat promotes poverty reduction. This research also proves concisely the poor can exit the poverty line with Zakat. This work implies the role of government in supporting Zakat as monetary tool in poverty alleviation.*

*Keyword: Zakat, West Sumatera, Exit Poverty, BAZNAS*

### INTRODUCTION

Poverty is an individual situation, not individual characteristics or behavioural patterns (Watt, 1968). This point of view leads to the definition of poverty as a situation where individual consumption is minimal, while prosperity is defined as a situation where there is a slight narrowing of consumption. Poverty is most often classified as something chronic and temporary (Murdoch, 1994). Poverty is still an interesting topic discussed in the field of research. One way to calculate the depth of poverty is by measuring the poverty gap, measuring how far the average poor person or poor family is below poverty thresholds. Islam has Zakat as an instrument to reduce poverty.

Hassan and Khan (2007) said that Zakat is one of the most powerful tool in poverty alleviation. Zakat yield is enough to cover needs. That is, the assumption of zakat must be based on Shariah opinion which allows the results

to be significant enough to achieve the target in reducing poverty (Kahf, 1997). Zakat is included as the third pillar of Islam. Zakat in Islam is not just worship and virtue but also an important role in economic growth that has an impact on the people welfare.

Indonesia as the fourth-largest population in the world with 87.21 percent is Muslim (Ministry of Religion, 2016). Of the percentage of Indonesian poor population is 9.41 per cent. In general, this indicates that the Indonesian Muslim population with poverty levels can be balanced with the existence of zakat.

Based on research by Firdaus et. al. (2012), the potential of national zakat in 2011 reached 3.4 percent of total gross domestic product, or in other words the potential of zakat in Indonesia was estimated at Rp.16.6 billion. The potential of zakat in Indonesia described is not yet supported by the collection of zakat fund (Puskas BAZNAS 2019). The latest data shows that there is a gap

between the potential of zakat and its collection. This can be seen from the data on the collection of national zakat, by the official zakat management organization in 2015 which reached Rp. 252.8 million or less than 1.3 percent of its potential (Puskas BAZNAS, 2016).

One of the provinces in Indonesia which has considerable potential is West Sumatra with a population of more than 5 million people where 97.42 per cent is Muslim (Ministry of Religion,

2016), with a percentage of poverty of 6.42 per cent. This certainly supports the existence of a large potential of zakat of Rp.120.7 million UD West Sumatra (Firdaus et. al. 2012). The zakat fund in Indonesia is managed by the national board of zakat, Republic of Indonesia (BAZNAS). This institution is operated in the nationwide of Indonesia. BAZNAS West Sumatra is one of the institutions that has been collecting the highest amount of zakat funds.

**Table 1.** Total Collection and Distribution of Zakat Funds in BAZNAS West Sumatra 2013-2018

Years	Collected Zakat Funds (Rupiah)	Percentage difference (%)	Distributed Zakat Funds (Rupiah)	Percentage difference (%)
2013	5 698 039 385	-	4 313 818 278	-
2014	6 826 525 113	0.19	5 069 317 746	0.17
2015	7 463 013 735	0.09	5 966 826 320	0.17
2016	11 149 385 130	0.49	6 845 752 500	0.14
2017	8 519 615 809	-0.23	8 838 308 200	0.29
2018	12 815 438 981	0.50	8 134 607 000	-0.07

Source: BAZNAS Province of West Sumatra 2018

Table 1 informs that there is an increase in zakat funds collected from 2013 to 2017 in BAZNAS West Sumatra. In the previous research on zakat as a reduction in poverty by Hassan and Khan (2007), it is mentioned that;

- 1) Zakat can alleviate the targeted budget category for poverty alleviation for other budget needs.
- 2) Zakat can increase the potential for taxation through increased productivity, employment and results.

Various policies and strategies have been adopted to reduce poverty, but the fact remains that poverty still exists. Muslim countries inherit powerful

institutions from Zakat, almsgiving and endowments to fight poverty. Therefore, this study aims to investigate the impact of zakat on poverty alleviation, with a special case from West Sumatra, Indonesia.

## LITERATURE REVIEW

Zaim (1989) and Powell (2010) explained that Zakat can be literally translated as “purity” or, in verbal form “to be pure”. In the context of English, zakat is usually translated as “almsgiving”, meanwhile in al-Qur’an, it refers to as ease the burden of the poor, as money, food, or clothing; charity gift (Powell, 2010; Bukowski, 2014).

In a simplified context, zakat is an obligation imposed on a Muslim who has attained *Nisab* and must pay 2.5 percent of the income he gets for one year. The Payment of zakat can be in the form of property owned. The 2.5 percent is not a fixed amount and may be modified depending on the property subject to zakat.

Zakat has a positive effect on economic growth. Paying Zakat promotes the growth of faith and economic growth. As a redistribution of income and wealth and reducing the phenomenon of inflation and poverty, other social and economic problems.

Miah (1992), Sarea (2012), Bukowski (2014), Bakar & Rahman (2007) elaborated that zakat serves as a unique mechanism for mandatory transfers of income and wealth to bridge the gap between the rich and the poor in society. Zakat can gradually increase employment and income in the economy, thereby increasing people's living standards and ultimately increasing the aggregate volume of zakat collections. On this point, zakat has a positive impact on the rate of economic growth in terms of poverty alleviation and reduction of unemployment (Ahmad, 1989).

Study in Bangladesh by Hassan and Khan (2007) found that the good management of zakat can reduce international monetary assistance (debt), which significantly reduce the national debt (Hassan & Khan, 2007). Some economists project that in 2004 to 2005, the potential of zakat funds could contribute in reaching 43 percent of Bangladesh's annual development plan (Shirazi & Amin, 2009).

The following study in Malaysia illustrates the approach to strengthening the existence of the zakat system in Malaysia's socio-economic development. It is similar to a tax deduction on salaries,

a mandatory zakat deduction on the income of all Muslims. In the country, Zakat management is under the authority of the state government.

The concept of zakat itself is a fundamental basis for Islamic economics to bring a balance between rich and poor people and also to strengthen the nation's entire economy and a large worldview (Al-Mamun & Haque, 2015). However, like a strategy to reduce poverty, the capacity of the poor must be developed through health, education, vocational training facilities, and others. So that poor people can get out of trap poverty. In addition, business entrepreneurship must also be developed based on priority.

The entrepreneurship development program has the possibility to not only eliminate poverty but also create employment opportunities for poor people. Proper payment of zakat amount with the right method to eliminate poverty from Muslim communities will ultimately help bring peace, harmony and prosperity to the Muslim world (Hoque, et al., 2015).

In the study done by Shirazi (2014), it was highlighted the critical role of zakat in poverty alleviation in Bangladeshi context. In that, zakat funds is believed to replace government budget expenditures in the range of 21 percent of the Annual Development Plan (ADP). Furthermore, zakat can increase productivity, employment, and output which consequently will increase the government's tax potential. Unfortunately, the government and the global stakeholders seem to be less aware to include zakat as an instrument of poverty alleviation.

Regarding zakat distribution, it has a significant and positive influence on increasing income distribution for the poor and needy (Ali et. al., 2013). In a study with the Human Development

Index (HDI), it can be concluded that there was indeed an increase in the HDI of *Mustahiks* (zakat recipients) households in the period being observed. There are several possible reasons why *Mustahiks* who received productive zakat assistance are improved their welfare status. In this regard, it is due to the investments in productive capital, in addition to having microfinance which can encourage growth in income and fulfill basic needs. Further, an appropriate training and empowerment programs can also be essential factors to strengthen household awareness in having good education (Nurzaman, 2016).

Furthermore, Kasri (2017) discussed the Determinants of Poverty among zakat recipients in Indonesia using household level analysis. The results show that the lower the age, the lower the education, the less formal employment, the smaller the size of the household, are related to the higher probability of being poor. The results show that such group of people should be the main target of zakat distribution, notably in Indonesia's context.

As explained in the above texts, it is evident that zakat has been found to positively impact on transforming its recipients into the group of people with financially stable. This study aims to extend the evidence from West Sumatra, Indonesia in that regard.

## RESEARCH METHODOLOGY

The main data used in this study are primary data from community surveys with respondents who have income below the poverty line and receive assistance from zakat funds. Primary data is taken using a questionnaire that provides information about the characteristics of the respondent's

household. Based on secondary data, the amount of data used is 200 respondents taken from all cities and regencies in West Sumatra, Indonesia.

This study uses the method of calculating the Poverty Indicator and Average Time Taken to Exit Poverty. The analysis of this study assesses how the positive impact of zakat on poverty and also calculates how many years the community estimates can get out of the cycle of poverty.

### *Analysis of Poverty Indicators*

According to Foster, Greer and Thorbecke (1984), there are several studies of poverty defined by ethnicity, geography, or other lines. Such an approach to poverty analysis places requirements on poverty measures in addition to those proposed by Sen (1979). In particular, the question of how to measure the linking of subgroup poverty with extreme poverty is very important for its application in the form of analysis. At the very least, one would expect that a reduction in the poverty rate of a *ceteris paribus* subgroup must reduce poverty for the population as a whole.

There are many analysis calculations for poverty but using poverty indicators we can also explain how many households are still categorized as poverty and depth of poverty. The Central Statistics Agency (BPS) uses several general indicators to measure poverty and inequality, namely the 'headcount ratio', the 'poverty gap index', and 'the sen index' and the 'FGT Index'. Meanwhile, according to Beik and Arsyianti (2016), to measure the level of poverty in a region, some differences need to be taken into account, for instance, the distance between the average poor household and the poverty line. In terms of measuring poverty levels also need to be considered

between poor households. Poverty alleviation programs have been well distributed to accumulate in certain groups. The following general poverty indicators are as follows:

#### *Headcount ratio (H)*

Headcount Ratio Index is a poverty indicator that measures the number of poor people below the poverty line. The way to assess the level of poverty in any community is to obtain a modest number of poor people. Poor people are those whose income falls low of the specified poverty line (UNDP 2009). In this study, the poor category was based on the poverty line standard issued by the Indonesian Central Bureau of Statistics. This indicator is used to calculate the percentage of poor people in an observation population. For this ratio calculation:

$$H = \frac{q}{n}$$

#### Information:

- H = The ratio of the number of employees (0 to 1)
- q = Number of Households that Have Income Below the Poverty Line
- n = Total population

The family poverty line is obtained from multiplying the per capita poverty line per month with the average family size of the poverty line of West Sumatra Province is Rp. 476 554. The headcount usage ratio index in this study aims to calculate the number of households receiving zakat higher than the poverty line and can determine the number of mustahik that can be obtained through the utilization of zakat. If the value of the headcount index is reduced, it means that the utilization of zakat has a positive influence, because it can reduce the number of mustahik living

with income below the poverty line. In other words, the smaller the headcount ratio of the index, the fewer the number of poor people.

#### *Poverty Gap Index (P1) and Income Gap Index (I)*

The poverty gap index (poverty reduction) and income gap index (income) are gauges used to identify and measure poverty levels. the poverty gap index is used to measure the difference between the average income of poor households below the poverty line and the poverty line. Beik and Arsyianti (2016) cite this program is needed to determine the amount of funds needed by a program or cash transfer policy or government to transfer people. the calculation formula is as follows:

$$P_1 = \sum_{i=1}^q \frac{z - y_i}{q}$$

#### Information:

- P1 = poverty gap index
- z = Poverty Line
- y<sub>i</sub> = 1<sup>st</sup> household income
- q = Number of households that have income below the poverty line.

If after the distribution of zakat, then the value of this index will decrease, meaning that zakat has a positive meaning on the submission of poverty levels. Or in other words, the smaller this index, the less the difference between the aggregate income of the poor and the poverty line is getting better.

Furthermore, the Income Gap Index is used to calculate the percentage of poor households whose opinions depend below the poverty line. The smaller the index value, the fewer poor households in the community. This second index can represent the success of a program. The following income gap formula is as follows:

$$I = \sum_{i \in S(z)} \frac{g_i}{qz}$$

Information:

- I = Income gap index
- $g_i = z - y_i$  (Difference in income between poor households with poverty line,  $y_i < z$ )
- z = Poverty line
- $y_i$  = Income of household number i
- q = Number of mustahik households that are below the poverty line

*Sen Poverty Index (P2) and The Foster-Greer-Thorbecke (FGT) Index (P3)*

There are two types of indicators that can illustrate the level of expenditure inequality among the poor, namely Sen Index (P2) and FGT Index (P3). The second indicator formula is as follows:

$$P_2 = H [I + (1 - I)G_p]$$

Information:

- $P_2$  = Sen Index
- H = Headcount ratio
- I = Income gap index
- $G_p$  = This poor coefficient of gini

The Foster-Greer-Thorbecke (FGT) index is based on the gap normalized  $g_i = (z - y_i)/z$  from poor people i, who lack income which is stated as part of the poverty line. See  $g_i$  as a measure of individual poverty for the poor. Here is the FGT Index formula:

$$P_3 = \frac{1}{n} \sum_{i=1}^a \left| \frac{g_i}{z} \right|^\alpha$$

Information:

- $P_3$  = FGT Index
- n = Number of households observed
- z = poverty line
- $g_i$  = Short-fall income of the i poor population
- $\alpha$  = Sensitivity parameter with a value of  $\geq 0$

Beik and Arsyianti (2016) explained that the Sen Index formula (P2) above is a combination of three indices namely the headcount ratio, the income gap ratio, and the Gini coefficient of the poor population. P2 is worth 0 if there are no more households that have income below the poverty line, and value 1 if all households have income below the poverty line. While the FGT Index is the development of the Poverty Gap Index (P1), which can be used to see total poverty equal to the weighted average of poverty in the population subgroup.

Murniati and Beik (2014) added that the smaller the value of the FGT Index, the smaller the percentage of poor households, the gap between the aggregate income of poor households and the poverty line is also less, and the income gap is getting smaller. If after the utilisation of zakat, the value of this index has decreased, meaning that zakat has a positive impact in reducing the severity of poverty.

*Analysis of Average Time Taken to Exit Poverty*

Morduch (1998) introduced a method for measuring the average time needed by households to reach a particular poverty line or regardless of poverty called Average time taken to exit poverty. This method makes it possible to describe the potential for future economic growth as well as the basis of appropriate economic policy in the future. Morduch (1998) shows that only dividing the Watts size by some hypothetical growth rates g, where  $g > 0$ , gives an interesting cardinal interpretation.

The modified index reflects the number of years a population needs to get out of poverty needed to ensure all income grows at the "g" level. Thus, providing a simple metric of potential economic growth to reduce poverty and

in this way can help to illuminate the contested policy debate. The method of calculating this method is formulated as follows:

$$t_g^j = \frac{\ln(z) - \ln(y_j)}{g}$$

Information:

$t_g^j$  = Average Time Taken to Exit Poverty

$z$  = Poverty Line

$y_j$  = Income of poor households in  $j$  (where  $y_j$  grows constant positively at  $g$  per year)

$g$  = Economic growth rate per year in a region

Mussa (2015) defined as the time needed by households to reach the poverty line through economic growth (income), which is assumed to grow steadily with a constant amount per year. This method can also be used to increase the level of household expenditure. While the compilation of households is above the poverty line.

Based on the research done by Gibson and Olivia (2002) in Papua New Guinea to calculate the level of poverty in this area. This study calculates the size of the time out of Papua New Guinea. The results of this study indicate that the average time taken to get out of poverty is 6.2 years if the growth rate is 2 percent. One reason for the average time of only 6.2 years is more than two-thirds of the population above the poverty line, so the time of discharge is zero. Things that should be considered by policymakers are ways to reduce poverty of policymakers. Moreover, it takes 20.5 years to get out of inequality.

## RESULTS AND DISCUSSIONS

### *Analysis of the Impact of Zakat in West Sumatra Province Based on Poverty Indicators*

**Table 2.** Indicators of Poverty Before and After Zakat

Indicator of Poverty	Before zakat	After zakat	Change (%)
<b>H</b>	0.59	0.185	-0.68
<b>P1 (Rp)</b>	633 110.71	326 186.11	-48.5
<b>I</b>	0.27	0.14	-48.5
<b>P2</b>	0.30	0.08	-73.3
<b>P3</b>	0.06	0.01	-83.3

Source: Calculated by Authors (2019).

#### *Headcount Ratio Index*

The use of this index is intended to determine the number of poor households that can be reduced through efforts to utilize zakat. Based on the calculation, it is known that the Headcount Ratio (H) value has decreased after the BAZNAS zakat empowerment program of 0.59 to 0.18. This decrease indicates that the zakat empowerment program in West Sumatra can reduce the number of poor households by 68 percent.

#### *Poverty Gap Index and Income Gap Index*

The Poverty gap ratio (P1) and the Income gap ratio (I) are indicators that can show the level of poverty in households in a region. Based on the Table 2, it is known that the utilisation of zakat provided by zakat institutions is from the previous Rp. 633.110 to Rp. 326.186. Likewise, the value of I has decreased from 0.27 to 0.14. Both of these indicate that the level of depth of poverty of households in West Sumatra was reduced after the zakat empowerment program by BAZNAS.

### *Sen Index Index and FGT Index*

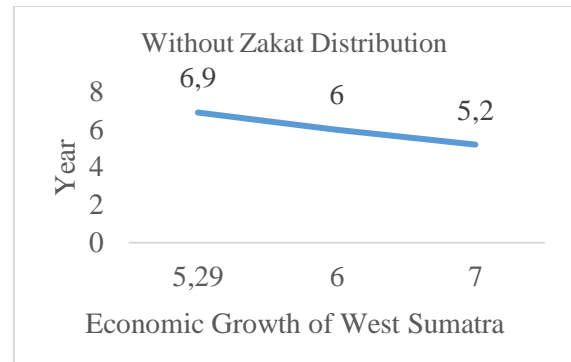
Sen Index (P2) and FGT Index (P3) are analytical tools used to measure the severity of poverty in a region. The results of the analysis show that the P2 value has decreased from 0.30 to 0.08. This value is known to be worth 0. Hence, there is no household that has income below the poverty line, whereas if it is worth 1 then all families have income above the current poverty line. While the P3 value shows a decrease from previous 0.06 to 0.01 This result shows that the empowerment program initiated by BAZNAS was able to reduce the severity of farmer households by 83.3 percent.

### *Average Time Taken To Exit Poverty Analysis Without And With Zakah*

Based on Figure 1 and Figure 2, it is known that there is a decrease in the average time needed for beneficiaries of zakat empowerment programs to get out of poverty, or at least be able to reach the Poverty Line of West Sumatra Province. This calculation uses the assumption of economic growth in the Province of West Sumatra in 2017 which is 5.29 and in 2018 of 5.14 per year.

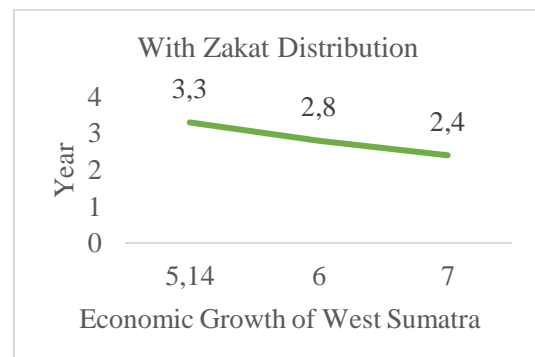
This shows that the management of zakat and the distribution of zakat by BAZNAS of West Sumatra to mustahik has been able to accelerate income increases while shortening the time the people who receive zakat funds can get out of poverty and can become a person who pays zakat. It can be noted the results of the analysis using the method of analysis of average time taken to exit poverty, from before it took 6.9 years without zakat and can be reduced to only 3.3 years if zakat can be optimized in its use.

**Figure 1.** Average Time of Taken to Exit Poverty Mustahik Household Without zakat distribution



Source: Prepared by Authors (2019).

**Figure 2.** Average Mustahik Time Taken to Exit Poverty of Households, there is a Zakat Distribution



Source: Prepared by Authors (2019).

Based on this research, it can be concluded that the zakat program managed by BAZNAS in West Sumatra Province is able to contribute positively to poverty alleviation programs. The performance of amil institutions in terms of distribution is quite good. Despite the increase in the aspect of zakat distribution, the collection of actual zakat is still far behind its potential. There is a big gap between the potential and the collected zakat.

If the value of economic growth in West Sumatra Province can increase to 6 to 7 percent, this will have an impressive impact repeatedly. Because the time needed for mustahik to get out



of poverty is getting faster. If the growth rises to 6 per cent without the zakat, the average value of time taken to exit poverty is 6 years, however, if it is accompanied by the distribution and utilization of zakat in a professional manner, it will decrease by 2.8 years. Especially, if the growth reaches 7 per cent, without zakat it takes 5.2 years but, after zakat only takes 2.4 years based on the formula average time taken to exit poverty.

Therefore, it is important to promote equitable economic growth. Not only for certain people who can experience economic growth, but people who fall into the middle to lower category can also face it. Zakat is helpful if it can be empowered properly and correctly. Based on the results of a study by Jonaidi (2012), the estimation results show that economic growth is negatively correlated with Indonesia's poverty level. This means that the more economic growth in Indonesia, the lower Indonesia's poverty. This is also proven in the average analysis tool taken time to exit poverty in this work.

### CONCLUSION

The analysis using the indicators of the Headcount Ratio Index, the Poverty Depth Index and the Poverty Severity Index, shows that zakat can reduce poverty in West Sumatra, Indonesia. It may also be seen that with zakat, the underprivileged community can get out of poverty faster, than those of without zakat. In this regard, the government can optimise the collection of zakat funds in West Sumatra to best target in realising its potential and supporting the local agenda of poverty alleviation.

In the province, Zakat fund which has been collected reached Rp. 1.7 trillion, which falls short from the

expected potential amount. Likewise, zakat institutions are recommended to keep and improve their innovation in empowering Mustahik.

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