

Increasing urban community empowerment through changing of poverty rate index on the productive zakat impact

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Abstract. We show how changes in poverty measures can be applied into growth of Islamic philanthropy distribution via zakat, and we use the methodology to zakat community development (ZCD) program in Bantul during the 2016. The purpose of the present paper is to prove zakat is able to be a solution part for the community empowerment. The result is the number of productive zakat program beneficiaries whose income is below the poverty line (poor category) before the program are 244 people ($H = 0.171$) and after the program change to 168 ($H = 0.118$), which means the program has succeeded in reducing the number of poor people by 76 people (5.34 percent). The poverty gap (P1) of beneficiaries of productive zakat program in Bantul also decrease. The gap between poverty line and average income of beneficiaries is Rp 63,763 before the program, while the gap after the program is Rp 56,992. The income gap (I) is also decline from 0.197 to 0.169. Poverty severity of beneficiaries of productive zakat program in Bantul seen by Sen Index (P2) decrease from 0.093 to 0.062, while using Foster-Greer-Thorbecke Index (P3), the poverty severity decrease from 0.010 to 0.004. The analysis revealed the zakat community empowerment was significant economically in suppressing the poverty rate, and possible for reducing inequality and ending poverty in Indonesia.

Keywords: community empowerment, income of beneficiaries, poverty line, zakat

1. Introduction

Zakat is one of the primary sector of economic in the Muslim countries. As the third pillar of Islam, payment of zakat is an obligation for an eligible Muslim to purify his wealth by distributing it to the mustahiq based on the specific criteria. Zakat has a huge potential to be economically developed. In the last decade, zakat experienced a rapid growth marked by the increase of total zakat collection fund. However, this zakat growth still has a significant gap compared to its potential. According to Kahf, total potential of zakat in OIC member countries ranged from 1.8 to 4.34 percent of total GDP. If zakat is multiplied by the GDP at current prices in 2010 from the OIC member countries, the global potential zakat reached USD 600 billion [1].

In the context of poverty alleviation in Indonesia, zakat has the huge potential. Since Indonesia has the biggest Muslim population in the world which is 85 percent of total population in Indonesia or 216.66 million population. It can also be portrayed from the increasing of zakat, alms, and sadaqah (zakat, infaq, sadaqah or ZIS) collection fund since 2002 until 2015 (Table 1).



Tabel 1. Time series of ZIS collected in Indonesia [6].

Year	Billion IDR	Million USD ^{*)}	Annual Growth (%)	GDP Growth (%)
2002	68.39	4.98	-	3.70
2003	85.28	6.21	24.70	4.10
2004	150.09	10.92	76.00	5.10
2005	295.52	21.51	96.90	5.70
2006	373.17	27.16	26.28	5.50
2007	740.00	53.86	98.30	6.30
2008	920.00	66.96	24.32	6.20
2009	1200.00	87.34	30.43	4.90
2010	1500.00	109.17	25.00	6.10
2011	1729.00	125.84	15.30	6.50
2012	2200.00	160.12	27.24	6.23
2013	2700.00	196.51	22.73	5.78
2014	3300.00	240.17	22.22	5.02
2015	3700.00	269.29	21.21	4.79

*) 1 USD = IDR 13,740

Table 1 shows that the ZIS collection fund had increased 5310.15 percent since year 2002 until 2015. In year 2005 and 2007, it also increased significantly (almost 100 percent) which was predicted as the implication of tsunami in Aceh and earthquake in Yogyakarta. Both of these tragedies were stated as the national disaster in Indonesia. Table 1. also shows the increasing of ZIS collection fund since year 2002 until 2015 as 39.28 percent in average. This data indicated that the public awareness to pay zakat through the certified zakat institutions (Lembaga Amil Zakat or LAZ) has been increased. The positive trend of this zakat collection also implied the increase of public trust to the zakat institution's performance in managing zakat fund. The annual growth of ZIS collection fund was also higher than the GDP growth year to year. In year 2009, the GDP growth decreased 1.3 percent as a consequence of global financial crisis. On the contrary, zakat growth increased 6.11 percent. The average of zakat growth in 2002 to 2015 (39.28 percent) also showed a higher number than the average of GDP growth which only 5.42 percent. Generally speaking, the zakat growth is not much affected by the global crisis. Therefore, zakat has a huge potential to contribute to the national development.

The zakat development in Indonesia increased significantly when the Zakat Act No. 38/1999 was launched. Based on this act, zakat can be managed by the zakat institutions created by the government (*Badan Amil Zakat*) and also privately created by the public (LAZ). However, a major change in the regulatory framework occurred on the replacement of Zakat Act No. 38/1999 with the Zakat Act No. 23/2011 which brought all major private collectors under the supervision of National Zakat Board (BAZNAS). The Act No. 23/2011 aims to "improve the effectiveness and efficiency of the management of zakat services, and optimise the benefits of zakat for public welfare and poverty alleviation".

Based on this Act, the National Board of Zakat (BAZNAS) as an independent government agency responsible to the President of the republic of Indonesia. It had been given two main obligations: (1) to regulate entire zakat system including planning, implementation, controlling the process, audit, transparencies, collections, and distributions and (2) to coordinate all of the zakat institutions in the country cross-bodies, cross-provinces and cross-regencies.

2. Research Method

To assess and measure changes in material well-being of productive zakat program beneficiaries in Bantul, we have used basic need approach that is ability to fulfill human basic needs, based on the Indonesian Central Bureau of Statistics (BPS) standard. In 2016, BPS has released the poverty line in Bantul in the amount of Rp 360,169 per capita per month. Where, a person is called poor if he/she has average monthly expenditure below the poverty line. When to assess the change in poverty, we use of

some general poverty index such as Headcount Index, Poverty Gap, Poverty Gap Index (P1), Income Gap Ratio (I), Sen Index (P2), Poverty Severity and FGT Index (P3). In terms of data availability, we conduct the survey to the productive zakat program by BAZNAS in Bantul during 2016.

2.1. General poverty index

The word poverty comes from old French *pauvreté* (Modern French: *pauvreté*), from Latin *paupertās* from *pauper* (poor). Poverty is general scarcity or the state of one who lacks a certain amount of material possessions or money (people with \$1.25 a day). Absolute poverty refers to the lack of means necessary to meet basic needs such as food, clothing and shelter. Absolute poverty is meant to be about the same independent of location. Relative poverty occurs when people in a country do not enjoy a certain minimum level of living standards as compared to the rest of the population and so would vary from country to country, sometimes within the same country.

The main poverty line used in the OECD and the European Union. When the United States, uses an absolute poverty measure created in 1963–64 and was based on the dollar costs of the U.S. Department of Agriculture's "economy food plan" multiplied. Both poverty measures are usually based on a person's yearly income and frequently take no account of total wealth. Major developments and research in this area suggest that standard one dimensional measures of poverty, based mainly on wealth or calorie consumption, are seriously deficient. This is because poverty often involves being deprived on several fronts, which do not necessarily correlate well with wealth.

The World Bank defines extreme poverty as living on less than US\$1.90 per day (PPP), and moderate poverty as less than \$3.10 a day. It has been estimated that in 2008, 1.4 billion people had consumption levels below US\$1.25 a day and 2.7 billion lived on less than \$2 a day.

2.2. Headcount index

The most common method to measure and report the poverty is the headcount ratio, which is given as the percentage of population that is below the poverty line based on the regional standards. For example, The New York Times in July 2012 reported the poverty headcount ratio as 11.1% of American population in 1973, 15.2 percent in 1983 and 11.3 percent in year 2000. The headcount index is one of the most widely-used measurements since it simply measures the proportion of the population that is counted as poor. In this case, we put the headcount index is used to find out the proportion of productive zakat beneficiaries, means the total beneficiaries who are poor categorized (in the sense of the local poverty line) of the total beneficiaries population.

The score describe how many poor based on BPS standard, among the productive zakat beneficiaries in Bantul. The headcount index often denoted by *H*, the formula as follows:

$$H = \frac{q}{n} \quad (1)$$

H = head count index; *q* = the number of poor people; *n* = the number of people in population

2.3. Poverty gap

The poverty gap indicator is produced by the World Bank Development Research Group to measure of the intensity of poverty. It is also defined as the average poverty gap in the population as a proportion of the poverty line. The poverty gap index is an improvement over the poverty measure headcount ratio which simply counts all the people below a poverty line, in a given population, and considers them equally poor. The poverty gap also described the average shortfall of the total population from the poverty line.

In the most cases, poverty line is indicated by the widely accepted international standard for extreme poverty. However, it's been difficult to set a common international poverty threshold since different countries have different thresholds for poverty. Thus, while the headcount index is just to show the proportion of poor people in population, the poverty gap measure how far the average individual income fall below the poverty line.

2.3.1. Poverty gap index

Poverty gap index estimates the depth of poverty by considering how far, on the average, the poor are from that poverty line [5]. Therefore, the sum of the income shortfall of poor people divided by the total number of poor people will show how far the gap is. The formula of P1 is as follows:

$$P = \sum_{i=1}^q g_i v_i(z, y) \quad (2)$$

P_1 = poverty gap; $g_i = z - y_i$ (the difference between the i -poor people and the poverty line/income shortfall), z = official poverty line, y_i = income of i -population, where $i = 1, 2, \dots, q$

This measure is the mean proportionate poverty gap in the population (where the non-poor have zero poverty gap). Some people find it helpful to think of this measure as the cost of eliminating poverty (relative to the poverty line), because it shows how much would have to be transferred to the poor to bring their incomes or expenditures up to the poverty line (as a proportion of the poverty line). The minimum cost of eliminating poverty using targeted transfers is simply the sum of all the poverty gaps in a population; every gap is filled up to the poverty line. However this interpretation is only reasonable if the transfers could be made perfectly efficiently, for instance with lump sum transfers, which is implausible [2]. It can be seen that the ratio of the minimum cost of eliminating poverty with perfect targeting (i.e. G_i) to the maximum cost with no targeting. Thus this measure is an indicator of the potential saving to the poverty alleviation budget from targeting: the smaller is the poverty gap index, the greater the potential economies for a poverty alleviation budget from identifying the characteristics of the poor – using survey or other information – so as to target benefits and programs.

2.3.2. Income Gap Ratio (I)

In addition to the poverty gap index, there is also a method to measure the gap between the poor people and the poverty line which is Income Gap Ratio (I). The income gap ratio is a relative gap between the poverty line and the average income of the poor [3].

$$I = \sum_{i \in S(z)} \frac{g_i}{qz} \quad (3)$$

I = income gap ratio; $g_i = z - y_i$ (income short-fall of i -poor people, z = poverty line, y_i = i -individual income; q = total people whose is below the poverty line.

2.3.3. Poverty Severity

Despite the ability to see the depth of poverty, poverty gap and income gap cannot capture the inequality between the poor. Therefore, other indexes such as Sen Index as well as Foster, Greer, and Thorbecke Index, are used to see the poverty severity.

2.3.4. Sen Index (P_2)

The Sen index sought to show how the headcount and income gap ratio, along with the Gini index of the income distribution of the poor, can give an adequate picture of poverty. Because of this poverty, the Sen index is said to include the three I's of poverty: Incidence, Intensity and Inequality [4].

$$P_2 = [I + (1 - I)G_p] \quad (4)$$

2.3.5. FGT Index (P_3)

Another method to see the poverty severity by thought of as one of a family of measures proposed by Foster, Greer and Thorbecke (FGT) Index (1984). The general formula for this index depends on a parameter α which takes a value of zero for the headcount, one for the poverty gap, and two for the squared poverty gap. Quite generally, as:

$$P_{\alpha}(y, z) = \frac{1}{n} \sum_{i=1}^q \left(\frac{g_i}{z} \right) \quad (5)$$

$G_i = z - y_i$ (income short-fall of i-poor people, z = poverty line, q = total people whose is below the poverty line, α = parameter of sensitivity with value ≥ 0).

2.3.6. Poverty Rate Index Changes Before and After

The next steps after conducting the assessment using these methods and formulas, we noticed changes in poverty level and material well-being of beneficiaries. Table 2 show the result for a year before and after receiving the program.

Table 2. Poverty rate index changes before and after.

Index Score	Before Program	After Program
H	0.171	0.118
P ₁	IDR 63,763	IDR 56,992
I	0.197	0.169
P ₂	0.093	0.062
P ₃	0.010	0.004

3. Results and Discussion

3.1. Headcount index

From the table, show the number of total beneficiaries (356 people) whose income is below the poverty line (poor category) before the program are 244 people ($H = 0.171$) and after the program change to 168 ($H = 0.118$), which means the program has succeeded in reducing the number of poor people by 76 people (5.34 percent).

This assuming, the index when getting close to 1 means more number of the poors, while when getting closer to 0 means the poors number are decreased. Thus, a good empowerment program is when the H index values after the program are less than the H index before the program.

3.2. Poverty Gap

From the table, show the poverty gap (P_1) among the beneficiaries also decrease. Before the program, the gap between poverty line and the average income of beneficiaries is Rp 63,763, while after the program the gap is IDR 56,992. Meaning that the average distance of the poors income to the poverty line (IDR 360,169), before the program IDR 63,763 and after the program IDR 56,992. Assumed, that the smaller and closer to 0 in *rupiah*, the smaller poverty gap has been generated. Thus, a good empowerment program is when the P_1 index after the program are less than the P_1 index before the program.

3.3. Income gap

From the table, show the income gap (I) is also decline from 0.197 to 0.169. Assuming, when the index getting close to 0 means the value of income gap is smaller and the poorer the better. Thus, a good empowerment program is when the I index after the program are less than the I index before the program.

3.4. Poverty Severity

From the table, show the poverty severity index among the beneficiaries seen by Sen Index (P_2) decrease from 0.093 to 0.062, while using Foster-Greer-Thorbecke Index (P_3) formula, the poverty severity decrease from 0.010 to 0.004. In the Sen Index (P_2) assuming, when the index getting close to 0 means the poverty severity was decreased. Thus, a good empowerment program is when the Sen

index after the program are less than the Sen index before the program. As well as in the FGT Index (P3) assuming, when the index getting close to 0 means the poverty severity was decreased. Thus, a good empowerment program is when the FGT index after the program are less than the FGT index before the program.

4. Conclusion

Based on the above empirical assessment, can be concluded that zakat distribution for the community empowerment in Bantul is possible for reducing inequality and ending poverty. This can be an example program for other regions in Indonesia, including in urban communities. From the calculating of five indexes, we can conclude that the program is effective for reducing the poverty, as well as can increase of the welfare level among the beneficiaries.

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