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ZAKAT FOR POVERTY ALLEVIATION AND INCOME INEQUALITY REDUCTION: WEST JAVA, INDONESIA

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ABSTRACT

This research aims to analyse the role of *zakat* distribution programmes in poverty alleviation and income inequality reduction among groups in urban and rural areas. It features a case study of 1,309 *zakat* beneficiaries managed by the National *Zakat* Board of Indonesia (BAZNAS) as the coordinating *zakat* institution in Indonesia, in different cities and regencies in West Java Province, namely Bogor, Depok and Sukabumi. The analytical tools used in this study are a modified Centre of Islamic Business and Economic Studies (CIBEST) model, the deciles method and the Gini coefficient. The study suggests that, in general, the present *zakat* distribution programmes can alleviate poverty and reduce income inequality among the observed *zakat* beneficiaries.

Keywords: Zakat, Poverty, Income Inequality
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I. INTRODUCTION

As a developing country, poverty and income inequality remain major problems in Indonesia. These serious phenomena can be understood based on the statistics presented in the following Table 1.

Table 1.
Percentage of Poor People in Indonesia, 2004–2015

Year	Percentage of Poor People (%)		
	Urban -1	Rural -2	Urban + Rural -3
2004	12.13	20.11	16.66
2005	11.68	19.98	15.97
2006	13.47	21.81	17.75
2007	12.52	20.37	16.58
2008	11.65	18.93	15.42
2009	10.72	17.35	14.15
2010	9.87	16.56	13.33
2011	9.09	15.59	12.36
2012	8.6	14.7	11.66
2013	8.52	14.42	11.47
2014	8.16	13.76	10.96
2015	8.22	14.09	11.13
Average	10.39	17.31	13.95
	(-14.34)*	(-13.92)*	(-16.27)*

* indicates a comparison of poverty based on the average with the base year of 2004, in percentage points.
Source: Central Board of Statistics (2016)

Based on the average figures, it is quite interesting to observe that over the past decade, there appears to have been a slightly faster rate of poverty reduction in urban compared to rural areas. This is evident from the figures in parentheses in Table 1 that show poverty reduction based on average performance in the period 2004–2015.

It is quite surprising to note that despite worsening inequality (+30.83) in terms of the average value of the Gini Index (Central Board of Statistics, 2016), the level of poverty reduction based on the average appears not to have worsened in urban areas (-14.34) compared to rural areas (-13.92). Our finding may thus suggest that during the last decade (2004–2015), the programme pertaining to overall social welfare in terms of health, education and reliefs or grants seems to have had a more salutary effect in urban compared to rural areas.

From the above explanation, we may be led to believe that poverty alleviation and income inequality reduction deserve priority in the national economic development strategy. Ishaq (2003) suggests that the only way to solve both

problems is by using instruments that are based on the local culture or religion. In this case, the institution of *zakat* is considered one of the most effective traditional mechanisms for dealing with the dual problems of poverty and income inequality (Pramanik, 1993). Its significance in terms of poverty eradication and income inequality reduction is reflected in several Quranic verses, including Quran 9: 60 and Quran 59: 7. These are also in line with Ahmad (1991), Al-Qaradhawi (1993) and Hafidhuddin (2002).

This research attempts to analyse the impact of *zakat* distribution programmes on reducing poverty and income inequality. Specifically, the study has two objectives. First, this study attempts to measure the effect of *zakat* in reducing the material and spiritual poverty of *zakat* beneficiaries in urban and rural areas. Second, this study tries to examine the effect of *zakat* in lessening income inequality among *zakat* beneficiaries.

This paper is structured as follows. The present section discusses the research background. Section II reviews literature on *zakat* and poverty alleviation. Section III discusses the research methodology. Section IV discusses the results and analyses the findings. Section V concludes the paper and suggests policy recommendations.

II. LITERATURE REVIEW

Numerous empirical studies on the importance of *zakat* distribution based on the quantitative approach have been conducted in Indonesia. Beik (2013) uses analytical tools to measure poverty and income inequality. These include the most commonly used Lorenz curve, Gini coefficient and Atkinson index to measure income inequality, in addition to the headcount ratio, poverty and income gap measurement, the Sen index and the Foster, Greer and Thoorbeek (FGT) Index to measure poverty, etc. In taking the case of Jakarta City, he finds that a proper *zakat* distribution programme is capable of reducing the incidence of poverty and income inequality by 16.79 per cent and 0.57 percentage points respectively.

Anriani (2010), Purnamasari (2010) and Beik and Tsani (2015) also report similar findings. Anriani (2010) suggests that the incidence of poverty in Bogor Regency can be reduced by 8.77 per cent using existing *zakat* distribution programmes, while Purnamasari (2010) finds that the poverty rate can be reduced by 21.40 per cent in Garut Regency. Likewise, they show that *zakat* can reduce the incidence of poverty in South Lampung Regency by 18.60 per cent.

It has been observed that most of the existing literature focuses only on the material aspects of the *zakat* beneficiaries. Therefore, the inclusion by this study of the spiritual aspects of *zakat* beneficiaries provides a different perspective on the problems of poverty and income inequality. This idea is in line with that of Al-Ghazali (1980) who postulates that poverty is related not only to worldly affairs but also to spiritual aspects. This is because Islam is a religion of balance that places equal emphasis on both of these elements. Fayazi (2015) also views the existence of spiritual poverty, defining it as a 'spiritual state in which one is devoid of selfishness and finds oneself totally dependent on God'. In other words, spiritual poverty approximates to being poor in spirit. From this point of view, it can be argued that spirituality is also an essential part of human life. Beik and

Arsyianti (2015) further suggest that spirituality from the perspective of Islam can be measured through the performance of worship, including prayer, fasting and *zakat*. The institution of the family and the support of the local authority are also instrumental in creating an environment to enable spiritual performance. In this case, the authors develop the Center for Islamic Economic and Business Studies (CIBEST) model to capture the material and spiritual dimensions of poverty.

Taking the case of Bogor Regency, Beik and Pratama (2015) show that after completing a programme implemented using *zakat* fund, 63.7 per cent of the households in the study are able to fulfil their material and spiritual needs. This is reflected by a decrease in the material, spiritual and absolute poverty indices alongside an increase in the welfare index.

Similarly, Beik and Arsyianti (2015) report that within one year of joining *zakat* distribution programmes, the welfare (falah) index of the *zakat* beneficiaries in Jakarta can be raised by 96.8 per cent, as measured by the CIBEST index. Moreover, *zakat* is able to lower the material and absolute poverty indices significantly by 30.15 per cent and 91.30 per cent respectively. However, in this case, two households have a higher spiritual poverty index. This reveals that these two *zakat* recipient households experience diminishing spiritual values while also being materially better off in the presence of the *zakat* utilisation programme.

Despite there being a number of existing studies, as delineated above, there remains a gap in terms of studying the empirical role of *zakat* in alleviating poverty and income inequality from many other dimensions. First, there is a lack of past empirical studies, notably at the micro level in Indonesia, comparing the role of *zakat* in urban and rural poverty caused by the different pull and push factors. Thus, any study that compares the role of *zakat* in poverty alleviation and income inequality reduction in urban and rural areas is expected to contribute to the existing *zakat* studies literature. Second, there is also a gap in terms of covering a geographical area as vast as that of Indonesia. This kind of empirical research is still not conducted in many parts of Indonesia. Therefore, covering the cities and regencies of Bogor, Sukabumi and Depok will enrich the body of empirical studies on *zakat*.

III. METHODOLOGY

The data for this study comprise primary data obtained through questionnaires. A total of 1,309 *zakat* beneficiaries are included that are managed by Badan Amil *Zakat* Nasional (BAZNAS) in Bogor, Depok and Sukabumi cities and regencies.

In general, this study employs three methods of estimation. A modified CIBEST model is used for the poverty analysis, while income inequality is measured using the deciles method and the Gini coefficient.

In terms of poverty analysis, this research examines two sets of data. The first data set comprises pre-*zakat* household income and the second data set include post-*zakat* household income. The pre-*zakat* and post-*zakat* income data are acquired using questionnaires that are completed by the participants one year after they had joined the *zakat* distribution programmes. In terms of spirituality before and one year after the *zakat* distribution programmes, the data are also obtained via a questionnaire. The CIBEST quadrant is used to derive an index for each area in

the quadrant, namely the welfare index, material poverty index, spiritual poverty index and absolute poverty index. In our study, we replace the term 'welfare' with '*falah*'. Mathematically, the falah index is formulised as follows.

$$F = \frac{f}{N} \tag{1}$$

Where:
F = Falah Index that lies within the range 0–1
f = The number of prosperous households of *zakat* payers
N = The number of observations

Secondly, the material poverty index is formulised as follows.

$$Mp = \frac{NM_p}{N} \tag{2}$$

Where:
Mp = Material Poverty Index that lies within the range 0–1
NM_p = The number of materially poor but spiritually rich households.

They fall under the material poverty line, but their spiritual Likert scale value is equal to at least 3.
N = The number of observations.

Thirdly, the spiritual poverty index is formulised as follows.

$$Sp = \frac{NS_p}{N} \tag{3}$$

Where:
Sp = Spiritual Poverty Index that lies within the range 0–1
NS_p = The number of materially rich but spiritually poor households.

They fall above the material poverty line, but their spiritual Likert scale value is less than 3.
N = The number of observations.

Lastly, the absolute poverty index is formulised as follows.

$$Ap = \frac{NA_p}{N} \tag{4}$$

Where:
Ap = Absolute Poverty Index that lies within the range 0–1
NA_p = The number of both materially and spiritually poor households.

They fall under the material poverty line and their spiritual Likert scale value is less than 3.
N = The number of observations.

The values for f, NM_p, NS_p, and NA_p are determined simply by counting the number of households that fall within each quadrant. Those numbers can be valued once the standards of materially and spiritually poor have been established. Accordingly, the material standard (MS) line is derived from the minimum standard of material needs that has to be fulfilled by the household. The formula for this standard is as follows.

$$MS = \sum_{i=1}^{N} PiMi \tag{5}$$

Where:
MS = Poverty line income (in terms of local currency)
P_i = Price of goods and services i (in terms of local currency)
M_i = Minimum amounts of goods and services needed.

In terms of the income poverty line in the five aforementioned areas under consideration, this study employs the *nishab* standard of *zakat* of income as its MS. The *nishab* standard of *zakat* of income is the monetary value of 524 kg rice based on Regulation of Indonesian Minister of Religious Affairs Number 52/2014. According to Presidential Instruction Number 5/2015, the government's purchase price of each kg is IDR 7300. Therefore, the MS according to *nishab* is obtained by multiplying 524 kg of rice with the aforesaid governmental purchasing price of each kg, thus being equal to IDR 3,825,200 or USD 283.29. A household is classified as materially poor if its income is less than the value of the MS. Otherwise, it is categorised as rich.

In terms of the indicators of spiritual needs, the spirituality model of CIBEST was chosen over other models based on several considerations. First, the simplicity of the CIBEST model makes it applicable to the large sample size. Second, although it requires several modifications, the indicators of spirituality in the CIBEST model have a strong foundation according to the Quran and hadith. Third, the model has been adopted as national policy by BAZNAS, thereby proving its validity.

The spiritual indicators of the CIBEST model are measured using a Likert scale by evaluating the performance of a household's worship and external factors including prayer, fasting, *zakat* and charity spending, the household environment and the government policy environment. The scale has a range of 1 to 5, with performance rated in ascending order. In other words, a higher score on the scale represents better spirituality.

For instance, if a household always performs its obligatory and recommended prayer, fasting and pays *zakat* and charity, it is scored 5. On the other hand, if the members of a household never undertake these activities and also prevent others from performing their own acts of worship, they are scored 1. Similarly,

if the household and policy environments are conducive to the family members performing worship, they are scored 5. The spiritual poverty line threshold is equal to 3, which shows the family performs only its obligatory worship or undertakes only the minimum level of worship.

Nevertheless, despite its simplicity, the spirituality index in the CIBEST model is confined to a mere three out of the five pillars of Islam and the supporting environment of the family and government. In the current study, the spiritual indicators are modified by adding other variables such as the way in which the household members perform prayer (i.e. on a congregational or individual basis), their habit of reading the Quran and their endeavours to acquire Islamic knowledge, as well as their attendance at religious gatherings or ceremonies. Besides that, the indicators also include one's foundation of Islamic creed, i.e. *aqidah*. The adjustments are expected to be able to capture the spiritual condition of a household in a more comprehensive way.

Following the CIBEST model, the spiritual standard that separates spiritually poor from spiritually rich households is determined to be equal to 3 (vide Table 1). Mathematically, this can be written as follows.

$$SS = 3 \tag{6}$$

Where:
SS = Standard for spiritual poverty

The general spiritual condition of households in one country can be formulated as follows.

$$SA = \sum_{k=1}^{N} \frac{SHk}{N} \tag{7}$$

Where:
SA = Average spiritual condition score of the observed households
SHk = Actual condition of household k
N = The number of households in the sample.

If the average spiritual value of the households is greater than the standard (SA > SS), then, generally speaking, the population in that place has a good spiritual condition. In other words, they are spiritually rich. Similarly, if the value of the spiritual average of the household is less than or equal to the standard (SA ≤ SS), then the residents of that place are deemed to be spiritually poor.

Another important aspect is related to the calculation of *SHk*. This is obtained from the score of all of the variables observed in the household. Therefore, equation (8) below provides the formula for computing *SHk*.

$$SHav = \sum_{h=1}^{TNH} \frac{AS_1 + AS_2 + \cdots + AS_{TNH}}{TNH} \quad (8)$$

Where:
SHav = Average score of the actual spiritual condition of one household
ASh = Actual spiritual score of household member h
TNH = Total number of household members.
As for *ASi*, the formula is as follows.

$$ASi = \frac{FS + OPS + RPS + CPS + OFS + RFS + ZS + RQ + KS + IGS + HS + GS}{12} \quad (9)$$

Where:
ASi = Actual spiritual score of household member *i*
OPS = Obligatory prayer score
RPS = Recommended prayer score
CPS = Congregational prayer score
OFS = Obligatory fasting score
RFS = Recommended fasting score
ZS = *Zakat* and infaq score
RQ = Recitation of Al-Quran score
KS = Acquiring Islamic knowledge score
IGS = Islamic gathering attendance score
HS = Household environment score
GS = Local authority environment score.

The number of households in each CIBEST quadrant is determined by combining the results of the MS value and the spiritual standard (SS) value. There are four possible combinations between the MS and SS results, namely both materially rich and with high spirituality, high spirituality but materially poor, materially rich but with low spirituality, and both materially poor and low spirituality (vide Table 2).

Once the number of households in each quadrant is known, the calculation of all indices becomes easier. Combining all of the values for the falah index, material poverty index, spiritual poverty index and absolute poverty index, we obtain the total values of those indices to be equal to 1. This is called the generalised CIBEST model.

$$CIBEST\ Model = 1 = F + Mp + Sp + Ap \quad (10)$$

According to equation (10), the total summation of all of the indices must be equal to one. These indices could be utilised to map the population in order to ascertain the quadrant in which the majority of the population lies. This will be of assistance to the government in designing a policy strategy that can be effectively executed.

Table 2.
Combination of SS and MS Values

Results	<MS Value	>MS Value
>SS Value	High Spirituality but Poor (Quadrant II)	Rich and High Spirituality (Quadrant I)
<SS Value	Poor and Low Spirituality (Quadrant III)	Rich but Low Spirituality (Quadrant IV)

Source: Beik and Arsyianti (2015)

In terms of income inequality, the study uses deciles and the Gini coefficient as its analytical tools. McConnell et al. (2015) define the Gini coefficient as a numerical measure of the overall distribution of income. The value lies between 0 and 1, with 0 denoting perfect equality and 1 representing perfect inequality. Based on Patmawati (2006), the calculation of the Gini coefficient is as follows.

$$G = 1 - \sum (ab)(bd + ac) \tag{11}$$

Where:
G = Gini coefficient
ab = The value based on population division
bd = Percentage of income received by the population
ac = Percentage of population.

The interpretations of the Gini coefficient results are as follows. If the post-*zakat* Gini coefficient is less than the pre-*zakat* Gini coefficient, this suggests that there is an impact of *zakat* distribution on income inequality reduction.

IV. RESULTS AND FINDINGS

4.1. Demographic Characteristics

Based on areas, while urban areas are represented by the three cities of Bogor, Sukabumi and Depok, rural only two regencies, namely Bogor and Sukabumi, represent rural areas. There are 833 respondents live in Bogor and Sukabumi while the remaining 476 respondents coming from Bogor, Sukabumi and Depok. In other words, around two-thirds of the respondents live in rural areas, while only one-third of the respondents live in urban areas.

The following Table 3 contains the demographic characteristics of the respondents in both the urban and rural areas. In terms of gender, it appears that the current finding contradicts the conventional wisdom, whereby male-headed households are dominant among the respondents by approximately two-thirds and four-fifths in urban and rural areas respectively. In terms of marital status, nearly two-thirds of the household heads are married in both areas, followed by the widowed and single household heads.

Table 3.
Respondents' Demographic Characteristics

Demographic Characteristics		Percentage	
		Urban	Rural
Gender	Male	67.4	79.7
	Female	32.6	20.3
Status	Married	66.8	81.9
	Single	8.2	0.7
	Divorced	25	17.4
Age Groups	Juvenile (12–25 yo)	5.7	1
	Adults (26–45 yo)	36.8	43.6
	Seniors (46–65 yo)	45	47.9
	Elderly (> 65 yo)	12.6	7.5
Formal Education	No Formal Education	4.2	1.6
	Elementary School	37.8	46
	Junior High School	22.5	23.3
	Senior High School	30.9	25.6
	Associate Degree	1.5	1.2
	Bachelor's Degree	2.5	3.1
	Other	0.6	0.2

Based on the age of the household heads in both areas, it is surprising to observe that almost half of the household heads fall within the seniors category (46–65 years old), which is followed by the adults (26–45 years old), elderly (over 65 years old) and juvenile (12–25 years old) categories. This finding suggests that the respondents are mostly at their economically productive age, i.e. between the ages of 46 and 65.

It is also found that a majority of the household heads in both areas have pursued a formal education up to the elementary school level, which is closely followed by the senior and junior high school levels. Approximately 4 per cent of the household heads hold a diploma and bachelor's degree, while less than 1 per cent of the respondents hold another level of formal education, such as that obtained from an Islamic boarding school (*Pesantren*). However, it is surprising to observe that the number of household heads who have never attended any formal education seems to be higher in the urban areas as compared to the rural areas. This might be linked to the increase in urban poverty arising from the phenomenon of internal migration from the rural to urban areas.

4.2. Poverty Analysis

This section explores the general poverty analysis derived from the overall respondents in the urban and rural areas. After having identified the income or expenditure as well as the spiritual condition of the observed households, we then compared those values with the poverty line standard and the spiritual line as explained in Section 3. Each household is then assigned to a CIBEST quadrant before and after the *zakat* distribution programmes according to the area. The following Figure 1 presents the results.

Figure 1 represents the number of households within each quadrant for before and one year after participating in *zakat* distribution programmes in urban and rural areas. As shown in the aforementioned figure, it is observed that 913 households, almost 70 per cent, of the observed households in urban and rural areas are in the material poverty quadrant (second quadrant), which means their material conditions are below the standard and their spiritual conditions are above the standard prior to the *zakat* distribution programmes. Moreover, approximately one-tenth of the households are in the absolute poverty quadrant, thus indicating that they were both spiritually and materially poor before the *zakat* distribution programmes. Therefore, in sum, around 80 per cent of the observed households are in the second and fourth quadrants. This shows that the BAZNAS in each city and regency has given priority to those households that are classified as those who have high spirituality but are materially poor.

(+)

Spiritual Level

(-)

Material Poverty	Before	After
Urban	307	327
Rural	606	656
Total	913	983

Falah	Before	After
Urban	70	91
Rural	44	90
Total	114	181

Absolute Povert	Before	After
Urban	32	20
Rural	90	28
Total	122	48

Spiritual Poverty	Before	After
Urban	67	38
Rural	93	32
Total	160	70

(-) **Maerial Level** (+)

Figure 1.
Number of Households Based on the CIBEST Quadrants (Before and One Year After Joining a *Zakat* Programme)

However, it surprising to observe that some households were already in the first and third quadrants prior to the *zakat* distribution programmes, thus showing that they were actually already above the MS. A total of 160 households, or 12.22 per cent of the total households, are in the third quadrant, i.e. the spiritual poverty

quadrant. The households in this quadrant are materially rich but spiritually poor. Besides, a total of 70 households were already in the first quadrant, indicating they were materially and spiritually rich prior to the programme.

The inclusion of households that were already materially rich prior to the *zakat* distribution programmes may be indicative of several facts. First, some households contain more than one working person, which therefore increases the total monthly income earned by those households. According to the data, it can be observed that about 42.0 and 49.2 per cent of the households in urban and rural areas respectively contain two to five working people. The total earnings of all of the working people in the family therefore place them above the poverty line.

Second, in some areas, BAZNAS may have distributed *zakat* funds to ineligible households. Although such cases are few in number, our finding might suggest that a lack of proper checks when determining the eligibility of *zakat* recipients can lead to *zakat* being incorrectly distributed to certain people who are not eligible to receive such funds. In this case, BAZNAS is urged to ensure there is tighter control in relation to examining the eligibility of potential *zakat* recipients in order to ensure that *zakat* is disbursed only to those who are eligible based on the standard.

Following the conducting of a *zakat* distribution programme over the course of one year, it is interesting to note that there is an increase of 7.67 per cent in the number of households in the material poverty quadrant as a result of the migration of households from the spiritual poverty and absolute poverty quadrants. The numbers of households in the spiritual and absolute poverty quadrants fell by 56.25 per cent and 60.66 per cent respectively. At the same time, the number of households in the *falah* quadrant increased by almost 60 per cent, from 114 to 181 households. This means that one year after the *zakat* distribution programme is executed; the majority of the households are better off in terms of either their spiritual condition or both their spiritual and material conditions.

Finally, the values of all indices can be calculated as shown in the following Table 4. It can be observed from the table that the *zakat* distribution programmes in the aforementioned cities and regencies can raise the falah level of the observed households by 55.56 per cent in total, as is evident from the figures in parentheses in column (5).

Table 4.
CIBEST Index in Urban and Rural Areas Before and One Year After Joining *Zakat* Distribution Programmes

Area	Before				After			
	FI (1)	MPI (2)	SPI (3)	API (4)	FI (5)	MPI (6)	SPI (7)	API (8)
Urban	0.15	0.64	0.04	0.17	0.19	0.69	0.01	0.11
					(+26.67)	(+7.81)	(-75.00)	(-35.29)
Rural	0.06	0.73	0.03	0.19	0.11	0.79	0.02	0.09
					(+83.33)	(+8.22)	(-33.33)	(-52.63)
Total	0.09	0.7	0.03	0.18	0.14	0.75	0.02	0.09
					(+55.56)	(+7.14)	(-33.33)	(-50.00)

Note: FI: *Falah* Index, MPI: Material Poverty Index, SPI: Spiritual Poverty Index, API: Absolute Poverty Index

It would appear that the *zakat* distribution programmes have a more salutary effect in rural areas than in urban areas. This is indicated by the greater increase in the rural area falah index (83.33 per cent) than in the urban area index (26.67 per cent). This might be linked to the fact that the majority of *zakat* programmes for the urban households are production-based programmes. Similarly, while the overall spiritual poverty index can be reduced by approximately one-third, the absolute poverty level can be reduced by around a half, as evident from the figures in parentheses in columns (7) and (8) respectively. However, the total material poverty index grows by 7.14 per cent as a result of the migration of households from the absolute and spiritual poverty quadrants. This is evident from the figures in parentheses in column (6). In general, our findings show that the observed households are improved in terms of their spiritual condition one year after the *zakat* distribution programmes have been conducted.

4.3. Income Inequality Analysis

This section contains an analysis of the role of *zakat* in income inequality reduction using the deciles method and Gini coefficient. The following Table 5 presents the size of the distribution of household income before and after the *zakat* distribution programmes using the deciles method. The observed households are firstly arranged according to their income in ascending order and are then divided into deciles.

Table 5.
Size of Distribution of Household Income Before and One Year After Participating in *Zakat* Distribution Programmes based on Deciles

Percentage of Population	Percentage Share of Total Income				Percentage Point of the Gap (b-a) (5)
	Before		After		
	Deciles (a) (1)	Cumulative Deciles (2)	Deciles (b) (3)	Cumulative Deciles (4)	
Top 20%	48.84	48.84	47.39	47.39	(-145.00)
Middle 40%	37.27	86.11	37.59	84.98	(+32.00)
Bottom 40%	13.89	100	15.2	100	(+113.00)

We can observe from Table 5 above that the bottom 40 per cent of the population shared only 13.89 per cent of the total income while the top 20 per cent held a 48.84 per cent share prior to the *zakat* distribution programmes, as evident from the figures in parentheses in column (1), rows (1) and (3). These findings suggest that the distribution of income among *zakat* beneficiaries in the urban and rural areas under consideration is highly unequal in the absence of *zakat* distribution programmes. One year after the distribution of *zakat*, the share of income of the bottom 40 per cent has increased by 113.00 percentage points while the portion of income of the top 20 per cent has fallen by 145.00 percentage points, as is evident from the figures in column (5), rows (1) and (3). These findings show that after one

year of *zakat* distribution programmes, income inequality among *zakat* beneficiaries can be reduced as the distribution of income is improved for the bottom 40 per cent at the same time as being reduced for the top 20 per cent. These findings also suggest that the inequality level among *zakat* recipients can be improved one year after the presence of *zakat* distribution programmes in both urban and rural areas.

By using the Gini coefficient as presented in the following Table 6, it is interesting to note that the overall income inequality of the observed households can be marginally reduced by 0.019. This is evident from the values of the Gini coefficient, which are greater prior to the *zakat* distribution programmes than for one year after the *zakat* distribution programmes. Prior to the *zakat* distribution programmes, the Gini coefficient is 0.431, while one year after the programmes the coefficient has fallen to 0.412. The income inequality among *zakat* beneficiaries one year after the *zakat* distribution programmes in urban and rural areas is also reduced by 0.019 and 0.011 percentage points respectively. Our finding might suggest that the presence of *zakat* distribution programmes has led to a reduction in the level of income inequality among *zakat* beneficiaries, although the improvement is only marginal.

Table 6.
Gini Coefficient Before and One Year After Joining *Zakat* Distribution Programmes

Gini Coefficient	Before *Zakat* Distribution Programmes (1)	After *Zakat* Distribution Programmes (2)	Reduction Index (3)
General	0.431	0.412	0.019
Urban	0.458	0.439	0.019
Rural	0.411	0.4	0.011

V. CONCLUSION

After examining 1,309 households in five different cities and regencies, it can be concluded that the present *zakat* distribution programmes conducted by BAZNAS are capable of significantly alleviating poverty and reducing income inequality. Based on the CIBEST model, the material and spiritual conditions of the observed households in the urban and rural areas were improved one year after they joined the *zakat* distribution programmes. This is indicated by the approximately 60 per cent increase in the falah index. This index indicates those households that have material and spiritual conditions above the standard. By using the CHAID method, it is also found that the spiritual supervision and routine assistance carried out by BAZNAS officers, informal education, family size, and the age and job of the respondents are the variables that are statistically significant in influencing the increase of the households' income and spirituality. According to the Gini coefficient, income inequality can be reduced by 0.021 percentage points. Thereby suggesting that the observed households are better off in terms of income inequality one year after the *zakat* distribution programmes.

The study suggests that *zakat* plays a significant role in poverty alleviation and income inequality reduction. Hence, economic policies should incorporate *zakat* as it can have a significant impact on those problems. Thus, economic policy actions should include *zakat* as a fundamental strategy for sustainable development and financial stability.

In addition, the support and political will of the government and parliament of the Republic of Indonesia is required, including regulations and the allocation of governmental budget, in order to enhance and optimise the role of *zakat* and of BAZNAS as the national coordinating institution for *zakat* management in Indonesia. Cooperation and synergy between BAZNAS, other *zakat* institutions and the government are also urgently needed to solve the dual problems of poverty and income inequality in the country in a more effective and efficient manner. Further research using other qualitative and quantitative approaches is also suggested as a means of obtaining more evidence of the economic role of *zakat* in society. To conclude, this study has substantiated the role of *zakat* in poverty alleviation and income inequality reduction such that it can benefit development and financial stability in general.

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