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ROLE OF ZAKAT IN REDUCING POVERTY IN ISLAMIC COUNTRIES

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ABSTRACT

Poverty can be defined in the simplest terms as a lack of basic necessities like food, clothing and shelter, etc. Around 3 billion people are living in poverty of which 35 % are from Muslim world [1]. And the number of poor people is increasing day after day worldwide. The main objective of this study is to determine the relationship between poverty and zakat, and examine the effectiveness of zakat in reducing poverty in Islamic countries which includes Indonesia, Pakistan, Malaysia, Egypt, Algeria, and Sudan. This study identifies the correlation between zakat distribution and poverty according to zakat rates and poverty lines data in the listed Islamic countries from the year 2003 to 2011. This study concludes that if zakat collections are collected and distributed according to Shariah compliance, it will reduce poverty and the society will become a better place. In the other hand if zakat payments are distributed unequally a number of poor people will increase. This study recommends that wealthy individuals must be oriented and encouraged to pay their zakat in order, to help the poor segment of the society and develop the community.

INTRODUCTION

Poverty is one of the biggest issues in Muslim communities. The percentage of people living in poverty is increasing rapidly. According to Zubair Mughal [2], the Minister of Religious Affairs in Tunis states that "Half of global poverty reside in the Muslim world while the Muslim population is 24% of the total global population, if the dangerously increasing poverty in the Muslim community is not controlled soon then it will be alarming". The main causes that accelerate the increase in the number of people living under the poverty line are; lack of education, lack of employment [2]. Furthermore, there are many types of research and statistics shows that the combining annual GDP on 75 Muslim countries remained under 2 trillion US Dollar. While the United

States GDP itself worth 20.4 trillion, China 5.7 trillion, Japan 3.5 trillion, and Germany 2.1 trillion [3]. However, the World Bank states that 70 million of the world's poor that are living on less than two dollars per day are in both of the Middle East and North Africa [4]. These figures show that actions must be done in order to reduce poverty in Muslim countries. As a result of that Islamic microfinance is becoming an important model to reduce poverty in Muslim countries. The most common Islamic microfinance strategies and products are Murabaha sale, Profit, and loss sharing contracts, a contract of Exchange, and Qard al Hassan [5]. These initiatives play an important role in developing poor Muslim countries as they are considered as a good Shariah is compiled instrument that fights poverty in Muslim countries.

Moreover, Zakat is one of the primary products offered by the Islamic microfinance that contribute to reducing the poverty in Muslim countries. Zakat committees are developed that are undertaken with the accumulation and distribution of Zakat funds, under the voluntary system [6]. Zakat is mandatory in a handful of the Muslim community, which then is collected in a central way by the state. In every Muslim country, there are institutions who are responsible for zakat and these institutions is under the responsibility of the government in accumulating as well as distributing zakat funds [7]. These institutions must have a good governance structure and management to allocate and distribute Zakat efficiently, as Zakat distribution would make certain the self-respect of the poor and needy people by the government. Different researches proved that different Zakat system has caused different impacts on developing Muslim countries and poverty reduction. During the past, there have been several Zakat systems in the region in order to manage Zakat at the national level. Countries like Saudi Arabia, Kuwait, and Malaysia have shown great results in applying such rules and regulations to maintain effective Zakat distributions [8]. On the other hand, there are many Muslim countries, which failed in developing a proper Zakat system such as Pakistan, Egypt, Afghanistan, Bangladesh, and Sudan. Zakat institutions play an important role in the process of collecting, distributing zakat, and reduce the poverty rates among the Muslim world. However, the Zakat system of the country depends on the management of zakat institution. Furthermore, the Zakat management all over the world faces various kinds of challenges and several issues in terms of collection and distribution.

Sabahuddin [9] in his research he also mentioned that according to Abdul Aziz and Abdullah [10]. These problems/challenges is due to: "lack of public awareness about the importance of paying zakat to these institutions, lack of awareness about basic of zakat, the absence of institutional support on zakat collection and distribution, absence of the standardized concept among the existing zakat management bodies". Several studies state that there is a strong relationship between the zakat institutions management system and poverty reduction in Muslim countries. However, the management system is good/bad it will either increase or decrease the poverty rates of the country [9].

As the main purposes of Zakat is to achieve economic wealth and justice. The challenge can be seen in how different countries apply and practice Zakat laws, in order maintain economic wealth and growth, income equality, and

justice. Norazlina and Abdul Rahim [11] state that governmental policies considered as the most important thing to assure the Zakat institution's efficiency in delivering the appropriate contribution to the economy. There are many types of research on the area of Zakat institution's Efficiency where this term is being used to measure how well an organization is using its resources to meet its specific objectives." However, the many researchers pointed out those government policies are essential to managing the process and structure of Zakat institutions, in order to increase their efficiency on enhancing social welfare of Zakat recipients, and demonstrating accountability to the Zakat payers. As government policies play an important role in optimizing of zakat management.

In Islamic countries, the system of zakat is different from country to another and these differences occur according to the way of applying and imposing zakat laws by the government of the country. According to Elsayed [12] the relationship between the ways of managing zakat system, the implementation of it laws, and poverty reduction is a very strong relationship. For example, in Saudi Arabia "DZIT" the department of zakat and income tax are completely responsible for collecting and distributing zakat funds and the total collection of zakat in Saudi Arabia is increasing efficiently every year because of the good management of the system. In the case of Egypt, the law of zakat is not imposing and the system is not developed due to the differences in poverty rate and the effectiveness of zakat in the field of poverty reduction. So, if the government of any Muslim country takes the complete responsibility for Zakat it will decrease the poverty rate in the country and the total yield of zakat will increase. as shown in the case of Saudi Arabia and there are other Muslim countries who have done this successfully.

METHODOLOGY

Data Processing

The collected primary data is the Zakat and poverty from different websites includes (The World Bank, index mundi, UnData). Secondary data was journal articles and previous studies to satisfy the need of the research, and answer the research questions. The data gathered belongs to six countries, which are Malaysia, Indonesia, Pakistan, Egypt, Sudan, and Algeria. New spreadsheets created and labeled according to the data processing, calculations, and investigation of relationships. However, in order to precise on the investigation of the possible relationship between Zakat and poverty, it was decided to separate the data into six datasets (1 data set for each country). This separation will enable comparison between all countries to see whether there were trends in the data over time periods. Same processing and examination tools applied to all the data. The currency used in this research is the United State Dollar. The amount of Zakat for all countries is divided by 1,000,000 in order to allow interpretation and simplify the process of decision-making.

Correlation

This study determines the correlation of the variables. On this research, the correlation system is used to prove the relationship between Zakat, and poverty. The type of relationship could weather be one variable goes up, and the other goes up as well. Or, when one goes up, the other goes down. If there is no such relationship they are not correlated. The correlation is measured by (R-value) which indicated the type, and strength of the relationship. Positive R-values mean one variable goes up and the other goes up. While negative R-values mean one variable goes up and the other goes down.

Regression

Regression is another statistical technique as helpful as the correlation used to understand relationships between variables. Regression fits a function to data by drawing a line or a curve that goes through data points. Which is essential to know in one variable moved by (x) how much is (y) going to change. For instance, if the amount of people living in poverty decreased, mean more people paying Zakat. Thus, the value of Zakat depends on the value of poverty.

Scatter plot

Each scatter plot indicates to a different relationship. In the matter of this research scatter plots are used to reveal the relationship between Zakat and poverty, and show how much Zakat (y) would change, according to the change in the percentage of poverty (x).

MODEL TESTING

Coefficient of Determination (R²)

A better option is to use the coefficient of determination (R²). Which is the value of R squared (correlation to the power of 2) Large R² means a good fit.

Standard Error

In the same way through the use of Linest function on Excel, obtained further regression analysis. Like each variable's (b, a, y) has an associated standard error: se1, se2. A small standard error indicates more reliable values.

Root Mean Square Error (RMSE)

RMSE helps in fitting a line into the data about Zakat and poverty. RMSE allows determining which line is better in fitting the data to the curve. The Mean of Standard Error is calculated by taking the average of the errors (Y), which is the error of the estimated Zakat, calculated each year using (b, and a) variables from the regression model. The square root of the mean of standard error is RMSE. Lower RMSE value means the line fits the data perfectly. One of the costs of RMSE is that it depends on the scale of y. So, large Zakat payments will lead to large Y values, which could reduce the reliability of RMSE. Therefore, it becomes hard to say what value of RMSE means "good fit".

Hypothesis Test

As in any linear correlation between x and Y, the slope must not equal to 0. Where if the slope is equal 0 means that no relationship is taking place between X and Y (Stat Trek, 2016). The null hypothesis test is as follows:

- 1) $H_0: S_0 = 0$ no relationship.
- 2) $H_1: S_1 \neq 0$ there is a relationship.

While the level of significance is ($\alpha = 0.05$). Apply the Linear formula in the Excel to get the other required inputs such as degree of freedom, error of slope, and b value. The results of the test indicate:

- 1) If $P < \alpha$ it means that the data we have is statistically significance and we should Accept the null hypothesis.
- 2) If $P > \alpha$ it means that we should reject the null hypothesis, therefore, no relationship between the two variables.

RESULT AND DISCUSSION

This paper discusses the successful application of zakat as an Islamic Finance Law to reduce poverty and income inequality. This study reveals the evidence of the impact of zakat as a tool in poverty reduction. In order, to determine whether Zakat can eliminate poverty. Statistical technique is used to study the relationship between the zakat collection and poverty percentage in each country. In the same way regression tests, hypothesis test and T-value have been applied to test and allow further interpretation.

Figure 1, Figure 2, Figure 3 Figure 4 and Figure 5 show the Linear equation $Y = Bx + a$ is used to determine by how much change on x (Zakat), would affect y (Poverty). B is the slope of the linear equation, and a is the intercept. (B and a) are important in modeling the linear equation. If R^2 is close to 1 it will indicate a good relationship and if R^2 is not close to 1 it will indicate a weak relationship.

T- Value is a normal distribution test that is calculated by dividing the value of b by the number associated with that value. If T-Value > 1.98 it indicates a strong relationship and vice versa.

MALAYSIA

Correlation and Regression

In Malaysia, the correlation (R-value) is equal to ($R = -0.82$) which represents a very strong negative relationship. As negative R values mean one variable goes up and the other goes down. In other words, the Malaysian government has well developed a system to collect Zakat and distribute it among poor people efficiently. The obtained R^2 is $= 0.86$ it indicates a Good relationship.

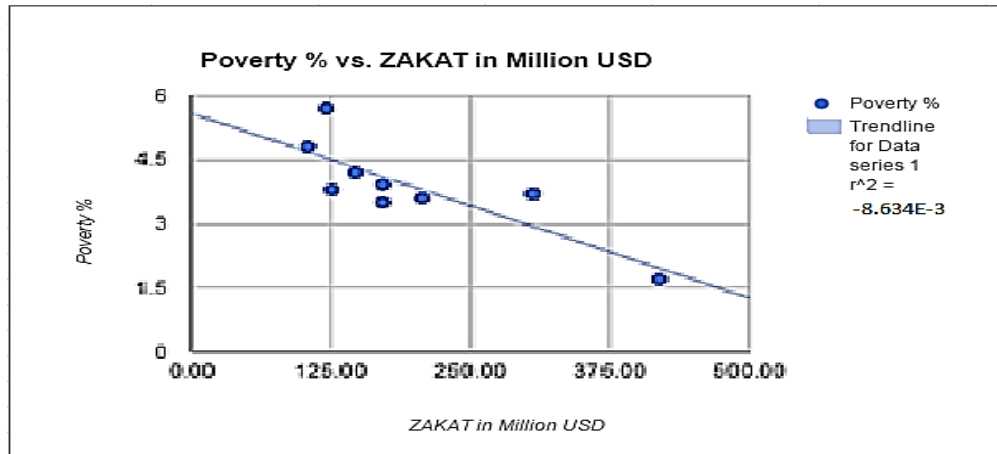


Figure 1. The Application of Linear Equation in Malaysia ($Y=Bx+A$). Y Represents the Poverty Rates, While X Represents Zakat Rates.

Hypothesis Test

The result of the test proves that the null hypothesis test should be rejected; the alternative hypothesis should be accepted, as the P value shown in Table 1 is lower than the level of significance, which is equal to 0.05.

RMSE

As the value of RMSE shown in Table 1 is not very large, thus the analysis is indicating good results.

T-value

Table 1 shows that T-Value is equal to -3.8 and indicates a weak relationship while the results of the other tests indicate a good relationship. T-value has failed because the 8 years investigated is not enough to give us an accurate T-value result.

Table 1. Statistical Result of Malaysia

MSE	0.49
RMSE	0.69
T-Value	-3.88
T-Distribution	0.01
a	0.05
p-a	-0.04

INDONESIA

Correlation and Regression

In Indonesia, the correlation (R-value) is equal to ($R= -0.93$) which represents a very strong negative relationship. As negative R-values mean one variable goes up and the other goes down. In other words, the Indonesian government

has well developed a system to collect Zakat and distribute it among poor people efficiently. The obtained R^2 is = 0.86 it indicates a Good relationship.

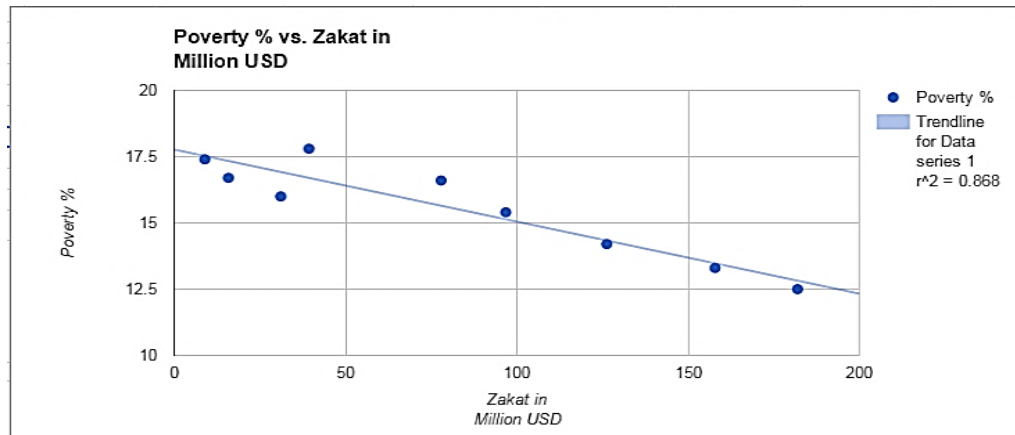


Figure 2. The Application of Linear Equation in Indonesia ($Y=Bx+A$). Y Represents the Poverty Rates, While X Represents Zakat Rates.

Hypothesis Test

The result of the test proves that the null hypothesis test should be rejected; our alternative hypothesis should be accepted, as the P value shown in Table 2 is lower than the level of significance, which is equal to 0.05.

RMSE

As the value of RMSE shown in Table 2 is not very large, thus the analysis is indicating good results.

T-value

Table 2 shows that T-Value is equal to -6.78 and indicates a weak relationship while the results of the other tests indicate a good relationship. T-value has failed because the 8 years investigated is not enough to give us an accurate T-value result.

Table 2. Statistical Result of Indonesia

MSE	0.78
RMSE	0.88
T-Value	-6.78
T-Distribution	0.00
a	0.05
p-a	-0.05

PAKISTAN

Correlation and Regression

In Pakistan, the correlation (R-value) is equal to (R= -0.29) which represents a weak negative relationship. As negative R-values mean one variable goes up and the other goes down. In other words, the Pakistani government has not developed a system to collect Zakat and distribute it among poor people efficiently. The obtained R² is = 0.08 it indicates a very weak relationship.

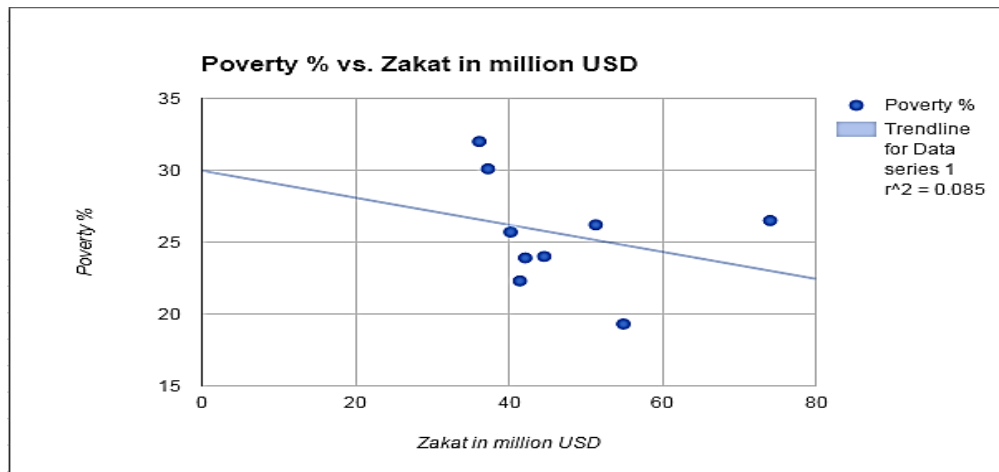


Figure 3. The Application of Linear Equation In Pakistan (Y=Bx+A). Y Represents the Poverty Rates, While X Represents Zakat Rates.

Hypothesis test

The result of the test proves that the null hypothesis test should be accepted, our alternative hypothesis should be rejected, as the P value shown in Table 3 is higher than the level of significance, which is equal to 0.05.

RMSE

As the value of RMSE shown in Table 3 is very large, thus the analysis is indicating bad results because the needed data is not enough to build an accurate decision.

T-value

Table 3 shows that T-Value is equal to -0.80 and indicates a weak relationship while the results of the other tests indicate a good relationship. T-value has failed because the 8 years investigated is not enough to give us an accurate T-value result.

Table 3. Statistical Result of Pakistan

MSE	9.12
RMSE	3.02
T-Value	-0.80

T-Distribution	0.45
a	0.05
p-a	0.40

SUDAN

Correlation and Regression

In Sudan, the correlation (R-value) is equal to (R= 0.29) which represents a weak positive relationship. As positive R-values mean one variable goes up and the other goes up. In other words, the Sudan government has not developed a system to collect Zakat and distribute it among poor people efficiently. The obtained R² is = 0.08 it indicates a very weak relationship.

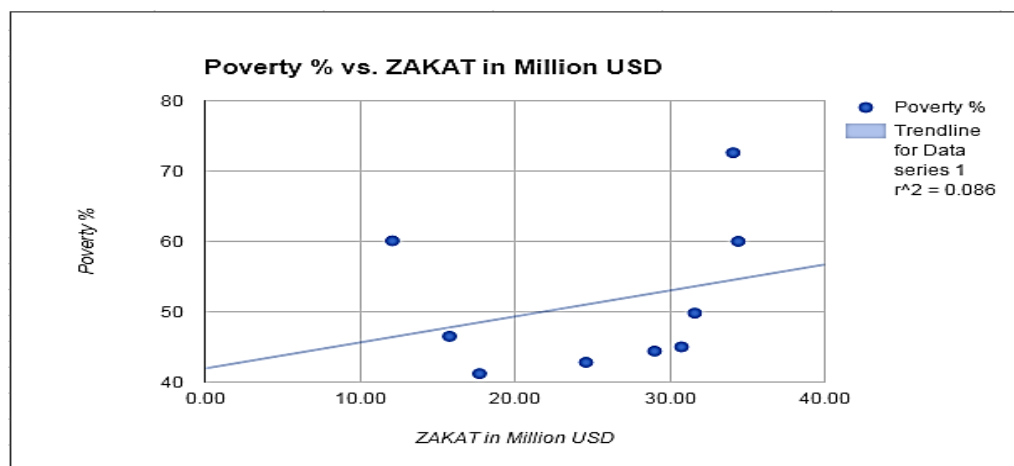


Figure 4. The Application of Linear Equation in Sudan (Y=Bx+A). Y Represents the Poverty Rates, While X Represents Zakat Rates.

Hypothesis Test

The result of the test proves that the null hypothesis test should be accepted, our alternative hypothesis should be rejected, as the P value shown in Table 4 is higher than the level of significance, which is equal to 0.05.

RMSE

As the value of RMSE shown in Table 4 is very large, thus the analysis is indicating bad results because the needed data is not enough to build an accurate decision.

T-value

Table 4 shows that T-Value is equal to 0.81 and indicates a weak relationship while the results of the other tests indicate a good relationship. T-value has failed because the 8 years investigated is not enough to give us an accurate T-value result.

Table 4. Statistical Result of Sudan

MSE	69.13
RMSE	8.13
T-Value	0.81
T-Distribution	0.44
a	0.05
p-a	0.39

ALGERIA

Correlation And Regression

In Algeria, the correlation (R- value) is equal to (R=0.07) which represents No or negligible relationship. In other words, the Algerian government has not developed a system to collect Zakat and distribute it among poor people efficiently. The obtained R² is = 0.004 it indicates no relationship.

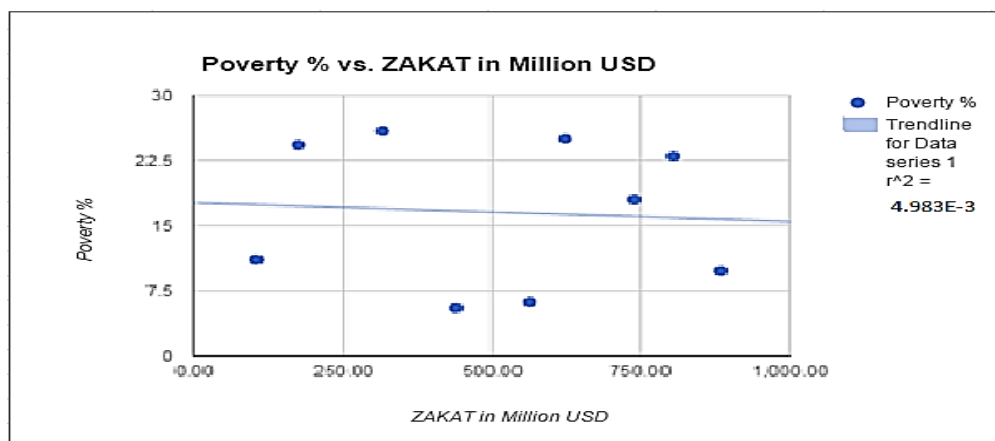


Figure 5. The Application of Linear Equation in Algeria (Y=Bx+A). Y Represents the Poverty Rates, While X Represents Zakat Rates.

Hypothesis Test

The result of the test proves that the null hypothesis test should be accepted, our alternative hypothesis should be rejected, as the P value shown in Table 5 is higher than the level of significance, which is equal to 0.05.

RMSE

As the value of RMSE shown in Table 5 is very large, thus the analysis is indicating bad results because the needed data is not enough to build an accurate decision.

T-Value

Table 5 shows that T-Value is equal to 0.81 and indicates a weak relationship while the results of the other tests indicate a good relationship. T-value has

failed because the 8 years investigated is not enough to give us an accurate T-value result.

Table 5. Statistical Result of Algeria

MSE	60.06
RMSE	7.75
T-Value	-0.19
T-Distribution	0.86
a	0.05
p-a	0.81

CONCLUSION

This paper discusses the increase in the number of poor people in Muslim countries while all Muslims are required to help their brothers who are in need. Different Zakat institutions that collect the Zakat from individuals/companies, and distribute to the poverty effectively reduce the percentage of poor people within their society and community. As each institute tested operates in a different country and under different sets of laws and regulations, the progress of each one in delivering a possible outcome to reduce poverty. Countries like Indonesia and Malaysia have been successful in reducing the percentage of poor people significantly. While on the other hand, from the researchers and Analytical tests applied in this study, the countries such as Pakistan, Sudan, and Algeria have failed in eliminating poverty. In the same the lack of Zakat collections and poverty percentages data in Egypt could be one of the main reasons behind the increasing number of poor people in Egypt. These countries are in huge need to develop their Zakat systems, as they are not contributing to reducing the number of people in poverty, which is one of their main duties. In general, the results of each country indicate that there are different outcomes of the application of Islamic Finance Laws in dealing with poverty. The data for both of Malaysia and Indonesia stated have successfully reduced the number of poor people over the 8 years studied. On the other hand, there are different countries failed to develop an efficient Zakat system to reduce poverty.

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