INTERNATIONAL CONFERENCE OF ZAKAT 2018 PROCEEDINGS
ISSN: 2655-6251

Determinants of Efficiency of Zakat Institutions in Indonesia: Two-Stage Data Envelopment Analysis Approach

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Paper to be presented at International Conference of Zakat 2018
15-16 November, Universitas Gadjah Mada, Yogyakarta, Indonesia

ABSTRACT

This study aims to analyze the level of efficiency and determine the factors that affect the efficiency of the National Zakat Management Organization (OPZ). This research is descriptive quantitative research. Samples in this study are six National Zakat Management Organizations with research period from 2012-2016. The analysis technique used is two-stage data envelopment analysis. First stage, using DEA to measure OPZ efficiency level with production approach and assumption of output-oriented CRS and VRS. The input variables used are amil salary, operational costs, and socialization costs, the output variables used are collected funds and funds disbursed. Second stage, using tobit regression model to see the factors that affect OPZ efficiency. Based on the results of DEA, during the period of 2012-2016 OPZ efficiency experienced a positive trend. In general there had been an increase in OPZ performance efficiency from 2012 to 2016. BNUIS BNI became the most efficient OPZ compared to other OPZ. Based on the results of Tobit regression, the total of human resources has a significant negative effect on the level of efficiency, transparency and OPZ type significantly positive, while the zakat payment system and ACR ratio do not affect the efficiency level of OPZ.

Keywords: Efficiency, Two-Stage Data Envelopment Analysis, Zakat Management Organization

INTRODUCTION

One of the major problems faced by the Indonesian people today is the large number of people who are below the poverty line. Based on data from the Central Bureau of Statistics (2017), the number of poor people in Indonesia in March 2017 was 27.77 million people increased from September 2016 which is 27.67 million people. This means that the problems regarding poverty in Indonesia are quite serious.

Islam has a solutive instrument that can overcome the problem of poverty, it is called zakat. Zakat is an instrument in the Islamic socio-economic system which transfer the income of muzakki (people who are obliged to issue zakat) to mustahiq (people who are entitled to receive zakat). Indonesia is the largest muslim population in the world. The number of Muslim in Indonesia is 222 million or 87% of the total population (MuslimPro, 2018). This is certainly very potential to implement Islamic instruments in the distribution of assets with zakat. Zakat can be channeled directly from muzakki to mustahiq or through the Zakat Management Organization (OPZ). Zakat distribution is better done by the Zakat Management Organization (OPZ), because it is in accordance with the provisions of sharia. Where the management of zakat through institutions has been done since the time of the Prophet and continues to take place

during the time of friends of the prophet, tabiin and later periods.

Public awareness for paying zakat through the Zakat Management Organization (OPZ) recorded in Indonesia's zakat statistics continues to increase. Based on data from the National Zakat Agency (2017) zakat, infaq and shadaqah (ZIS) fund raising has increased by 3243% in the past 13 years. From 2005 to 2007, there was an increase in ZIS collection of almost 100% which was predicted due to national disasters in the country (Aceh tsunami and Yogyakarta earthquake). If we take the averaged from 2004 to 2016, the growth of ZIS collection reached an average increase of 39.46%. This indicates that there is an increase in public awareness that is high enough to pay zakat through the Zakat Management Organization (OPZ). This growth trend also indicates an increased in public trust in the performance of the Zakat Management Organization (OPZ), both goevrment owned (BAZNAS) and private owned (LAZ).

The results of a research conducted by BAZNAS regarding the potential of national zakat in 2015 had reached Rp. 286 trillion. Nonetheless, the potential for zakat has not been supported by achievements in collecting zakat in the field. This means that there is a very high gap between the potential and reality of collectiing zakat (BAZNAS, 2018: 3). This fact can be seen from the actual data of national zakat, infaq and shadaqah collection by the official Zakat Management Organization (OPZ) in 2017 which only reached Rp. 6 trillion or only 2% of the potential.

In its realization, the government has supported the optimization of zakat potential with the issuance of Law No. 23 of 2011 concerning the Management of Zakat. This law is expected to increase awareness of paying zakat for the community. In addition, to actualize the potential of large zakat funds the government plans to cut the salary of Muslim Civil Servants (ASN) by 2.5% for zakat. If the estimated ASN Muslim zakat is an average of IDR 10-15 trillion (Saifuddin, 2018).

The high gap between the ratio of national zakat potential and zakat funds collected was due to the low public trust in the existing zakat institutions. Based on research conducted by FEM IPB shows that the level of public trust in the credibility of the zakat institution is transparent only 23% of 15% who think the zakat institution is professional (Mukhlis and Irfan Syauqi Beik, 2013). This low level of trust is caused because not all Zakat Management Organizations (OPZs) in Indonesia have transparent financial reports and regularly audited. So that will result in a weakening of public trust, even in a credible institution (Mintarti, 2011).

One of the indicator that shows the performance of Zakat Management Organizations running effectively is by reviewing the Allocation to Collection Ratio, namely by comparing the ratio between the proportion of zakat funds channeled with zakat funds collected (Zakat Core Principles, 2016). Based on national zakat statistics, the value of ACR of the Zakat Management Organization (OPZ) in 2016 was 58.42% or was in a "quite effective" condition. Compared to the previous year, this absorption rate has decreased from 61.6% in 2015. This is considered not proportional, because an effective ACR should be in the range of 70% - 89% and is very effective if more than 90%.

In its development, many Zakat Management Organizations (OPZ) have emerged, but the Zakat Management Organization (OPZ) at the national level is recognized by the Directorate General of Taxation as a taxable income deduction based on Regulation No. PER-11 / PJ / 2017

which is only have 26 legal zakat management organizaton. Whereas if we look at the Zakat Forum (2017) data, there are 400 more Zakat Management Organizations (OPZ). That is, there are still many Zakat Management Organizations (OPZ) that have not received legality from either the Directorate General of Taxation or the Ministry of Religion.

The Zakat Management Organization is a non-profit intermediary organization. All operational expenses are taken from zakat funds and collected infaq. This is also justified by Sharia, because the OPZ management is Amil Zakat which also includes eight ashnaf who are entitled to zakat. This portion is used for operational activities and amil salaries (Akbar, 2009). In this case, Qaradhawi (2005) emphasized the need for operational efficiency of Amil. He gave a tax case that is often a waste of operational costs that should be suppressed, as well as to boast of office, elegant office, striking appearance and others. All of these costs are taken from the collected tax which should be the right for people who need it more.

Based on these problems, stakeholders must know the level of performance efficiency of the Zakat Management Organization (OPZ) in the collection and management of zakat. This is considered important because zakat can be a potential source of funds if the company can implement the principles of good corporate governance, namely professional, transparency, and accountability.

Efficiency measurement has been done to assess the performance of the institution. Muharam and Purvitasari (2007) stated that analyzing efficiency can be done with 3 approaches, namely ratio approach, regression approach and frontier approach. Of the three approaches, this study uses a frontier approach. The frontier approach uses non-parametric measurements because these measurements are not required to fulfill the parameters of the population as the parent sample of the study (Muharam and Pusvitasari, 2007). In connection with the need for non-parametic efficiency analysis, the Data Envelopment Analysis (DEA) method is needed to process the research data.

The level of efficiency can be determined by selecting variables that are input and output. According to Hadad (2003), in explaining the relationship of input output in financial institutions with a production approach, intermediation approach and asset approach. The production approach shows financial institutions as service producers for fund owners and managers. The intermediation approach places financial institutions as intermediaries of the funds held into funds used. The asset approach places financial institutions as fund managers.

The researches to measure the efficiency of the Zakat Management Organization has been widely developed in accounting and financial research. Lestari (2015) analyzed the efficiency of the management of zakat funds in the East Lombok Regional Zakat Agency (BAZDA) with an intermediation approach. Input variables used are ZIS funds collected, fixed assets and employee salaries. While the output variables are channeled ZIS funds and operational costs. Results of this study The results of this study indicate that the East Lombok Regency BAZDA experienced efficiency in 2012-2014 that is equal to 100%.

Zahra, Harto and Bisyri (2016) analyzed the efficiency of the management of zakat funds in 7 Amil Zakat Institutions with a production approach. Input variables used are human resources costs, socialization costs and operational costs, while the output variables used are collected funds and channeled funds. The results of

this study indicate that only 3 efficient Zakat Management Organizations (OPZ), namely BNI BAMUIS, BSM Ummat, and BRI YBM. And the most widely used Zakat Management Organization (OPZ) is BRI's YBM.

In this study, the authors chose to use a production approach. The production approach measures how the performance of zakat institutions in managing costs in order to produce, collectiinf and channeled funds efficiently. Input variables used by Amilin salary, socialization costs and operational costs, while the output variables used are collected funds and channeled funds.

Over time flows, the DEA method also experienced growth, namely by adding an analysis of the factors that are thought to affect the level of efficiency. This procedure is hereinafter referred to as the Two-Stage Data Envelopment Analysis. According to Coelli et. al (2005) efficiency assessment with the Two-Stage Data Envelopment Analysis procedure uses two stages in the analysis, namely in the first stage, the efficiency level is measured using the Data Envelopment Analysis (DEA) approach with the traditional input and output desired. Whereas in the second stage, regression analysis will be carried out in which the efficiency value from the first stage is used as the dependent variable, while the exogenous factors are the independent variables.

There are not many studies on the factors that influence the efficiency of the Zakat Management Organization (OPZ), but there are studies that are used as references in this study. Wahab and Rahman (2013) analyzed the level of efficiency and factors influencing the institution of amil zakat in Malaysia with the Two-Stage Data Envelopment Analysis approach using the Tobit regression model to determine the factors that influence the efficiency of zakat institutions. The results show that the zakat payment system, computerized zakat computer system, board size, audit committee and decentralization significantly affect the efficiency of zakat institutions in Malaysia.

In this study, to find out the factors that influence efficiency in the Zakat Management Organization (OPZ) in Indonesia, the Tobit regression model is used to analyze it. The variables used in this study are the number of human resources, transparency, zakat payment system and OPZ type.

Based on the information described above, it is necessary to conduct research to further examine how efficient the Zakat Management Organization (OPZ) is in allocating various input sources to produce various outputs and the factors that influence that efficiency. Therefore, the title of this research is "Analysis of the Efficiency Determinants of National Zakat Management Organizations with the Two Stage Data Envelopment Analysis Approach for the 2012-2016 Period".

The objectives in this study are:

1. Analyze the level of efficiency of the Zakat Management Organization (OPZ) during the period 2012-2016.
2. Analyze the factors that influence the efficiency of the Zakat Management Organization (OPZ).

LITERATURE REVIEW

Zakat and Management System

Zakat is one of the economic characteristics of Islam regarding property that is not found in other economies. The economic system outside of Islam does not recognize the guidance of God to the owner of the property, in order to set aside certain assets as cleansers of the soul, from the nature of stinginess, envy, and revenge (Nasution,

2007: 29). In terms of syar'i zakat is a part of the property that has been obliged by Allah SWT to be given to those who have the right to receive it as stated in the Al-Quran or may also be interpreted to a certain degree of certain assets given to certain groups that are excluded from people who have been charged with the obligation to issue zakat (Ar-rahman, 2000: 2).

Based on Law Number 23 of the year 2011 concerning about Management of Zakat, zakat management is an activity that includes planning, organizing, implementing, and supervising the distribution and utilization of zakat. While the purpose of zakat management is to improve the effectiveness and efficiency of services in the management of zakat and increase the benefits of zakat to realize community welfare and poverty reduction.

Based on Law No.38 of 1999, there are two types of OPZ, namely; Zakat Agency (BAZ), namely the Zakat Management Organization formed by the government and the Amil Zakat Institution (LAZ), namely the Zakat Management Organization formed by the community and confirmed by the government. According to the Director General of Taxes Regulation Number PER-11 / PJ / 2017 which has been effective since August 23, 2017, the Legal OPZ is recognized by the government, specifically the Directorate General of Taxation, there are 26 legal zakat management organization (OPZ).

Efficiency

Efficiency traditionally defined as the company's ability to produce certain outputs by using inputs in portions to a minimum, so that efficiency is the level of input divided by the level of output. Efficiency is one of the performance parameters which theoretically is one of the performance that underlies the entire performance of an organization. The ability to produce maximum output with existing inputs is an expected measure of performance. When the efficiency measurement is done, the bank is faced with the condition of how to get the optimal level of output with the existing input level, or to get a minimum input level with a certain level of output. In addition, with the separation between this unit and price, it can be identified what level of technology efficiency, allocation efficiency, and total efficiency. By identifying the allocation of inputs and outputs, it can be further analyzed to see the causes of inefficiencies (Hadad et al, 2003).

According to Muharam and Purvitasari (2007), efficiency measurement can be done with three approaches, ratio approach, regression approach and Frontier approach. The non-parametric frontier approach is measured by non-parametric statistical tests using the Data Envelopment Analysis (DEA) method. So to analyze the measurement with the existing variables, this study uses DEA non-parametric method. There are two techniques for measuring efficiency, namely input orientation and output orientation (Coelli, et.al., 2005):

1. Input-Oriented Measures
2. Output-Oriented Measures

In this study, the authors chose to use output-oriented measurements. Output-oriented measurement is more appropriate for the OPZ case, where zakat funds collected are far from their potential. According to Hadad, et al. (2003) there are several approaches used to define the relationship of inputs and outputs in measuring efficiency in the financial industry, these approaches are:

1. The production approach,
2. The intermediation approach,
3. The asset approach,

In this study, the authors chose to use a production approach. The production approach saw OPZ as a producer that gave birth to two main products, collected funds and channeled funds.

Efficiency with DEA two stage method

First Stage: Data Envelopment Analysis

The DEA method was created as a performance evaluation tool for an organization, basically referred as DMU (Decision Making Unit). In simple terms, measurements are expressed by the ratio of output to input which is a unit of measurement of efficiency or productivity. DEA analysis is specifically designed to measure the relative efficiency of a production unit in the condition that there are many inputs and outputs, which are usually difficult to solve perfectly by other efficiency measurement analysis techniques (Atmanti in Retnowati, 2017). The relative efficiency of a DMU is the efficiency of a DMU compared to other DMUs in a sample that uses the same type of input and output.There are two DEA models that are often used in the DEA, namely the Charnes model, Chooper and Roodes (CCR) and the Banker, Charnes and Cooper (BCC) models (Coelli, et.al, 2005):

1. CCR model (CRS)

The CCR model was developed by Charnes, Cooper and Rhodes (Rusydiana, 2013). This model assumes that the addition of input of n times will increase the output by n times or also called the Constant Return to Scale (CRS). Another assumption used in this model is that each DMU or Decision Making Unit operates at an optimal scale. Thus, efficiency with this model is also called Overall efficiency, which is technically efficient and scale.

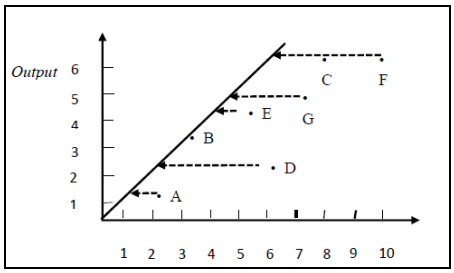

Figure 1. *Frontier* Eficiency CCR Model
Source: Rusydiana (2013)

2. BCC Model (VRS)

Developed by Banker, Charnes and Cooper (Rusydiana, 2013). They stated that competition and financial constraints could cause the company not to operate at its optimal scale. To overcome this problem, they put forward the assumption of the Return to Scale Variable (VRS). That is, if there is an additional input of n times, it will not cause the output to increase by n times. Can be bigger or smaller). Conditions where it can produce a larger output is called Increasing Return to Scale (IRS). And if it produces less than n times, then it is called the Decreasing Return to Scale (DRS) condition. This efficiency is calculated using VRS assumption which is called pure technical efficiency, hereinafter referred to as technical efficiency. By estimating the frontier using the CRS and VRS models, it can be done the Decomposition of the Overall Technical Technicall Efficiency (OTE) to Pure Technical Efficiency (PTE) and Scale Efficiency (SE).

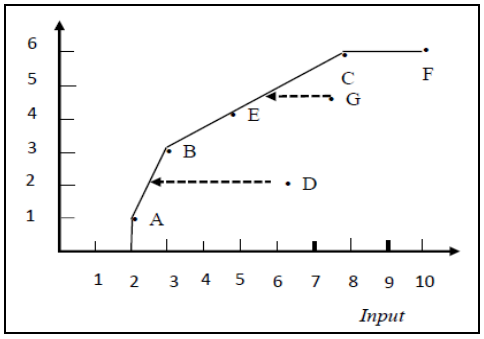

Figure 2. *Frontier* Eficiency VRS Model
Source: Rusydiana (2013)

Second Stage: Tobit Regression

The Tobit Method assumes that independent variables are not limited to value (non-censured); only non-free variables are censured; all variables (whether free or not) are measured correctly; no autocorrelation; no heteroscedascity; there is no perfect multicollinearity; and the mathematical model used is right. In the use of regression analysis methods for social and economic research, there are many data structures where the response variable has a zero value for some observations, while for some other observations have certain values that vary. This data structure is called censored data (Rusydiana, 2013).

RESEARCH METHODOLOGY

This type of research according to the approach is quantitative descriptive research. The sample selection in this study uses purposive sampling. The consideration is that the six OPZs studied have officially entered the OPZ which is confirmed by the government so that they have legal legality in carrying out their activities, so that a sample of 6 National Zakat Management Organizations is obtained, including BAZNAS, DKI BAZIS, BNI BAMUIS, Dompet Dhuafa, LAZISMU and LAZ Al - Azhar. The source of the data used is secondary data by collecting data using documentation and observation techniques in the form of published financial reports of the Zakat Management Organization (OPZ) for the 2012-2016 period and related literature.Input variables and output variables in this study include:

Table 1. Operational Definition of Input-Output Variables

Input **Variable**	**Operational definiton**	**Source**
Amil's income	Funds for paying the amil in zakat management organization	Amil alteration fund report
Operati-onal cost	This cost consist of any expenses in the financial report except employee income	Amil alteration fund report
Socializa-tion cost	Fund to socialize zakat, infaq, shadaqah and waqaf to the society	Amil alteration fund report
Output **Variable**	**Operational definition**	**Source**
Collected fund	All of funds that collected from the muzaki in one zakat management organization	Alteration fund report
Chanelled fund	Total of fund that chanelled to mustahiq or chanelled program	Alteration fund report

Source: Processed data, 2018

This study uses 4 variables that are thought to affect OPZ efficiency. In general, the operational definition of variables is as follows:

Variable	Operational definition
Amount of human resources	The total of all amil in each zakat management organization
Zakat payment system	Online zakat payment system in each organization, score 1 if it is available score 0 if it is not
Transparency	Publish the financial report in the organzitaion web, score 1 if it is available score zero if it is not
ACR ratio	Comparassion ratio between chanelled fund and collected fund
Type of OPZ	There are two type of OPZ, goverment owned and private owned

Source: Processed data, 2018

The Data analysis used in this research is Two-Stage Data Envelopment Analysis. By first obtaining the efficiency

value in the first stage (first stage) using the DEA method, the value will be analyzed with several environmental variables to know the relationship and the nature of the relationship between these variables to the second stage.

First Stage: Data Envelopment Analysis

OPZ is efficient if it has a ratio of close to 1 or 100 percent, on the contrary if it approaches 0 it indicates that the OPZ efficiency is getting lower. Following are the steps for processing data:

1. Determine the approach and input-output variables that will be used for analysis.
   In this study, the authors chose to use a production approach. The production approach saw OPZ as a producer that gave birth to two main products, collected funds and channeled funds.
2. Select the DEA Model
   The DEA model used is the CRS and VRS models. The CRS assumption will produce technical efficiency values (technicall efficiency) and the VRS assumption will produce pure technical efficiency values (pure technicall efficiency). Furthermore, the orientation used is based on the output orientation
3. Perform synthesis and analysis
   Process collected data using MAXDEA 6.4 Data Envelopment Analysis Software. Software by itself may even synthesize data from each input and output variable for each DMU. The results of the analysis are:
   a. Efficiency Score
      Results of efficiency gains with CRS assumptions and VRS assumptions. A perfectly efficient DMU will have a value of 1 or 100%, while a DMU is said to be inefficient if it has a value of less than 1 or 100%.
   b. Return To Scale
      There are three conditions of return to scale that will describe the conditions of each DMU, including:
      1) Increasing Return to Scale (IRS),
      2) Constant Return to Scale (CRS),
      3) Decreasing Return to Scale (DRS).
   c. Tables Target of Values
      Table Target of Values provides recommendations that DMUs that experience inefficiencies can increase their efficiency level.
   d. Reference Frequency / Benchmark
      DEA can make DMU ratings that can be used as benchmarks for other DMUs. In this case, it can provide information about OPZ which is most often referred to by other inefficient amil zakat institutions.

Second Stage: Tobit Regression

At this stage, the Tobit model is used to determine the factors that influence the level of efficiency of the Zakat Management Organization (OPZ). By first obtaining the efficiency value in the first stage using the DEA method, the value will be analyzed with several independent variables to determine the effect of these variables on the second stage. To find out the factors that affect the efficiency of the OPZ by using the Tobit regression formula processed using EVIEWS 9.0 software. The reason for using the Tobit method in this study is because the data used in this study is sensitive data, ie the value of the non-independent variable, namely the level of technical efficiency (EFT), is limited and can only range between 0 to 100. The Tobit Regression Model is as follows:

$$EFTi = \beta_1 + \beta_2\ SDMi + \beta_3\ SPZi + \beta_4\ TRANSi + \beta_5\ TIPEi + \varepsilon_i$$

Explanation:
EFT = Data Envelopment Analysis (DEA) score
SDM = Amount of human resources
SPZ = Zakat Payment System
TRAN = Transparency
TIPE = Zakat Management Organization (OPZ) Type

RESULT AND DISCUSSION

In this study DMU consists of 6 National Zakat Management Organizations. A DMU is considered efficient if it has a value of 1. Inefficiency can be seen from the value of less than 1. In this study, the efficiency calculation is processed with the MaxDEA software. The following is broken down the OPZ efficiency value each year based on the DEA processing results:

Table 3. Efficiency Level of Zakat Management Organization Period of 2012-2016

DMU	CRS	VRS	RTS
2012 BAZNAS	70%	73%	*Decreasing*
2012 BAZIS DKI	79%	80%	*Increasing*
2012 DOMPET DHUAFA	89%	100%	*Decreasing*
2012 BAMUIS BNI	100%	100%	*Constant*
2012 LAZISMU	55%	100%	*Increasing*
2012 LAZ-ALAZHAR	53%	54%	*Increasing*
2013 BAZNAS	53%	82%	*Decreasing*
2013 BAZIS DKI	81%	82%	*Increasing*
2013 DOMPET DHUAFA	60%	94%	*Decreasing*
2013 BAMUIS BNI	90%	100%	*Increasing*
2013 LAZISMU	80%	100%	*Increasing*
2013 LAZ-ALAZHAR	64%	65%	*Increasing*
2014 BAZNAS	57%	92%	*Decreasing*
2014 BAZIS DKI	100%	100%	*Constant*
2014 DOMPET DHUAFA	61%	100%	*Decreasing*
2014 BAMUIS BNI	96%	97%	*Decreasing*
2014 LAZISMU	52%	100%	*Increasing*
2014 LAZ-ALAZHAR	84%	85%	*Increasing*
2015 BAZNAS	69%	100%	*Decreasing*
2015 BAZIS DKI	100%	100%	*Constant*
2015 DOMPET DHUAFA	59%	100%	*Decreasing*
2015 BAMUIS BNI	100%	100%	*Constant*
2015 LAZISMU	57%	67%	*Increasing*
2015 LAZ AL-AZHAR	58%	61%	*Decreasing*
2016 BAZNAS	44%	99%	*Decreasing*
2016 BAZIS DKI	100%	100%	*Constant*
2016 DOMPET DHUAFA	64%	100%	*Decreasing*
2016 BAMUIS BNI	100%	100%	*Constant*
2016 LAZISMU	68%	70%	*Increasing*
2016 LAZ AL-AZHAR	85%	86%	*Decreasing*

Source: Processed data with MAX DEA

Based on the DEA calculation for the 2012-2016 period, there are only 6 DMUs from 30 DMUs that are technically efficient (CRS). As for technically pure (VRS), there are 13 DMUs that are already efficient. The average OPZ efficiency level is at 74% for technical efficiency and 90% for pure technical efficiency. Overall, the performance of national zakat management organizations in 2016 tends to be more efficient compared to previous years. That is, in general there has been an increase in the efficiency of OPZ performance from 2012 to 2016 based on pure technical and technical values.

The DEA results also explained that the National Zakat Organization is quite efficient both in terms of CRS and VRS, which is technically 84% pure in 2012, 87% in 2013, 96%% in 2014, 88% in 2015 and increased to 92% in 2016. The increasing level of efficiency in a purely technical manner shows that the performance of the national OPZ has been good enough to collect and distribute the funds.

With the DEA method is also able to measure and ascertain whether a DMU has optimized its production capacity, namely how optimal the use of input in generating output. In this case, a DMU will have one of three conditions Return to Scale (RTS), including the Increasing Return to Scale (IRS), Constant Return to Scale (CRS), and Decreasing Return to Scale (DRS). The processing results show that 11 DMUs are in IRS conditions which are notated with number 1 (increasing) and 13 DMU which experience DRS conditions which are

notated with number -1 (decreasing). While the remaining 6 DMUs are in efficient condition which is indicated by the number 0 (constant). The condition of the IRS makes it possible to continue to increase its output capacity by maintaining existing inputs, because the addition of input is not effective because the resources used are still not functioning optimally. The condition of DRS demands an input reduction, because the number of inputs with the output produced is not ideal.

Based on both technical (CRS) and pure technical (VRS) calculations, OPZ which has the best efficiency value is BNI BAMUIS. BAMUIS BNI is an OPZ that operates within the company's environment in this case banking. This provides scale efficiency benefits compared to other OPZs. With minimal input can produce greater output. For example, BNI deducts 2.5% of the salaries of its employees every month if its income reaches 94 grams of gold a year. This mechanism can certainly save input usage, including socialization costs.

Benchmarked zakat management organization

Another advantage that DEA has is that it can make a DMU ranking that can be used as a benchmark for other DMUs. Figure 4 shows that OPZ is the most reference for other zakat institutions based on CRS assumptions:

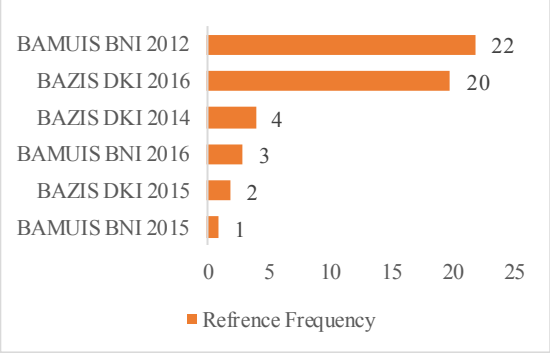

Figure 3. *Reference Frequency* CRS
Source: Processed data with MAX DEA

The graphic shows that DMUs that are inefficient reference to other OPZs are: BNI BAMUIS in 2012, 2016 and 2015 and 2016, 2014 and 2015 DKI BAZIS. 26 Bamuis BNI are referred to by inefficient OPZ and DKI BAZIS 26 times. This shows that based on the technical efficiency of BNI BAMUIS and DKI Bazis, it has worked efficiently.

While based on VRS assumptions (figure 5) shows that in 2012 the most frequently referred to OPZ was BNI BAMUIS as many as 9 DMUs and DKI BAZIS as many as 8 DMUs. Whereas in 2013, the most widely referred to OPZ was LAZISMU referred to as many as 7 DMUs. In 2014, the most commonly referred OPZ was DKI BAZIS as many as 3 DMUs. In 2015 the most widely referred OPZ was BAMUIS BNI referred to as many as 4 DMUs and in 2016 the most widely referred to OPZ was DKI BAZIS referred to as many as 12 DMUs.

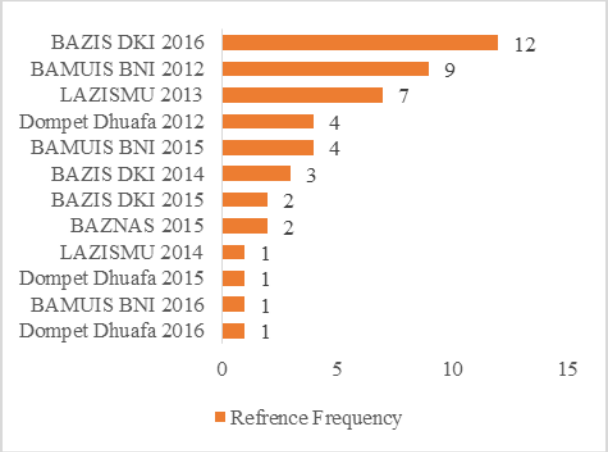

Figure 4. *Reference Frequency* VRS
Source: Processed data with MAX DEA

Factors That Influence Efficiency with Tobit Model

In the next stage, the factors that influence the Zakat Management Organization (OPZ) using the Tobit model will be conducted. Here are the results using the Tobit model:

Table 4. The Result of Tobit Model Analysis

Variabel	*Coefficient*	*p-Value*
Amount of human resources	-0.004139	0.0000
Zakat payment system	0.016050	0.7990
Transparency	0.134451	0.0070
ACR ratio	0.157806	0.5547
OPZ type	0.169774	0.0100

Source: Processed data with eviews

Based on the results of the analysis in Table 21 it can be seen that the results of tobit processing can be explained as follows:

1. Amount of Human resources
   The amount of human resources has a significant negative effect on OPZ efficiency at a significance level of 5% in this case the p-value <0.005 or 0.000 <0.005 means that H0 is rejected and H1 is accepted. This shows that if the number of HR increases, it is expected to reduce the OPZ efficiency level by 0.4%. That the more number of employees (amil) in zakat institutions, the lower the level of efficiency of an OPZ. So that it can be a consideration for top management in making decisions and policies related to the addition of OPZ amil amounts. In other words, these conditions can provide an overview to each OPZ, that a large number of employees cannot necessarily increase the level of efficiency if the employee is less productive and professional compared to the relatively small number of employees but professional, integrity, disciplined and productive.
2. Zakat Payment System
   Zakat Payment System has no significant effect on OPZ efficiency at a significance level of 5% in this case p-value> 0.005 or 0.4978> 0.005 means that H0 is accepted and H2 is rejected. This shows that the zakat payment system online has not given a real influence on the efficiency of zakat institutions. This can be caused by the costs incurred for making the program, strengthening the network, maintaining the program, not being able to make a major contribution to the collected funds. As an example in this observation, Dompet Dhuafa as the largest gathering institution, the total funds collected are greater than direct collection, such as zakat outlets and donors. So far the more efficient zakat payment system is still produced from conventional payment systems.
3. Transparency
   Transparency has a significant positive effect on OPZ efficiency at a 5% significance level in this case the p-value <0.005 or 0.0070 <0.005 means that H0 is rejected and H3 is accepted. This shows that if transparency increases, it is expected to reduce OPZ's efficiency level by 17%. Transparency is meant when OPZ publishes its financial statements through the website. With the transparent management of zakat, it will create a good control system, because it does not only involve internal organizations, but also involves external parties. In addition, transparency also increases public confidence in the zakat institution. Muzakki will be interested in zakat institutions that use zakat efficiently and on target. As an example in this observation, BNI BAMUIS during the research period published financial reports through the website, thus influencing the level of efficiency. Evidenced by BNI BAMUIS being the most efficient OPZ compared to other OPZ.
4. OPZ type
   OPZ type has a significant positive effect on OPZ efficiency at a 5% significance level in this case the p-

value <0.005 or 0.0100 <0.005 means that H0 is rejected and H4 is accepted. This shows that if the OPZ type increases, it is suspected that it will increase the OPZ efficiency level by 13.44% or in the sense that OPZ which is protected by the government is more efficient than private OPZ. This is because government OPZ tends to not require large costs in operational costs. Evidenced by the attention from the government which is realized in the form of APBN and the provision of office facilities. In addition, the pattern of collection carried out by the Government OPZ is relatively easier and very effective because the government OPZ, such as DKI BAZIS, does not work alone, but there are BAZs at the city level, sub-districts to villages that support and implement each planned program. In addition to the Instruction which contains obligations for zakat for Officials and Civil Servants in the DKI Province, it will reduce the burdens that must be incurred by OPZ in collecting zakat funds.

5. ACR ratio

   The ACR (Allocation to Collection Ratio) ratio has no significant effect on OPZ efficiency at a 5% significance level. This shows that if the ACR ratio increases, it is expected to reduce the OPZ efficiency level by 15.78%. This is because the comparison between the amount of ZISWAF funds distributed and the amount of ZISWAF funds collected is important as a performance indicator of the existing ZISWAF funds distribution. If an institution has an ACR value of 90%, it means that 90% of the zakat collected has been distributed. Amil uses funds as much as 10 percent to fulfill all of its operational activities. Thus, the lower the percentage of ACR values shows the weaker management capacity of the distribution of zakat institutions so that steps need to be taken to improve them (BAZNAS: 2016).

CONCLUSION

Based on the discussion, the conclusions that can be drawn from research on the determinants of efficiency of the National Zakat Management Organization are:

1. Based on the results of the study, during the period of 2012-2016 the efficiency of OPZ experienced a positive trend. OPZ performance in the last year of observation, namely 2016 is more efficient when compared to previous years seen based on the acquisition of technical (CRS) and pure technical value (VRS). That is, in general there has been an increase in the efficiency of OPZ performance from 2012 to 2016. This indicates that public trust in OPZ has increased every year. During the study period, the majority of OPZ were at a technically efficient level. In this study, BAMUIS BNI became the most efficient OPZ compared to other OPZs, while the Al-Azhar LAZ became the most inefficient OPZ
2. For five consecutive years (2012-2016) no OPZ has perfect efficiency (100%) both technically and pure technical. During this period, the average OPZ was in inefficient several times due to waste of costs and under-funding of the funds collected and distributed. To optimize the level of efficiency can look at the target of values table or reference set
3. There are several factors that affect OPZ efficiency. The Human resources variable has a significant negative effect

on the level of efficiency, the transparency variable and the OPZ type have a significant positive effect, while the zakat payment system variable does not affect the level of OPZ efficiency.

BIBLIOGRAPHY

Akbar, N. (2009). Analisis Efisiensi Organisasi Pengelola Zakat Nasional dengan Pendekatan Data Envelopment Analysis. *Tazkia Islamic Finance and Business Review, 4(2*, 760-784.

Ar-Rahman, S. M. (2000). *Zakat: 1001 Masalah dan Solusinya.* Jakarta: Pustaka Cerdas.

BAZNAS. (2014). *Perturan BAZNAS Nomor 2 Tahun 2014 Tentang Pedoman Tata Cara Pemberian Rekomendasi Izin Pembentukan LEmbaga Amil Zakat.* Jakarta: Badan Amil Zakat.

BAZNAS. (2017). *Outlook Zakat Indonesia 2017.* Jakarta: Pusat Kajian Strategis BAZNAS.

BAZNAS. (2018). *Outlook Zakat Indonesia 2018.* Jakarta: Pusat Kajian Strategis BAZNAS.

BPS. (2017, September). *Jumlah Penduduk Miskin 2007-2017*. Diambil kembali dari Badan Pusat Statistik: https://www.bps.go.id/linkTableDinamis/view/id/1119

Coelli, et al. (2005). *An Intoduction to Efficiency and productivity Analysis, edisi kedua.* Boston: Kluwer Academic Publisher.

Ditjen Pajak. 2017. *Per/11/PJ/2017 tentang Badan/Lembaga Yang Dibentuk Atau Disahkan Oleh Pemerintah Yang Ditetapkan Sebagai Penerima Zakat Atau Sumbangan Keagamaan Yang Sifatnya Wajib Yang Dapat Dikurangkan Dari Penghasilan Bruto.* Jakarta: Ditjen Pajak.

Forum Zakat. (2017). *Data Organisasi Pengelola Zakat*. Retrieved from Forum Zakat: https://forumzakat.org/ diakses pada 23 Januari 2018

Hadad, Muliaman D. dkk. (2003). Pendekatan Parametrik untuk Efisiensi Perbankan Indonesia. Research paper BI. No. 4/5. *Research Paper BI*.

Mahkamah Konstitusi. (2013). *Risalah Sidang Pengujian Undang-Undang Nomor 23 Tahun 2011.* Jakarta: Mahkamah Konstitusi Republik Indonesia.

Mintarti, N. (2011, April 13). *Membangun Kepercayaan Publik dan Kapasitas Pengelolaan Zakat di Indonesia*. Retrieved from IMZ: http://www.imz.or.id/new/article/773/membangun-kepercayaan-publik-dan-kapasitas-pengelolaan-zakat-di-indonesia/

Muharam, Harjum dan Rizki Pusvitasari. (2007). Analisis Perbandingan Efisiensi Bank Syariah di Indonesia dengan Metode Data Envelopment Analysis (Periode tahun 2005). *Jurnal Ekonomi dan Bisnis Islam, (Yogyakarta), Vol II, No. 3,*.

Mukhlis, Ahmad dan Irfan Syauqi Beik. (2013). Analisis Faktor-faktor yang Memengaruhi Tingkat Kepatuhan Membayar Zakat: Studi Kasus Kabupaten Bogor. *Jurnal al-Muzara'ah, Vol I, No. 1*, 101.

MuslimPro. (2018, Januari 18). *Top 10 Populasi Umat Muslim Terbesar di Dunia*. Diambil kembali dari Muslim Pro: https://support.muslimpro.com/hc/id/articles/115002006087-Top-10-Populasi-Umat-Muslim-Terbesar-di-Dunia

Nasution, M. E. (2007). *Pengenalan Eksklusif Ekonomi Islam.* Jakarta: Kencana Media Prenada Grup.

Qaradhawi, Y. (2005). *Spektrum Zakat.* Jakarta: Zikrul Hakim.

Retnowati, D. (2017). *Analisis Kenierja dan Efisiensi Organisasi Pengelola Zakat Menggunakan Pendekatan Indeks Zakat Nasional (IZN) dan Data Envelopment Analysis (DEA) Studi Kasus Provinsi Jambi.* Skripsi. Bogor: Institut Pertanian Bogor.

Rusydiana, Aam dkk. (2013). *Mengukur Tingkat Efisiensi dengan Data Envelopment Analysis (DEA): Teori dan Aplikasi.* Bogor: Smart Publishing.

Saifuddin, L. H. (2018). *Kontan*. Retrieved from Kementerian Agama estimasi dari zakat ASN bisa raup Rp 10-15 triliun: https://nasional.kontan.co.id/news/kementerian-agama-estimasi-dari-zakat-asn-bisa-raup-rp-10-15-triliun

Undang-Undang Nomor 23 Tahun 2011 . (2011). *tentang Pengelolaan Zakat.* Jakarta: Republik Indonesi.

Zakat, C. P. (2016). *Core Principles for Effective Zakat Supervision.* Jakarta: BAZNAS dan BI.

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