# EFFICIENCY OF ZAKAT MANAGEMENT ORGANIZATION (OPZ) BANK SYARIAH: DATA ENVELOPMENT ANALYSIS APPROACH

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**Abstract**

The main objective of this study was to analyze the level of efficiency of the Zakat-based Organization of Islamic Banking (OPZ) in Indonesia in 2016-2017 with the Data Envelopment Analysis (DEA) method of production approach. The sample of this study was selected, namely Baitulmal Bank Muamalat (BMM) Indonesia and BSM Umat (BSMU). The data is processed using Warwick DEA software with input-output orientation, Constant Return to Scale (CRS) and Variable Return to Scale (VRS) assumptions, and with a production approach. The results of this study indicate that all Islamic banking-based OPZs have efficient performance.

**Key Words**: Islamic Banks, Data Envelopment Analysis, Efficiency, Zakat Management Organization

## 1. Introduction

Microfinance refers to the financial intermediation between micro savers, micro borrowers and micro investors. The mechanism of microfinance is to provide small loans to individuals as initial capital to engage in micro-entrepreneurship that would help them to be economically independent (Weiss and Montgomery, 2004). the globe and become a new industry (D Lascelles, 2008). It is difficult to obtain an accurate number of MFIs as there is no specific market research data available but the Consultative

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**INTRODUCTION**

One of the important problems faced by Islamic countries, including Indonesia, is poverty. According to Bank Indonesia-P3EI-FE-UII (2016), although there is no uniformity between the two countries and in measuring poverty, they have the same concern about the need for systematic and planned efforts to overcome poverty.

Based on data from the Central Statistics Agency (BPS), the number of poverty figures in Indonesia as of September 2016 is 27.76 million (10.70%), poor people. In 2017 in the same month, the number of poor people decreased to 26.59 million (10.12%). Furthermore, as of September 2018 and 2019 also experienced a decrease in the number of poor people, respectively 25.67 million (9.66%) and 24.79 million (9.22%). In short, there was a decrease in the number of poor people, although the relative magnitude was not significant.

The government, through the ministry's authority, has made efforts to reduce poverty with various programs that are designed but have not yet had a broad impact. Therefore, according to Wibisono (2015), a participatory government partnership is needed with the Organization of Zakat Management (OPZ) for the acceleration of poverty reduction that has a complex and unified nature, which can only be overcome through a partnership framework that allows multisectoral and cross-disciplinary approaches.

Based on statistical data BAZNAS (2018) potency OPZ is quite large and accounts for 9% of the total collection of zakat nationwide with a ZIS collection of Rp 8,117,597,683,267 and disbursement of Rp 6,800,139,133,196 from all OPZ at various levels (table 1.) The amount of funds raised is still far from the actual potential of 252 trillion.

Table 1. Number of OPZ by Level
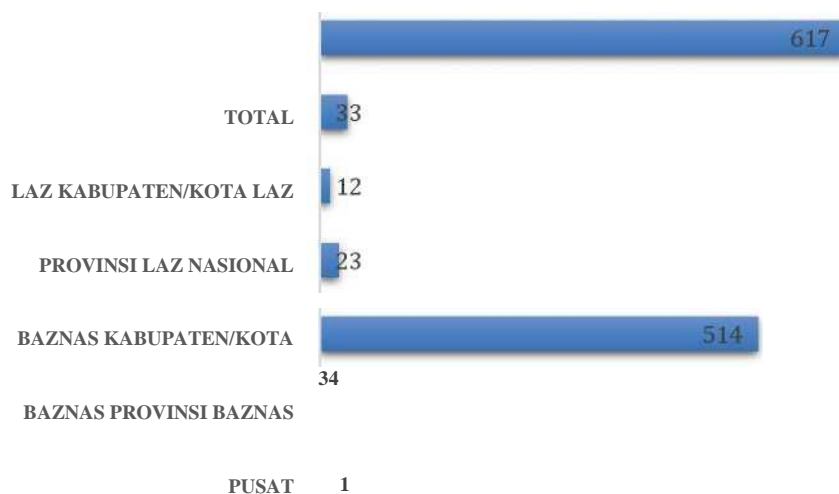


OPZ is a non-profit organization that collects and distributes community funds in the form of Zakat, donations, alms, grants, and others under Islamic law. More than that, the OPZ function is also the utilization of public funds. With this function, OPZ has transformed from the realm of charity and relief to the domain of development and empowerment in the modern era, according to Wibisono (2015).

The most common research domain in the social funding literature is evaluating the performance of zakat institutions, including productivity, efficiency, effectiveness, and quality of service to their role in collecting and distributing Zakat (Nahar, 2018). Previous studies of

nain were carried out(Usman, Andriyani, and Pambuko 2019), (Djaghballou et al. et al. 2017), (Norfitriani 2016) and (Bahrini 2015). Efficiency domain research

tadi and Susilowati (2018), Al-Ayubi, Ascarya, & Possumah (2018), Nurasyiah and Adam (2019),

Ahmad and Ma'in (2014) and Wahab and Rahman (2011).

sample of zakat literature was at least doubled. First, the research on zakat before is highly developed, including qualitative and quantitative approaches. This is very effective in expanding the field of zakat research to various empirical facts. Second, almost all of the research on zakat institutions established by the private sector and government such as BAZNAS, LAZ, and others. This is basically a strong empirical vacuum in the literature, specifically relating to the efficiency of the distribution of zakat in zakat-Baitul Maal institutions established by Islamic banks. In particular, previous studies have used various techniques (Basir et al. 2017), (Lubis, Ridho Lubis, and Almaarif 2019) and (Abdullah et al. 2012).

As a community fund manager, it is essential to measure the performance of both the efficiency and effectiveness of OPZ. There are various OPZ performance findings. An empirical study conducted Ayubi, Ascarya, and Possumah (2018), which tests efficiency with the Data Envelopment Analysis (DEA) technique with a production approach to Indonesian Zakat Institutions (IZI). Their findings identify an important problem; namely, mass-based IZI has higher efficiency compared to non-mass IZI. According to them, increased socialization costs, the number of volunteers, the amount of zakat collected, and the distribution of consumptive zakat, which cumulatively reduces the intermediation function of zakat institutions. Therefore, this study suggests that IZI must resolve this problem to improve the efficiency of zakat institutions.

Rustyani and Rosyidi (2018) measure the level of efficiency and productivity of zakat institutions in Indonesia. Quantitative research uses the method of Data Envelopment Analysis (DEA) and Malmquist Productivity Index (MPI) at six LAZ with an intermediation approach. The themes show that the 2014 and 2015 observation periods contained two inefficient LAZ, while in the 2016 period all LAZ in this study had reached an optimal level of efficiency. This study suggests that LAZ balances the intermediary role of collecting and distributing ZIS funds so that LAZ has an effective and efficient performance.

Kurniawan (2018) measure efficiency and determine the factors that influence OPZ with Two-Stage Data Envelopment Analysis. The results show an increase in OPZ efficiency. While the results of the tobit regression model show that HR, financial transparency and the type of OPZ have a significant effect on efficiency. Unfortunately, the zakat payment system and the ACR ratio do not affect the level of efficiency of the OPZ.

Wahyuny (2016) investigating the National OPZ with the Data Envelopment Analysis method with an intermediation and production approach. The result, four OPZ intermediation approaches are showing efficient performance, whereas with two OPZ production approaches. There is a record of these findings that OPZ is still experiencing managerial, oversight, and accountability issues and the quality of human resources.

Rusydiana and Al-farisi (2016) measure the level of efficiency at three OPZ using data envelopments analysis (DEA) with an intermediation approach. His findings show that the level of efficiency is found in 12 decision-making units at OPZ. There are six six decisionmaking units at OPZ at an inefficient level. This is due to the lack of optimal distribution of funds to the asnaf, so it has not been able to solve the problem of poverty. This study suggests OPZ publishes an annual financial report to increase accountability and transparency in fund management.

*https://hamdardfoimdatioii.org/hamdard-islamicus/*

Lestari (2015) testing the efficiency of the OPZ BAZDA Data Envelopment Analysis (DEA) with the intermediation approach in Lombok. The results show maximum efficiency.

Other findings, Akbar (2009), which investigates the efficiency level of 9 Zakat Management Organizations (OPZ) relatively using Data Envelopment Analysis (DEA) with a production approach. The results show that the five most efficient OPZ efficiency is indicated by the magnitude of operating costs and the four most efficient OPZ demonstrated by the low operating costs.

Empirical experience in other countries, such as investigation Zoramawa and Jilani (2018), analyze the efficiency of Zakat and Waqf Board in Sokoto State using the Data Envelopment Analysis (DEA) method. Empirical findings indicate that the efficiency of the zakat payment system is significantly influenced by the size of the board, audit committee, and computer systems. This study recommends policymakers to improve the efficiency of zakat and endowment institutions.

Hamzah and Krishnan (2016) measure the efficiency of collecting Zakat at the Sabah Zakat Center with the Data Envelopment Analysis (DEA) method. As a result, only the 2009 and 2012 periods showed an efficient level, and seven research periods were found to be inefficient due to differences in the number of inputs with the main output, the reduction in HR staff.

Ahmad and Ma'in (2014) which analyzes the efficiency of collecting and distributing Zakat in the Selangor Zakat Institution *Data Envelopment Analysis Two-Stage Analysis*. His theme shows three important things; first, both collection and distribution have resources left behind in technical efficiency. Second, distribution is more efficient than collection. Third, the distribution function shows a high-efficiency score every year at the Selangor Zakat Institute. This study suggests zakat institutions to implement transparency in operational activities and the authority in this matter to play a greater role in supervision.

Wahab and Rahman (2013) investigate the efficiency of institutions with the Malmquist Productivity Index approach to estimate productivity and efficiency and the Tobit model to determine the factors that influence the efficiency of zakat institutions in Malaysia. As a result, there has been an increase in the Total Factor Productivity (TFP) of zakat institutions in Malaysia. Empirical findings based on Tobit regression show that the zakat payment system, computerized zakat system, board size, audit committee, and decentralization significantly influence the efficiency of zakat institutions in Malaysia.

This study aims to measure the efficiency of OPZ, which is a nonprofit organization with a Data Envelopment Analysis (DEA) approach. Berber et al. 2011) suggest a DEA analysis for nonprofits in two stages; the first stage measures collection efficiency and the distribution of the efficiency of the second measures. This separation will show a more explicit analysis between the two. Different from (Akbar, 2009), this research focuses on the efficiency of selected Islamic banks' OPZ in Indonesia with the specific consideration that in addition to the financial intermediation function, it also performs social functions in the form of raising Islamic social funds in the form of OPZ in accordance with the Law. More than that, Islamic banks' OPZ already has adequate and specific accounting tools. So it is quite unique considering that most of the literature focuses on efficiency on all types of OPZ like(Ayubi, Ascarya, and Possumah, 2018); (Rustyani and Rosyidi, 2018); (Rusydiana and Al-farisi 2016); (Halim et al. 2015) and (Ma'in and Ahmad, 2014)

## RESEARCH METHODS

This type of research is quantitative with a non-parametric approach to Data Envelopment Analysis (DEA), which is processed using Warwick DEA software with an input- output orientation, assuming Constant Return to Scale (CRS) and Variable Return to Scale (VRS), and with a production approach. This analysis technique is used to determine the level of efficiency of non-profit organizations Banking-based Zakat Managers (OPZ) with a production approach with input variables used are operational costs and socialization costs for ziswaf and output variables used are ziswaf funds received, and ziswaf funds channeled.

The efficiency model in this study is in accordance with before (Berber et al. 2011),(Wahab and Rahman (2011), and(Ahmad and Ma'in, 2014). According to Talluri (2000), DEA is a multi-factor productivity analysis model to measure the relative efficiency of a set of homogeneous decision-making units (DMUs). The model used in this study is CRS Input, CRS Output, VRS Input, and VRS Output.

Simply, the calculation of efficiency by comparing the input and output for each unit or Decision-Making Unit (DMU). Efficiency scores before several input and output factors are formulated as:

$$\frac{\textit{weighted sum of outputs}}{\textit{weighted sum of inputs}}$$

The sample in this study is OPZ, which was established by Islamic banking. This sample selection considers that; First, banks have a unique characteristic that is performing two functions simultaneously, intermediation function as OPZ based on the mandate of the law. Second, banking OPZ has accounting standards based on accounting standards (PSAK). Third, OPZ has financial reports for the 2016-2017 research period. There are only two baitulmal; Baitulmal Bank Muamalat (BMM) Indonesia and BSM Umat (BSMU) are reliable in accordance with the variables in this study because of the limited data obtained. According to(Akbar 2009), there is no minimum limit on the number of DMUs that must be analyzed.

The checklist mark in Table 1 shows the annual data that has been obtained and will be used in this study.

**Table 1. Sample data**

| No | OPZ name | 2016 | 2017 |
|----|----------|------|------|
| 1 | Baitul Maal Muamalat (BMI) | V | V |
| 2 | BSM Community (BSM) | V | V |

## RESULTS AND DISCUSSION

Data availability is the differentiator in this research observation. So that the DMU data analyzed amounted to two Zakat Management Organizations (OPZ); Baitulmal Bank Muamalat (BMM) Indonesia and BSM Umat (BSMU). Table 2 describes the average OPZ inputs and outputs of the Banking.

Table 2. Average input and output of OPZ Banking

| Variable | 2016 | 2017 | |
|----------|------|------|--------|
| | Number | Number | Growth |
| Funds raised | Rp96,031,627,813 | Rp.185,536,519,478 | 93% |

| Funds channeled | | | |
|---|---|---|---|
| | Rp54,746,740,168 | Rp.175,705,178,552 | 68% |
| Operating costs | | | |
| | Rp4,558,379,519 | Rp4,064,307,891 | 10% |
| Ziswaf socialization costs | | | |
| | Rp.490,556,651 | Rp.193,015,461 | 61% |

The data presented in table 2 shows that the funds raised in 2017 were more significant than in 2016 or 93% growth. The funds that have been distributed are bigger in 2017 compared to 2016 or 68% growth. This shows that the intermediary function of Islamic banks' OPZ is going well. This growth was driven by the amount of bank zakat, zakat from customers and the public, and zakat from bank employees who experienced an increase and an increase in donations and alms funds.

Data on input variables illustrate the decline in growth rates. 2017 showed a decrease compared to 2016, which is a difference in numbers of Rp. 494,071,628 in operational costs. In line with the cost of socialization, Ziswaf showed a decrease in the difference in figures of Rp 297,541,190 between 2017 and 2016. The decrease in costs on this variable is thought to be caused by the better performance of amiline in the OPZ production function of Islamic banks.

The results of the efficiency analysis using Warwick Win Data Envelopment Analysis (DEA) software showed that Constant Return to Scale (CRS) and Variable Return to Scale (VRS) had the best efficiency value with 100% (Table 2). The criterion of an OPZ is efficient if it meets the requirement that the score reaches 100%. Conversely, if he moves away from 100% or approaches 0%, then he is increasingly inefficient.

Table 3. The efficiency of BMM and BSMU with Production and Intermediation Approaches

| DMU | | | BMM | BSMU |
|---|---|---|---|---|
| Production Approach | Input | CRS | 100.00 | 100.00 |
| | The output | CRS | 100.00 | 100.00 |
| | Input | VRS | 100.00 | 100.00 |
| | The output | VRS | 100.00 | 100.00 |

Source: Results of processing by Warwick win D
A

**Efficiency Analysis with Production Approach**
The efficiency of Baitulmal Muamalat (BMM)

The results of the calculation of Warwick Win Data Envelopment Analysis (DEA) show that the Zakat Management Organization (OPZ) Baitulmal Muamalat (BMM) is in the efficient score (table 4). BMM efficiency reaches a maximum score of 100%, which means that all variables have the same actual value as the target value. In other words, the use of input variables is proportional to the output obtained. Thus, these findings provide a clue that the production variable in OPZ BMM has a good efficiency level.

Table 4. The efficiency of Baitulmal Muamalat (BMM)

| Variable | Actual | Target | To Gain | Achieved |
|---|---|---|---|---|
| Operating costs | 3154629984 | 3154629984 | 0.0% | 100% |

| | | | | |
|---|---|---|---|---|
| ZISWAF socialization fee | 172699000 | 172699000 | 0.0% | 100% |
| Ziswaf funds received | 32771370911 | 32771370911 | 0.0% | 100% |
| Ziswaf funds channeled | 26366281438 | 26366281438 | 0.0% | 100% |

Source: Results of processing by Warwick win DEA

**Bank Syariah Mandiri Umat Efficiency (BSMU)**

The results of the calculation of Warwick Win Data Envelopment Analysis (DEA) show that the Zakat Management Organization (OPZ) of Bank Syariah Mandiri Umat (BSMU) is in an efficient score (table 5). The efficiency of BSMU reaches a maximum score of 100%, which means that all variables have the same actual value as the target value. In other words, the use of input variables is proportional to the output obtained. Thus, these findings provide a clue that the production variable at OPZ BSMU has a good efficiency level.

Table 5. Efficiency of Bank Syariah Mandiri Umat (BSMU)

| Variable | Actual | Target | To Gain | Achieved |
|---|---|---|---|---|
| Operating costs | 1403749535 | 1403749535 | 0.0% | 100% |
| ZISWAF socialization fee | 317857651 | 317857651 | 0.0% | 100% |
| Ziswaf funds received | 3260256902 | 3260256902 | 0.0% | 100% |
| Ziswaf funds channeled | 28380458730 | 28380458730 | 0.0% | 100% |

Source: Results of processing by Warwick win DEA

**DISCUSSION**

Efficiency test results on the Zakat Management Organization (OPZ) of Islamic banks with a production approach shows efficient performance Baitulmal Bank Muamalat (BMM) Indonesia and BSM Umat (BSMU). As a corporate-based OPZ State-Owned Enterprises (BUMN), BSMU can show efficient performance in its social functions as mandated by Islamic banking laws. Likewise, Baitulmal Bank Muamalat (BMM) Indonesia, as an OPZ based on Islamic banks, showed efficient performance.

These findings support and confirm previous research conducted by Kurniawan (2018) and Akbar (2009) and which states that banking OPZ, in particular, provides a scale efficiency advantage compared to other OPZ, this is due to minimal input mechanisms. Still, it produces maximum output, such as collecting Ziswa funds from zakat banks, zakat from customers and the public, and zakat from bank employees, infaq, and alms funds, thereby reducing one of the expenses, namely socialization costs.

This finding also supports the research conducted by Al-Ayubi, Ascarya, and Possumah (2018), which states that OPZ that grows and develops in a corporate environment (banking) tends to be more efficient than other OPZs. The reason for this phenomenon may be the salary reduction system, which reduces the pressure to collect ZIS funds.

The difference in the efficiency of OPZ based on corporate banking with other OPZ based is more viewed from the aspect of high output costs such as socialization costs, operational costs, and personnel costs. FindingWahyuny (2016)confirmed that the BAZNAS case was inefficient due to increased operational costs and personnel costs. Unlike the findingsLestari (2015), which explains that BAZDA has an efficiency level of 100% with assumptions *Constant Return to Scale (CRS).*

Finding Rustyani, Rosyidi, and Airlangga (2018)explains that civil society-based OPZ has the right level of efficiency, even though its productivity has decreased in the study period.

Unlike the finding main and Ahmad (2014), which revealed the zakat institutions in Selangor, Malaysia showed that the OPZ fund distribution activities each year performed more efficiently compared to the performance of fundraising.

OPZ's financial performance, including efficiency, is mostly influenced by other factors such as managers or amiline. FindingNasri, Aeni, and Fawzi (2019)confirm this by concluding that professionalism, transparency in the management of zakat has a positive and significant impact on financial performance. In short, this research shows that zakat institutions must increase their transparency and professionalism to improve their financial performance in the future. Likewise, findingsWahab and Rahman (2013) which reveals factors that significantly influence efficiency in Malaysian zakat institutions including zakat payment systems, computerized zakat systems, the board size, audit committees, and decentralization

## CONCLUSION

This study aims to examine the efficiency level of the Zakat-based Organization of Islamic Banking (OPZ) in Indonesia in 2016-2017 with the Data Envelopment Analysis (DEA) method of production approach. Baitulmal Bank Muamalat (BMM) Indonesia and BSM Umat (BSMU) were chosen as research samples that provide data for this research period. The results of this study indicate that all Islamic banking-based OPZs have an efficient performance with a value of 100% both the assumption of Constant Return to Scale (CRS) and Variable Return to Scale (VRS).

Based on the findings and analysis in this study, OPZ management plays an important role in managing social funds in the form of professional and transparent ZISWAF financial reporting. This is in line with the efforts of Islamic banks' OPZ in meeting the reporting standards set out in the Law on the management of zakat institutions.

## RECOMMENDATION

The author realizes that the main limitation of this study is still the amount of data used. Wider use of data and involving OPZ outside Indonesia is expected to produce results that better reflect reality. The researcher recommends further research to add approaches such as intermediation and assets.

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