

Measuring Efficiency of Waqf Fund: Evidence in Indonesia

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Abstract: This study will try to measure the efficiency of waqf funds in zakat institutions in Indonesia using the non-parametric Data Envelopment Analysis (DEA) method. The objects in this study are eight zakat institutions that manage waqf funds in Indonesia. The data in this study comes from the annual reports of each of these institutions during the period 2013-2020. The input variables in this study include operational costs and HR costs. In comparison, the output variables in this study include the collection and distribution of waqf funds. This study indicates that during 2013-2020, the efficiency of zakat institutions in managing waqf funds has a fluctuating trend. This study will also look at the possibility of improving inefficient programs from input and output variables; in general, the main factor in the efficiency of waqf funds lies in the output variable, namely the acceptance and distribution of waqf funds. In addition, this study provides a reference for other decision-making units (DMUs) in improving efficiency, and the average DMU used as a reference is the one who has good professionalism and innovation.

Keyword : Waqf fund, Data envelopment analysis (DEA), Efficiency, Indonesia

Abstrak: Penelitian ini akan mencoba mengukur efisiensi dana wakaf pada lembaga zakat di Indonesia dengan menggunakan metode non-parametrik Data Envelopment Analysis (DEA). Objek dalam penelitian ini adalah delapan lembaga zakat yang mengelola dana wakaf di Indonesia. Data dalam penelitian ini berasal dari laporan tahunan masing-masing lembaga tersebut selama periode 2013-2020. Variabel input dalam penelitian ini meliputi biaya operasional dan biaya SDM. Sebagai perbandingan, variabel keluaran dalam penelitian ini meliputi penghimpunan dan penyaluran dana wakaf. Studi ini menunjukkan bahwa selama tahun 2013-2020, efisiensi lembaga zakat dalam mengelola dana wakaf memiliki tren yang fluktuatif. Studi ini juga akan melihat kemungkinan perbaikan program yang tidak efisien dari variabel input dan output; Secara umum faktor utama efisiensi dana wakaf terletak pada variabel output, yaitu penerimaan dan penyaluran dana wakaf. Selain itu, penelitian ini menjadi acuan bagi DMU dalam meningkatkan efisiensi, dan rata-rata DMU yang dijadikan acuan adalah yang memiliki profesionalisme dan inovasi yang baik.

Kata Kunci: Dana Wakaf, Data Envelopment Analysis (DEA), Efisiensi, Indonesia

ملخص: ستحاول هذه الدراسة قياس فعالية أموال الوقف في مؤسسات الزكاة في إندونيسيا باستخدام طريقة تحليل غلاف البيانات غير المعياري (DEA). وموضوع هذه الدراسة هي ثماني مؤسسات زكاة تولت أموال الوقف في إندونيسيا. تأتي البيانات الواردة في هذه الدراسة من التقارير السنوية لكل من هذه المؤسسات خلال الفترة ٢٠١٣-٢٠٢٠. تتضمن متغيرات المدخلات في هذه الدراسة التكاليف التشغيلية وتكاليف الموارد

البشرية. وبالمقارنة، فإن متغيرات المخرجات في هذه الدراسة تشمل جمع وتوزيع أموال الوقف. تشير هذه الدراسة إلى أن فعالية مؤسسات الزكاة في إدارة أموال الوقف خلال الفترة ٢٠١٣-٢٠٢٠ متذبذبة. ستنظر هذه الدراسة أيضًا في إمكانية تحسين البرامج غير الفعالة من متغيرات المدخلات والمخرجات ؛ بشكل عام ، يكمن العامل الرئيسي في فعالية أموال الوقف في متغير المخرجات ، وهو قبول وتوزيع أموال الوقف. بالإضافة إلى ذلك ، توفر هذه الدراسة مرجعًا لوحدة DMU الأخرى في تحسين الفعالية، ومتوسط DMU المستخدم كمرجع هو الذي يتمتع باحترافية وابتكار جيد. كلمات مفتاحية: أموال الوقف ، تحليل غلاف البيانات (DEA) ، الفعالية ، إندونيسيا

INTRODUCTION

Background

Waqf can be defined as the transfer of funds and other resources from consumption and investment as productive assets to provide results or income used for individual and group consumption in the future. Therefore, Waqf can be said to be an activity that combines savings with investment. Thus, Waqf consists of certain consumption resources and, simultaneously, developing them as productive assets to increase capital accumulation in the economy, thereby increasing future services and income output. Waqf has played an important role since the beginning of Islamic civilization, which is generally related to religion and society's economic system. This Islamic institution is widespread and accepted as one of the foundations for building society, especially in terms of meeting basic needs and functioning as a supporter of the system by providing free public infrastructure.

Waqf plays an important role in achieving equity and becomes a catalyst for development for the nation. In particular, waqf institutions refer to foundations established to maintain property continuously and make its income available to certain beneficiaries. Since the early days of Islam, this institution has played an important social and economic role. For this reason, Waqf must be managed productively following its purpose, function, and designation to prosper the community (Haq & Anam, 2004).

Waqf management reached its peak in the 8th and 9th centuries H. At that time, waqf included various objects, such as mosques, schools, farmland, shops, gardens, bakeries, office buildings, meeting and commercial buildings, bazaars and markets, baths and wells, and other objects that were beneficial to humans (Directorate of Waqf Empowerment, Ministry of Religion, 2007). According to the times, this habit of waqf is still being continued today in various countries in the world. Thus, throughout Islamic history, waqf has played a very important role in developing Islamic society's socio-economic and cultural activities. In addition, waqf has facilitated scholars and students with adequate facilities and infrastructure to carry out various research activities and complete their studies.

Waqf is not obligatory in Islam but is recommended because its benefits are perpetuated for the ummah. Waqf in Arabic means to withhold, stop or prevent (Kahfi, 2003). Waqf is a form

of worship to Allah and has a significant contribution to economic development, playing an important role as a mechanism for redistribution of wealth (Rahman, 2009). Waqf can be used as an effort to alleviate poverty (Sadeq, 2002; Saifuddin, Kayadibi, Polat, Fidan, & Kayadibi, 2014) and provide basic needs for the poor

The benefits of waqf are not only limited to helping Muslims but also the entire community. Thus, maintaining excellent performance is important to ensure the waqf assets are managed properly. Moreover, in Indonesia, based on projections from the Indonesian Waqf Board (BWI), the potential for waqf assets per year is IDR 2,000 trillion. In addition, during the Covid-19 pandemic, the use of waqf instruments expected to be able to play an optimal role in overcoming social problems and economy. As fintech acts as a liaison between groups with high financial ability and groups experiencing lack of funds due to the covid-19 pandemic (Lida 2020), waqf is also expected can play a role in overcoming these deficiencies.

Professional waqf management requires accuracy and professionalism. The effectiveness and efficiency of waqf property management are important so that progress can be measured and avoid tabdzir that will harm the ummah. For example, the land around a mosque that is not productive is usually left alone, even though the land can be used, and the results are for the mosque's maintenance (Djunaidi & al Asyhar, 2005). According to the Ministry of Religion, this effectiveness is the optimal use of waqf objects for the public interest (Ministry of Religion of the Republic of Indonesia, 2007). Furthermore, collecting and distributing waqf is very important in the management of waqf funds and in meeting the objectives of bridging the income gap of the community. Therefore, the efficiency of waqf funds managed by several zakat institutions in Indonesia should be a major concern. The measurement of efficiency is determined by the ability of an organization or individual to increase its funds to fulfill its mission and goals (Alfirevic, Pavicic, & Najev-Cacija, 2014). Organizations measure efficiency by increasing profits by lowering operating costs and increasing productivity. Therefore, managers can estimate their costs and budgets accurately for future projects based on previous data (Averson, 1998).

Objective

This research has several objectives. Among them is measuring the efficiency level of waqf funds managed by zakat institutions in Indonesia during the 2013-2020 period. In addition, this study also analyzes the potential for increasing the slack value between the original data and the projected data. This is done to identify input or output variables that need improvement to produce an efficient performance of waqf funds. Furthermore, this research is structured as follows. The second part discusses, in general, the theoretical basis and some previous research. The third section describes the methodology, which consists of data and development models. The fourth section presents the results of research on the efficiency of waqf funds in Indonesia, provides an efficient analysis of DMUs, and explains potential improvements. Finally, the fifth section is the closing, which summarizes the main discussions and recommendations.

LITERATURE REVIEW

Almost all countries in the world are affected by the covid-19 pandemic. In a pandemic situation, Indonesia applies social distancing rules even on a large scale or better known as large-scale social restrictions (PSBB). The implementation of the PSBB by the government has caused economic and business activities in Indonesia to be distracted. The COVID-19 pandemic in Indonesia had a fairly serious impact and caused a lot of unrest in the community. If allowed to continue, Indonesia's economic condition will worsen, and the poverty rate in Indonesia will be even higher. This is evidenced by BPS data (2021) that the percentage of Indonesia's poor population in semester 1 of 2019 was 9.41 percent, increasing to 10.19 percent in semester 2 of 2020.

In this momentum, Islam, as the majority religion adopted by the Indonesian state, also attended and played a role in dealing with COVID-19 that occurred in Indonesia. One of them is through the use of waqf instruments which are expected to play an optimal role in overcoming social and economic problems. Waqf is a source of people's funds to develop, utilize, and manage professionally to obtain optimal benefits. One of these uses is to utilize waqf for the welfare of the people (Hadi, 2017).

Waqf assets can be empowered to help provide health facilities amid the COVID-19 pandemic so that these waqf funds provide basic needs for the community. Therefore, the role of Islamic financial institutions can overcome and restore economic shocks caused by the COVID-19 outbreak (Ahmadan, 2020). Furthermore, due to empowerment, waqf management can help finance underprivileged communities and victims of natural disasters. Thus, the abilities gained are material benefits and their ability to return to independent and prosperous lives Amarodin (2019). From this opinion, it is known that during the Covid-19 pandemic, the Islamic philanthropy sector, especially in the management of waqf as one of the institutions that are expected to be affected, therefore needs to develop innovations that can improve the efficiency of its performance.

Previous Studies

So far, there are still few studies that analyze the efficiency of waqf funds managed by zakat institutions in Indonesia. Therefore, this study tries to analyze the efficiency level of waqf funds managed by zakat institutions in Indonesia from 2013-2020, especially in 2020 when COVID-19 began to spread in Indonesia. The research that has been done is as follows:

Pyeman, Hasan, & Ahmad (2016) measure the efficiency score of waqf in all countries that run Waqf funds (SIRC) using Data Envelopment Analysis (DEA). Hasan & Ahmad (2014) measure the efficiency of waqf by measuring two stages, namely the collection stage and the distribution stage using Data Envelopment Analysis (DEA). (Ibrahim & Ibrahim, 2020) This study examines the relationship between corporate governance mechanisms, location, and organizational size with the efficiency of SIRCs in waqf management in Malaysia for the period 2007 to 2013 using two basic Data Envelopment Analysis (DEA) models. Hasan, Azmi, Mud, & Ahmad (2020) measure efficiency scores in the two states of Kelantan and Penang that manage SIRCs Waqf funds using Data Envelopment Analysis (DEA) for 2008 to 2010.

Misbahrudin (2019) analyzes the efficiency of Malaysian waqf institutions by using the Data Envelopment Analysis (DEA) method with output orientation using the Variable Return to Scale (VRS) assumption.

METHODOLOGY

Method

This research is quantitative research with a non-parametric approach. Non-parametric is a Data Envelopment Analysis method to measure the efficiency level of the decision-making unit (DMU). The DMUs observed in this study are zakat institutions that manage waqf funds in Indonesia. However, there are only six institutions because not all zakat institutions manage waqf funds. Another reason is that there are institutions that do not publish their financial reports from 2013 to 2020.

Table 1. DMUs Data

No.	Name of Zakat Institutions	Annual Report							
		2013	2014	2015	2016	2017	2018	2019	2020
1	Dompet Dhuafa	NA	NA	√	√	√	√	√	NA
4	Pos Keadilan Peduli Umat	√	√	√	√	√	√	√	NA
5	Daarut Tauhiid	NA	NA	NA	√	√	NA	NA	NA
6	Laziz Dewan Dakwah	NA	√	√	√	NA	NA	NA	NA
7	Yatim Mandiri	NA	√	√	√	√	√	√	√
8	ACT	NA	NA	NA	√	√	√	√	NA

Source: Zakat Institution Financial Report

Data Envelopment Analysis

This study uses Data Envelopment Analysis (DEA) with an output approach, maximizing output with the same input level. Output-oriented measurement is more appropriate to measure the efficiency of waqf funds, where waqf funds collected and distributed are far from their potential.

The input variables selected in this study are operational costs and HR costs, while the output variables are the number of funds collected and the number of funds distributed. The selection of input and output variables is based on the production approach. In other words, this study views waqf institutions as producers with an output maximization approach.

DEA is a method for evaluating a production unit's relative efficiency and managerial performance or decision making (DMU), using several selected inputs and outputs in which the correlation function from input to output is unknown (Purwantoro, 2005). Efficiency

scores in DEA range between 0 and 1 or 100%. A score of 100% indicates an efficient DMU. The lower the score, the less efficient the company is.

DEA approach models

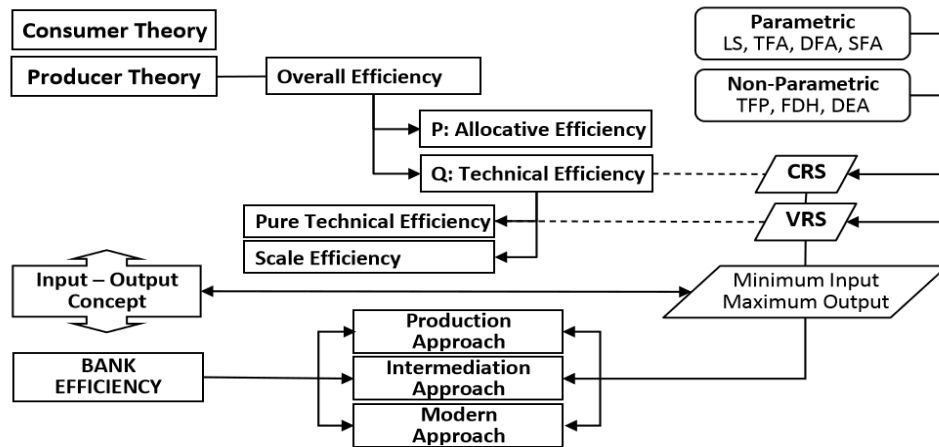


Figure 1. DEA Model

Source : Ascarya (2012)

Two DEA models are often used, namely the Charnes, Cooper, and Rhodes (CCR) model and the Banker, Charnes, and Cooper (BCC) model, which were introduced in 1984 (Coelli et al., 2005). The main difference between the CCR model and the BCC model is the treatment of returns to scale. The CCR model assumes a constant return to scale (CRS), while the BCC model assumes that each DMU operates with a return to scale (VRS) variable (Ascarya and Yumanita, 2006). Constant Return to Scale (CRS) assumes that every increase in a certain percentage of input will be followed proportionally by an increase in output by the same percentage.

CRS can be applied when the observed DMU is operating at an optimal scale. However, competition and financial barriers are key factors of corporate inefficiency. Banker, Charnes, and Cooper (1984) proposed a DEA model based on the return to scale (VRS) variable to anticipate this. VRS produces Technical Efficiency (TE), also known as Pure Technical Efficiency (PTE). The VRS approach assumes that the additional input of x times cannot produce the correct additional output of x times so that it can be smaller or larger than x times (Ascarya and Yumanita, 2006). Using frontier estimation based on CRS and VRS, we can decompose the technical efficiency (overall) using the CRS approach (TECRS) into pure technical efficiency (TEVRS) and scale efficiency (SE) using the following equation (Coelli et al., 2005): $TECRS = TEVRS \times SE$.

A company should be very sensitive to the problem of output scale (commonly called return to scale (RTS). For example, Siswandi and Arafat (2004), in practice, a company experiences one of three RTS conditions, namely increasing return to scale (IRS), Constant Return to Scale (CRS), and Decrease Return to Scale (DRS). The IRS condition assumes that each increase of

x times the input will result in more than y times the output. The CRS condition assumes that each increase of 1x the input will result in 1 year of output, whereas the DRS assumes that every increase of 1 unit of input will result in less than 1 unit of output.

RESULTS AND DISCUSSION

Input and Output Variables

Table 2 provides an overview of the input and output variables used in this study. In addition, table 2 shows descriptive statistics of input and output variables of waqf funds managed by zakat institutions in Indonesia from 2013-2020.

Table 2. Input and Output Variables

Variable	Mean	Std.Dev	Max	Min
Input				
Operational Cost	Rp 13.131.647.852	Rp 11.161.604.016	Rp 39.010.725.441	Rp 307.698.815
SDM cost	Rp 18.640.202.641	Rp 15.801.604.258	Rp 81.060.526.055	Rp 387.651.000
Output				
Collection	Rp 5.737.117.244	Rp 8.201.272.944	Rp 34.449.727.582	Rp 20.370.000
Distribution	Rp 3.122.707.519	Rp 3.457.846.567	Rp 10.380.077.036	Rp 1.969.600

Efficiency Level

The efficiency of waqf funds in Indonesia has been checked using the DEA method every year by investigating using a common frontier. Table 3 below is the average Technical Efficiency (TE), Pure Technical Efficiency (PTE), and Scale Efficiency (SE) of waqf funds managed by zakat institutions in Indonesia for 2013 (Panel A), 2014 (Panel B), 2015 (Panel C), 2016 (Panel D), 2017 (Panel E), 2018 (Panel F), 2019 (Panel G), 2020 (Panel H), and the whole year (Panel I).

Table 3. Summary Statistic of Efficiency Score (TE, PTE, and SE) by year

Years/ Type of Efficiency	Mean	Min	Max	SD
Panel A (2013)				
TE	0,055	0,055	0,055	0
PTE	0,099	0,099	0,099	0
SE	0,556	0,556	0,556	0
Panel B (2014)				
TE	0,453	0,072	1,000	0,397

PTE	0,459	0,081	1,000	0,392
SE	0,949	0,885	1,000	0,048
Panel C (2015)				
TE	0,318	0,037	0,606	0,201
PTE	0,444	0,081	0,793	0,267
SE	0,682	0,457	0,951	0,190
Panel D (2016)				
TE	0,264	0,010	0,472	0,170
PTE	0,451	0,097	1,000	0,356
SE	0,618	0,102	0,968	0,299
Panel E (2017)				
TE	0,352	0,060	1,000	0,344
PTE	0,448	0,068	1,000	0,394
SE	0,857	0,457	1,000	0,203
Panel F (2018)				
TE	0,224	0,083	0,546	0,188
PTE	0,362	0,085	1,000	0,371
SE	0,753	0,546	0,975	0,155
Panel G (2019)				
TE	0,363	0,001	0,937	0,373
PTE	0,532	0,058	1,000	0,468
SE	0,587	0,012	0,950	0,389
Panel H (2020)				
TE	0,206	0,206	0,206	0,000
PTE	0,329	0,329	0,329	0,000
SE	0,627	0,627	0,627	0,000
Panel I (All Years)				
TE	0,307	0,001	1,000	0,286
PTE	0,432	0,058	1,000	0,373
SE	0,718	0,012	1,000	0,269

The table above shows that the TE score on waqf funds managed by zakat institutions in Indonesia was highest in 2014 (0.453), and the highest PTE score was also in 2014 (0.549). Meanwhile, the lowest TE score was in 2013 (0.055), and the lowest PTE score was also in 2013 (0.099). Based on these results, the efficiency scores of waqf management institutions in Indonesia fluctuate from year to year.

Table 4. Waqf Fund Efficiency Score

No	DMU	CRS							
		2013	2014	2015	2016	2017	2018	2019	2020
1	ACT	-	-	-	0,335	0,240	0,155	0,065	-
2	Dompot Dhuafa	-	-	0,320	0,455	0,383	0,546	0,448	-
3	Daarut Tauhiid	-	-	-	0,129	1,000	-	-	-
4	Laziz Dewan Dakwah	-	1,000	0,606	0,472	-	-	-	-
5	Pos Keadilan Peduli Umat	0,055	0,072	0,037	0,010	0,079	0,083	0,001	-
6	Yatim Mandiri	-	0,286	0,309	0,186	0,060	0,113	0,937	0,206

No	DMU	VRS							
		2013	2014	2015	2016	2017	2018	2019	2020
1	ACT	-	-	-	0,354	0,255	0,221	0,068	-
2	Dompot Dhuafa	-	-	0,575	1,000	0,838	1,000	1,000	-
3	Daarut Tauhiid	-	-	-	0,185	1,000	-	-	-
4	Laziz Dewan Dakwah	-	1,000	0,793	0,881	-	-	-	-
5	Pos Keadilan Peduli Umat	0,099	0,081	0,081	0,097	0,080	0,085	0,058	-
6	Yatim Mandiri	-	0,297	0,325	0,192	0,068	0,143	1,000	0,329

Table 5. Average Efficiency Score

No	Zakat Institutions	CCR Model	BCC Model	
		Technical Efficiency	Pure Technical Efficiency	Scale
1	ACT	0,199	0,22	0,886
2	Dompot Dhuafa	0,431	0,883	0,493
3	Daarut Tauhiid	0,565	0,592	0,850
4	Laziz Dewan Dakwah	0,693	0,891	0,767
5	Pos Keadilan Peduli Umat	0,048	0,083	0,568
6	Yatim Mandiri	0,300	0,336	0,876

Table 5 is the average result of the CCR model showing that Laziz Dewan Dakwah is a zakat institution that manages waqf funds most efficiently. At the same time, Pos Keadilan Cares for the People and ACT experience the lowest efficiency level. Furthermore, to understand more deeply, the BCC model deserves to be analyzed because waqf management institutions may not operate at an optimal scale. Based on the results of the analysis of the BCC model, it shows that Laziz Dewan Da'wah, Dompot Dhuafa, and Daarut Tauhid are in the top three of pure technical efficiency. This indicates that they have better management than other institutions.

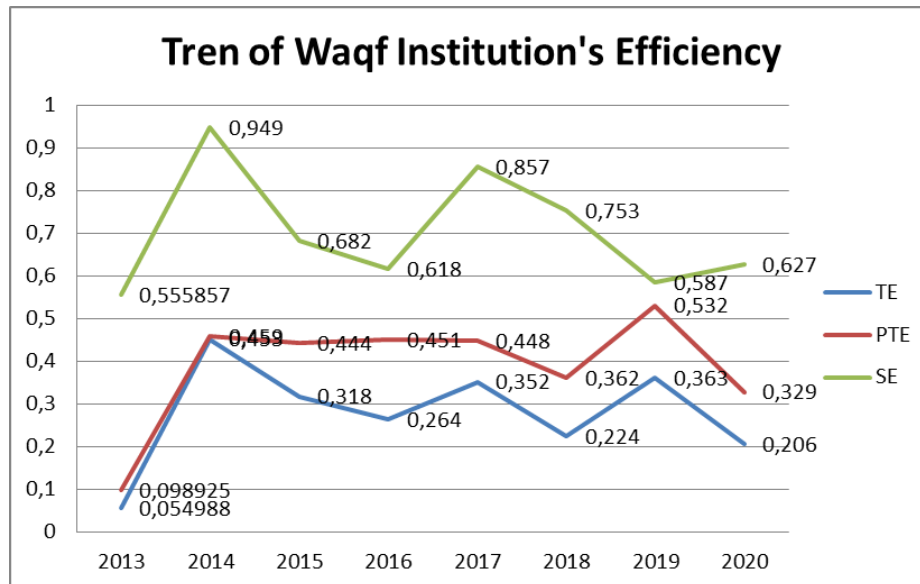
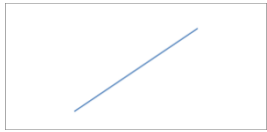
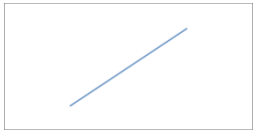
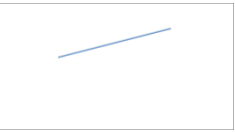
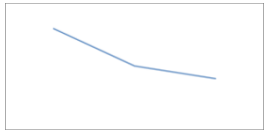
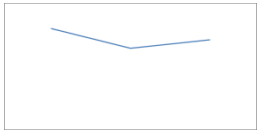
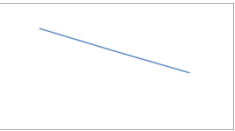
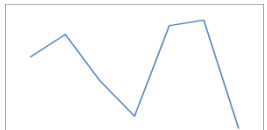
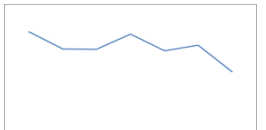
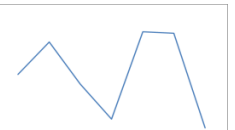


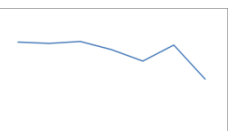


Figure 2. Trend of waqf Fund's Efficiency

Figure 2 shows the trend of efficiency from 2013 to 2020. Technical Efficiency (TE) shows fluctuations from year to year. Pure Technical Efficiency (PTE) also fluctuated slightly where the score in 2014 increased, then in 2014-2017 moved stable, and then rebounded in 2018-2020. Furthermore, the efficiency scale also experienced very significant fluctuations from 2013-2020. From the overall efficiency trend, it can be concluded that there have been fluctuations for eight years, so breakthroughs are needed to increase the efficiency level of TE, PTE, and SE.

Table 6. Efficiency Trend of Waqf Fund

Nama Lembaga	Technical Efficiency	Pure Technical Efficiency	Scale Efficiency
ACT			
Dompot Dhuafa			

Daarut Tauhiid			
Laziz Dewan Dakwah			
Pos Keadilan Peduli Umat			
Yatim Mandiri			

In detail, the efficiency trend of each waqf fund managed by zakat institutions in Indonesia can be seen in table 6. From the TE perspective, almost all waqf funds fluctuated from time to time so that consistent improvements are needed. Several zakat institutions continue to decline, such as the ACT and Laziz Dewan Da'wah. These institutions must, of course, pay more attention to their performance, and great improvements must be made. From the PTE side, Dompet Dhuafa and Laziz Da'wah Council are consistent in making improvements.

On the other hand, ACT continues to decline. While other institutions experience fluctuations. Therefore, the consistency of management aspects is still a serious problem in the management of waqf funds.

Potential Improvement

Besides producing efficiency values, the DEA method can also generate potential improvement or the level of improvement needed to achieve optimal efficiency values. Through the analysis of potential improvement, it can be seen the variables that need to be optimized. An analysis of potential improvement is carried out using the last year of observation and separately from previous years to describe the value to be achieved. The results of measuring the potential for improvement can be seen in the graph below:

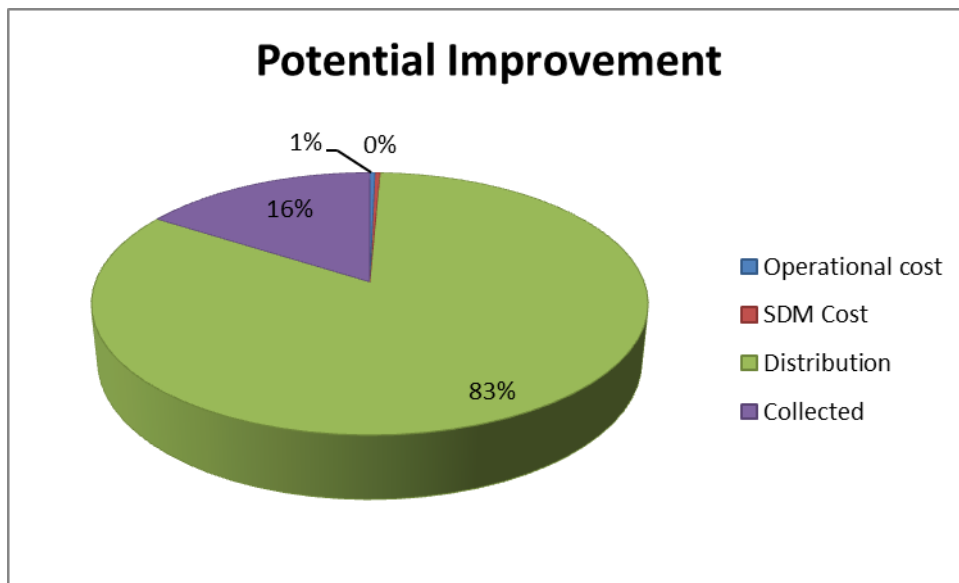


Figure 3. Potential Improvement

To find out the source of inefficiency of the waqf management institution, it can be seen through the increase in the total potential in the information below to provide an overview related to the inefficient waqf management institution. The variables that cause inefficiency for waqf funds are derived from the output variable, which consists of the collection and distribution of waqf funds. The graph of potential improvement states that for waqf funds managed by zakat institutions to reach an optimal level of efficiency, the receipt of funds needs to be increased up to 16% and the distribution of funds up to 83%

Benchmarking

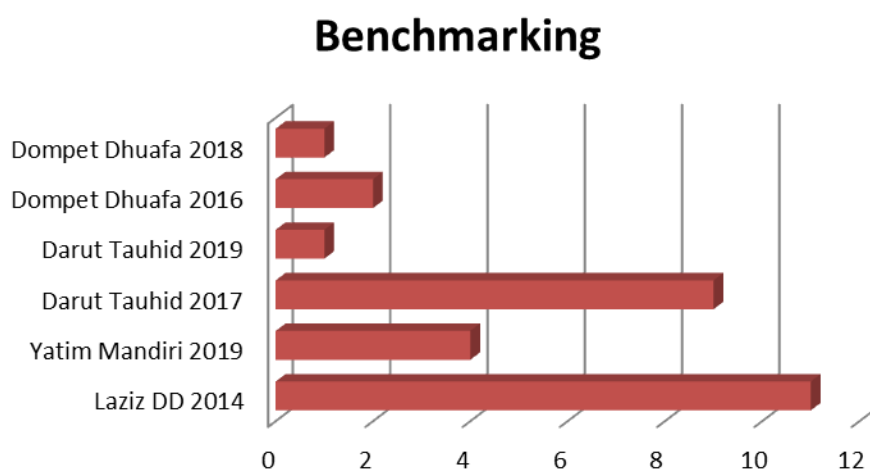


Figure 4. Benchmarking Result

This section explains DMUs that are a reference for other DMUs, especially those that are not yet efficient in waqf fund management. The calculation of the frontier analysis shows that the most referenced zakat management institution is Laziz Dewan Da'wah in 2014 which was referenced as many as 11 DMU, Darul Tauhid, who was referred for two years, namely in 2017 and 2019 with a total of 10 DMU. Next is Dompot Dhuafa, which was also referred for two years, in 2016 and 2018, with a total of 3 DMUs.

Based on the research results on the efficiency of waqf funds managed by zakat institutions in Indonesia in the 2013 to 2020 research period, several findings can be used to benefit academics and policymakers. The first finding in this study is shown by the CCR and BCC score tables (See table 5) which show the timeline for developing the average level of efficiency of waqf management institutions from year to year. Then the CCR and BCC tables show the efficiency value of waqf management institutions each year. The CCR model shows that Laziz Dewan Dakwah is the zakat institution that manages waqf funds most efficiently. At the same time, Pos Keadilan Cares for the People and ACT experience the lowest efficiency level.

Meanwhile, the BCC model shows that Laziz Dewan Da'wah, Dompot Dhuafa, and Daarut Tauhid are the top three pure technical efficiencies. To understand more deeply, the BCC model deserves to be analyzed because waqf management institutions may not operate at an optimal scale. Coelli (2005) argues that imperfect competition, financial constraints, government regulations, and others can cause the decision-making unit to operate at an optimal scale.

Second, in figure 2 and figure 3, we find a fluctuating trend in the efficiency of waqf funds managed by zakat institutions in Indonesia during the 2013-2020 research period. Technical Efficiency (TE), Pure Technical Efficiency (PTE), and Scale Efficiency (SE) have fluctuated for eight years, so breakthroughs are needed to increase efficiency levels. Furthermore, if the graph is observed and correlated with the COVID-19 pandemic, it can generally be concluded that the COVID-19 pandemic has affected the efficiency of waqf funds; this is due to a reduction in the number of waqf funds collected and distributed during the COVID-19 pandemic.

Third, the next finding from the research is the potential for increasing the efficiency of waqf funds in Indonesia. The graph of potential improvement contains the results of the analysis of each zakat institution that manages waqf funds in the 2019 dataset. The table shows the amount of slack, namely the difference in the gap between the efficient projected value and the original value of the data. The slack variable is used to identify sources of inefficiency. If a variable tends to be below, then the management of waqf funds is not fully efficient because inputs can be reduced without reducing output. The results of the analysis of the variables that most contributed to the decrease in efficiency scores were the output variables consisting of the acceptance and distribution of waqf funds. This variable needs to be increased by 16% and 83% so that the efficiency of waqf fund management can increase to 1.00.

The last finding of this research is a benchmarking analysis that recommends several DMUs as a reference for other DMUs in improving efficiency. Based on the analysis results, three DMUs are most frequently referenced by other DMUs, including Laziz Dewan Da'wah, Darut

Tauhid, and Dompot Dhuafa. The average of the three DMUs that become a reference for other DMUs is that these institutions are better in innovation and professionalism. As mentioned by Djunaidi & al Asyhar (20015) that professional waqf management requires accuracy and professionalism. The effectiveness and efficiency of waqf property management are important so that progress can be measured.

CONCLUSION

Conclusion

This study analyzes the efficiency of waqf funds managed by zakat institutions in Indonesia during the period 2013-2020 using the DEA method. The results of this study show. There is a fluctuating trend in the efficiency of waqf funds managed by the Indonesian Zakat institution. Furthermore, in general, Covid-19 that occurred at the end of 2019 and 2020 impacted the efficiency level of waqf funds due to the reduction in waqf funds collected and distributed.

Additionally, based on an analysis of potential improvements using the 2019 dataset, it shows the variables that most contribute to the decrease in efficiency scores are the output variables consisting of acceptance (16%) and distribution of waqf funds (83%). Therefore, these variables need to be improved so that the efficiency of waqf fund management can improve to 1.00.

Another result is based on a benchmarking analysis; three DMUs, including Laziz Dewan Da'wah, Darut Tauhid, and Dompot Dhuafa, are references for other DMUs. They become references for other institutions because these institutions are better in terms of innovation and professionalism. Therefore, we need innovation and professionalism in managing waqf funds to achieve the maximum level of efficiency.

There are several limitations to this study. Namely, this study uses datasets from 2013-2020. We have difficulty finding data on financial reports for the management of waqf funds published by zakat institutions in Indonesia. One of the objectives of this research is to find out the impact of the COVID-19 pandemic on the efficiency of waqf funds for the 2019-2020 period. Still, unfortunately, very few institutions released annual reports in 2020. Despite the limitations of this study, the results of this study have significant implications. Important zakat institutions that manage waqf funds in Indonesia and policymakers. In addition, this research can also be useful for further research that wants to investigate the efficiency of waqf funds in Indonesia with the latest data using a similar method or with other methods.

Recommendation

1. Financial report data is useful for researchers/academics to be used as research data sources. However, the ultimate goal is the improvement and development of Indonesian waqf. Therefore, it is necessary for the government's role so that waqf management institutions can publish financial reports regularly. Unfortunately, the author has difficulty finding financial reports from waqf management institutions in

Indonesia.

2. Zakat institutions that manage waqf funds need to perform efficiency calculations on a regular and regular basis so that the level of efficiency, the potential for improvement, as well as benefits and weaknesses in general, within the framework of efficiency analysis of waqf funds is known.
3. Due to the limited data obtained by the authors, the number of observations is relatively small, although it is still tolerable. For further research, the authors can add the number of observations. Therefore, it is necessary to involve institutions that manage waqf funds to publish annual financial reports to increase accountability and transparency in managing waqf funds.

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