Efficiency and Productivity Performance of Dompet Dhuafa based on the Type of Fund for 2010-2019

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The Islamic social finance industry in Indonesia is one of the industries that is growing very rapidly every year. This can be seen from the growth in the number of zakat management institutions that continue to increase, both those formed by the government and those formed by the community. The rapid development of the number of zakat management institutions raises the level of competition between zakat institutions getting stronger. To be able to compete in this industry, Dompet Dhuafa as one of the zakat management institutions must be able to compete with other zakat management institutions by improving performance optimally. The purpose of this study is to analyze the level of performance efficiency and productivity of Dompet Dhuafa for the 2010-2019 period based on the type of funds it manages. The methods used in this research are Data Envelopment Analysis (DEA) and Malmquist Productivity Index (MPI) methods. The estimation results show that Dompet Dhuafa has not achieved an optimal level of performance efficiency and relatively low productivity. This can be seen from the average efficiency score from 2010-2019 which only reached 0.66 and the average productivity level of Dompet Dhuafa reached 0.958.

Keywords: Dompet Dhuafa; DEA, Efficiency; Productivity; MPI
INTRODUCTION

In Islam, Islamic social finance consists of zakat, infaq, sadaqah and waqf (Ziswaif) which are worship and become instruments of socio-economic equity in an effort to reduce poverty, both poverty caused by food commodities and non-food commodities (Hermawan and Waluya (2019). The potential of zakat in Indonesia is quite large, where according to data from the Center for Strategic Studies of the National Amil Zakat Agency (Baznas) states that the national zakat potential is 217 trillion. However, in 2016, it was recorded that the incoming zakat was IDR 5 trillion. This amount is only 1 percent of the potential.

Zakat is one of the social financial instruments that has a strategic role in poverty alleviation and economic development (Ifranudin, 2019). This is in accordance with what was conveyed by Sri Mulyani as the Minister of Finance of the Republic of Indonesia at the opening of the 2nd Annual Islamic Finance Conference entitled "The Role of Islamic Finance in Eradicating Poverty and Income Inequality" organized by the Department of Fiscal Policy Agency. In addition, at the forum Bambang Brodjonegoro as Minister of National Development Planning also explained that zakat and waqf are potential Islamic social funds in addition to being used as a source of funding, where the two Islamic financial instruments if managed professionally, can systematically become a weapon to alleviate poverty and reduce social inequality so as to support Indonesia to achieve the National Development Target by 2030.

Currently, the development of zakat is increasing every year. This is supported by the Law that regulates the implementation of zakat, namely the 1999 Zakat Law (Kazdi, 2014). In addition, the development of zakat can also be seen from the growth of zakat institutions in Indonesia, both those formed by the government (BAZIS) and those formed by the community (LAZIS) (Kasdi, 2014). According to the National Zakat Statistics (2017), states that in 2017 the number of zakat management organizations in Indonesia amounted to 603. The number consists of 548 BAZNAS (48 provincial BAZNAS and 514 regency/city BAZNAS) and 55 LAZ (19 national LAZ, 11 provincial LAZ, and 25 regency/city LAZ). One of the zakat management institutions that has tried to distribute zakat with productive patterns is Dompet Dhuafa. Dompet Dhuafa has several economic programs that aim to empower communities in the field of productive economics for underprivileged families, including Madrasah Ekonomi Dhuafa (Sakofa) (Ifranudin, 2019).

The success of Dompet Dhuafa in distributing zakat can be seen from its performance efficiency and productivity level. Efficiency measurement is used to determine the amount of competitiveness in the industry (Antonio et al. 2013). Measurement of efficiency and productivity is also needed to evaluate the company's performance in the activity of combining inputs to produce optimum output as an effort to avoid bankruptcy (Cooper et al., 2006). Therefore, this study will analyze the level of performance efficiency and the level of productivity of Dompet Dhuafa based on the type of fund for the period 2010-2019.

LITERATURE REVIEW

Dompet Dhuafa is a non-profit organization formed by the Indonesian people which aims to raise the social dignity of the poor with ZISWAF (Zakat, Infaq, Shadaqah, and Waqf) funds and other funds that are halal and legal, both from individuals, groups or institutions (Ifranudin, 2019). Based on Indonesian Law Number 38 of 1999 concerning Zakat Management, Dompet Dhuafa is a zakat management institution formed by the community in the form of a foundation, which on October 8, 2001 was inaugurated by Dompet Dhuafa Republika as a national level Amil Zakat Institution (Dompet Dhuafa Republika, 2011). In accordance with applicable legal provisions, DD is registered with the Ministry of Social Affairs of the Republic of Indonesia as an organization in the form of a Foundation. The establishment of the foundation was carried out before Notary H. Abu Yusuf, SH on September 14, 1994, announced in the State Gazette of RI No. 163/A.YAY.HKM/1996/PNJAKSEL (Kasdi, 2014).

In an effort to manage and distribute ZISWAF funds, Dompet Dhuafa distributes these funds through various programs. These programs include BMT career, Baitul Mal Desa (BMD), livestock farmer empowerment (Kampoeng ternak), farmer empowerment, natural disaster relief, social and warfare and business development (Kasdi, 2014). The success of Dompet Dhuafa in running its various programs can be seen from the performance efficiency and productivity levels in terms of each type of fund managed.

Efficiency is defined as a measure of effectiveness without wasting time, effort and with minimum skill. However, efficiency is focused on the use of minimum inputs to produce optimum output (Jaouadi and Zorgui 2014). Efficiency will be optimal if the company can
maximize output by using fixed inputs or by minimizing the use of inputs to achieve the same level of output (Karim 2007). In measuring the performance level of an entity, efficiency is closely related to productivity, where efficiency and productivity describe the comparison between input and output (Rusydiana 2018). According to the National Productivity Council, productivity is a comparison between the results achieved (output) and the overall resources used (input), where productivity criteria relate to the added value of output (Wahyudi, 2012). In this study, efficiency measurement is estimated using a non-parametric method, namely Data Envelopment Analysis. Meanwhile, the productivity level is estimated using the Malmquist Productivity Index method.

Data Envelopment Analysis is one of the methods used to measure the efficiency score of a Decision Making Unit (DMU) which has the advantage of being able to analyze multiple inputs and multiple outputs (Sabiti et al., 2017). This method was first discovered by Farrell in 1957 and then developed by Charnes, Cooper and Rhodes (Cooper, 2002). This method consists of two models, namely the CCR model and the BCC model. The CCR model was introduced by Charnes, Cooper and Rhodes in 1978 which has the concept of constant return to scale approach, where every additional input x times will produce output x times as well (Cooper et al., 2006). Meanwhile, the BCC model is a model introduced by Baker, Charner and Cooper that assumes variable return to scale, where every additional input x times does not cause the output to increase by x times as well, but can be smaller or larger (Cooper et al., 2006). The increase in the proportion of output can be increasing return to scale (IRS) or decreasing return to scale (DRS).

Measuring the productivity of an entity can be done with the Total Factor Productivity (TFP) method. Malmquist index is a bilateral index used to compare the production technology of two economic elements (Cooper et al. 1999). This index was first created by Sten Malmquist in 1953, then introduced by Caves et al. (1982). In the measurement process, the Malmquist Index is based on the concept of a production function that is able to measure the maximum production function with predetermined input constraints. The results of this index consist of efficiency change, technological change, pure efficiency change, economic scale change and TFP change. Measurement using the Malmquist Index has several conveniences such as being a non-parametric method that does not require the specification of the form of production, does not require assumptions on the economic behavior of the production unit, the calculation of the index does not require price data which is often unavailable, and can be broken down into efficiency change and technological change. However, the measurement using this method requires a balanced panel data so it cannot be done for time series data (Avenzora and Jossy 2008).

RESEARCH METHODOLOGY

This research will analyze the performance efficiency score and productivity level of Dompet Dhuafa’s zakat management institution for the 2010-2019 period. This research is a quantitative research using secondary data obtained from annual financial reports. The input variables used include operations and revenue from each type of fund. While the output variable used is the expenditure/distribution of each type of fund. The types of funds that become Decision Making Units (DMU) in this study are zakat funds, infaq funds, tied infaq funds, waqf funds, financial solidarity funds, qurban animal stocking funds and zakat funds. The measurement of Dompet Dhuafa’s performance efficiency based on the type of fund is estimated using the Data Envelopment Analysis (DEA) method with the output-oriented BCC model. Analysis with the DEA method produces efficiency values in the range of 0-1 (Sabiti et al. 2017). Each type of fund at Dompet Dhuafa will be considered efficient if it has an efficiency value close to the value of 1 and is said to be inefficient if it is close to the value of 0. The purpose of this study is to determine and compare the efficiency scores of the management and distribution activities of each type of fund during the 2010-2019 period.

Several studies related to the measurement of performance efficiency using DEA, both theoretical and applicable, have been conducted. These studies have been conducted by Miniaouai and Chaibi (2012), Rahman (2013), Khan and Noreen (2014), Herman (2021), Tuffahati et al. (2016), Benarda et al. (2016), and Ikhwani et al. (2020). The analysis tool used in this neutralization is Max DEA to measure the efficiency level of Dompet Dhuafa’s performance based on each type of fund managed for the 2010-2019 period.

Then in the second step, in measuring performance productivity using the Malmquist Productivity Index method. Several studies related to productivity measurement have been conducted by Rusydiana (2018), Raphael (2013) and Yildirim (2015). In productivity analysis, a value of one means there is no change in productivity or productivity is relatively stagnant, x> 1 means there is an increase in productivity and x < 1 means there is a decrease in productivity. The calculation of total productivity change starts from the
second year, MPI measurement will use DEAP 2.1 software, which will produce five measures of change for each period it measures, as follows (Uula, 2022; Hamidi & Rusydiana, 2019; Uula et al., 2023; Herindar et al., 2021):

(1) **EFFCH/Technical Efficiency Change** is the change in technical efficiency which is the change in the technical efficiency measure relative to the CRS/CCR assumptions.

(2) **TECHCH / Technological Change** is a technological change in the DMU (Decision Making Unit).

(3) **PECH/ Pure Technical Efficiency Change** is a change in pure technical efficiency which is a change in technical efficiency measures against VRS/BCC assumptions.

(4) **SECH/Scale Efficiency Change** is a scale efficiency change that measures the difference in technical efficiency values based on CRS and technical efficiency based on VRS (Effch/Pech).

(5) **TFPCH/Total Factor Productivity Change** is the change in total factor productivity of each DMU.

**ANALYSIS AND DISCUSSION**

**Dompet Dhuafa Efficiency Score for the Period 2010-2019**

A company is said to have good and efficient performance if it is able to manage inputs and produce optimal outputs in various market conditions faced. Achieving or not the efficiency of company performance is due to errors in managing inputs and outputs (Cooper et al., 2006). This study aims to analyze the performance of the Dompet Dhuafa company for the 2010-2019 period. The analysis method used in this research is the DEA (Data Envelopment Analysis) method using the output-oriented BCC model.

Based on the results of data processing of Dompet Dhuafa's financial statements using DEA, an efficiency score was obtained. Table 1 explains the efficiency level of Dompet Dhuafa for the period 2010-2019 using operational input and revenue variables, as well as distribution output variables. In the table, it can be seen that the Zakat Fund has the highest average efficiency score with an average of 0.89. Then followed by the Bound Infaq Fund with an average efficiency score of 0.69. Meanwhile, the Waqf and Humanitarian Solidarity Funds have the lowest efficiency scores, each of which has an average of 0.55. In addition, when viewed from the efficiency score of all types of funds per year, 2011 had the highest efficiency score with an average of 1.00, followed by 2019 with an average of 0.78. While 2013 had the lowest efficiency score with an average of 0.46, so that the average efficiency score of Dompet Dhuafa's performance in the 2010-2019 period in terms of all types of funds was 0.66. The results of the efficiency score indicate that Dompet Dhuafa has not had an efficient performance, which means that it has not been able to manage its inputs to produce optimal outputs.

<table>
<thead>
<tr>
<th>DMU</th>
<th>Efficiency Score</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infak</td>
<td>0.92</td>
<td>1.00</td>
</tr>
<tr>
<td>Bound Infaq</td>
<td>0.87</td>
<td>1.00</td>
</tr>
<tr>
<td>Humanitarian</td>
<td>0.87</td>
<td>1.00</td>
</tr>
<tr>
<td>Qurban Stock</td>
<td>0.87</td>
<td>1.00</td>
</tr>
<tr>
<td>Waqf</td>
<td>0.98</td>
<td>1.00</td>
</tr>
<tr>
<td>Zakat</td>
<td>0.87</td>
<td>1.00</td>
</tr>
<tr>
<td>Average</td>
<td>0.90</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**Dompet Dhuafa Efficiency Distribution Score for the Period 2010-2019**

In relation to the previous efficiency table information, the graph below provides information on efficient and inefficient types of funds on a certain group scale. Based on the following graph, it can be seen that the number of types of funds that are perfectly efficient (100%) is 11 DMUs. The graph below also provides information that the most business units are in a 100% efficiency condition, namely 11 DMUs, while the least are business units with an efficiency level of 90 99%, only 3 DMUs.
Condition of **Return to Scale (RTS)** Dompet Dhuafa Period 2010-2019

Besides being used to estimate the efficiency value of each type of fund, the DEA method is also used to analyze how much the company's efforts in increasing its business operational capacity to achieve optimal performance. At this stage, each DMU (Decision Making Unit) is in one of the Return to Scale (RTS) conditions, namely Increasing to Scale (IRS), Constant to Scale (CRS) and Decreasing to Scale (DRS). The condition grouping is based on the efficiency scale (ES) value of each company. If the company has TE, PTE and ES values with a value of one, then the company is in Constant to Scale (CRS) condition. Meanwhile, if the value of ES is one but the value of TE and PTE is less than one, the company is in the Decreasing to Scale (DRS) condition, while if the value of ES is less than one, the company is in the Increasing to Scale (IRS) condition (Sabiti et al. 2017).

Figure 2 explains the condition of **Return to Scale (RTS)** in the Dompet Dhuafa company for the 2010-2019 period.

Based on the Figure, it can be seen that there are 2 types of funds that are in CRS conditions, 44 types of funds are in DRS conditions and 14 types of funds are in IRS conditions. The DRS condition occurs when the increase in output produced is smaller than the input added. In this condition, fund types are required to reduce inputs, because the amount of input and output produced is not ideal. Meanwhile, the CRS condition occurs when there is an increase in output that is proportional to the input added. This condition is the ideal condition. Meanwhile, IRS occurs when the increase in output is greater than the increase in input. In this condition, it is possible to continue increasing the output capacity by maintaining the existing inputs.
Total Potential Improvement Dompet Dhuafa Period 2010-2019

To find out the source of inefficiency in the type of Dompet Dhuafa company funds in this observation, it can be seen through total potential improvement information that can provide an overview of the source of inefficiency. Figure 3 shows a graph of total potential improvement which states that in order to be efficient, the inefficient fund types should reduce their operating costs by 28%. Meanwhile, the distribution of funds needs to be increased by 54% in order to achieve an optimal level of efficiency.

Total Potential Improvement

Source: DEA output (2021, processed)
Figure 5 Dompet Dhuafa Potential Improvement

Productivity Analysis of Dompet Dhuafa's Performance Period 2010-2019

In this model, each type of fund managed by Dompet Dhuafa will be compared to determine the ranking of its productivity level. According to Table 2, it can be seen that in the 2010-2019 period, the Humanitarian Solidarity fund had the highest productivity level of 1,284. Then followed by Infak funds with a productivity level of 1,118, and zakat funds of 1,108. For Waqf funds ranked fifth with a productivity level of 0.775, and tied infaq funds are the type of funds with the lowest productivity level of 0.676. While the average productivity level of all types of funds for the 2010-2019 period reached 0.958. This indicates that Dompet Dhuafa still has a relatively low level of productivity.

<table>
<thead>
<tr>
<th>DMU</th>
<th>EFFCH</th>
<th>TECH</th>
<th>PECH</th>
<th>SECH</th>
<th>TFPCH</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infak</td>
<td>1.738</td>
<td>0.643</td>
<td>1.748</td>
<td>0.994</td>
<td>1.118</td>
<td>2</td>
</tr>
<tr>
<td>Bound Infaq</td>
<td>0.942</td>
<td>0.718</td>
<td>0.954</td>
<td>0.998</td>
<td>0.676</td>
<td>6</td>
</tr>
<tr>
<td>Humanitarian Solidarity</td>
<td>1.823</td>
<td>0.704</td>
<td>1.771</td>
<td>1.029</td>
<td>1.284</td>
<td>1</td>
</tr>
<tr>
<td>Stocking Qurbani</td>
<td>1.453</td>
<td>0.542</td>
<td>1.656</td>
<td>0.877</td>
<td>0.787</td>
<td>4</td>
</tr>
<tr>
<td>Waqf</td>
<td>1.028</td>
<td>0.754</td>
<td>1.000</td>
<td>1.028</td>
<td>0.775</td>
<td>5</td>
</tr>
<tr>
<td>Zakat</td>
<td>1.691</td>
<td>0.655</td>
<td>0.964</td>
<td>1.754</td>
<td>1.108</td>
<td>3</td>
</tr>
<tr>
<td>Average</td>
<td>1.445</td>
<td>0.669</td>
<td>1.348</td>
<td>1.113</td>
<td>0.958</td>
<td></td>
</tr>
</tbody>
</table>

FINDINGS

The results showed that Dompet Dhuafa during the 2010-2019 period had an average efficiency score of 0.66, which means that it has not achieved efficient performance. These results are in accordance with research conducted by Wahyuny (2016) which shows that Dompet Dhuafa has an average efficiency score of...
0.74 in 2013. In fact, Dompet Dhuafa is a zakat management institution that has the smallest efficiency score than YBUI BNI, Rumah Zakat, and Lazis Swadaya Ummah at that time. However, the result contradicts Akbar’s research (2009) which shows that Dompet Dhuafa is the most efficient OPZ from year to year during the period 2005-2007 compared to the other 9 OPZs in the study.

According to Rusyeliana and Al-Parisi (2016), Al-Parisi (2017), the main factor that causes inefficiency in zakat management institutions is the distribution of zakat funds that have not been optimized. Meanwhile, according to Nurhasanah and Lubis (2017), the cause of inefficiency in zakat management institutions is the internal institution itself which consists of operational costs and socialization costs. Therefore, to have an efficient performance, zakat management institutions need to reduce operational costs and socialization costs, and increase funds collected and funds distributed.

Based on the research results, Dompet Dhuafa has an average productivity level that reaches 0.958. These results indicate that during the 2010-2019 period Dompet Dhuafa tended to experience a decrease in productivity. This is in line with research conducted by Al-Parisi (2017) which states that Dompet Dhuafa has the lowest productivity level and is the only OPZ that has decreased productivity when compared to YBM BRI, RZI, PKPU and BAZNAS in the 2012-2013 period. According to Wahab and Rahman (2011), some factors that affect the level of efficiency and productivity of zakat management institutions in Malaysia include the payment system, computerization system, organizational structure, audit committee and decentralization.

The type of waqf fund is one of the types of funds that has the lowest efficiency level of 0.55 and has a productivity level ranked fifth out of six types of funds with a value of 0.775. In fact, waqf is one of the instruments that has high potential in Indonesia to improve people's welfare. In fact, in Nigeria waqf is able to support the financing needs of disadvantaged Muslim communities (Zauro et al. 2020). However, based on the results of this study, it can be found that behind the large role of waqf for social welfare, it turns out that waqf management is still considered less than optimal. This is due to the limited public understanding of the potential of waqf in socio-economic life. This phenomenon is in accordance with research conducted by Hamad et al. (2017) which states that one of the reasons for the lack of development of waqf in Zanzibar is the limited understanding of the community of the concept and potential of waqf itself, so that there is a need for proper orientation and application of waqf in its management.

**CONCLUSION**

Based on the results of the study, it shows that Dompet Dhuafa has not achieved an optimal level of performance efficiency. This can be seen from the average efficiency score from 2010-2019 which only reached 0.66. 2011 was the year with the highest efficiency score with an average of 1.00 or had a perfect efficiency score. While 2013 was the year with the lowest efficiency score with a score of 0.46. Then, the type of fund that has the highest efficiency score is zakat with an efficiency score of 0.89 and the type of fund that has the lowest score is waqf and financial solidarity with a score of 0.55 each. Meanwhile, the average productivity level of all types of funds reaches 0.958, where the highest type of fund is owned by the Humanitarian Solidarity fund with a productivity level of 1.284 and the lowest productivity level is owned by the tied infaq fund with a productivity level of 0.676. These results indicate that Dompet Dhuafa does not yet have efficient performance and low productivity levels. This means that Dompet Dhuafa has not been able to manage its inputs to produce optimal outputs.

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