

Productivity of Waqf Funds in Indonesia: A Malmquist Index Approach on Selected Philanthropic Institutions

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The goal of this study is to use the Malmquist Productivity Index to figure out how well zakat institutions in Indonesia manage waqf funds. The objects of this study consist of six Zakat institutions in Indonesia, and the data used in this research comes from the annual reports of these institutions during the 2017–2021 period. The input variables in this study include salary expenses, operating expenses, and total assets. Meanwhile, output variables include collected waqf funds and distributed waqf. The results of the study found that the Malmquist Productivity Index (MPI) score for each Zakat institution explained that the level of productivity of Zakat institutions in managing waqf funds fluctuated from year to year. In general, the level of work done by zakat institutions has gone down. This is because efficiency and technology have changed. Analysis during the COVID-19 pandemic found that the productivity of Zakat institutions managing waqf funds before the pandemic had a higher level of productivity than during the pandemic. And analysis of the Malmquist Index quadrant shows that Zakat Institutions managing waqf funds dominate in quadrant 3, with a total of 3 Zakat Institutions, and quadrant 4, with the same number of Zakat Institutions, namely 3 institutions.

Keywords: Waqf funds, Productivity, Indonesia, MPI

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INTRODUCTION

The term "waqf" comes from Arabic which means to restrain or limit. According to [Bakri et al \(2016\)](#) Waqf is a form of direct or indirect property dedication, in which the property owner's rights are limited in all types of business transactions, inheritance, gifts, and wills. The benefits of waqf assets only apply to general or specific charitable purposes and any type of income or profits derived from waqf assets must be spent to eliminate difficulties and improve general welfare ([Pyeman et al., 2016](#); [Bakri et al., 2016](#)) or specifically with the intention of the founder to get closer to Allah SWT. Thus, the waqf property no longer belongs to the owner, cannot be returned to the previous owner, and cannot be owned by anyone ([Bakri et al., 2016](#)). Furthermore, [Sadeq in Noordin et al \(2017\)](#) explains that waqf is an ongoing or voluntary charity that functions as a mechanism to fight for the Islamic economic system's main goals, namely equal wealth distribution and income distribution. Usually, waqf only uses immovable property such as land and buildings ([Khamis & Salleh, 2018](#)). But recently, waqf assets have started to be allowed in the form of movable property. This was approved by the Indonesian Ulema Council (MUI) in its fatwa in 2002. Thus, waqf assets can be managed productively.

In their research, [Sadeq \(2002\)](#) and [Islahi \(2003\)](#) stated that waqf has become one of the most important instruments of Islamic finance in the economic system. This is because the goal of waqf is to achieve equity and become a driver of development for the country, improve general welfare, get rid of income differences, and reduce poverty ([Sadeq, 2002](#); [Pyeman et al., 2016](#); [Bakri et al., 2016](#); [Noordin et al., 2017](#); [Hasan et al., 2020](#)). Waqf has made a big difference by building hospitals, orphanages, and mosques, which often become centers for education, culture, and government. Waqf has also helped build schools and libraries. In the end, the waqf makes a positive contribution to expanding the economy through the planting of social enterprises ([Noordin et al., 2017](#)). This explains that waqf does not only play a role in the social aspect but also in the economic aspect, because the impact it has is comprehensive on the social life of the community and the economy and can be felt continuously ([Munir, 2015](#); [Thaker & Pitchay, 2016](#); [Scientific, 2019](#)).

In Indonesia alone, according to data from the Ministry of Religion's Waqf Information System for 2021, waqf assets in Indonesia have spread over 415,306 locations with an area of waqf land of around 55,392.80 ha and potential waqf assets reaching IDR 2,000 trillion

per year. Waqf land is used for mosques (43.96%), prayer rooms (28.04%), schools (10.70%), cemeteries (4.43%), Islamic boarding schools (3.81%), and other social endowments (9.06%). From these data, it can be concluded that Indonesia has great potential for the development of waqf, especially in relation to waqf land. However, even though the number of waqf lands in Indonesia is quite large, the empowerment of waqf lands has not been maximized ([Scientific, 2019](#)).

Given the potential and important role of waqf in various aspects, it is appropriate that waqf assets collected are managed appropriately and effectively to generate income for the benefit of the people ([Khamis & Salleh, 2018](#)), including in this case, maintaining the effectiveness or productivity of institutions that manage waqf fund. and efficiency in allocating these funds ([Noordin et al., 2017](#)). [Pyeman et al. \(2016\)](#) say that the collection and distribution process is very important for waqf to meet its goals of closing the income gap in society, which shows how important it is to manage waqf funds well. ([Noordin et al., 2017](#)) It is also very important to measure mutawalli's performance in a wide range of ways to make sure they do their jobs well and are responsible for managing waqf funds.

[Kopelman \(1986\)](#) says that productivity is the ratio of the number of physical outputs to the number of physical inputs. In other words, total production (output) is affected by the amount of capital and labor invested. According to [Zacharatos et al. \(2005\)](#), managers must be able to accurately estimate their costs and budgets for future projects based on previous data to maintain the productivity of their companies.

As far as the author's observation goes, research related to the productivity of waqf funds in philanthropic institutions is still very rare. Among the studies that are relevant to the topic of this research are those conducted by [Greece et al. \(2020\)](#); [Herindar & Rusydiana \(2021\)](#); [Pyeman et al. \(2016\)](#); [Hassan et al. \(2020\)](#); [Wahab & Rahman \(2012\)](#); and [Bakri et al. \(2020\)](#). From this background, this study looks more closely at how productively waqf funds were managed by zakat institutions in Indonesia from 2017 to 2021.

LITERATURE REVIEW

Philanthropic Institutions

In Islamic teachings, philanthropy is realized through zakat, infaq, alms, and endowments (ZISWAF). ZISWAF aims not only to increase faith but also to eliminate materialistic, miserly, and greedy traits, improve the human spirit, develop and clean wealth, and overcome various social and economic problems

(Iskandar et al., 2020). Zakat institutions are trusted institutions that manage zakat or ziswaf in Muslim countries (Wahab & Rahman, 2012; Widiastuti et al., 2018; Rusydiana & Firmansyah, 2017).

Based on this law, it is explained that waqf is a wakif's legal act to separate and/or surrender part of his property to be used forever or for a certain period according to his interests for the purposes of worship and/or public welfare according to Sharia. The goal of waqf is to use waqf property for social, religious, and humanitarian purposes (Wahab & Rahman, 2013). Because of this, it is very important for zakat institutions that manage waqf to keep up their levels of productivity.

Also, the Indonesian Waqf Board (BWI) is a separate organization that is in charge of growing waqf in Indonesia. BWI was started in 2004 and has started doing things, like teaching nazirs all over Indonesia about waqf and how it can help them (Zainal, 2016). However, waqf funds themselves can be managed by zakat institutions. There are two types of zakat institutions in Indonesia, namely those formed by the government, for example the National Amil Zakat Agency (BAZNAS) and those formed by the community, the Lembaga Amil Zakat (LAZ).

Productivity

Efficiency and productivity are often used to measure a financial institution's achievements. This is usually related to the objectives of the financial institution. Therefore, efficiency and productivity can be measured by comparing financing and operations as outputs with fixed assets, labor, and customer funds as inputs. Efficiency can be calculated by calculating the ratio of output to input, while productivity is the relationship between output and input (Mongid & Tahir, 2010).

Kopelman explains in 1986 that productivity is the ratio of one or more physical outputs to the materials that went into making them. In other words, total production (output) is affected by the amount of capital and labor invested. According to Fare et al. (1994), productivity can be divided into smaller segments based on changes in efficiency through innovative technological advances, assuming that output equals output and that the growth index of total factor productivity captures technological changes. Therefore, total Factor Productivity (TFP) can be identified with changes in technology (from a technical perspective), which can be measured as changes in performance and modified by adjusting the selected inputs. In other words, as productivity levels increase in an industry, more output can be achieved with the same quantity of

input.

PREVIOUS STUDIES

Previous researchers have done very little research on the productivity of zakat institutions managing waqf funds. This is because most researchers focus more on research related to the efficiency of zakat institutions. Hasan et al. (2020) conducted a study on the efficiency of waqf in Kelantan and Penang, which is relevant to this study. The results of his study show that the Data Envelopment Analysis (DEA) only shows one state, Penang, which operates at a total efficiency score (benchmark), while Kelantan is far from being fully efficient.

Herindar & Rusydiana (2021) analyzed the efficiency of waqf funds in Indonesia during the 2013–2020 period. The results of this study indicate that the efficiency of zakat institutions in managing waqf funds during 2013–2020 has an unstable trend. In general, the main thing that affects how well waqf funds work is the output, which is how the funds are received and given out. Furthermore, research from Djaghballou et al. (2018) analyzes the efficiency and productivity of the performance of zakat funds in Algeria. His study concluded that total factor productivity had increased markedly for all zakat funds, mainly due to technical changes rather than efficiency changes. Further breaking down changes in efficiency into pure technical efficiency and scale efficiency shows that pure technical efficiency is a more important source of changes in efficiency than scale efficiency. This means that zakat funds rely on technical aspects to become more efficient.

Although research related to the productivity of zakat institutions managing waqf funds is still rare, there is still research that can be used as a reference for measuring the productivity of waqf funds, including Greece et al (2020) measurement of the efficiency of zakat managers (OPZ) of Islamic banks in Indonesia. Maulana & Fanani (2020) describe the efficiency of national zakat institutions from 2015–2016. Wahab & Rahman (2012) explain Malaysia's productivity growth of zakat institutions. Ryandono et al. (2021), who analyzed the efficiency of zakat institutions in Indonesia with research periods starting from 2014–2018 using the DEA and FDH methods. And research from Saadati (2016) looks at how well cash waqf helps Indonesians get ahead economically.

This study tries to fill in the gaps in what we know about how productive zakat institutions in Indonesia that manage waqf funds are. As is known, in addition to measuring efficiency, measuring productivity

is also very important so that several stakeholders such as banking practitioners and regulators can evaluate and develop future strategies to optimize waqf funds in Indonesia. This study focuses on zakat institutions that manage waqf in Indonesia that have met the research sample criteria. Furthermore, this research also analyzes the effect of the Covid-19 pandemic on the productivity of zakat institutions managing waqf funds in Indonesia.

METHOD

The Malmquist Index is an indicator used to measure productivity. This index was first created by Sten Malmquist in 1953, but was later reintroduced by [Caves et al \(1982\)](#). The Malmquist index measures two things: the catch-up effect and the frontier shift effect. The catch-up effect measures the level of change in efficiency relative to the first period to the second period. Meanwhile, the frontier shift effect measures the level of technological change, through the combination of inputs and outputs from the first to the second period. The frontier shift effect is also known as the innovation effect ([Caves et al., 1982](#); [Rani et al., 2017](#); [Rusydia, 2018](#)).

The Malmquist index has several advantages that make it the right choice for measuring productivity. First, this index is a non-parametric method, which means that the production function does not need to be given. Second, the Malmquist index doesn't make any assumptions about how economic production units will act, like that they will try to keep costs as low as possible or make as much money as possible. Third, the calculation of this index does not require price data which is often unavailable, so it is beneficial if the destination is a different or unknown manufacturer. Fourth, the Malmquist productivity index can be divided into two components: changes in efficiency and changes in technology ([Marlina et al., 2018](#)).

In measuring the Malmquist productivity index in this study, we used DEAP 2.1 software as an analysis tool. This research was conducted on six zakat institutions managing zakat funds in Indonesia from 2017 to 2021. All data used was collected from the annual reports of zakat institutions which are available in publication reports on each zakat institution's website. In selecting a sample of zakat institutions, all relevant data is required over five years from 2017 to 2021, resulting in a model of 6 zakat institutions in Indonesia. To measure the Malmquist productivity index in this study using DEAP 2.1 software as an analysis tool. This research was conducted on 6 zakat institutions managing zakat funds in Indonesia from 2017 to 2021. All data

used was collected from the annual reports of zakat institutions which are available in publication reports on each zakat institution's website. In selecting a sample of zakat institutions, all relevant data is required for five years from 2017 to 2021, resulting in a model of 6 zakat institutions in Indonesia.

Inputs like fixed assets, labor costs, and third-party funds are used in the productivity analysis. And the output, namely the amount of financing provided, and operating income. By adopting an intermediation approach to measure the productivity of financial institutions. The BCC or VRS method with an output focus is used to figure out how productive zakat institutions are. In addition, the Malmquist index and the Cobb-Douglas production function are used to figure out TFP growth and its parts.

Furthermore, in this study the method used to measure efficiency is part of the Data Envelopment Analysis (DEA), namely the Malmquist Productivity Index (MPI). Then, changes in total factor productivity (TFPCH) can be divided into changes in technology (TECHCH) and changes in efficiency (EC) (EFFCH). The efficiency change index can be further decomposed into a PECH (pure efficiency change) component which is calculated comprehensively against the VRS technology, and a SECH (scaling change) component which captures the change in a deviation between the VRS technology and the CRS.

Factors that influence changes in productivity can be seen through the values of the efficiency change index (EFFCH) and the technology change index (TECHCH) to explain the reasons for changes in productivity. In addition, the pure efficiency change index (PECH) and scale efficiency change index (SECH) are used to determine the cause of the change in the efficiency change index (EFFCH). The total factor productivity (TFP) value shows the difference in the index. $M > 1$ indicates increased productivity; $M = 1$ suggests no increase in productivity; and $M < 1$ indicates a decrease in productivity.

RESULTS AND ANALYSIS

Productivity of Waqf Funds in Indonesia

The Efficiency Change Index (EFFCH) and the Technology Change Index (TECHCH) can be used to find the factors that cause productivity to change. At the same time, the Pure Efficiency Change Index (PECH) and Scale Efficiency Change Index (ECH) are used to determine the causes of changes in EFFCH. Furthermore, the value of Total Factor Production (TFP) is intended to see any reflectges in the index. If

the value of $M > 1$ indicates an increase in productivity, and vice versa, whereas if $M < 1$ shows a decrease in the value of productivity. If $M = 1$, then there is no increase in productivity.

The table below describes the results of the analysis using the Malmquist Productivity Index (MPI) from Zakat Institutions managing waqf funds in Indonesia which are the object of observation in this study.

Table 1: Malmquist Index of Waqf Fund in Philanthropic Institutions per Year

Year	EFFCH	TECHCH	PECH	SECH	TFPCH
2017-2018	1,059	0,057	0,769	1,377	0,060
2018-2019	0,560	0,562	1,212	0,462	0,315
2019-2020	1,658	1,333	0,913	1,816	1,502
2020-2021	0,613	1,154	0,711	0,862	0,707
Mean	0,881	0,695	0,882	0,999	0,613

The table above describes changes in the total productivity (TFPCH) of Zakat institutions managing waqf funds and the factors that influence them, namely changes in technology (TECHCH) and changes in efficiency (EFFCH) during the observation period. From the MPI results for six Zakat institutions managing waqf funds in Indonesia, it can be concluded that productivity trends fluctuate from year to year. The average score results show that the productivity value of zakat institutions decreases (0.613), which is both caused by a reduction in changes in efficiency (0.881) and changes in technology (0.695). This explains that changes in efficiency and technology contribute to a decrease in the productivity of Zakat institutions managing waqf funds in Indonesia.

In 2017–2018, the average productivity level of Zakat institutions managing waqf funds (0.060) with a change in efficiency (1.059). Likewise, technological change experienced the lowest decline during the five study periods (0.057). It can be concluded that technology in this period has not been able to make an optimal contribution to the productivity of Zakat Institutions waqf funds in Indonesia. Furthermore, the results for the 2018-2019 period, the productivity level of Zakat Institutions operating waqf funds also decreased (0.315) with the lowest efficiency change throughout the research period (0.560), and

technological changes showed a decrease (0.562). That means, in the 2018-2019 period changes in efficiency and technology have not made an optimal contribution to the productivity level of Zakat Institutions managing waqf funds in Indonesia.

Furthermore, in 2019-2020 the productivity level experienced the highest increase in productivity during the five observation periods (10,502) which were equally affected by increases in changes in efficiency (1,658) and changes in technology (1,333). Then, for 2020-2021, the productivity level decreased during the five-year observation period, with a value of (0.707). This was influenced by a decrease in the rate of change in efficiency (0.613), while changes in technology increased (1.154). It can be concluded that during the two periods from 2020 to 2021, changes in efficiency have not contributed to increasing the productivity of Zakat institutions managing waqf funds in Indonesia.

If analyzed further, productivity in 2017-2018 was the year with the lowest productivity level, while in 2019-2020 the productivity level experienced the highest increase throughout the study period. The increase in productivity in 2019-2020 compared to the previous year or after can be affected because the level of changes in efficiency and changes in technology both increase, whereas changes in efficiency or changes in technology decreased in the previous year.

Summary of Malmquist Index per Institutions in Indonesia

Table 2: Productivity per firm 2017-2021

firm	effch	techch	pech	sech	tfpch
1	1.000	0.580	1.000	1.000	0.580
2	0.625	0.580	0.671	0.930	0.362
3	0.758	0.712	0.767	0.987	0.540
4	1.000	0.586	1.000	1.000	0.586
5	0.790	0.884	0.949	0.832	0.699
6	1.252	0.909	0.963	1.300	1.138
Mean	0.881	0.695	0.882	0.999	0.613

Based on the table, the average productivity of Zakat Institutions managing waqf funds throughout the study period shows a decrease in productivity (0.613). A decrease influenced this decrease in productivity in the average values of changes in efficiency (EFFCH) with a value of (0.881) and changes in technology (TECHCH) with a value of (0.695). The decrease in efficiency can be caused by a decrease in one of the EFFCH forming factors, namely a reduction of Pure Efficiency Change (PECH) with a value of (0.882), even though in terms of the Scale Efficiency Change (SECH) factor it only decreased by -0.01% (0.999).

Furthermore, because the analysis was conducted individually on Zakat Institutions managing Waqf funds, it can be concluded that YYMS has the highest productivity, with a value of 1.138. A rise in EFFCH (1.252) is a factor in the high level of

productivity at the Zakat Institution, which is in charge of managing the YYMS waqf funds. However, TECHCH decreased (0.909). Then, for the Zakat Institution operating waqf funds with the lowest productivity value obtained was by the IZI Institution with a productivity value (0.362). Low productivity is affected by decreased EFFCH (0.625) and TECHCH (0.580).

Productivity of Waqf Funds in Indonesia before and during Covid-19 Pandemic

The emergence of Covid-19 at the end of 2019 and its spread in Indonesia in early 2020 certainly had a global impact not only on the health sector but also on the economic sector, especially in managing waqf funds. For this reason, the following analysis explains the productivity of Zakat Institutions managing waqf funds before and during the Covid-19 pandemic.

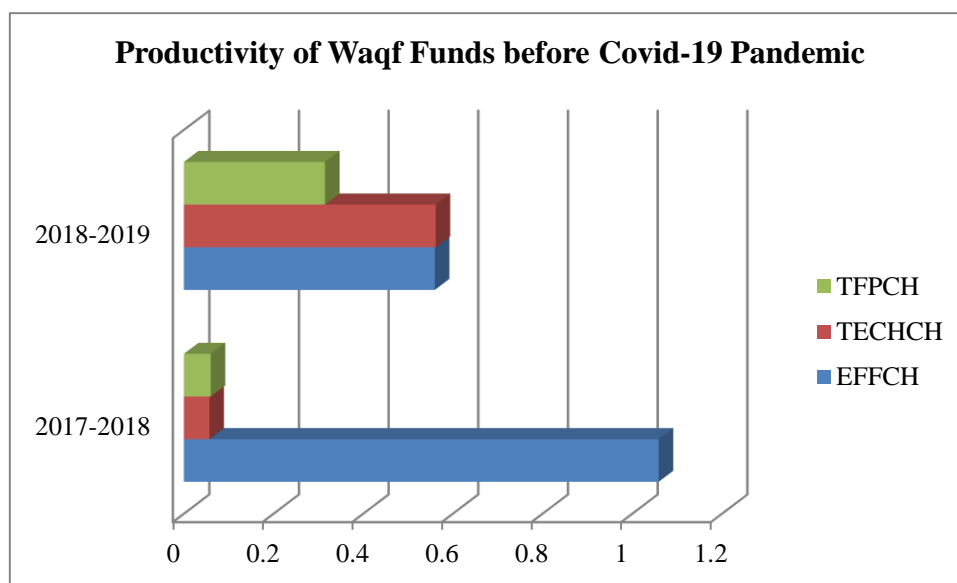


Figure 1: Productivity of Waqf Funds before Covid-19 Pandemic

Figure 1 above represents the productivity level of Zakat Institutions managing waqf funds before the Covid-19 pandemic. It can be concluded that, prior to the COVID-19 pandemic, the level of productivity of Zakat institutions working with Indonesian waqf funds increased in the 2018-2019 period compared to the 2017-2018 period. In the 2018-2019 period, EFFCH (0.560) and TECHCH (0.562) contributed to the level of productivity of zakat institutions. In the 2016-2017 period, the productivity level was only (0.060), which was influenced by a decrease in EFFCH (0.057). While

TECHCH in this period experienced an increase (1.059). This explains that in the 2016-2017 period technological changes played an essential role in contributing optimally to increasing the productivity of Zakat Institutions.

The following analysis is of the productivity of Zakat Institutions managing waqf funds during the Covid-19 pandemic, starting from the 2019-2021 period. The following is a picture showing the productivity of Zakat Institutions managing waqf funds during a pandemic.

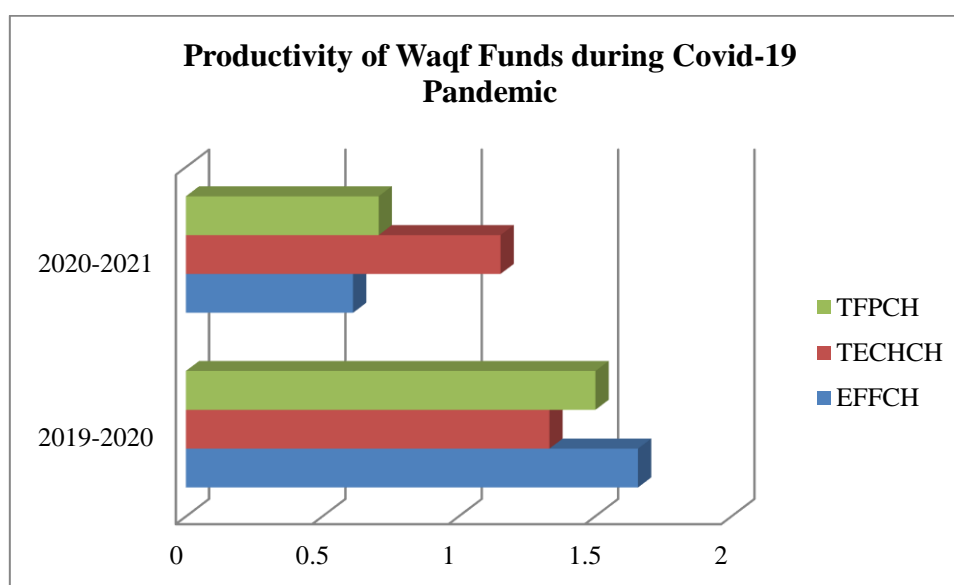


Figure 2: Productivity of Waqf Funds during Covid-19 Pandemic

Figure 2 shows the level of productivity of Zakat Institutions managing waqf funds in Indonesia during the Covid-19 pandemic. At the beginning of the Covid-19 period, namely the 2019-2020 period, the average productivity level of Zakat Institutions managing waqf funds continued to increase significantly, namely (1.502). An increase influences this through changes in efficiency (EFFCH) of (1.658) and changes in technology (TECHCH) with a value of (1.333). Then in the next period, namely 2020-2021, there will be a significant decrease in the level of productivity, namely with a value of (0.707). The level of productivity in this period may decrease due to a reduction in changes in efficiency (EFFCH) with a value of (0.613), even though changes in technology (TECHCH) still show an increase (1.154). So, it can be concluded that during the period the Covid-19 pandemic took place in Indonesia, it caused a decrease in the productivity level of Zakat Institutions managing waqf funds due to changes in efficiency (EFFCH) which became the main factor in reducing and

increasing the productivity of Zakat Institutions managing waqf funds in Indonesia.

Malmquist Index Quadrant

At this point, Zakat Institutions that manage waqf funds will be put into four quadrants based on changes in efficiency (EFFCH) and changes in technology (TECHCH), with high and low categories for each. The EFFCH and TECHCH values are seen from the industry average, if the values on EFFCH and TECHCH are higher than the industry average, it indicates a high category, and vice versa, if EFFCH and TECHCH are below the industry average, it means a low type.

Quadrant 1 says that the Zakat Institution manages waqf funds with changes in efficiency and changes in technology in the high category. This means that the Zakat Institution has a high level of productivity. Quadrant 2 includes high technological changes, but on the other hand efficiency changes are still low. In Quadrant 3, Zakat Institutions manage waqf funds with changes that are low in terms of technology

and high in terms of how well they work. And quadrant 4, which describes the group of Zakat Institutions that

manage waqf funds with changes in technology and efficiency, both show a low category.

Table 3: Malmquist Index Quadrant

Quadrant 1 (High Tech, High Eff)	Quadrant 2 (High Tech, Low Eff)
Quadrant 3 (Low Tech, High Eff)	Quadrant 4 (Low Tech, Low Eff)
DD	IZI
PYI	LAZ MU
YLMS	YLMI

Based on the table above, it can be concluded that zakat institutions managing waqf funds do not exist in zakat institutions that are in quadrants 1 and 2. Zakat institutions dominate in quadrants 3 and 4 with the number of zakat institutions in each quadrant being 3. Based on this, Zakat Institutions managing waqf funds in Indonesia have not yet adopted technology optimally, which affects the level of productivity of Zakat Institutions operating waqf funds which is still relatively low.

FINDINGS

Related parties can use several findings from a research analysis on zakat institutions managing waqf funds from 2017 to 2021 to make appropriate policies. The first finding in this study is the productivity of waqf funds during Covid is relatively lower than before Covid. The results of this study support the statement from Herindar & Rusydiana's) research, which states that the Covid pandemic has affected the reduced amount of waqf funds collected and distributed.

Furthermore, [Miftakhuddin et al., \(2021\)](#) explained that the role of waqf in dealing with the COVID-19 pandemic was considered less than optimal compared to other instruments, and that the existing waqf had not been managed productively. Most of the funds distributed to affected communities come from zakat, infaq and alms (ZIS) instruments, while the waqf sector is still very minimal. Likewise with research from [Scientific \(2019\)](#) which states that although the number of waqf lands in Indonesia is quite large, the empowerment of waqf itself is not optimal. Of course this can affect the level of productivity of zakat institutions that manage waqf funds. One of the causes of unproductive waqf funds can be the relatively low public understanding of the role of waqf ([Miftakhuddin et al., 2021](#)).

Further findings, research results show that in general the productivity of zakat institutions in managing waqf funds is still low. The results of this study are in contrast to research from [Wahab & Rahman \(2012\)](#) that found that the total factor productivity of zakat institutions in Malaysia has increased for the entire industry and that technical changes are greater than changes in efficiency.

Also, this study's results show that technological change (Effch) doesn't make much of a difference. Therefore, in the future it will be necessary to increase the use of technology/digitalization in philanthropic institutions to improve performance, including productivity. In this case, [Yusof et al. \(2014\)](#) explained the need for digitalization of waqf, where by utilizing digitalization, management costs can be reduced, and this will provide great benefits to waqf fund management institutions by increasing the efficiency and productivity of their institutions. In addition, the digitization of waqf can significantly attract youth to contribute to digital waqf transactions ([Berakon, et al., 2021](#)). So, the more opportunities there are to collect waqf funds through digital improvements, the more this will boost the productivity of the institution.

And the final findings in this study state that in general, the quadrant analysis shows the need to improve the performance of zakat institutions in managing waqf funds to make them more productive and optimal. In research by [Lestari & Thantawi \(2016\)](#) it is explained that effective waqf management such as investment in the real sector or investment in the financial industry based on sharia instruments has not been appropriately implemented. For this reason, to improve the performance of zakat institutions to be more productive in managing waqf funds, it is necessary to improve management. Furthermore, [Kasdi \(2014\) and Ridwan \(2012\)](#) state that the primary key to waqf management lies in the existence of waqf managers,

especially nadzirs and a solid work team to maximize the role of waqf.

Also, you can't manage waqf assets without a professional nadzir (Dahlan, 2016; Suryadi & Yusnelly, 2019). Ridwan's research (2012) explains that a professional nadzhir must have qualified human skills, including technical and human relations to manage waqf and realize waqf goals. Also, in their research, Wahab and Rahman (2011) found a number of good ways to measure how well zakat institutions work or how well they are run. Of course this can be used as an effort to improve the performance of zakat institutions, especially in managing waqf funds.

CONCLUSION

This study aims to analyze the level of productivity of Zakat Institutions managing waqf funds in Indonesia during the 2017-2021 period using the Malmquist Index. The results of the Malmquist Productivity Index (MPI) score in this study are based on each Zakat Institution's analysis explaining that the productivity level at Zakat Institutions managing waqf funds fluctuates from year to year. Then, overall, the productivity of zakat institutions has gone down, which is known to be caused by both changes in efficiency and changes in technology.

Furthermore, the analysis during the Covid-19 pandemic found that the productivity of Zakat Institutions managing waqf funds before the pandemic was higher than the level of productivity of Zakat Institutions working with waqf funds during the pandemic. That means, during the Covid-19 pandemic period there was a decrease in the productivity of Zakat Institutions containing waqf funds. An analysis of the Malmquist Index quadrant which is categorized into four quadrants shows that Zakat Institutions managing waqf funds dominate quadrant 3 with the category of high technology and low efficiency, namely 3 Zakat Institutions, and quadrant 4 with the category of technology and low efficiency, with the same number of zakat institutions, namely 3 institutions.

REFERENCES

- Bakri, M. H., Md Sahiq, A. N. B., Ismail, S., Husin, A., Ali, R., & Rajiani, I. (2016). Waqf efficiency framework in Malaysia. Proceedings of the 27th International Business Information Management Association Conference - Innovation Management and Education Excellence Vision 2020: From Regional Development Sustainability to Global Economic Growth, IBIMA 2016, March, 2258–2264.
- Berakon, I., Aji, H. M., & Hafizi, M. R. (2022). Impact of digital Sharia banking systems on cash-waqf among Indonesian Muslim youth. *Journal of Islamic Marketing*, 13(7), 1551–1573. <https://doi.org/10.1108/JIMA-11-2020-0337>
- Caves, D. W., Christensen, L. R., & Diewert, W. E. (1982). The economic theory of index numbers and the measurement of input, output, and productivity. *Econometrica: Journal of the Econometric Society*, 50(6), 1393–1414.
- Dahlan, R. (2016). Analisis Kelembagaan Badan Wakaf Indonesia. *ESENSI: Jurnal Bisnis dan Manajemen*, 6(1), 113-124.
- Djaghballou, C. E., Djaghballou, M., Larbani, M., & Mohamad, A. (2018). Efficiency and productivity performance of zakat funds in Algeria. *International Journal of Islamic and Middle Eastern Finance and Management*, 11(3), 474–494. <https://doi.org/10.1108/IMEFM-07-2017-0185>
- Färe, R., Grosskopf, S., Norris, M., & Zhang, Z. (1994). Productivity growth, technical progress, and efficiency change in industrialized countries. *The American Economic Review*, 84(1), 66-83
- Fase, M. & Abma, R. (2003). Lingkungan Keuangan dan Pertumbuhan Ekonomi di Beberapa Negara Asia Terpilih. *Jurnal Ekonomi Asia*, 14, 11-21.
- Hasan, H., Azmi, N. F., Mud, N. N. N., & Ahmad, I. (2020). Waqf efficiency: CRS, VRS and malmquist total factor productivity index via data envelopment analysis (DEA). *International Journal of Innovation, Creativity and Change*, 10(10), 71–83.
- Hasan, H., Azmi, N. F., Mud, N. N., & Ahmad, I. (2020). Waqf efficiency: CRS, VRS and malmquist total factor productivity index via data envelopment analysis (DEA). *International Journal of Innovation, Creativity and Change*, 10(10), 71-83.
- Herindar, E., & Rusydiana, A. S. (2021). The Measuring Efficiency of Waqf Fund. *Al-Awqaf: Jurnal Wakaf Dan Ekonomi Islam*, 14(2), 107-122.
- Ilmiah, D. (2019). Optimalisasi asset wakaf melalui sukuk wakaf di indonesia. *JESI (Jurnal Ekonomi Syariah Indonesia)*, 9(2), 127-137.
- Iskandar, A., Possumah, B. T., & Aqbar, K. (2020). Peran Ekonomi dan Keuangan Sosial Islam saat Pandemi Covid-19. *SALAM: Jurnal Sosial Dan Budaya Syar-I*, 7(7), 625-638.
- Islahi, A. A. (2003). *Waqf: A Bibliography*.

- Kasdi, A. (2016). Peran Nadzir Dalam Pengembangan Wakaf. *ZISWAF: Jurnal Zakat dan Wakaf*, 1(2), 1-14.
- Khamis, S. R., & Che Mohd Salleh, M. (2018). Study on the Efficiency of Cash Waqf Management in Malaysia. *Journal of Islamic Monetary Economics and Finance*, 4(1), 61-84. <https://doi.org/10.21098/jimf.v4i1.732>
- Kopelman, R. E. (1986). Managing productivity in organizations: A practical, people-oriented perspective. McGraw-Hill College.
- Lestari, W., & Thantawi, R. (2016). Efektivitas pengelolaan wakaf tunai di badan wakaf Indonesia. *Jurnal Syarikah: Jurnal Ekonomi Islam*, 2(1).
- Marlina, L., Rusydiana, A. S., & Athoillah, M. A. (2018). Malmquist Index To Measure The Efficiency and Productivity of Indonesia Islamic Banks. *Pridobljeno*, 20(7).
- Maulana, A., & Fanani, S. (2020). Efficiency of national zakat institutions on increasing muzakki from 2015-2016. *Opcion*, 36(SpecialEdition27), 950-964.
- Miftakhuddin, M., Lestari, KT, Aniroh, A., & Adinugraha, HH (2021). Pemanfaatan Wakaf di Tengah Pandemi Covid-19 dalam Perspektif Maqashid Al-Syariah. *IQTISHADUNA: Jurnal Ilmiah Perekonomian Kita*, 10 (1), 76-90. <https://doi.org/10.46367/iqtishaduna.v10i1.313>
- Mongid, A., & Tahir, I. M. (2010). Technical and scale efficiency of Indonesian rural banks. *Banks and Bank Systems*, 5(3), 80-86.
- Munir, A. S. (2015). Optimalisasi Pemberdayaan Wakaf Secara Produktif. *Ummul Qura*, 6(2), 94-109.
- Noordin, N. H., Haron, S. N., & Kassim, S. (2017). Developing a comprehensive performance measurement system for waqf institutions. *International Journal of Social Economics*, 44(7), 921-936. <https://doi.org/10.1108/IJSE-09-2015-0257>
- Pyeman, J., Hasan, H., & Ahmad, I. (2016). Modernizing Waqf Performance Evaluation By Waqf Management Efficiency Index. *Asia-Pacific Management Accounting Journal*, 11(2), 1-7.
- Rani, L. N., Rusydiana, A. S., & Widiastuti, T. (2017). Comparative Analysis of Islamic Bank's Productivity and Conventional Bank's in Indonesia Period 2008-2016. *1st International Conference on Islamic Economics, Business, and Philanthropy (ICIEBP 2017)*, 118-123.
- Ridwan, M. (2012). Nazhir Profesional Kunci Kesuksesan Wakaf Produktif. *Muqtasid: Jurnal Ekonomi Dan Perbankan Syariah*, 3(1), 91-109.
- Rusydiana, A. S. (2018). Indeks Malmquist untuk Pengukuran Efisiensi dan Produktivitas Bank Syariah di Indonesia. *Jurnal Ekonomi Pembangunan*, 26(1), 47-58. <https://doi.org/10.14203/jep.26.1.2018.47-58>
- Rusydiana, A. S., & Firmansyah, I. (2017). Prioritizing zakat core principles criteria. *Esensi: Jurnal Bisnis dan Manajemen*, 7(2), 277-302.
- Ryandono, M. N. H., Qulub, A. S., Cahyono, E. F., Widiastuti, T., Aisyah, B. N., & Robani, A. (2021). Efficiency Analysis of Zakat Institutions in Indonesia: Data Envelopment Analysis (Dea) and Free Disposal Hull (Fdh) Approaches. *Academy of Accounting and Financial Studies Journal*, 25(6), 1-12.
- Saadati, N. (2016). Efisiensi Produktifitas Wakaf Tunai (wakaf uang) dalam pemberdayaan ekonomi di Indonesia. *Muqtasid: Jurnal Ekonomi dan Perbankan Syariah*, 7(1), 73-91.
- Sadeq, A. H. M. (2002). Waqf, perpetual charity and poverty alleviation. *International Journal of Social Economics*, 29(1/2), 135-151.
- Suryadi, N., & Yusnelly, A. (2019). Pengelolaan Wakaf Uang di Indonesia. *Syarikat: Jurnal Rumpun Ekonomi Syariah*, 2(1), 27-36.
- Thaker, M. A. B. M. T., & Pitchay, A. A. (2018). Developing waqf land through crowdfunding-waqf model (CWM): the case of Malaysia. *Journal of Islamic Accounting and Business Research*.
- Wahab, N. A., & Rahman, A. R. A. (2011). A framework to analyse the efficiency and governance of zakat institutions. *Journal of Islamic Accounting and Business Research*.
- Wahab, N. A., & Rahman, A. R. A. (2012). Productivity growth of zakat institutions in Malaysia: An application of data envelopment analysis. *Studies in Economics and Finance*, 29(3), 197-210. <https://doi.org/10.1108/10867371211246876>
- Wahab, N. A., & Rahman, A. R. A. (2013). Determinants of efficiency of zakat institutions in Malaysia: A non-parametric approach. *Asian Journal of Business and Accounting*, 6(2), 33-64.
- Widiastuti, T., Mawardi, I., Robani, A., & Rusydiana, A. S. (2018). Optimization of Zakat fund management in regional Zakat institution. *Humanities & Social Sciences Reviews*, 6(2), 133-139.
- Yunani, A., Wahyudi, R., Fasa, M. I., & Maulida, S. (2020). Riduwan, "Efficiency Of Zakat Management Organization (OPZ) Bank Syariah:

- Data Envelopment Analysis Approach,” *Hamdard Islamicus*, 43(1).
- Yusof, M. F. M., Yusof, M. F. M., Hasarudin, M. H., & Romli, N. (2014). Cash waqf and infaq: a proposed e-philanthropy in Malaysia. *Jurnal Kemanusiaan*, 12(1).
- Zacharatos, A., Barling, J., & Iverson, R. D. (2005). High-performance work systems and occupational safety. *Journal of Applied Psychology*, 90(1), 77–93. <https://doi.org/10.1037/0021-9010.90.1.77>
- Zainal, V. R. (2016). Pengelolaan dan pengembangan wakaf produktif. *Al-Awqaf: Jurnal Wakaf dan Ekonomi Islam*, 9(1), 1-16. <https://doi.org/10.47411/al-awqaf.v9i1.32>