The Impact of Macroeconomic Indicators on Zakah Receipt during the Covid-19 Pandemic Era

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DOI: https://doi.org/10.22219/jes.v6i1.16394

ABSTRACT

This study aims to determine the impact of macroeconomic indicators on Zakah receipt during the Covid-19 pandemic era. This research is associative with the quantitative approach. The research sample is five Zakah institutions obtained based on purposive sampling. Secondary data in the research was sourced from the official website of the relevant institution. The data analyzed using Partial Least Square-Structural Equation Modeling (PLS-SEM). The results found that inflation had a negative and significant effect on Zakah receipts during the Covid-19 pandemic, while money supply had a significant positive effect on Zakah receipts during the Covid-19 pandemic. On the other hand, gold prices and exchange rates had no significant effect on Zakah receipts during the Covid-19 pandemic. The results of this study contribute to enriching knowledge, especially regarding the macroeconomic impact on Zakah receipts during the Covid-19 pandemic.

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INTRODUCTION

Covid-19 is an infectious disease that attacks the respiratory system caused by the SARS-CoV-2 (Zhang, Y., et al., 2020; Li, H. & Xu, 2020; Mohanty, et al., 2020; Bacherini, et al., 2020; Liang, W., et al., 2020). The virus was first discovered in December 2019 in Wuhan, China. Furthermore, based on its rapid and widespread spread, Covid-19 has been designated as a global pandemic (Baloch, S., et al., 2020; Abd El-Aziz & Stockand, 2020; Shaw, Kim & Hua, 2020; She, Liu & Liu, 2020; Abebe, et al., 2020). The outbreak of the Covid-19 pandemic has caused economic shocks in many countries including Indonesia (Olivia, Gibson & Nasrudin, 2020; Pitaloka, et al., 2020; Prawoto, et al., 2020; Joko, 2020; Djalante, et al., 2020; Purwanto, et al., 2020; Apresian, 2020). Junaedi & Salistia (2020) stated that the impact on economic activity is caused by restrictions on mobility in some regions and countries as a strategy to prevent or at least reduce the rate of transmission.

Prawoto, Priyo Purnomo & Az Zahra (2020) found that there was a strong relationship between a pandemic tested positive for Covid-19 and mortality rates with socio-economic conditions with an average correlation coefficient above 0.80. Moreover, Purwanto, et al., (2020) found that some of the negative impact of Covid-19 Pandemic such as reduce imports of raw materials, decrease sales, reducing production capacity, order demand has declined and sales turnover has also decreased, difficulty in sending distribution of goods, and so forth.

Pitoyo, Aditya & Amri (2020) found the impacts of Covid-19 pandemic to informal economic sector in Indonesia, the crisis as a result of this pandemic provides a new experience for the informal sector in dealing with the crisis. Although informal sector was not always a hero during the crisis but rather an alternative sector that offers business flexibility. Riadil (2020) found negative impact on Indonesian tourism and the hospitality industry, according to by the Indonesian tourism employee’s perspectives, as a consequence of a significant pandemic of disease spreading throughout the world.

On the other hand, beside the low response and enforcement of government, Mietzner (2020) found that there are another factors which combined into a toxic mix that severely constrained Indonesia’s ability to effectively respond to Covid-19, which are populist anti-scientism, religious conservatism, religio-political polarisation, corruption and clientelism, as well as assertiveness among anti-democratic actors.

Saadillah (2019) found that unstable macroeconomic performance affect a personal decision in allocating funds, including allocation for social funds as well as Zakah. Furthermore according to BAZNAS Report (2021), negative economic growth caused to a decline in the majority of Indonesian income. This issue will affect negatively the collection of Zakah in Indonesia.

Hakim, (2018); Iskandar, Possumah & Aqbar (2020) found the role of Zakah as an alternative solution to overcoming an economic crisis in Indonesia. Because Zakah as part of prayer as well as social order in the form of shared wealth to the poor as called the recipient of Zakah (Dwitama & Widiastuti, 2017; Canggih, Fikriyah & Yasin, 2017;
Hakim, 2017). According to the World Population Review (2019), the large population of Indonesia (more than 87% of the total population) are Muslim. Zakah provide a significant multiplier effect to the economic growth (Suprayitno, 2020); (Hakim, 2020).

Table 1. Comparison of Zakah Receipts (January - June 2020)

<table>
<thead>
<tr>
<th>Zakah Institutions</th>
<th>2019 (in IDR)</th>
<th>2020 (in IDR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAZNAS RI</td>
<td>138,977,959,755,97</td>
<td>183,522,140,237,07</td>
</tr>
<tr>
<td>LAZ Yatim Mandiri</td>
<td>6,276,146,426,00</td>
<td>7,682,449,020,00</td>
</tr>
<tr>
<td>LAZ Al-Hilal Rancapanggung</td>
<td>253,605,399,00</td>
<td>294,242,415,00</td>
</tr>
<tr>
<td>LAZ Sahabat Mustahiq Sejahtera</td>
<td>171,088,837,00</td>
<td>316,069,297,00</td>
</tr>
</tbody>
</table>

Source: Processed from various sources

Table 1 shows a comparison of Zakah receipts before and during the Covid-19 pandemic from some Zakah institutions that publish their financial statements. From the data, it was found that the total receipt of Zakah during the six months of the Covid-19 pandemic (January–June 2020) increased when compared to the same period in 2019, before the Covid-19 pandemic.

Umar, et. al., (2021), on the potential of Islamic social finance to alleviate poverty in the era of COVID-19, found that the awareness and knowledge of Islamic social finance instruments have a potentially significant positive contribution to poverty alleviation during the COVID-19 pandemic except for Zakah and ethical oriental has also a significant positive contribution. Only Islamic microfinance has endured the moderating effect to continue contributing significantly and positively to the reduction of poverty. Hassan, Rabbani & Abdulla, (2021) stated that Islamic finance can be utilized as an alternative financial system in providing the relief to the COVID-19 affected people and entrepreneurs.

Buheji, et., al, (2020); Hudaefi, Caraka & Wahid, (2021); Sulaeman, Majid & Widiastutti, (2021) found that Zakah as a religious obligation plays a critical role in shaping a Muslim community's social and economic processes, notably during the unprecedented times of Covid-19. Further, Arfah, et., al, (2020); Hakim, et., al, (2020) Faturohman, et., al, (2021) Umar, et., al, (2021) stated that, Islamic economics can be an alternative in response to various economic uncertainties. The primary strategy in implementing the sharia economy such strengthening regulation and governance, optimization of Zakah, Infaq, Sadaqah, and Waqaf are needed to support the development and the economy. Setianingrum, Huda & Santosa, (2021) found that regulatory variables, Zakah incentives as tax credits, socialization and promotion have a significant effect on muzaki and taxpayer participation in a New Normal Covid-19 Period. Mursal, et., al, (2021) found that the contribution of LAZISMU was in order to deal with the impact of the pandemic in various forms, by providing scholarships, distributing basic necessities, helping orphanages and distributing masks.
On the macroeconomic perspective, the impact of the Covid-19 pandemic in Indonesia caused to the inflation in the first semester of 2020 and continues to decline due to weakening domestic demand amidst adequate supply (Ministry of Finance, 2020). On the other hand, the rupiah depreciated to its highest point of Rp16,608/USD in March 2020 because of increasing global market uncertainty and increased capital outflows (Ministry of Finance, 2020).

Further, the price of gold soared in line with the high demand for gold under uncertain economic conditions (CNN Indonesia, 2020). This is followed by the fluctuation of money supply caused by government’s financial operations. Indonesia’s economic growth was recorded at minus 5.32% in the second quarter of 2020, or cumulatively, the Indonesian economy in the first semester of 2020 was -1.26% (year on year) (Central Bureau of Statistics, 2020).

Previous research on the role of Zakah in macroeconomics and Zakah has been developed by several researchers. Dwitama & Widiastuti (2017); Saadillah (2019) found that inflation has no significant effect on the amount of Zakah. In contrast, according to Republika.id (2020) that the inflation has a positive and significant effect on Zakah. On the other hand, Armina (2020) found that the exchange rate has a negative and significant effect on Zakah. In contrast, Dwitama & Widiastuti (2017) found that the rupiah exchange rate has an insignificant effect on Zakah.

While Ahmad (2011) found that the gold price has a positive effect on Zakah, yet according to Afendi (2018) in contrast, the gold price has no significant effect on Zakah. On the other hand, Saadillah (2019) found that money supply has a positive influence on the receipt of Zakah.

However, the testing of macroeconomic indicators in previous studies was carried out during normal conditions. This study aims to test the influence of macroeconomic indicators on Zakah receipt during the Covid-19 pandemic. In addition, the difference between previous research and current research is the focus of the problem being studied. Where in this study not only examines one Zakah institution as the object of research but examines Zakah receipts by taking samples from several Zakah institutions.

This research is expected to provide empirical evidence on the impact on the macroeconomic side, especially in the management of Zakah during the Covid-19 pandemic. In addition, this research is expected to contribute to Zakah practitioners so that they can make adjustments to economic fluctuations and serve as a reference in determining policy.

RESEARCH METHOD

This study was associative using a quantitative approach. Sugiono (2015) mentions associative as a study that aims to analyze the relationship or predict the influence between two or more variables. This study examines macroeconomic indicators such as
inflation, exchange rates, gold prices, and money supply against the receipt of Zakah during the Covid-19 pandemic.

Exogenous variables in this study were macroeconomic indicators, namely inflation (X1), exchange rate (X2), gold price (X3), and money supply (X4). The endogenous variable in this study was the Zakah receipt. Furthermore, all variables used in this study were observed variables (variables that could be measured directly).

The population in this study was the financial report of the Badan Amil Zakah Nasional RI (BAZNAS) and the Lembaga Amil Zakah (LAZ). The sampling technique used was purposive sampling. The sample selection criteria in this study were monthly financial statements during the six months of the Covid-19 pandemic (January – June 2020) and published on the official website of the institution concerned. The selection of the research period was based on consideration of the timing of the spread of the Covid-19 pandemic which began in early 2020.

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
<th>Total Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Badan Amil Zakah Nasional RI (Central BAZNAS)</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>The official Amil Zakah Institution (LAZ) recommends BAZNAS.</td>
<td>81</td>
</tr>
<tr>
<td>3</td>
<td>Zakah institutions that do not publish finance on the website.</td>
<td>(54)</td>
</tr>
<tr>
<td>4</td>
<td>Zakah institutions that do not have a report monthly finance.</td>
<td>(22)</td>
</tr>
<tr>
<td>5</td>
<td>Data regarding monthly financial statements are not complete.</td>
<td>(1)</td>
</tr>
<tr>
<td></td>
<td><strong>Total Sample</strong></td>
<td><strong>5</strong></td>
</tr>
</tbody>
</table>

In this case, five Zakah institutions that meet the sample criteria consist of central BAZNAS and four LAZNAS. The four LAZ consist of one National LAZ and three Regional LAZ. Then multiplied by six months (January-June 2020) to obtain 30 research samples.

The data used in this study were secondary data obtained from the official website of the relevant institution. The data analysis technique used was Partial Least Squares Structural Equation Modeling (PLS-SEM) using Smart PLS 3.3.3. PLS was used in this study due to parametric assumptions that could not be met; therefore, OLS regression is not suitable for use in this condition. In addition, PLS is a powerful tool for testing the influence of variables. Although PLS is designed to analyze latent variables with manifest variables, it can also be used for models with observed variables.

Furthermore, the PLS evaluation model can be used to assess the outer and inner models. However, for multiple regression models with observed variables using PLS, it was not necessary to evaluate the outer models (Ghozali & Latan, 2015). Thus, because the variables in this study were observed variables, testing can be directly performed by evaluating the inner model.
Figure 1. PLS Model

Figure 1 show the model used in this study. It is known that the exogenous and endogenous variables in this study were denoted by an elliptical or rounded blue shape, each having one indicator denoted by a yellow square. This model was formed on the basis that the variables used in this study were observed variables. The regression model for the observed variables using PLS was performed by building a formative indicator (Ghozali & Latan, 2015).

RESULT AND DISCUSSION

Based on Table 3 show the average values in this study, namely 5.3567, 1.01, 1.4817, 0.9767, and 43.338 for variable inflation, exchange rate, gold price, money supply, and Zakah receipts. The standard deviation value for variable inflation was 71.92678, the exchange rate was 7.27742, the gold price was 2.64078, the money supply was 2.89204, and the Zakah receipt was 127.52525. A standard deviation value higher than the mean indicates that the data are heterogeneous.

Table 3. Descriptive Statistics

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Inflation</td>
<td>-64.29</td>
<td>157.14</td>
<td>5.3567</td>
<td>71.92678</td>
</tr>
<tr>
<td>2.</td>
<td>Exchange Rate</td>
<td>-7.39</td>
<td>14.99</td>
<td>1.0100</td>
<td>7.27742</td>
</tr>
<tr>
<td>3.</td>
<td>Gold Price</td>
<td>-1.40</td>
<td>6.19</td>
<td>1.4817</td>
<td>2.64078</td>
</tr>
</tbody>
</table>
The highest value in this research data is 157.14, which is inflation growth in June 2020. 14.99, which is the exchange rate growth in March 2020. 6.19, which is the gold price growth in March 2020. 5.30, which is the money supply growth in March 2020, and 378.64, which is the growth of Zakah receipts in February 2020 at LAZ Al-Hilal Rancapanggung. Meanwhile, the lowest value in this research data is -64.29, which is the inflation decrease in March 2020. -7.39, which is the exchange rate decrease in the exchange rate in April 2020. -1.40, which is the gold price decrease in May 2020. -3.14, which is the money supply decrease in April 2020, and -86.45, which is the Zakah receipt decrease in June 2020, which also occurred at LAZ Al-Hilal Rancapanggung.

**Structural Model Measurement Analysis (Inner Model)**

Inner model measurements were performed to predict the relationships between the variables in the model. The inner model analysis was evaluated by evaluating the coefficient of determination (R²) and predictive relevance (Q²) and by measuring the significance of the path coefficient (Ghozali & Latan, 2015).

**Coefficient of Determination (R²) and Predictive Relevance (Q²)**

The R-squared value explains the extent to which an exogenous variable can explain its endogenous variables. The standard criteria of R-Square values are divided into three classifications: 0.75, 0.50, and 0.25, as strong, moderate, and weak models (Hair, Ringle, & Sarstedt, 2011). This standard of rule of thumb has also been used in recent research (Ghozali & Latan, 2015).

Table 4 shows that the R-Square value of this study was 0.662. That is, exogenous variables namely inflation, exchange rates, gold prices, and money supply are able to explain the effect on Zakah receipt by 66.2%. While 33.8% is described by other variables outside the model. These results also showed that the testing model in this study was moderate, as the R-Square value was above 0.50.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>R Square</th>
<th>R Square Adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y (Zakah Receipts)</td>
<td>0.662</td>
<td>0.608</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SSO</td>
<td>SSE</td>
</tr>
<tr>
<td>Y (Zakah Receipts)</td>
<td>30,000</td>
<td>11,819</td>
</tr>
</tbody>
</table>
The Q-square value indicates the extent to which the observation value is generated. A Q-square value greater than 0 indicates that the model has predictive relevance, while a Q-square value of less than 0 indicates that the model lacks predictive relevance (Ghozali & Latan, 2015). The Q-Square magnitude has a value in the range of $0 < Q^2 < 1$, where a value closer to 1 indicates a better model (Anuraga, Sulistiyawan & Munadhiroh, 2017). The Q-squared value was obtained using a blindfolding procedure.

From the results in Table 4, shows that the Q-Square value of this study was 0.606. This indicates that the model has predictive relevance because the resulting Q-Square value is greater than 0; thus, the model formed is suitable for use.

Path Coefficient

This evaluation was conducted to test the influence of the variables as a hypothesis test. The significant value used in this study was 1.96 or significant level 5%. Thus, the indicator can be said to have a significant effect if the T-statistic is > 1.96, and p-values < 0.05. At this stage of evaluation, the procedure of bootstrapping result shown in Table 5.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Original Sample</th>
<th>T Statistics</th>
<th>P Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1 (inflation) -&gt; Y (Zakah Receipts)</td>
<td>-0.692</td>
<td>1.977</td>
<td>0.049</td>
</tr>
<tr>
<td>X2 (Exchange Rate) -&gt; Y (Zakah Receipts)</td>
<td>-1.484</td>
<td>1.856</td>
<td>0.064</td>
</tr>
<tr>
<td>X3 Gold Price -&gt; Y (Zakah Receipts)</td>
<td>0.720</td>
<td>1.014</td>
<td>0.311</td>
</tr>
<tr>
<td>X4 Money Supply -&gt; Y (Zakah Receipts)</td>
<td>0.936</td>
<td>5.712</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Based on Table 5 shows that variable inflation has a significant effect on Zakah receipt. As evidenced by the t-statistical value > 1.96 which is 1.977, and p-values < 0.05, which is 0.049. The effect of inflation on Zakah receipts is negative, indicated by the original sample value of -0.692. Furthermore, variable money supply also has a significant effect on Zakah receipt. As evidenced by the t-statistical value > 1.96 which is 5.712, and p-values < 0.05, which is 0.000. The effect of money supply on Zakah receipt is positive, indicated by the original sample value of 0.936.

Meanwhile, variable exchange rates and gold prices have no significant effect on Zakah receipt. As evidenced by the t-statistical values, both are < 1.96, which are 1.856 and 1.014, respectively. The p-values were both > 0.05, which were 0.064 and 0.311, respectively. The original sample value for the exchange rate variable was -1.484, and the original sample value of the gold price sample was 0.720.

Based on the study, found that inflation has a negative and significant effect on Zakah receipts during the Covid-19 pandemic. The result was in line with the results conducted by Fitriah, Asmara, & Lubis (2015); Saadillah (2019); Afendi (2018). The results found that inflation has become a strong variable in influencing the receipt of Zakah. These
results also show that the effect of inflation on Zakah receipts during the Covid-19 pandemic is the same as the effect in normal conditions, which is negative and significant. The Negative results indicate that there was an inversely proportional relationship between inflation and the receipt of Zakah. It will be followed by a decrease in the receipt of Zakah and vice versa. The conditions in the field show inflation in the first semester of 2020, with a downward trend. This is influenced by the decrease in domestic demand amid maintained food supply (Bank Indonesia, 2021).

On the other hand, the exchange rate has a negative and insignificant effect on the receipt of Zakah during the Covid-19 pandemic. This result was in contrast with Afendi (2018) which found that the exchange rate has a significant and positive effect on the receipt of Zakah. The results of this study in line with the results of Dwitama & Widiastuti (2017). This result in contrast, with the result of Afendi (2018) which found that the exchange rate has not significant and negative effect on the receipt of Zakah. How ever, Sari, Anggraini, & Zaenardi (2020) found that the level of collection is believed to increase when disasters or even economic crises comes.

While gold price has a negative and insignificant effect on the receipt of Zakah during the Covid-19 pandemic. This result was in line with the results of Afendi (2018) which stated that gold price had no significant effect on the receipt of Zakah and different from Ahmad (2011) which found that the price of gold has a significant effect on Zakah. The positive result in this study means there is a unidirectional relationship between the price of gold and the receipt of Zakah. If the gold price increase it will be followed by an increase in Zakah receipts. However, the insignificant result shows that the rise and fall of gold prices do not affect Zakah receipts.

The money supply has a positive and significant effect on Zakah receipt during the Covid-19 pandemic. This result is in line with the result of Saadillah (2019); Novitasari & Rosyidi (2019). The results found that the influence of the money supply on the receipt of Zakah during the Covid-19 pandemic is the same as the influence in normal conditions, namely positive and significant.

In relation to Zakah, economic growth can ultimately encourage one's ability to pay Zakah, thereby increasing the acceptance of Zakah. The conditions in the field indicate that the money supply in the first semester of 2020 fluctuates, which leads to an increase in the money supply. This is influenced by the government's financial operations, especially in overcoming the economic shocks caused by the Covid-19 pandemic. Therefore, it may be that the increasing money supply affected by the policy has an effect on the increase in the receipt of Zakah during the Covid-19 pandemic.

Economic growth can encourage a person’s ability to pay Zakah. However, where the Covid-19 pandemic occurred and caused to decrease in inflation, some of policies are to be done to keep the growth of Indonesia’s economy. The increase of economics growth
will affect to the increase of Zakah fund during the Covid-19 pandemic. Some of policy is monetary policy to control over the amount of money in circulation (Mankiw, 2010). This policy implemented by Indonesia Bank to lower the benchmark interest rate (Bank Indonesia, 2020); Al-Amin (2020). From an Islamic economics perspective, monetary policy is seen as one way to control inflation (Salam, 2020). Because decreases of inflation will caused to the ability of government to control the money supply.

On the other hand, fiscal policy can be implemented to reduce the impact of the Covid-19 pandemic on the economy (Salam, 2020). The government provides tax stimulus for employees and the business world such as temporary exemption from PPh 21, reduction of PPh 25 for six months, etc. Tax cuts will increase disposable income and ultimately affect demand (Silalahi & Ginting, 2020). In this case, fiscal policy in the taxation sector can increase productivity which ultimately causes economic growth (Pardamean, 2020).

CONCLUSION

This study aims to determine the impact of macroeconomic indicators on Zakah receipt during the Covid-19 pandemic era. The results found that only variable inflation and money supply had a significant effect on the receipt of Zakah during the Covid-19 pandemic. The exchange rate and gold price had no significant effect on the receipt of Zakah during the Covid-19 pandemic. During the six months of the Covid-19 pandemic, inflation rate in the first semester of 2020 experienced a downward trend due to the decrease in demand amid maintained food supply. However, the government’s policy of maintaining economic stability in Indonesia during the economic crisis also has an impact on the influence of inflation on Zakah receipts.

However, for the limitation of the study, further studies are expected to explore other macroeconomic indicators such as Gross Domestic Product (GDP), monetary and fiscal policy done by the government and its impact on zakah, and also the impact of good governance in Zakah institutions.

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