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The Role of Zakat on Economic Growth: Modification of the Mathematical Model from an Islamic Economic Perspective

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Abstract

Zakat is seen as a financial instrument that minimizes economic inequality and distributes wealth from the rich to the poor and needy. Empirical facts show that zakat can stimulate economic growth, increase consumption, investment and government spending. However, the role of zakat variable is often overlooked, especially in the context of mathematical model of economic growth. Therefore, this research seeks to evaluate the mathematical model of economic growth and modify it by involving zakat variable. It is important to conduct this research to measure the socio-economic impacts produced by zakat and analyze economic growth more comprehensively. The method used in this research is conceptual approach with library research. This research offers a mathematical model involving zakat variable in economic growth. The model offered is Y = C + I + G + Z + (X – M), where Z is the zakat. Thus, adding zakat variable to the mathematical model needs to be implemented to read economic dynamics comprehensively, especially in Muslim majority country such as Indonesia. The implications of this research play an important role in providing decision recommendations for policymakers and zakat institutions.

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INTRODUCTION

Zakat is one of the pillars of Islam that Allah SWT requires of His servants. By definition, zakat can be interpreted as a mandatory contribution determined by Islam for all Muslims who have wealth at a level above the exception limit set by the Sharia (Yusuf et al., 2024). As part of the pillars of Islam with social and economic dimensions, zakat plays a vital role in minimizing economic disparities that occur in society through the distribution of wealth from rich to less fortunate people. Islam pays excellent attention to equal distribution of wealth and alleviates poverty through zakat. Zakat is the primary fiscal instrument oriented towards social justice and economic independence (Herianingrum et al., 2024).

This is also emphasized in the Al-Qur'an and is the spirit in Islam to bring about economic balance through the circulation of wealth, as mentioned in the Al-Qur'an Surah Al-Hasyr verse 57, "so that wealth may not merely circulate among your rich." By making efforts to reduce this gap, zakat can contribute to the creation of more harmonious and maintaining social stability. Through this role, zakat also contributes to poverty alleviation, where zakat funds are designed to be allocated to primary priority programs to meet the basic needs of people experiencing poverty and encourage sustainable development (Ayuniyyah et al., 2022).

Several previous studies show that zakat is essential in growing the economy and reducing poverty significantly. Jedidia & Guerbouj (2021) researched the effect of zakat on economic growth. The findings show that zakat can stimulate the country's growth because zakat funds are directed to increase consumption, investment, or government spending, where these funds spur economic growth. Besides, Bouanani & Belhadj (2020) conducted a simulation examining zakat's role in reducing poverty. The results of his research showed that there was a significant reduction in the poverty index in seven regions of Tunisia when zakat was implemented.

Likewise, research conducted by Herianingrum et al. (2024) analyzed the concept of zakat as an instrument for improving the economy and alleviating poverty in Indonesia. The results of his research show that the empowerment program carried out by zakat institutions in Indonesia is based on the priority scale and potential of mustahik (people who deserve zakat). Zakat management considers the level of productivity and the long-term impact of improving the economy of mustahik, which has an impact on reducing the number of mustahik living below the poverty line. In line with that, Gojali et al. (2024) revealed that zakat plays an important role in economic growth according to an Islamic economic perspective.

Safitri et al. (2024) also showed that ZIS (Zakat, Infak, and Sadaqah) significantly contributed to economic growth. Their research stated that the roots of good ZIS management will maximize the increase of community welfare, prosperity, benefits and equal distribution of income. In addition, Mansur et al. (2025) offered a conceptual paradigm that integrates the role of zakat and taxes. They proposed to

develop empirical models that quantify the macroeconomic impacts of zakat-tax integration and explore its application in diverse economic contexts.

From various previous literature reviews show that zakat contributes to economic growth. Various empirical studies show that zakat is important in increasing economic growth and reducing poverty. Furthermore, the potential of zakat, which is still at 9%, shows that zakat can play a more significant role, especially when the government intervenes in zakat obligations for people whose assets have reached the nisab and haul. However, the role of zakat variable is often overlooked, especially in the context of mathematical model of economic growth. Therefore, this research seeks to evaluate the mathematical model of economic growth and modify it by involving zakat variable. It is essential to carry out this research to measure the socio-economic impact produced by zakat, and analyze economic growth more comprehensively.

METHOD

The method used in this research is conceptual approach with library research (Makrygiannikis & Jack, 2018). The data used in this research is secondary data from a literature review and obtained from various literature. A literature review was carried out on literature relevant to zakat in the context of economic growth. In this research, we take literature from reputable sources that explains why mathematical models built by conventional economics are not yet comprehensive by discussing a brief history of the context in which these models were implemented.

This research uses content analysis (Janowitz, 1968) to identify sources used as references to perfect conventional perspective mathematical models by studying them in depth based on Islamic perspectives. The analysis technique used is descriptive analysis, which analyzes the literature obtained and interpreted in descriptions and offers a mathematical model of economic growth from an Islamic economic perspective by adding zakat variable.

RESULT AND DISCUSSION

Zakat and Economic Growth

Islam has an important role in realizing economic equality and alleviating poverty (Choiriyah et al., 2020). Efforts to realize this cannot be separated from the various roles of Islamic economic financial instruments, one of which is zakat. The role of zakat as an instrument for wealth redistribution impacts economic growth. Many scholars and academics have expressed views and conducted empirical research regarding the role of zakat in economic growth (Choiriyah et al., 2020; Herianingrum et al., 2024; Jedidia & Guerbouj, 2021; Safitri et al., 2024).

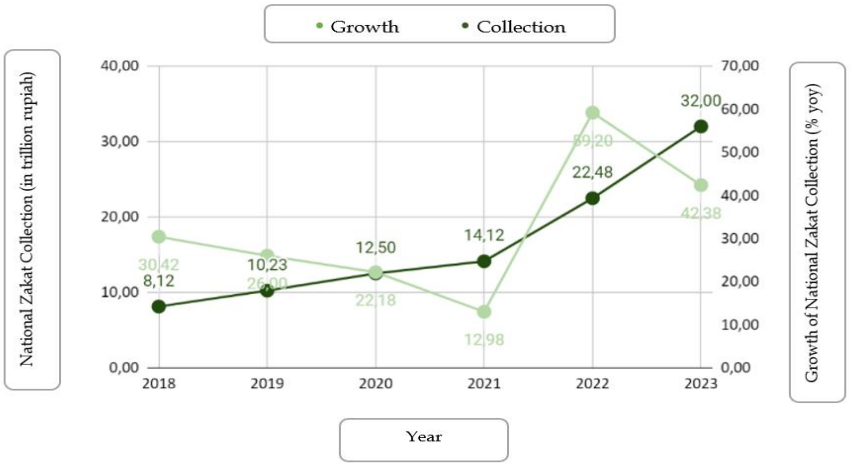

Figure 1. National Zakat Collection (2018 – 2023)

Moreover, Puskas BAZNAS (2024) noted that during the 2018 – 2023 period, there was an increase in zakat collection in Indonesia, and the realization increased every year. Figure 1. shows that in 2023, the total national zakat collection will amount to IDR 32 trillion. When compared with the amount of zakat collection in 2022, there has been an increase of approximately IDR 10 trillion or 42.38% in 2023. These data show that zakat in Indonesia has the opportunity to continue to increase so that it can provide benefits to the broader community.

In a broader context, zakat not only impacts one particular aspect but also plays an important role and multiplier effect in various aspects, especially in the economic dimension. The role of zakat can be optimized through various means, such as increasing consumption, investment, and government spending (Ashfahany et al., 2023; Jedidia & Guerbouj, 2021; Suprayitno, 2018). Such efforts can be realized when all relevant stakeholders, especially the government, try to implement them in society's socio-economic life. Zakat must be an instrument of state revenue that is vital in distributing assets and impacts economic development (Saidurrahman, 2013).

When zakat is distributed from rich people to poor and underprivileged people, it is used to fulfill basic needs such as buying basic food, clothing, and other household needs. Through consumption activities channeled through zakat funds, an increase in household spending used to meet basic needs will stimulate the economy to turn around, thereby contributing to the demand for goods and services. Such a rotation will indirectly increase aggregate demand and ultimately spur economic growth (Ashfahany et al., 2023; Jedidia & Guerbouj, 2021).

On the other hand, zakat can also increase investment, where zakat can not only be distributed to consumptive things in nature but can also be used in a productive form through investment (Mawardi et al., 2023). Mustahik can take advantage of zakat funds, which often cause difficulty in getting access to capital to start or develop micro-businesses, in addition to the intense assistance that needs to be provided (Sulaeman & Ninglasari, 2020). By financing capital for business

development, such as purchasing production equipment or raw materials, mustahik can develop its business better, stimulating the market and increasing consumer demand (Widiastuti, Ningsih, et al., 2022). This will increase demand for goods and services, stimulate production, and encourage societal reinvestment (Anis & Kassim, 2016).

Government spending can also be reduced using zakat funds (Shirazi, 2014). When zakat funds are used for poverty alleviation programs, government spending can be diverted to social welfare programs, such as optimizing and fulfilling access to education and health and improving infrastructure services. Indirectly, zakat functions as an Islamic social financial instrument that can help reduce the fiscal burden incurred by the state (Munfaati et al., 2023). Apart from that, the government's use of zakat funds for public services can also reduce foreign debt submitted by the government to various interest-based financial institutions.

Therefore, zakat plays an important role in realizing economic development (Widiastuti, Mawardi, et al., 2022). Zakat is important in growing economic activity because of its increasing consumption, investment, and government spending. When distributed to mustahik with low incomes, zakat funds tend to be used to meet daily living needs, encouraging consumption activities. As a result, this increase in consumption drives demand for goods and services in various sectors, thus stimulating the business world to reinvest. Such conditions will impact the growing investment atmosphere and affect expanding job opportunities, including mustahik, which can use productive zakat for business development (Widiastuti, Ningsih, et al., 2022).

When the business world expands its market, it will have the potential to finance infrastructure and public projects, which will indirectly help the government reduce state budget expenditures and channel them to other more important programs. This phenomenon has a multiplier effect on how zakat can stimulate economic growth and contribute to economic development (Suprayitno, 2018). In this way, zakat contributes to a more equitable and inclusive economic environment and encourages economic stability through the fair circulation of wealth.

The Mathematical Model from an Islamic Economic Perspective

In economic development, various existing theories have been built to become the basis for understanding economic growth (Mansur et al., 2025; Safitri et al., 2024). Many concepts and models are the basis for measuring and analyzing economic growth. One of the most famous concepts is the *invisible hand* proposed by Adam Smith through his work An Inquiry into the Nature and Causes of the Wealth of Nations (Smith, 1776), which emphasizes the importance of market mechanisms in allocating resources efficiently. The *invisible hand* concept proposed by Smith argues that economic prosperity will be achieved by providing freedom for individuals to pursue their economic interests.

However, the concept offered by Smith, the primary representative of classical economics, failed to prevent the crisis at that time, the Great Depression of 1929 (Iqbal, 2015). The government failed to act as a regulator, causing the economy to collapse, especially regarding speculative loans and risky investments carried out by banks. This impacted many businesses and companies, resulting in layoffs. As a result, many people were unemployed and unable to meet their daily needs. This is due to a lack of government intervention, where the market can run itself (Mansur et al., 2025).

Classical economics then received much criticism because it could not solve economic problems and caused economic stagnation. Classical economic theory understands that interest rates affect people's consumption and savings (Iqbal, 2015). On this basis, Keynes, with his famous theory The General Theory of Employment, Interest, and Money (Keynes, 1936), introduced the view that the economy cannot consistently achieve full balance with a free market mechanism. Keynes emphasized the importance of aggregate spending, including government intervention through government spending, to encourage economic growth and prevent recession.

In addition, Keynes also explained that people's consumption and savings are more influenced by their income. For this reason, Keynes explained this condition by stating that when income is higher than usual, people's desire to consume goods and services and save money will increase (Keynes, 1936). Keynes's opinion was then used to explain and identify that the crisis in 1929 was caused by a decrease in demand, which led to decreased spending and increased unemployment.

Keynes's theory places great emphasis on aggregate income and expenditure. Keynes believed that people's consumption and savings were greatly influenced by the income they generated rather than interest rates. These conditions then form a mathematical equation, which is derived in the following formula:

$$Y = C + I + G + (X - M)$$

Y = National Income (GDP)
C = Consumption
I = Investment
G = Government Spending
X = Exports
M = Imports

However, even though it describes many economic aspects, this theory cannot accommodate overall national income, especially in the context of Islamic macroeconomics. In the conventional economic perspective, as pioneered by Adam Smith, humans are seen as Homo Economicus, where they are seen as rational economic humans who only care about themselves and strive to maximize utility. This view suggests that humans are individualistic creatures. On the other hand, from an Islamic perspective, this view is unrealistic and negates human nature as social creatures who need each other (Farooq, 2011; Sholihin et al., 2023).

Furthermore, the theories adopted by conventional economics emphasize production and consumption as determining factors for economic growth, but often fail to include social and religious dimensions, which are very important in an Islamic economic perspective. For this reason, several Islamic economists have attempted to modify and perfect this theory, especially from an Islamic perspective, by viewing and placing social variables as important elements that influence the economy. Islamic economists view this model as being more comprehensive and realistic. Among the mathematical model offered by Islamic economists is the following model:

$Y = C + I + G + Z + (X – M)$

Y = National Income (GDP)

C = Consumption

I = Investment

G = Government Spending

Z = Zakat

X = Exports

M = Imports

In the mathematical model of Islamic economics above, the variable zakat (Z) is included because it plays an important role in influencing national income, especially in countries with a majority Muslim population. Zakat is recognized as an independent component that can influence national income in the model offered. This is inseparable from the role of zakat, which has an impact on increasing consumption by mustahik and tends to be used to meet basic daily needs, which has an impact on increasing aggregate consumption. Such economic circulation ultimately has the potential to increase economic growth.

The Role of Zakat in Economic Growth: An Example

The addition of the zakat variable in the economic model illustrates the role of Islamic views on economic balance. Zakat not only functions as a means of clearing wealth, but also as a very effective wealth distribution mechanism (Gojali et al., 2024; Hasnat et al., 2025). Adding the zakat variable in aggregate demand will encourage fairer and more stable economic growth. Moreover, so far, no BPS (National Statistics Agency) data reveals the direct distribution of zakat funds, which often results in the role of zakat being negated in the context of economic growth.

Whereas, if we look at it, zakat has a significant role in stimulating economic growth. For instance, BAZNAS (2024) reported that the potential zakat in 2024 reaches 327 trillion rupiahs. Of this total, only around 32 trillion rupiahs, or 9%, have been realized. This data shows that the potential zakat in Indonesia has not been maximally realized. In fact, if this potential could be realized, it would greatly help meet the basic needs of the poor and have a broader impact. BPS (2025) noted that the poverty line in Indonesia is 595 thousand rupiahs. If the zakat potential in Indonesia could be

realized, such as by enforcing a regulation that obligates Muslims who have reached the nisab to pay zakat, assuming 50% of this potential could be achieved, and of this achievement, quarter is distributed to the poor and needy, then at least 68 million people would have their basic needs met, of which 24 million are those whose income is below the poverty line.

When zakat is distributed to the poor and the needy people, the funds will be used to meet their living needs, increasing household consumption (Suprayitno, 2020). This increase in consumption then creates a multiplier effect, which positively impacts the entire economy. Because mustahik spend zakat funds to meet basic needs, local businesses will experience increased sales, encouraging producers to increase production to meet market demand. This will undoubtedly increase overall economic activity, which benefits the mustahik and impacts the economy as a whole. This simple example illustrates how zakat has a significant impact on economic growth.

This example shows how zakat functions as a tool for poverty alleviation and economic stimulation. In a broader economic context, adding the zakat variable in the mathematical model shows that zakat is positioned not only as a social activity but also as a strategic economic instrument. In addition, by including the zakat variable in the national income model, we can measure how zakat can effectively affect the economy. Direct effects can also be measured through zakat policies on the economy as a whole. This model will help the government and Islamic financial institutions design zakat fund management strategies, including collection, management, and utilization.

CONCLUSION

Zakat is seen as a financial instrument that minimizes economic inequality and distributes wealth from rich to less fortunate people. Empirical facts show that zakat can stimulate economic growth, increase consumption, investment and government spending. This research offers a mathematical model involving the zakat variable in economic growth. The model offered is $Y = C + I + G + Z + (X – M)$, where Z is the zakat variable.

The implications of this research play an important role in providing decision recommendations for policymakers and zakat institutions. For policymakers, the findings highlight the importance of integrating zakat into the recent economic model and strengthening legal frameworks to see the extent to which zakat can influence economic growth. For zakat institutions, the research underscores the need for data-driven approaches to ensure that zakat is allocated efficiently so that zakat can impact the welfare of mustahik and society as a whole.

Thus, adding variable to the mathematical model needs to be implemented to read economic dynamics comprehensively, especially in Muslim majority country such as Indonesia. However, even though this model is considered comprehensive, this

research is still an offer in conceptual form and has not been studied empirically. Therefore, future research needs to study more deeply by testing this model that integrates zakat variable, especially in Muslim majority country such as Indonesia.

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