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AJIM (Airlangga Journal of Innovation Management)
Journal homepage: https://e-journal.unair.ac.id/AJIM

Factors Influencing Economic Growth in OIC Countries: A Panel Data Approach

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ARTICLE INFO

Paper Type:
Research Paper

Keywords:
Economic Growth, Zakah Rate, Journal Articles, Population, Unemployment

Article History
Received: 15 May 2024
Revised: 6 June 2024
Accepted: 24 June 2024
Available online: 30 June 2024

ABSTRACT

Economic growth plays a crucial role in determining the success of a country's development, with each nation setting stable economic growth targets within its development agenda. The process of economic growth is influenced by various factors that can either drive or hinder the pace of growth. This study aims to analyze the impact of zakah growth, the scientific and technical journal articles, population, and unemployment rates on the economic growth of 10 member countries of the Organization of Islamic Cooperation (OIC) for the period 2002-2022 using a quantitative approach with a random effects panel data regression analysis technique and EViews 12 application for data management. As per the research findings, the variables of zakah and scientific and technical journal articles have a positive and significant relationship with economic growth. The population and unemployment rate have a negative and significant. Therefore, it is recommended that governments should improve efficiency in the management of zakah, allocate more budget for education and research, and formulate policies to promote innovation and collaboration between related sectors. It assists in achieving more awareness of zakah and participation in monitoring the utilization of zakah funds for society. The studies would help to see what variables affect economic growth.

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Cite this article as: Syaifullah et al. (2024). Factors Influencing Economic Growth in OIC Countries: A Panel Data Approach. *Airlangga Journal of Innovation Management, 5(2), 291-305.*
https://doi.org/10.20473/ajim.v5i2.57640

Introduction

Economic growth is one of the important indicators that every country must pay attention to globally. Economic growth is becoming increasingly important to study, bearing in mind that every country will always try to increase its economic targets as a measure of a country's success in the long term. (Syaifullah et al., 2024). One benchmark for observing the pace of economic progress and development in a country is by looking at its economic growth rate (Abdulkadir et al., 2020; Aghaei & Rezagholizadeh, 2017). Increasing Gross Domestic Product (GDP) per capita is one of the concerns always considered in the economic development process of a country, whether it is a developed country or a developing one, including the countries in the Organization of Islamic Cooperation (OIC) (Khan et al., 2023).

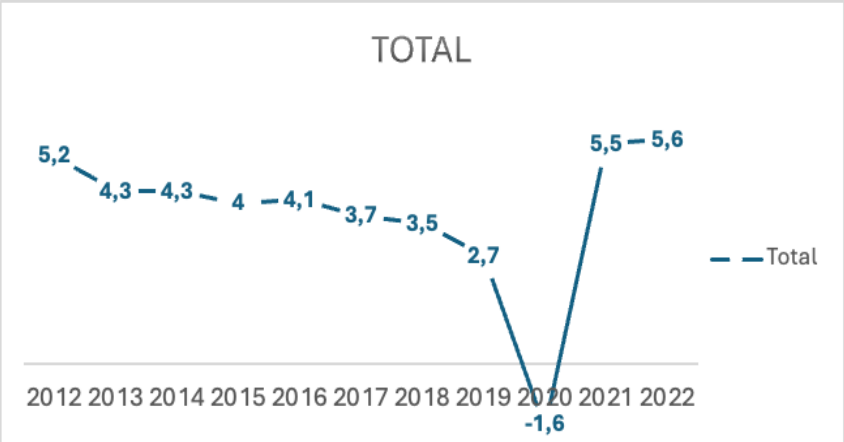

Figure 1. Real GDP Growth of OIC Countries in 2012-2022

Source: BPS (2023)

The economic growth of OIC countries has shown a declining trend from 5.2% in 2012 to 2.7% in 2019. Because of the COVID-19 pandemic, economic growth of OIC countries contracted to -1.6%. However, with the improvement in the global economy, the economies of OIC countries grew by 5.5% in 2021. In 2022, OIC countries recorded an average GDP growth rate of 5.6%, the highest growth rate observed in the last decade. It is worth noting that despite the improvement, the economic growth rate in OIC countries is still relatively low compared to the global average economic growth rate of 6.0% (SESRIC, 2023). Zakat, inflation rate, tax income, amount of foreign investment, and population are considered to have an important role in influencing economic growth (Pratiwi et al., 2022).

Zakah, in particular, is one of the Islamic financial instruments that can play a significant role in wealth redistribution and improving people's welfare. Zakah is believed to help reduce poverty and economic inequality, thus promoting economic growth (Ryandono et al., 2022). Several previous studies have shown that zakat distribution and population growth have a positive influence on economic growth in Muslim majority and minority countries such as Indonesia, Malaysia, and Singapore (Wardani et al., 2021). On the other hand, zakat has been identified as a locomotive driving economic progress and reducing poverty, especially when a country experiences economy difficulties, thus contributing to the economy welfare of society (Ashfahany et al., 2023). Overall, Zakat has important contribution to economic growth through its clear role in equalizing wealth, alleviating poverty, and encouraging sustainable economic growth (Wardhana, 2021a).

Second, scientific and technical journal articles are selected for their contribution to technological innovation and development. Scientific publications reflect the level of research and development progress in a country, which in turn can increase productivity and economic efficiency (Anser et al., 2023; Appelbaum et al., 2018). Findings from scientific and technical journal articles can be applied in industry to create new services and products, thereby driving economic growth, as found by Anser et al. (2023) and Tuna et al. (2015) scientific and technical journal articles regarding their relationship with economic growth. Innovation is generally understood as the process of generating unique and original ideas, which requires a systematic and imaginative approach (Zakik et al., 2022).

Third, a factor that affects economic growth is population. This variable is important because population size and growth affect the labor market and aggregate demand. A large population can provide abundant labor and a vast consumer market was essential for economic growth (Davis, 2015; Maestas et al., 2023). However, population growth that is not balanced with economic growth can lead to unemployment and poverty problems (Furuoka, 2018). A previous study by Amirat et al. (2020) highlighted a positive correlation between population and GDP per capita, confirming the significant influence of population dynamics on economic indicators (Ghifara et al., 2022).

Finally, unemployment was chosen because a high unemployment rate can be an indicator of a lack of employment opportunities and low economic efficiency. High unemployment can reduce people's purchasing power and increase the social burden on the government (Serifat, 2020; Sinha, 2022). Studies from Nigeria and India reveal that unemployment leads to lower output, reduced productivity, and sluggish economic growth (Akorede, 2015; Anghel et al., 2017; Sinha, 2022). In Nigeria, a one percent increase in the unemployment rate is associated with an approximately 11.56% decrease in Gross Domestic Product, highlighting the detrimental effects of unemployment on the economy (Elorhor, 2019). Moreover, youth unemployment in Nigeria has been associated with negative consequences on economic growth.

Based on the above introduction, the author is interested in researching OIC countries because its members are mostly developing countries with fluctuating economic growth rates. This study used a sample of 10 OIC countries due to the availability of data collected from 2002-2022. This study is expected to contribute especially to policymakers in OIC countries as an evaluation material regarding several factors that have affected OIC economic growth over the past 20 years. The countries studied include (Indonesia, Malaysia, United Arab Emirates, Bahrain, Iran, Turkey, Jordan, Qatar, Kuwait, and Saudi Arabia), research related to population variables and unemployment has been widely studied (Amirat & Zaidi, 2020; Lestari et al., 2024; Lini & Sasana, 2019). However, previous studies observed about the utilization of zakah were limited. Moreover, previous studies about technical models to see zakah effect on economic growth in OIC countries were also very few

Literature Review

Economic Growth

Economic growth is the process of sustainable improvement of a country's economic conditions over a period. The result of economic growth is an increase in national income. One indicator of a country's strong economic performance is the high rate of economic growth (Anwar, 2024). Therefore, every country generally seeks to accelerate its economic growth rate to show an increase in people's welfare and the country's economic performance (Hodijah et al., 2021; Huda, 2017). The rate of economic growth itself can be seen from the growth of a country's Gross Domestic Product (GDP) per capita (Agezew, 2024). GDP per capita is the best measure to see how well an economy is performing (Mankiw et al., 2016). According to Rapanna et al., (2017), the economic condition of a country can develop if the per

capita income increases every year. Economic growth based on national income and population development in a country is measured through GDP per capita (Agezew, 2024). Increasing GDP per capita is one of the main focuses in the process of economic development in a country, both developed and developing countries in the world, including OIC countries (Wardhana, 2021a).

Islamic characteristics in achieving economic growth according to (Muttaqin, 2018) include several important principles that focus on the welfare of the world and the hereafter, social justice, and balance in various aspects of the economy. First, Islam has a comprehensive view *(Al-Syumul)* of economic growth that includes worldly and afterlife welfare and encourages the creation of integral social justice. Secondly, it is balanced *(Tawazun)* which emphasizes the balance between increasing the production sector and fair distribution, ensuring equitable distribution of economic output to reduce social disparities. Third, realistic *(Waqi'iyyah)* where economic policies and rules must be adjusted following reality, not just idealistic. Fourth, fairness *('Adalah)* which ensures economic growth is accompanied by fair distribution to prevent economic disparities. Fifth, being responsible *(Mas'uliyyah*) or preserving natural resources, so that economic growth is achieved without damaging the environment. Sixth, sufficiency (*Kifayah*) means that the allocation of wealth must be appropriate with a size or capacity that meets the needs in a balanced manner. Finally, human orientation (*Ghayatuha al-Insan*) prioritizes the development of humanity as the focus of every economic policy.

Zakah

Zakah is one of the characteristics of the Islamic economic system and is part of the implementation of the principle of justice (Huda, 2015; Ryandono, 2008). Zakah has an economic aspect that is reflected in two main concepts. First, zakah plays a role in supporting the realization of fair economic growth, as explained in the Qur'an Surah Al-Rum verse 39, as well as in the distribution mechanism in the economy, as stated in the Qur'an Surah Al-Hashr verse 19. The economic function of zakah is to ensure equitable distribution of wealth or income in society so that wealth or income is not only concentrated among wealthy groups of society (Nuryitmawan, 2023; Widiastuti et al., 2022). In a comprehensive study conducted by Jedidia et al., (2020), it was found that zakah plays an important role in stimulating economic growth within the country.

It does much to empower the person to help those in need (Lestari et al., 2022; Setiyowati, 2019). Zakat also plays a pivotal role in building Pakistan on the ladder toward achieving SDGs. This study has proved a direct link between zakat and multidimensional poverty reduction and affirms its varied implications on community welfare. Further, Shaukat et al., (2021) stated that zakat impacted Foreign Direct Investment (FDI) and domestic investment. Moreover, zakat appears to be a practical locomotive that eradicates corruption. These findings collectively support the argument that zakat does not only implement charitable practices but is a strategic instrument to increase community welfare. through equal distribution of wealth and promote economic growth. The interaction of zakat with various economic factors places it as the central engine for community welfare.

Zakah, recognized as an Islamic institution, serves a dual purpose, reflecting its divine and human or social dimensions (Afandi, 2022). This places zakah as an important element in Islamic philanthropy, which can contribute to the welfare of society when managed effectively. In the social sphere, zakah has the potential to act as a catalyst to improve individual welfare. Insights from previous studies conducted by (Jedidia et al., 2020; Suprayitno, 2020) highlighted that the zakah rate shows a positive correlation, leading to a significant impact on economic growth. However, contrasting findings emerged from a study (Islam et al., 2023), which challenged the prevailing narrative by suggesting that zakah has no discernible effect on

economic growth in four Southeast Asian countries. Based on the insights provided by previous research efforts, the proposed research hypothesis is formulated as follows:
H1: Zakah has a positive and significant relationship with GDP per capita in OIC countries.

Scientific and Technical Journal Articles

In general, innovation is understood as generating unique and original ideas, requiring a systematic and imaginative approach (Wardhana & Ratnasari, 2022). The benchmark of innovation lies in scientific and technical journal articles, which are considered the most important indicators, explaining about 60% of the variability Amirat et al., (2020). Several studies, including those conducted by Costantini et al. (2023) found a significant influence of scientific and technical journal articles on economic growth. Thus, it can be postulated from the available literature that the relationship between innovation in this regard and economic growth is the basis for the research hypothesis:
H2: Scientific and technical type of articles had a positive and significant effect on GDP per capita in OIC countries.

Population

Population issues play an important role in the development path of a nation, as uncontrolled population growth can lead to adverse effects on economic progress (Wardhana, 2021b). However, the economic impact on the population largely depends on the quality of the population (Davis, 2015). Previous studies by Amirat et al., (2020) highlighted a positive correlation between population and GDP per capita, confirming the significant influence of population dynamics on economic indicators. In contrast, different results emerged from the analysis conducted by (Hossain, 2019), focusing on the relationship between population growth and economic conditions, particularly in India. Their study found that population growth had no significant effect on per capita income growth, and vice versa. Based on the insights provided by previous research efforts, the proposed research hypothesis is formulated as follows:
H3: Population has a positive and significant relationship with GDP per capita in OIC countries.

Unemployment

The effect of unemployment on economic growth is a topic that has been researched in various contexts and regions. Unemployment has a significant negative impact on economic growth. Studies from Nigeria and India reveal that unemployment leads to lower output, reduced productivity, and sluggish economic growth (Anghel et al., 2017; Sinha, 2022). In Nigeria, a one percent increase in the unemployment rate is associated with an approximately 11.56% decrease in Gross Domestic Product, highlighting the detrimental effects of unemployment on the economy (Elorhor, 2019). Furthermore, youth unemployment in Nigeria has been associated with negative consequences on economic growth, such as political instability and social vices, emphasizing the urgency of addressing this issue to drive economic development (Serifat, 2020). Solving the unemployment problem was critical in promoting economic growth by effectively utilizing labor resources and increasing productivity.
H4: The unemployment rate had a significant negative relationship with GDP per capita in OIC countries.

Methodology

This study involves quantitative analysis using panel data to explore the complex relationship between zakah rate, population, and number of scientific and technical journal article publications and unemployment on economic growth in ten OIC countries from 2002 to 2022. The total number of countries

that are members of the OIC countries is 57. However, the countries studied in this research include Indonesia, Malaysia, the United Arab Emirates, Bahrain, Iran, Turkey, Jordan, Qatar, Kuwait, and Saudi Arabia. In addition to data limitations, the countries selected as samples have diverse economies, ranging from high-income countries such as Qatar and the UAE to middle-income countries such as Indonesia and Malaysia. The use of panel data in this study provided broader information coverage, increasing the number of degrees of freedom, and reducing collinearity problems between independent variables. The data sources used in this study come from secondary sources, mainly publications by the World Bank. The empirical model used in this analysis can be explained as follows:

$$\mathbf{GDP_{it} = \alpha + \beta 1ZR_{it} + \beta 2PLS_{it} + \beta 3ART_{it} + \beta 4UMP_{it} + \varepsilon it}$$

GDP - gross domestic product
ZR - zakah rate,
PLS - population,
ART - number of scientific and technical journal articles,
UMP - rate of unemployment.

The above empirical model tested in the present paper is well tested in terms of reliability and robustness to assess the classical assumptions like multicollinearity and heteroscedasticity. This research adopts the tool of panel data regression analysis to study how the independent variables impact the dependent variable over time (Srihardianti et al., 2016). In estimating panel data regression models, three possible models include Pooled OLS, Fixed Effects Model (FEM), and Random Effects Model (REM) (Gujarati, 2021). In selecting the best estimation model statistically, one of the techniques for panel data regression is to gain the best estimation model (Fauziana et al., 2022). This study used the Chow, Hausman, and Lagrange Multiplier test to choose the best model for analyzing panel data. Furthermore, partial tests (t-tests), simultaneous tests (F-test), and considering the coefficient of determination (R2) are three statistical tests used to test the hypothesis of research to assess how independent variables forecast precision.

In another term, this study examines the independent variables such as zakah rate, population, number of scientific and technical journal articles, and unemployment rate in one analytical framework. The zakah rate variable denotes the amount of zakah distributed by Muzakki to the Mustahik. Some previous studies tested the various calculation methods using different proxies. Indeed, a meaningful way to do this is by using accurate data on allocating zakah funds in the respective institutions. Otherwise, it may use an index to approximate this allocation process; therefore, it ensures an enlarged view of the complex mechanisms governing zakah distribution (Lestari et al., 2024). Due to the minimal data availability, in this study, the zakah rate was estimated following the approach used by Resosudarmo et al. (2016) and Bouanani et al. (2019). In this study, the Zakat rate was computed depending upon the estimation of investment Zakat fund collection through the same formula as (Widiastuti et al., 2022).

Zakah Rate = 2.5% * Gross Capital Formation (AS Annual)

The secondary data of this study was used to estimate the independent variable. Data were taken from the World Bank database. In addition, the study also conducted an in-depth analysis of the number of scientific and technical journal articles published in various academic fields, such as physics, biology, chemistry, mathematics, clinical medicine, biomedical research, engineering and technology, and earth and space sciences. Data on the number of scientific and technical journal articles was obtained from the World

Bank database. Furthermore, this study also analyzes the impact of unemployment on the economy. Data on unemployment comes from the World Bank database. Independent variables used in this study were essential in understanding the complex dynamics and nuances that contribute to the overall research framework. Meanwhile, the dependent variable in this study is GDP per capita (in constant 2015 US dollars). The GDP data in this study was obtained from the World Bank database.

Table. 1 Variable Measurement

Variable	Measurement	Source
GDP Per capita	inconstant 2015 US dollars	World Bank
Zakah Rate	Zakah Rate = 2.5% Gross Capital Formation (AS Annual)	World Bank
Scientific and Technical Journal Articles	Scientific and technical journal articles	World Bank
Population	Population in total	SESRIC
Unemployment	Unemployment, total (% of total labor force)	SESRIC

Sources: Data processed, 2024

Results and Discussion

Based on the statistics presented in Table 1. In general, all the OIC countries in the sample have an average GDP per capita of 21,532 USD from 2002-2022, with the highest GDP per capita reaching 73,493 USD in Qatar in 2011. Meanwhile, the country with the lowest GDP per capita was Indonesia reaching 1,943 USD.

Table 2. Statistical Description

	ZR	PLS	ART	UMP	GDP
Mean	20793715114	48374457	9379	5.7	21532
Median	12.764127576	12583495	1995	3,8	14808
Maximum	98092696575	275501339	61259	18,8	73493
Minimum	1066784203	7131186	89	0,1	1943
Std. Dev.	219996959143	74015455	13527	4,7147	19595
Observation	204	204	204	204	204

Sources: Data processed, 2024

Based on Table 2, the average zakah rate in ten OIC countries from 2002 to 2022 was 20,793,715,114 USD, with a median value of 12,764,127,576 USD. The maximum zakah rate is 98,092,696,575 USD, which is the zakah rate in Indonesia in 2022. Meanwhile, the zakah rate in Jordan in 2006 was 1,066,784,203, which is the minimum Gini ratio rate.

The study uses proxy indicators to measure the volume of scientific publications produced by the World Bank across various scientific and technical disciplines. These disciplines include physics, biology, chemistry, mathematics, clinical medicine, biomedical research, engineering and technology, and earth and space sciences. The investigation examined the extent of the World Bank's contribution to the academic

literature in these specialized fields. The average number of scientific and technical journal articles in this study was 9,379 and the median value was 1995. The maximum number of scientific and technical journal articles is 61,259, which is in the country of Iran in 2022. Meanwhile, the minimum number of scientific and technical journal articles is 89, which is the publication of articles in Qatar in 2002.

The entire population as determined by the World Bank data served as a proxy for the population in this study. Between 2002 and 2022, the average population of the sample countries is 48,374,457 while their median is 12583495, The total maximum population of the sample is 275,501,339 which corresponds to the entire population of Indonesia in 2022. Meanwhile, the minimum population of the sample is 7131186. It covered almost the whole population of Qatar in 2002.

Unemployment rate data was also downloaded from the World Bank. The average unemployment rate of the sample countries is 5.7% while their median is 3.8%. The maximum total unemployment rate of the sample occurs in Jordan in 2021 with a percentage of 19.84%. Meanwhile, the minimum unemployment rate of the sample is Qatar in 2019 with a percentage of 0.1%.

Finally, GDP per capita is used in this study as a proxy for economic growth rate. In the sample of this study, the mean per capita is 21,532 USD, and the median is 14,808 USD. Qatar had the highest per capita GDP level, reaching 73,493 USD in 2011. Meanwhile, Indonesia had the lowest GDP per capita, only reaching 1943 USD.

An examination of the interactions between the independent variables in the current investigation is explained through the presentation of correlation relationships in Table 2. This correlation analysis aims to ensure the absence of correlation symptoms between the independent variables, referred to as multicollinearity. One of the essential criteria for the multicollinearity check is the value of the correlation coefficient, where the concentration is on the value being more significant than the threshold of 0.90. If the correlation coefficient is greater than the critical threshold, we can infer that problems with multicollinearity will almost always occur in the model being studied

Table 3. Correlation Test

	ZR	ART	UMP	PLS
ZR	1.000000	0.30905	0.20056	0.69653
ART	0.30905	1.000000	0,36431	0.29548
UMP	0.20056	0.42644	1.000000	0.20376
PLS	0.69653	0.29548	0.20376	1.000000

Sources: Data processed, 2024

Based on the multicollinearity test shown in Table 3 above, there is no coefficient value between variables greater than 0.90. In other words, there is no evidence of multicollinearity among the independent variables investigated in this study. Based on the results of the chow test, Hausman test, and Lagrange Multiplier test, the best model for panel data regression in this study is REM (Random Effect Model). The panel regression results in this study are presented in Table 3 below.

Table 4. Panel Regression Results

Variable	Coefficient	t-statistic	Prob	Result
C	14.82757	23.00046	0.0000	-

Ln_ZR	0.200210	7.841067	0.0000	Accepted
Ln_ART	0.106523	7.377718	0.0000	Accepted
Ln_PLS	-0.650909	-14.21014	0.0000	Rejected
Ln_UMP	-0.065465	-2.609168	0.0098	Accepted

Sources: Data processed, 2024

Table 4 shows that the zakah rate variable has a coefficient of 0.200210 with a t-statistic value of 7.841067 and a probability of 0.0000. The scientific and technical journal article variable has a coefficient of 0.106523 with a t-statistic value of 7.377718 and a probability of 0.0000. Since both probabilities are smaller than the significance level of 0.05, these two variables show a positive and significant relationship with economic growth, so H1 and H2 are accepted.

Furthermore, the population variable has a negative coefficient of -0.650909 with a t-statistic value of -14.21014 and a significant score < 0.05. it means that population had a negative and significant effect on economic growth, so H3 was rejected. Finally, the unemployment variable has a coefficient of -0.065465 with a t-statistic value of -2.609168 and a probability of 0.0098. Since the probability value is smaller than the significance level of 0.05, the unemployment rate as an independent variable had a negative and significant effect on economic growth, so H4 is accepted. In this study, the F test was conducted to determine whether the independent variables could affect the dependent variable simultaneously. The F-test results are presented in Table 4 below.

Table 5. F-test results

	Value
F-statistic	78.78726
Prob. (F-statistic)	0.0000

Sources: Data processed, 2024

Based on Table 5, it is explained that the Prob (F-statistic) value is 0.0000, where this value is smaller than the significance level of 5%. This indicates that the variables of zakah, scientific and technical journal articles, population, and unemployment statistically have a simultaneous effect on GDP. Furthermore, to determine the accuracy of the independent variables in this study, the coefficient of determination (R2) is used. Table 6 below shows the value of the coefficient of determination in this study.

Table 6. R-square value (R2)

	Value
R-square	0,6129
Adj. R-square	0,6061

Sources: Data processed, 2024

The R-square (R^2) value in this panel regression model is 0.6129, indicating that the variation in the independent variables zakah rate, journal, and technical articles, population, and unemployment can collectively explain approximately 61% of the variation in the GDP variable. This suggests that these factors have a substantial explanatory power to GDP within the context of this model. However, it also implies that 39% of the variation in GDP is influenced by other variables not included in this model, pointing to the potential for further research to identify and incorporate additional determinants of GDP.

The Influence of Zakah Rate on Economic Growth

According to the panel data regression analysis, the zakah rate has a positive relationship and significant impact on GDP per capita. This suggests that an increase in the level of zakah can boost economic growth in Muslim-majority countries. This finding is consistent with the research of Lestari et al. (2024). Zakah is an Islamic instrument with two-dimensional purpose, namely the divine dimension and the human or social dimension (Iman, Wardhana, et al., 2022). This means that the different mechanisms of zakah for Islamic charities can be steered to enhance individual welfare in general if applied wisely in society. On a social level, zakah can improve economic development within the countries of OIC members because it acts as a financial tool used in promoting progressive economic activities. It can be implied that zakah can lead to a significant contribution to economic development in the country since it is a form of religious tax, flowing into consumption, investment, or government spending, affecting aggregate demand and expansion of an economy as a whole (Wardhana et al., n.d.).

Zakah use to augment GDP per capita in OIC countries can be carried out in several ways. Zakah, was a medium to distribute wealth in society transferring resources from the rich to the poor to reduce poverty by increasing purchasing power. This raises the incentive to consume goods and services and indirectly affected GDP per capita. Zakah funds can be utilized to provide scholarships to underprivileged individuals to get a good education. A more educated workforce would yield a much higher level of productivity that would boost the economy, and hence, per capita income would increase.

The Influence of Scientific and Technical Typed Articles on Economic Growth

The results above showed that scientific and technical journal articles are positively related and significantly affect GDP per capita. In other words, it is derivable from the result that an increase in scientific and technical journal articles would lead to growth at a different level of the economic status of OIC countries. The findings from this study concur with several others, such as (Anser et al., 2023; Lestari et al., 2024). Scientific and technical journal articles are communications or reports in scientific or technical journals that describe research, development, and innovation in all branches of sciences and technologies. Scientific and technical journal articles provide a backbone for the three channels of increase in GDP per capita.

First of all, scientific and technical type of articles served as sources of new knowledge and innovations. They can be shared and encourage technological developments that improve production efficiency. Increasing productivity and economic outcomes are the results of the mentioned facts. Secondly, these articles could improve the quality of education and workforce development by presenting the latest innovations. It would enable students and researchers to develop their skills and knowledge and also improve efficiency and productivity. Evidence-based policy support would aid policymakers in developing more effective and efficient economic policies. All these factors contribute to economic growth and increase welfare for people, thereby increasing GDP per capita.

The Influence of Population on Economic Growth

Based on the panel data regression results, the population affected negatively significantly on economic growth in the ten OIC countries. This finding suggests that rapid and uncontrolled population growth may adversely affect economic growth. This result is consistent with research conducted by (Furuoka, 2018; Maestas et al., 2023). Indonesia as a country that has 2nd largest Muslim population poses

challenges in providing adequate infrastructure, education, and healthcare. In addition, high population growth can lead to increased unemployment if not matched by sufficient job creation. This can lower productivity and, consequently, hinder economic growth. In contrast, Bahrain with a small population of 1.4 million in 2022 managed to become a high-income country. The relatively small and more manageable population allows Bahrain to support stable and sustainable economic growth. Appropriate economic policies and efficient resource distribution helped Bahrain achieve this economic status (Qosim et al., 2023).

At a certain level of population growth, where the population continues to increase while other factors of production remain stable, there is a decline in marginal growth and productivity. This leads to a declining in per capita income and a slowdown in overall economic growth. In this context, managing population growth becomes important to implement sustainable economic growth. Managing population growth balancing population growth and increased production capacity and infrastructure. In this way, the economy can utilize the full potential of the available workforce without experiencing a significant drop in productivity.

The Influence of Unemployment on Economic Growth

Based on the panel data regression results above, unemployment has a negative and significant relationship. This indicates that when the unemployment rate decreased, economic growth would be increased. In other words, a high unemployment rate in the Organization of Islamic Cooperation (OIC) countries has a detrimental and significant impact on economic growth. This finding is consistent with the findings of (Akorede, 2015; Anghel et al., 2017; Sinha, 2022). It is worth noting that OIC countries, with 46.3 million unemployed people, accounted for 22.6% of global unemployment in 2022, compared to 21.7% in 2021 (SESRIC, 2023). In this research, Jordan has a high unemployment rate with a percentage of 17.9% in 2022. The current high unemployment rate causes this country to still fall into the lower middle-income category. In contrast, Qatar with the lowest unemployment rate with a percentage of 0.1% in 2022 became a country with the highest GDP per capita in the world. Qatar occupies the fifth position with a GDP per capita of 84,425 US Dollars (SESRIC, 2023).

A high unemployment rate indicates that a large proportion of the labor force is unable to find productive employment, thus reducing their contribution to economic production and growth (Rapanna & Sukarno, 2017). In the context of Organization of Islamic Cooperation (OIC) member countries, rising unemployment rates significantly hamper economic growth, reduce people's purchasing power, and increase social instability. This situation hinders long-term development efforts and exacerbates poverty and inequality. Reducing unemployment was the key to promoting stronger and more sustainable economic growth in OIC countries. This can be done through improving the quality of education and skills training, creating new jobs, and supporting economic sectors with high growth potential. By effectively addressing unemployment, OIC countries can increase productivity, strengthen economic stability, and improve the overall well-being of their people.

Conclusion

The results of this study show that zakah, scientific, and technical journal articles have a significant positive effect on economic growth, while population and unemployment have a significant negative effect. The novelty of this study is the analysis of the simultaneous impact of these variables in ten OIC countries. In other words, this study looks at the combined effect of all these variables on economic growth. This study suggested increasing the efficiency of zakah management by ensuring the effective and targeted use of funds.

This study also recommended that Islamic social finance institutions increase transparency, accountability, and supervision of zakah management. In addition, the government also needs to allocate a budget for education and research to improve scientific and technical outcomes, as well as support innovation and collaboration between universities, industries, and research institutions. Previous studies should observe more on the utilization process of zakah to improve income per capita in OIC countries. This study is limited to ten OIC countries. As a result, future research needs to expand the criteria of samples to provide deeper insights for policymakers in improving economic growth and welfare.

Author's Contribution

All authors have contributed to the final manuscript. All of the authors contributed according to each expertise. All authors discuss the results and contribute to the final manuscript.

Acknowledgments

The author would like to thank Airlangga University, IAIN Parepare and Universitas Internasional Semen Indonesia who are willing to facilitate the author to support the achievement of this research.

Declaration of Competing Interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Funding

This research did not receive any funding from any institution for publication in a journal.

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