



## How Zakat Affects Economic Growth In Three Islamic Countries

Afief El Ashfahany<sup>1</sup>, Awalul Dini Nur Hidayah<sup>2</sup>, Lukmanul Hakim<sup>3</sup>, Mohd Shahid Bin Mohd Noh<sup>4</sup>

<sup>1</sup>Universitas Muhammadiyah Surakarta, Indonesia, aea930@ums.ac.id

<sup>2</sup>Universitas Muhammadiyah Surakarta, Indonesia, awaluldini351@gmail.com

<sup>3</sup>Universitas Muhammadiyah Surakarta, Indonesia, lh138@ums.ac.id

<sup>4</sup>Universiti Malaya, Malaysia, shahid82@um.edu.my

**Abstract.** Zakat as a pillar of development in Islamic economics contributed to the economic development applied in all Caliphate in the Islamic history. By then, this study aims to analyze the effect of zakah on economic growth of three Muslim countries. This study uses a regression estimate of panel data designed to determine the impact of zakat on economic growth with a sample of three Islamic countries in 2003-2020. The results of this study indicate that zakat distribution and population growth have a positive and significant effect on economic growth in three Islamic countries, namely Indonesia, Malaysia and Singapore in 2003-2020. Thus, it can create evidence that zakat can affect economic growth, especially in Islamic countries. This research also supports that zakat should be included in fiscal instrument in today's world, not only tax. Based on the results of the research above, the student recommend that zakat be included in fiscal policy as is the case with taxes.

**Keywords:** Zakat, Economic Growth, Population Growth.

**\*Corresponding Author**

## INTRODUCTION

Based on their role, conventional economics and Islamic economics have a common objective is to maintain and increase economic growth. Another way of increasing economic growth is through zakat (Ishak, 2012). Zakat is a fundamental instrument in Islamic economics (Alam, 2018).

Zakat is one of the third pillars of Islam, obliged to every muslim which has an impact on the economy (Hakim et al., 2021). These obligations must be paid so that the assets obtained are always circulated in productive ways. The assets that must be zakat are agriculture (wheat and rice), livestock (cow, camels and sheep), gold and silver (Safitri et al., 2021). This is what can affect economic growth.

On the other hands, zakat can be regarded as a social security because it is a system of asset distribution where these assets must be evenly distributed and not accumulated in a group of people (Hamidah et al., 2017). If the wealth is evenly distributed, it can reduce poverty and improve the economy (Fahmawati, 2019). Thus, zakat can create economic growth and social justice in society (Prawiro & Fata, 2020).

Distribution of zakat and aggregate demand can affect economic growth: first, zakat can increase the consumption of the poor; second, zakat can increase investment; third, zakat can represent the budget and increase government spending (Ben Jedidia & Guerbouj, 2021). It can be concluded that zakat can be used as a catalyst because zakat can be used to increase aggregate demand so that it can affect economic growth and investment (Bayinah, 2017). In addition, zakat can improve the quality of life and prosperity of society through human development so that it can reduce and alleviate poverty (Khaerunisa et al., 2021).

Several researchers have conducted research related to zakat and economic growth which is associated with several variables such as the human development index (Permatasari, 2020), unemployment and poverty (Athoillah, 2018), inflation and money supply (Hanafi, 2020), small micro and medium enterprises (Ridlo & Setyani, 2020), exports and household consumption (Safitri et al., 2021), local income and expenditure (Chiko, 2022).

Furthermore, countries that have been studied discuss the relationship between zakat and economic growth, such as Indonesia (Purwanti, 2020); (Ridlo & Setyani, 2020); (Roisyatin & Jamaludin, 2020); (Safitri et al., 2021); (Dewi, 2013); (Hanafi, 2020), Malaysia (Suprayitno, 2019), Senegal, Sudan, Qatar, UAE, Kuwait and Saudi Arabia (Ben Jedidia & Guerbouj, 2021). In addition, there are also those who research several provinces in Indonesia such as East Java (Fahmawati, 2019), West Java (Permatasari, 2020), Aceh (Al-Haj & Ikhsan, 2021) and North Sumatra (Harahap, 2021).

Based on this background and several previous studies related to zakat and economic growth. So, the study aims to analyze the impact of zakat on economic growth with a sample of three Islamic countries namely Indonesia, Malaysia and Singapore in 2003-2020.

## LITERATURE REVIEW

### Zakat

One of the driving factors for the large amount of zakat or charitable donations in Islamic countries is religion (Opoku, 2013). In the al-Qur'an there are several verses that explain about zakat, one of which is the Surah al-Taubah verse 103.

خُذْ مِنْ أَمْوَالِهِمْ صَدَقَةً تُطَهِّرُهُمْ وَتُزَكِّيهِمْ بِهَا وَصَلِّ عَلَيْهِمْ إِنَّ صَلَاتَكَ سَكَنٌ لَهُمْ وَاللَّهُ سَمِيعٌ عَلِيمٌ

Meaning: “Of their goods, take alms, that so thou mightest purify and sanctify them; and pray on their behalf. Verily thy prayers are a source of security for them: And Allah is One Who heareth and knoweth”.

The verse explains that the zakat payment is intended to clean up his assets because some of the assets gained are the rights of the poor. It is stated that the payment of zakat is obliged to every Muslim whose wealth reached nisab.

Etymologically, zakat is rooted from *zakka-yuzakki-tazkiyatan*, which means growth, purification and blessing. In terminology, zakat is an obligation imposed on one's work, whether done alone or jointly which generates income and fulfills the nisab (Harahap, 2021). The object of zakat is assets, such as agricultural products, gold, silver, livestock and merchandise. In determining zakat there are several conditions that must be met, namely ownership, has the potential to increase, does not have debt and ownership has lasted for one year (Aisha, 2019).

Zakat is a tool of wealth distribution from wealthy people to 8 recipients of zakat, such as the needy, the poor, *amil*, *mu'alaf*, slaves, *gharimin*, *fii sabilillah* and *ibnu sabil* (Rizal et al., 2020). In addition, zakat is also a major pillar of the Islamic economic system that is based on good intentions and has an impact on the economy.

## **Economic Growth**

Economic growth is a condition where people achieve a high standard of living where job opportunities are created so that people can satisfy their needs (Permatasari, 2020). Thus, people can live in prosperity as well in economics, education and health.

Al-Haj & Ikhsan (2021) Finds that economic growth is a process of change calculated on the basis of gross domestic product (GDP) or quantitative income. In creating economic growth there are several influencing factors, namely natural resources, organization, accumulation of capital, level of production, division of labour and technology (Sukirno, 1994).

According to an Islamic economic perspective, economic growth is intended to increase people's well-being in accordance with Islamic teachings (Al-Haj and Ikhsan, 2021). To achieve the objective, several factors are needed, including natural resources, human resources, entrepreneurship and technology (Permatasari, 2020). Moreover, Islamic economic growth pays more attention to human development because the objectives to be attained are not only the world, but also the after world.

## **Relationship of Zakat and Economic Growth**

Bayinah (2017) concluded that there are four approaches that explain the casual relationship between zakat and economic growth: first, zakat is a determinant of economic growth; second, zakat follows economic growth; third, there is a reciprocal relationship between zakat and economic growth; fourth, the hypothesis of zakat and economic growth are interconnected.

Zakat and economic growth are also interrelated with Islamic banks (Alam Choudhury and Syafri Harahap, 2008). Because zakat is collected in Islamic banks in the form of financial instruments or Islamic projects to achieve gross domestic product (GDP). Afterwards, GDP is influenced by zakat using several variables, namely consumer spending, investment spending and government spending (Alam Choudhury and Syafri Harahap, 2008). If the GDP increases, it indicates that the country is experiencing economic growth.

The relationship between zakat and economic growth is strongly influenced by the effectiveness of the collection and distribution of zakat. Muzakki's number of payment

intentions shows the amount of money collected (Khasandy and Badrudin, 2019). In addition, knowledge, attitudes, religion, motivation and income of the muzakki also affect the increase in zakat (Sedjati et al., 2018). The greater the amount of zakat funds issued by the muzakki, the greater the welfare felt by the community.

Ben Jedidia & Guerbouj (2021) concluded that zakat and trade openness have a positive effect on economic growth, while financial development and population growth rates have no effect on economic growth. The method used by researchers is panel data analysis with a sample of eight Islamic countries namely Senegal, Indonesia, Sudan, Malaysia, Qatar, UAE, Kuwait and Saudi Arabia in 2004-2017.

Specifically in Indonesia, to Roisyatin & Jamaludin (2020), zakat had a positive effect on economic growth in Indonesia in 2008-2018. The method used by researches is descriptive quantitative with secondary data samples obtained from website of the National Zakat Agency (BAZNAS) and the Central Statistics Agency (BPS). Then processed using linear regression analysis.

Suprayitno (2020) concluded that zakat has a positive effect on economic growth, consumption, and investment. The method used by researchers is the Error Correction Model (ECM) with sample data obtained from Government Finance Statistics, International Financial Statistics (IFS), National Amil Zakat Agency (BAZNAS), Indonesian Central Bank (BI) and the Central Statistics Agency (BPS).

Warokka & Mahat, N.,I (2013) concluded that zakat has a positive effect and has great potential for economic growth. The researcher's method is a regression model with exploratory variables such as annual public capital.

Aisha (2019) concluded that zakat has no effect on economic growth and social welfare. The method used by researchers is a survey method which aims to find out what factors influence muzakki to pay zakat through the National Amil Zakat Agency (BAZNAS) or give directly to mustahik. Data collection was done by distributing questionnaires to 250 respondents via google sheet and then analyzed descriptively.

Athoillah (2018) concluded that zakat has a positive and significant effect on economic growth and poverty. Meanwhile, zakat has a negative and insignificant effect on unemployment. The method used by researchers is panel data analysis with a fixed effect model (FEM) approach to zakat and poverty samples that occurred in six provinces on the island of Java in 2001-2012.

Bayinah (2017) concluded that zakat has a positive effect on Islamic banks so that these institutions will contribute to economic growth in both the short and long term. The method used by the researchers is cointegration panel Vector Autoregressive (VAR), Decomposition of Variance (VD) and Impulse Response Function (IRF) with samples of zakat, Islamic banks and economic growth in 2011-2015 in ten districts or cities of West Java province.

Fahmawati (2019) concluded that the Human Development Index (IPM) variable had a significant effect on economic growth while the zakat, infaq, alms (ZIS) and poverty variables had no significant effect on economic growth in East Java province in 2015-2016. The method used by researchers is panel data regression analysis with a sample of twenty-five cities or regencies in East Java province in 2015-2016.

Harahap (2021) concluded that zakat has no effect on economic growth in the province of North Sumatra but zakat is able to reduce poverty in the province. The method used is regression analysis with the help of SPSS 23 software using a sample of ten years, namely 2009 to 2019.

Considering literature review analysis above, the working hypotheses for this research would be:

H<sub>0</sub> : Distribution of zakat and population growth can affect economic growth.

H<sub>1</sub> : Distribution of zakat and population growth cannot affect economic growth.

## **METHOD**

### **Sample**

Due to the limited zakat data available, the authors used a sample of three Islamic countries with different levels of economic growth. Indonesia is a lower middle income country (US\$

1,026-3,995), Malaysia is an upper middle income country (US\$ 3,996-12,375) and Singapore is a high income country (US\$ 12,376 or more) (Espen Beer Prydz and Divyanshi Wadhwa, 2019). The sample has been adjusted to the existing zakat data. Thus, the authors can analyze the impact of zakat on economic growth by using several other growth factors.

### Econometric Spesification

Analysis of the effect of zakat on economic growth is based on panel data regression estimates using a combination of cross section and time series data as follows.

$$\ln(Y_{it}) = c + \alpha_i \ln(PZ_{it}) + \beta_i \ln(X_{it}) + \xi_{it} \quad (1)$$

$$\xi_{it} = v_i + \mu_{it}$$

Information :

- $\ln(Y_{it})$  : GDP
- $I$  : country
- $t$  : year
- $\ln(PZ_{it})$  : the amount of zakat funds distributed
- $X_{it}$  : control variable matrix
- $\xi_{it}$  : error term
- $v_i$  : unobserved country-specific effect
- $\mu_{it}$  : idiosyncratic error

Gil-Garcia & Puron-Cid (2014) concluded that the panel data model has several advantages, namely increasing sample size; provide more information and variety; more practical because it can combine observations over time; better describes the process of change in social phenomena. As such, panel data models can make for powerful and useful analyzes for research.

### Variables and Hypothesis

In this study, the dependent variable is economic growth while the independent variables are zakat and population growth.

Table 1. Variable Description

Symbol	Variable	Proxies	Hypothesis Relationship
ln (Gdp)	Economic growth	The logarithm of GDP per capita	
ln (PZ)	Distribution of zakat	The logarithm of the amount of zakat funds distributed	+
ln (PP)	Population growth	The logarithm of the population growth rate	+/-
C	Intercept	-	
$\xi_{it}$	Error term	-	

ln (PZ) or the amount of zakat funds distributed. According to Wang et al., (2016) the variable amount of zakat funds distributed can measure economic growth. The greater the amount of zakat funds distributed, the higher the level of economic growth.

ln (PP) or population growth rate. Rukmana (2012) concluded that the rate of population growth has a positive effect on economic growth because with an increase in population, the greater the number of workers and the rate of economic growth. Unlike Astuti et al., (2017) concluded that these two variables have a negative relationship because with an increase in population, economic growth will decrease.

### Estimation Method

This study aims to determine the impact of zakat on economic growth. The method used is panel data regression estimation by combining cross section and time series data which aims to determine the quality of the impact of inseparable variables on individuals in several periods (Gil-Garcia & Puron-Cid, 2014). This method has several stages, namely estimating the panel data regression model, selecting the panel data regression model, testing the classical assumptions and testing the feasibility of the panel data regression model (Iqbal, 2015).



## RESULTS

### Descriptive Statistics

Tabel 2. Descriptive Statistics

	GDP	PZ	PP
Mean	2.55E+15	3.51E+10	93567442
Median	9.83E+11	2.09E+10	28859576
Maximum	1.09E+16	2.90E+11	2.74E+08
Minimum	2.08E+11	0.000000	4114826.
Std. Dev.	3.83E+15	5.52E+10	1.10E+08
Skewness	1.000610	3.090532	0.705997
Kurtosis	2.349987	12.91796	1.567230
Jarque-Bera	9.961640	307.2861	9.104755
Probability	0.006868	0.000000	0.010542
Sum	1.38E+17	1.90E+12	5.05E+09
Sum Sq. Dev.	7.77E+32	1.61E+23	6.45E+17
Observations	54	54	54

Table 2 shows the results of the descriptive statistical regression. It is known that the total data for each variable is 54. This number was obtained from a sample of three Islamic countries, namely Indonesia, Malaysia and Singapore in 2003-2020.

GDP has an average of 2.55E+15 with a standard deviation of 3.83E+15. This study uses a sample of three Islamic countries with different levels of economic growth. Lower middle income Indonesia, upper middle income Malaysia and high income Singapore.

Distribution of zakat funds has an average of 3.51E+10 with a standard deviation of 5.52E+10. This shows that the greater the zakat funds distributed, the greater the level of wealth of a country.

Population growth has an average of 93567442 with a standard deviation of 1.10E+08. This variable is a determining factor of economic growth because an increase in population growth in a country can encourage economic growth (Rukmana, 2012).

## Data Analysis

### Panel Data Regression Model Estimation

The panel data estimation model has three approaches, namely the Common Effect Model (CEM), Fixed Effect Model (FEM) and Random Effect Model (REM). The following are the regression results of the three approaches.

Table 3. Common Effect Model (CEM)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-8.19E+14	9.46E+13	-8.662258	0.0000
PZ	15639.41	1438.915	10.86889	0.0000
PP	30154481	719741.8	41.89625	0.0000
R-squared	0.982522	Mean dependent var		2.55E+15
Adjusted R-squared	0.981837	S.D. dependent var		3.83E+15
S.E. of regression	5.16E+14	Akaike info criterion		70.64571
Sum squared resid	1.36E+31	Schwarz criterion		70.75621
Log likelihood	-1904.434	Hannan-Quinn criter.		70.68833
F-statistic	1433.501	Durbin-Watson stat		0.273813
Prob (F-statistic)	0.000000			

Table 4. Fixed Effect Model (FEM)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-7.47E+15	3.57E+14	-20.93217	0.0000
PZ	3434.087	781.9845	4.391503	0.0001
PP	1.06E+08	4035557.	26.21180	0.0000

### Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.998164	Mean dependent var	2.55E+15
Adjusted R-squared	0.998015	S.D. dependent var	3.83E+15
S.E. of regression	1.71E+14	Akaike info criterion	68.46620
Sum squared resid	1.43E+30	Schwarz criterion	68.65036
Log likelihood	-1843.587	Hannan-Quinn criter.	68.53722
F-statistic	6661.517	Durbin-Watson stat	0.497877
Prob(F-statistic)	0.000000		

Table 5. Random Effect Model (REM)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-8.19E+14	3.13E+13	-26.20015	0.0000
PZ	15639.41	475.7323	32.87440	0.0000
PP	30154481	237960.0	126.7208	0.0000
Effects Specification				
			S.D.	Rho
Cross-section random			1.15E+08	0.0000
Idiosyncratic random			1.71E+14	1.0000
Weighted Statistics				
R-squared	0.982522	Mean dependent var	2.55E+15	
Adjusted R-squared	0.981837	S.D. dependent var	3.83E+15	
S.E. of regression	5.16E+14	Sum squared resid	1.36E+31	
F-statistic	1433.501	Durbin-Watson stat	0.273813	
Prob(F-statistic)	0.000000			
Unweighted Statistics				
R-squared	0.982522	Mean dependent var	2.55E+15	
Sum squared resid	1.36E+31	Durbin-Watson stat	0.273813	

## Panel Data Regression Model Selection

In determining the panel data estimation model, there are three tests that must be carried out, namely the chow test, hausman test and lagrange multiplier test. The following are the results of the three regression tests.

Table 6. Chow Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	208.784314	(2,49)	0.0000
Cross-section Chi-square	121.693580	2	0.0000

Table 6 is the result of chow test regression. It is known that the statistical value of the chi-square cross-section is 121.693580 with a probability of 0.0000. This shows a probability value of less than 0.05 ( $0.0000 < 0.05$ ). So it can be concluded that the model chosen is the Fixed Effect Model (FEM).

Table 7. Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	417.568628	2	0.0000

Table 7 is the result of the hausman test regression. It is known that the value of the chi-square statistic is 417.568628 with a probability of 0.0000. This shows a probability value of less than 0.05 ( $0.0000 < 0.05$ ). So it can be concluded that the model chosen is the Fixed Effect Model (FEM).

In this study, the lagrange multiplier test was not carried out because the results of the chow test and hausman test showed that the selected model was the Fixed Effect Model (FEM). Meanwhile, the lagrange multiplier test is used to determine between the Common Effect Model (CEM) or the Random Effect Model (REM).

## Classic Assumption Test

Table 8. Multicollinearity Test

	PZ	PP
PZ	1	0.450909385106404
PP	0.450909385106404	1

Table 8 is the result of the multicollinearity test regression. It is known that the correlation value between PZ and PP is 0.450909385106404 while the correlation value between PP and PZ is 0.450909385106404. This shows a correlation value of less than 0.80 ( $0.450909385106404 < 0.80$ ). So it can be concluded that there is no multicollinearity problem.

Table 9. Heteroscedasticity Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-6.47E+13	8.48E+13	-0.763001	0.4491
PZ	71.11810	185.9114	0.382538	0.7037
PP	1286459.	959425.8	1.340863	0.1861

Table 9 is the result of the heteroscedasticity test regression. It is known that the probability value of the independent variable is greater than 0.05 ( $> 0.05$ ). So it can be concluded that there is no heteroscedasticity problem.

## Panel Data Regression Feasibility Test

### Simultaneous Significance Test (F Test)

Table 4 is the result of the Fixed Effect Model (FEM) regression test. It is known that the prob value (F-Statistic) is 0.000000. This is shows the value is less than 0.05 ( $0.000000 < 0.05$ ). So it can be concluded that PZ and PP simultaneously affect economic growth.

### Partial Statistical Test (T Test)

Based on table 4 it is known that the calculated t value of the zakat distribution variable is 4.391503, which means that it is greater than the t table value ( $4.391503 > 1.675$ ). The

probability value of the zakat distribution variable is 0.0001, which means it is smaller than the significance value ( $0.0001 < 0.05$ ). It may therefore be concluded that the variable distribution of zakat has a positive and significant effect on economic growth. While the value of the regression coefficient of zakat distribution is 3434.087, meaning that if the level of zakat distribution increases by 1%, the economic growth rate will increase by 3434.087% *ceteris paribus*.

Based on table 4 it is known that the calculated t value of the population growth variable is 26.21180, which means that it is greater than the t table value ( $26.21180 > 1.675$ ). The probability value of the population growth variable is 0.0000, meaning that it is less than the significance value ( $0.0000 < 0.05$ ). It can therefore be concluded that the population growth variable has an important positive effect on economic growth. Meanwhile, the value of the regression coefficient of population growth is 1.06E+08, meaning that if the population growth rate increases by 1%, the economic growth rate will increase by 1.06E+08% *ceteris paribus*.

#### Determination Coefficient Test

Based on table 4, it is known that the Adjusted R-squared value is 0.998015, meaning that the variable distribution of zakat and population growth of 99.8% can affect economic growth while the remaining 0.002% is influenced by other factors not examined in this study.

## DISCUSSION

The model chosen is the Fixed Effect Model (FEM) after estimated by Eviews 10, which is presented in Table 4. The following are the results of the significance test and hypothesis analysis of the relationship of each independent variable (zakat distribution and population growth) to the dependent variable (economic growth).

#### Effect of Distribution of Zakat on Economic Growth

Distribution of zakat (PZ) has a positive and significant coefficient value of 3434.087. That is, if the level of zakat distribution increases by 1%, the economic growth rate will increase by 3434.087%. This proves that zakat can significantly encourage economic growth.

This research is in line with Ben Jedidia & Guerbouj (2021), Roisyatin & Jamaludin (2020), Suprayitno (2020), Warokka & Mahat, N.,I (2013), Athoillah (2018) and Bayinah (2017) which concludes that zakat and economic growth has a significant relationship because the more zakat funds are distributed, the more it encourages the level of economic growth.

However, this is contrary to Khasandy & Badrudin (2019), Fahmawati (2019) and Harahap (2021) which conclude that zakat and economic growth have no significant relationship because zakat is an additional growth factor in the Islamic economy.

#### Effect of Population Growth on Economic Growth

Population growth (PP) has a positive and significant coefficient on economic growth of 1.06E+08. That is, if the population growth rate increases by 1%, the economic growth rate will increase by 1.06E+08%. This proves that population growth can drive economic growth significantly.

This research is in line with Shaukat & Zhu (2021) and Rukmana (2012) which conclude that population growth and economic growth have a significant relationship because as the population increases, the number of workers will also increase. This can encourage economic growth.

However, this is contrary to Ben Jedidia & Guerbouj (2021) and Astuti et al (2017) which conclude that population growth and economic growth do not have a significant relationship because as the population increases, the number of unemployed will also increase. This can reduce the rate of economic growth.

#### **CONCLUSION**

Zakat is one of the main pillars of the Islamic Economic System which is based on good intentions and has an impact on the economy. Zakat can be used as a tool to distribute wealth by distributing wealth to specific recipients. Furthermore, zakat can also be used as a social security and a catalyst to increase aggregate demand, investment and influence economic growth.

The results of this study indicate that zakat distribution and population growth have had a positive and significant effect on economic growth in three Islamic countries, namely Indonesia, Malaysia and Singapore in 2003-2020. Based on the results of the research above, the student recommend that zakat be included in fiscal policy as is the case with taxes.

## REFERENCES

- Aisha, E. (2019). *Munich Personal RePEc Archive The Influence of Zakat on Economic Growth and Welfare Society in Indonesia The Influence of Zakat on Economic Growth and Welfare Society in.* 91574.
- Al-Haj, H., & Ikhsan, I. (2021). Pengaruh Infrastruktur dan Zakat Terhadap Pertumbuhan Ekonomi (Studi Kasus di Kota Banda Aceh). *Jurnal Ilmiah Mahasiswa Ekonomi Islam*, 3(1), 104–118.
- Alam, A. (2018). Analisis Efisiensi Pengelolaan Dana Zakat Infak Sedekah (Zis) Di Baznas Kabupaten/Kota Se-Karesidenan Surakarta Dengan Menggunakan Metode Data Envelopment Analysis DEA. *Iqtishoduna: Jurnal Ekonomi Islam*, 7(2), 262–290.
- Astuti, W. A., Hidayat, M., & Darwin, R. (2017). Pengaruh Investasi, Tenaga Kerja dan Pertumbuhan Penduduk Terhadap Pertumbuhan Ekonomi di Kabupaten Pelalawan. *Jurnal Akuntansi Dan Ekonomika*, 7(2), 141–147.
- Athoillah, M. A. (2018). The Zakat Effect on Economy Growth, Unemployment, and Poverty in The Island of Java : Panel Data Analysis 2001 - 2012. *Ekspansi*, 10(2), 205–230.
- Bayinah, N.A. (2017). *Role of Zakat as Social Finance Catalyst to Islamic Banking and Economic Growth*. 2(2), 55–70.
- Ben Jedidia, K., & Guerbouj, K. (2021). Effects of zakat on the economic growth in selected Islamic countries: empirical evidence. *International Journal of Development Issues*, 20(1), 126–142. <https://doi.org/10.1108/IJDI-05-2020-0100>
- Chiko, C. (2022). *El-ecosity: jurnal ekonomi dan keuangan islam*. 02(01).
- Dewi, R. K. (2013). Pertumbuhan Ekonomi Indonesia. *Statistik, Badan Pusat*, 2(14), 1–9.
- Espen Beer Prydz and Divyanshi Wadhwa. (2019). *Classifying countries by income*. World Bank. <https://datatopics.worldbank.org/world-development-indicators/stories/the-classification-of-countries-by-income.html>
- Fahmawati, R. (2019). Pengaruh Zakat, Infak, Sedekah (ZIS), Indeks Pembangunan Manusia (IPM) Dan Kemiskinan Terhadap Pertumbuhan Ekonomi Di Provinsi Jawa Timur. *Twining Program, Fakultas Ekonomi dan Bisnis dan Fakultas Agama Isl.* <http://eprints.ums.ac.id/id/eprint/77070>
- Gil-Garcia, R., & Puron-Cid, G. (2014). Using Panel Data Techniques for Social Science Research: an Illustrative Case and Some Guidelines. *Journal of Research and Sciences*, 21(3), 203–216. <http://www.redalyc.org/articulo.oa?id=10432355004>
- Hakim, L., Alam, A., At-Thariq, M. M., Junaedi, D., & Arsyad, M. R. (2021). Perbandingan Program Zakat Produktif antara BAZNAS dan LAZISMU Kota Surakarta. *Al-Kharaj : Jurnal Ekonomi, Keuangan & Bisnis Syariah*, 4(1), 33–46. <https://doi.org/10.47467/alkharaj.v4i1.348>
- Hamidah, R. A., Widiastuti, T., Alam, A., & Cahyono, E. F. (2017). Impact of ZIS (Zakah, Infaq and Sadaqa) Distribution and Islamic Financial Institutions to MSMEs (Micro, Small, and Medium Enterprises) and Gross Regional Product Growth in East Java (2011-2014 Periods). *Journal of Islamic Financial Studies*, 3(1), 1–15. <https://doi.org/10.12785/jifs/030101>
- Hanafi, K. A. (2020). Analisis Pengaruh Zakat, Infaq, Sadaqoh (ZIS), Inflasi dan Jumlah Uang Beredar Terhadap Pertumbuhan Ekonomi Indonesia Tahun 2004-2018. *Twining Program, Fakultas Ekonomi Bisnis dan Fakultas Agama Islam U.*
- Harahap, A. H. (2021). *Pengaruh zakat terhadap pertumbuhan ekonomi dengan pengentasan kemiskinan sebagai variabel moderating di Provinsi Sumatera Utara*. 01, 1–16. <http://etd.iain-padangsidempuan.ac.id/6744/%0Ahttp://etd.iain-padangsidempuan.ac.id/6744/1/1640200197.pdf>
- Iqbal, M. (2015). Regresi Data Panel ( 2 ) " Tahap Analisis ". *Sarana Tukar Menukar Informasi Dan Pemikiran Dosen*, 2, 1–7.
- Khaerunisa, S., Yayuli, Y., & Febriandika, N. R. (2021). Analysis of the Impact of Covid-19 on the Collection of Zis Funds (Zakat, Infaq and Shodaqoh) in Lazismu Surakarta in 2020. *Proceedings Book The International Conference on Islamic Economics, Islamic Finance, & Islamic Law (ICIEIFIL) 2021*, 1(1), 65–74. <https://publikasiilmiah.ums.ac.id/xmlui/handle/11617/12576>
- Khasandy, E. A., & Badrudin, R. (2019). The Influence of Zakat on Economic Growth and Welfare Society in Indonesia. *Integrated Journal of Business and Economics*, 3(1), 65. <https://doi.org/10.33019/ijbe.v3i1.89>



- Opoku, R. A. (2013). Examining the motivational factors behind charitable giving among young people in a prominent Islamic country. *International Journal of Nonprofit and Voluntary Sector Marketing*, 18(3), 172–186. <https://doi.org/10.1002/nvsm.1457>
- Permatasari, widy. (2020). Analisis Pengaruh Dana Zakat, Indeks Pembangunan Manusia, Dan Kemiskinan Terhadap Laju Pertumbuhan Ekonomi Jawa Barat Dengan Pendapatan Perkapita Sebagai Variabel Intervening Periode Tahun 2014-2019. *Iain Salatiga, Analisis Pengaruh Dana Zakat, Indeks Pembangunan Manusia, Dan Kemiskinan Terhadap Laju Pertumbuhan Ekonomi Jawa Barat Dengan Pendapatan Perkapita Sebagai Variabel Interveningperiode Tahun 2014-2019*, 13–26.
- Prawiro, A., & Fata, A. K. (2020). Optimalisasi Peran Lembaga Zakat Dalam Mewujudkan Keadilan Sosial-Ekonomi. *Al-Buhuts*, 16(1), 80–98.
- Purwanti, D. (2020). Pengaruh Zakat, Infak, dan Sedekah terhadap Pertumbuhan Ekonomi Indonesia. *Jurnal Ilmiah Ekonomi Islam*, 6(1), 101. <https://doi.org/10.29040/jiei.v6i1.896>
- Ridlo, M., & Setyani, D. (2020). Pengaruh Zakat, Inflasi Dan Perkembangan Usaha Mikro Kecil Menengah Terhadap Pertumbuhan Ekonomi Tahun 2011-2018 (Studi Kasus Di Indonesia). *Jurnal Ekonomi Bisnis*, 6(1), 75–83.
- Rizal, J. H. T., Km, N., & Padangsidimpuan, S. (2020). *Strategi Pemberdayaan Ekonomi Mustahiq Melalui Pendistribusian Zakat Produktif Aliman Syahuri Zein Email : alimansya@iainpadangsidimpuan.ac.id Institut Agama Islam Negeri Padangsidimpuan Kata Kunci : Strategi , Pemberdayaan Ekonomi , Zakat , Produktif Str. 8, 266–282.*
- Roisyatin, & Jamaludin. (2020). Pengaruh Zakat Terhadap Pertumbuhan Ekonomi Indonesia Tahun 2007-2018. In *Al-Mubin; Islamic Scientific Journal* (Vol. 3, Issue 1, pp. 39–49). <https://doi.org/10.51192/almubin.v3i1.68>
- Rukmana, indra. (2012). Pengaruh Disparitas Pendapatan, Jumlah Penduduk Dan Inflasi Terhadap Pertumbuhan Ekonomi Di Jawa Tengah Tahun 1984-2009. *Economics Development Analysis Journal*, 1(1), 27–34.
- Safitri, W., Aziz, A., Pratama, N., & Ratno, F. A. (2021). Pengaruh Zakat Infak Sedekah , Ekspor dan Konsumsi Rumah Tangga terhadap Pertumbuhan Ekonomi Indonesia Tahun 2015-2019. *Jurnal Baabu Al-Ilmi*, 6(2), 11–20. <http://dx.doi.org/10.29300/ba.v6i2.4285>
- Sedjati, D. P., Basri, Y. Z., & Hasanah, U. (2018). Analysis of Factors Affecting the Payment of Zakat in Special Capital Region (DKI) of Jakarta. *International Journal of Islamic Business & Management*, 2(1), 24–34. <https://doi.org/10.46281/ijibm.v2i1.50>
- Shaukat, B., & Zhu, Q. (2021). Finance and growth: Particular role of Zakat to levitate development in transition economies. *International Journal of Finance and Economics*, 26(1), 998–1017. <https://doi.org/10.1002/ijfe.1832>
- Suprayitno, E. (2019). *Zakat and SDGs : The Impact of Zakat on Economic Growth, Consumption and Investment in Malaysia*. 101(Iconies 2018), 202–209. <https://doi.org/10.2991/iconies-18.2019.39>
- Suprayitno, E. (2020). The Impact of Zakat on Economic Growth in 5 State in Indonesia. *International Journal of Islamic Banking and Finance Research*, 4(1), 1–7. <https://doi.org/10.46281/ijibfr.v4i1.470>
- Wang, Y., Wang, Z. P., Zhang, Y., Xu, J., & Duan, Y. (2016). Years of tight oil fracturing: What have we learned? *Society of Petroleum Engineers - SPE Asia Pacific Hydraulic Fracturing Conference*, II(1), 75–89. <https://doi.org/10.2118/181810-ms>
- Warokka, A., & Mahat, N.,I (2013). *Investigation on zakat as an indicator for Moslem countries ' economic growth.*