

DOES INFLATION MATTER FOR ZAKAT COLLECTION AND DISTRIBUTION IN INDONESIA?

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Paper was presented at the 9th International Conference on Zakat (ICONZ)
9 – 12 December 2025, Jakarta, Indonesia

ABSTRACT

Zakat plays an important role in reducing poverty and empowering communities in Indonesia. However, macroeconomic factors such as inflation may influence the performance of zakat institutions in collecting and distributing funds. While this issue is increasingly relevant, few studies have investigated the short-term and long-term effects of inflation on both zakat collection and distribution. This study explores the impact of inflation, measured by the Consumer Price Index (CPI), on zakat collection and distribution in Indonesia using monthly time-series data from January 2021 to March 2025. The data are sourced from BPS and BAZNAS. The analysis is conducted using the Autoregressive Distributed Lag (ARDL) model. The findings reveal that inflation has a significant and positive relationship with both zakat collection and distribution in both the short and long term. These results also passed normality, heteroscedasticity, serial correlation, and stability diagnostic tests, indicating that the models are robust and reliable. This research highlights the importance of considering macroeconomic conditions, particularly inflation, in designing effective zakat management strategies. It offers valuable insights for policymakers and zakat institutions in improving both the collection and distribution of zakat during economic fluctuations. Furthermore, the study contributes to the limited empirical literature linking inflation with the broader performance of zakat in Indonesia.

Keywords : Zakat Collection, Zakat Distribution, Inflation, ARDL, Zakat Institutions, Islamic Social Finance

I. INTRODUCTION

Zakat is one of the main pillars of Islamic social finance, designed to support those in need and reduce poverty (Ayuniyyah et al., 2022; Herianingrum et al., 2024). In Indonesian context, zakat is managed through official institutions and collected from individuals and companies as part of their religious and social responsibility (Yahya, 2020). Zakat plays an important role in helping communities during both normal and crisis situations (Sari et al., 2019). As the economy continues to change, especially due to inflation and other macroeconomic factors, it is important to understand how these changes affect zakat performance, not only in terms of how much is collected, but also how it is distributed to the people who need it.

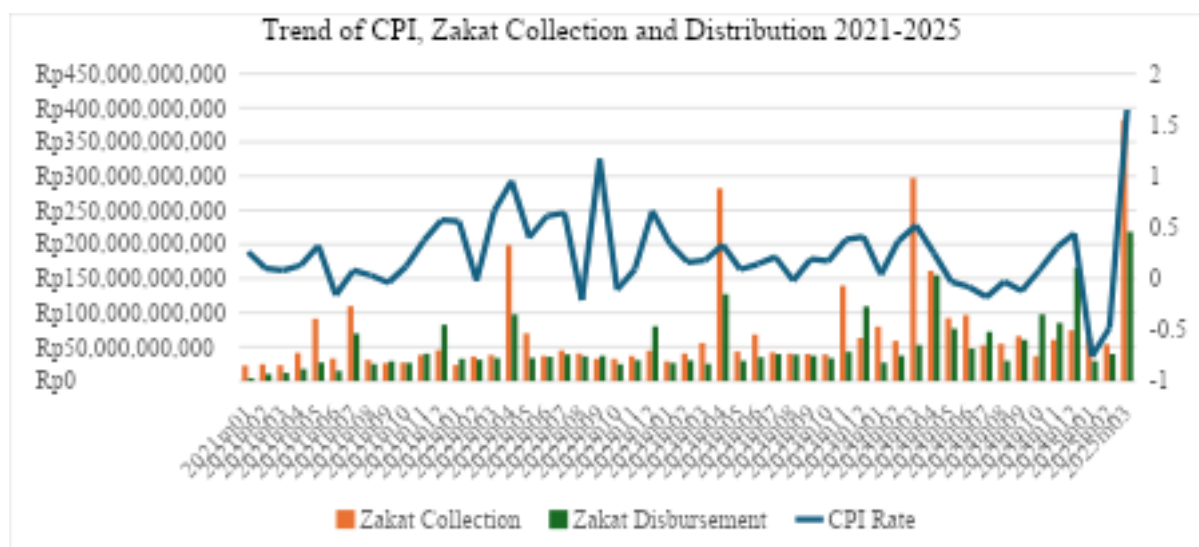


Figure 1. Trend of CPI, Zakat Collection and Distribution 2021-2025

Source: BAZNAS and BPS, 2025

The chart above shows the trend of inflation (CPI Rate), zakat collection, and zakat distribution from 2021 to 2025. From the graph, we can see that the movement of inflation is quite dynamic, with some spikes especially in mid-2022 and early 2025. Zakat collection and distribution also show ups and downs, although the pattern seems less volatile compared to the inflation rate. This raises an important question, does inflation really influence zakat collection and distribution? And if so, how strong is that relationship?

Understanding this connection is important for zakat institutions and policymakers. It helps them plan better strategies, especially during times of economic uncertainty. While several past studies have already looked at how inflation impacts zakat collection (Almeyda & Rusgianto, 2023; Arifah, 2024; Kafabih, 2024; Monalisa, 2022), very few have analyzed how it affects zakat distribution. This study tries to fill that gap by exploring the relationship between inflation and both zakat collection and distribution performance in Indonesia.

Based on this background, the research aims to answer the following questions:

1. Does inflation (CPI rate) have a short-run and long-run impact on zakat collection in Indonesia?
2. Does inflation (CPI rate) affect the behavior of zakat distribution in the short run and long-run?
3. How do these relationships help explain the role of macroeconomic conditions in shaping zakat institution performance?

Hence, the study aims to provide a better understanding of how inflation connects to the zakat system and offer recommendations to make zakat more effective and responsive to economic change.

The structure of this study consists of five parts. First, the introduction explains the background and research objectives. Second, the literature review provides a summary of previous studies related to zakat and macroeconomic variables. Third, the data and methodology section presents the data used in the study and the analytical tools applied. Fourth, the findings and discussion section shows the results of the analysis and compares them with previous studies. Finally, the conclusion and recommendation section highlights the key takeaways and suggests what zakat institutions can do in response to economic changes.

II. LITERATURE REVIEW

2.1 Inflation and Its Economic Implications

Defined as a sustained increase in the general price level of goods and services in an economy, is influenced by a complex interplay of macroeconomic factors (Utomo, 2022). These factors can be broadly categorized into demand-pull and cost-push factors. Demand-pull inflation arises when there is an increase in aggregate demand that outpaces the economy's ability to produce goods and services (Noviarita, 2022).

Several factors can drive demand-pull inflation, including expansionary monetary policy, increased government spending, and rising consumer confidence. Expansionary monetary policy, such as lowering interest rates or increasing the money supply, can stimulate borrowing and spending, leading to higher demand and prices (Faridatussalam, 2022). Increased government spending on infrastructure projects or social programs can also boost aggregate demand, contributing to inflationary pressures (Ekpenyong, 2020).

Inflation has implications to the economy. Low moderate inflation (below 3-7%) empirically affected to boost the economic growth while high inflation also contributes to the economic growth reduction (Khan & Naushad, 2020; Susanto & Pangesti, 2021). Furthermore, financial market and its stability also impacted by the inflation rate through the price shocks and it leads to the declining of purchasing power of money by raising the living costs, reducing real incomes, particularly for those on fixed incomes (Zhao, 2022).

One of the common model to measure inflation, particularly in urban areas, is consumer price index. Consumer price index is a measure that examines the weighted average of prices of a basket of consumer goods and services, such as transportation, food, and medical care (Boulaksili, 2022). CPI is calculated by taking price changes for each item in the predetermined basket of goods and averaging them; the goods are weighted according to their relative importance in the average consumer's budget (Lewis, 2011). Changes in the CPI are used to assess price changes associated with the cost of living, making it one of the most watched statistics for economic policy making (Sentosa, 2020).

2.2 Zakat ad Its Context

One of the five fundamental tenets of Islam, zakat, is essential to the development of a fair and just society. In addition to its religious significance, zakat serves humanitarian and economic purposes by empowering underprivileged populations (Noor Achmad et al., 2025). Reducing social and economic inequalities among members of society is one of zakat's main goals (Ayuniyyah et al., 2022). A more equal allocation of resources is achieved by redistributing wealth from the financially competent to those in need through the zakat system.

In order to improve socioeconomic welfare, poor groups can get financial assistance like zakat (Lawal & Ajayi, 2019). It is a component of Islamic finance, which follows Sharia laws and values by using community resources to fund social initiatives (Siswantoro, 2022). Zakat's primary goal is to redistribute wealth in order to achieve social justice (Mustafa et al., 2022). This is in accordance with maqashid al-shariah, which states that in order for people to succeed in this life as well as thereafter, they must assist and protect one another from difficulty (Mustafa et al., 2022).

Zakat's existence affects the course of policy in reducing poverty. According to Ahmed Shaikh & Ghafar Ismail (2017) zakat is essential for tackling problems including unemployment, starvation, illiteracy, and health challenges. Additionally, zakat has a beneficial effect on reducing poverty (Widiastuti et al., 2021), improving community well-being (Mbulu et al., 2023), and empowering women entrepreneurs through successful zakat empowerment (Ajib Ridlwan et al., 2022).

In the context of Indonesia, the collection of zakat is managed by the National Amil Zakat Agency (BAZNAS) and authorized private institutions (LAZ), this system aims to balance

regulatory oversight with local adaptability and private sector innovation (Mohammad Qutaiba et al., 2024; Ridwan et al., 2019). Furthermore, as part of its distribution programs, BAZNAS in Indonesia has four empowerment priority initiatives across the country: the Santripreneur program, Micro Zakat Bank, Z-Chicken, and Z-Mart (Noor Achmad et al., 2025). However, from the standpoint of economic growth, zakat has demonstrated a contribution to the advancement of inclusive economic growth (Safitri et al., 2024).

2.4 Empirical Studies on Zakat and Macroeconomic Variables

This part elaborates the empirical researches that have been conducted so far which relates to the scholarly discussion about macroeconomics variables and their impact on zakat collections.

The study that has been conducted by Kafabih (2024) investigates the non-linear impact of inflation and currency exchange to zakat collection in Indonesia. By observing 45 time-series data and utilizing ARDL approach, the study found that the inflation and currency exchange have a positive impact to the zakat collection in Indonesia. Arifah (2024) further explored the influence of inflation on zakat collection

Subsequently, Almeyda & Rusgianto (2023) investigate the impact of macroeconomic variables such as number of population, production index, domestic investment, GDP, exchange rates, and inflation on zakat collection in the period 2018-2022. The study utilized multivariate regression approach to observe the relationship among variables. The research revealed that simultaneously all macroeconomic variables are significantly affect the zakat collection, however, in a partial stage the study shows that only GDP and Domestic Investment have significant impact to the zakat collection.

Furthermore, another research has been conducted by Irawan (2022) that examined the impact of macroeconomic variables to zakat collection in BAZNAS. The multivariate regression was employed in this study to analyze the relationship between inflation, central bank rate, profit and loss sharing rate, exchange rate, money circulation toward zakat collection performance. The study found that the inflation, central bank rate, and exchange rate has a negative relationship with zakat collection while the money circulation has a positive relation with zakat collection.

Moreover, the impact of inflation, production index, and currency exchange rate to zakat collection has been investigated by Islamiyati & Hany (2021). Using the ARDL model to observe 60 monthly time-series data, the study depicts that only production index that has positive and significant relationship with the zakat collection. However, the inflation and currency exchange rate do not have significant relationship with zakat collection. Nevertheless, the nexus between production index and return on assets (ROA) toward zakat collection has been examined with VAR/VECM approach. the investigation found that production index has a causality relationship with zakat collection. However, the inflation has a one-way relationship with zakat collection (Munandar & Amirullah, 2021).

The factors that affect zakat collection also observed by Monalisa (2022). Through the ECM approach, the study investigates the relationship between macroeconomic variables such as currency exchange rate, gold price, money circulation, and inflation toward zakat collection from 2012-2019. The research reveals that in the long-run gold price, money circulation, and inflation affect significantly on zakat collection. However in the short-run, the money circulation and inflation do not have a significant impact on zakat collection. The similar research by Novitasari and Rosyidi (2019) found the different result that money circulation does not have any impact to the zakat collection.

Nevertheless, Munandar and Amirullah (2021) explored the contribution of real and monetary sectors, and inflation to zakat collection. By utilizing VAR & VECM with the time-series data from 2011-2019, the study found that the zakat collection has a causal relationship with the real sector. On the other hand, inflation has only one causal relationship. Furthermore, the real sector

variable shocks are positively and highly responded to by zakat collection compare to the monetary sector.

Despite many studies have observed the relationship between macroeconomic variables and zakat collection, yet they did not investigate it relationship to the zakat distribution behavior. Therefore, the study aims to fill the gap by investigating the macroeconomic indicator towards zakat performance including its impact to the zakat distribution.

III. METHODOLOGY

3.1. Data

This study utilized a monthly time series data from January 2021 to March 2025 with the total of 51 observation data. The variables that are used in this research are included in the following table.

Variables	Symbol	Proxy	Data Sources
Zakat Collection	LnZC	Total monthly zakat collection in Rupiah (transform to log natural)	The National Board of Zakat of the Republic of Indonesia (BAZNAS)
Zakat Distribution	LnZD	Total monthly zakat distribution in Rupiah (transform to log natural)	The National Board of Zakat of the Republic of Indonesia (BAZNAS)
Inflation	CPI Rate	The national monthly data of consumer price index growth rate (percentage)	The National Statistic Agency (BPS)

3.2. Methodology

The methodology that is applied in this research is the Autoregressive Distributed Lag (ARDL). This model is adopted due to its advantages in investigating the short-run and long-run relationship within variables. Moreover, the ARDL Model can be implemented on the mixed stationary data at level $I(0)$ and first difference $I(1)$ (Emeka & Kelvin, 2016; Kripfganz & Schneider, 2023). Besides, this approach also is widely used in economic, energy, environment, and financial issues due to its capability in handling complex data time series (Sarkodie & Owusu, 2020). The analysis steps for ARDL model can be seen as the following:

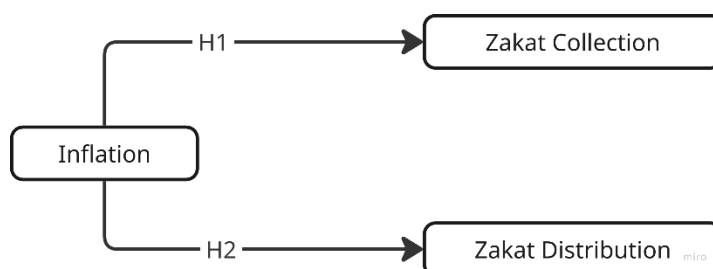
1. Stationary test by employing the Philips-Perron (PP) test to assure all variables are stationary at level $I(0)$ or at first difference $I(1)$ and there is no variable with second difference $I(2)$.
2. ARDL Model determination by defining the optimal lag based on Akaike Criterion (AIC), and estimating ARDL model for both dependent variables (LnZC and LnZD) upon CPI Rate.
3. Cointegration Test (Bound test) to assess whether there were long-run relationships between the variables or not.
4. Error Correction Model (ECM) stage is used if there is a long-term relationship between the variables by transforming the model into ECM to capture the adjustment dynamic into the balance.
5. Classic Assumption test by including the normality test (Jarque-Bera), heteroscedasticity (White), and autocorrelation test (Breusch-Godfrey LM) to ensure the model validity.

3.3. Research Hypothesis

The hypothesis in the study is formulated to check the significant influence of inflation (CPI Rate) on zakat collection and distribution. The test is conducted to the coefficient of CPI rate in the ARDL Model and ECM whether in short run or long run. The hypothesis is determined as follows:

1. H1: There is a significant relationship between the inflation (CPI Rate) to the zakat collection
2. H2: There is a significant relationship between the inflation (CPI Rate) to the zakat distribution

Figure 2. The Hypothesis of the Study



3.4. Model Specification

The study estimates two ARDL models which accordingly represents the relationship between inflation to zakat collection and distribution. The model is formulated as follows:

1. Zakat Collection

$$\Delta \ln ZC_t = \beta_0 + \beta_1 CPI_{rate}_t + \lambda ECT_{t-i} + \varepsilon_t \dots\dots\dots 1)$$

2. Zakat Distribution

$$\Delta \ln ZD_t = \beta_0 + \beta_1 CPI_{rate}_t + \lambda ECT_{t-i} + \varepsilon_t \dots\dots\dots 2)$$

IV. RESULTS AND DISCUSSION

4.1.1 Descriptive Statistics and Stationarity Test Results

4.1.1. Descriptive Statistics

	LNZD	LNZC	CPI RATE
Mean	24.41309	24.71929	0.231569
Median	24.31015	24.51520	0.170000
Maximum	26.11033	26.67027	1.650000
Minimum	22.12157	23.84051	-0.760000
Std. Dev.	0.721449	0.663856	0.387837
Skewness	-0.142630	1.209437	0.924575
Kurtosis	4.222505	4.090698	5.971569
Jarque-Bera	3.348770	14.96121	26.03036
Probability	0.187423	0.000564	0.000002
Sum	1245.068	1260.684	11.81000
Sum Sq. Dev.	26.02442	22.03526	7.520875
Observations	51	51	51

Source: Eviews 13, processed by Author

Based on the descriptive statistics in the table, the average value of the natural log of zakat distribution (LNZD) is 24.41, which is slightly lower than the average of zakat collection (LNZC), which is 24.72. Meanwhile, the average inflation (CPI_RATE) is 0.23. The LNZD data shows wider variation (standard deviation of 0.72) compared to LNZC (0.66), while CPI_RATE has the biggest range with a maximum value of 1.65 and a minimum of -0.76. The distribution of LNZC and

CPI_RATE is skewed to the right (positive skewness), while LNZN is more symmetric. However, all three variables have kurtosis values higher than 3, meaning their distributions are more peaked than normal. The Jarque-Bera normality test shows that only LNZN is normally distributed (p -value = 0.18 > 0.05), while LNZN and CPI_RATE are not, because their p -values are below 0.05. These results give a basic picture of the characteristics and patterns of each variable used in the analysis.

4.1.2. Unit root test findings

		At Level		
		LNZN	CPI_RATE	LNZN
With Constant	t-Statistic	-4.5549	-6.0809	-5.3085
	Prob.	0.0006 ***	0.0000 ***	0.0000 ***
With Constant & Trend	t-Statistic	-5.5452	-5.9909	-7.1805
	Prob.	0.0002 ***	0.0000 ***	0.0000 ***
Without Constant & Trend	t-Statistic	1.6779	-4.7931	1.8358
	Prob.	0.9759 n0	0.0000 ***	0.9828 n0

Source: Eviews 13, processed by Author

The unit root test results in the table show that all three variables e.g. LNZN, CPI_RATE, and LNZN, are stationary at level, meaning they do not have a unit root. This is proven by the significantly low probability values ($p < 0.01$) in both the model with constant and the model with constant and trend. For example, under the "with constant" model, the t-statistics for LNZN, CPI_RATE, and LNZN are -4.5549, -6.0809, and -5.3085 respectively, all with p -values of 0.0000 or very close to it. However, under the model without constant and trend, LNZN and LNZN do not show significance, while CPI_RATE remains significant. These findings confirm that the variables are stationary in their level form, so no further differencing is needed, and the ARDL model can be applied without concerns of I(2) processes.

4.1.3. Cointegration test

Based on the finding, all of the data that included in this study shows that they are stationed at level. It is emphasized by the result of the unit root test that has been conducted in the previous chapter. Hence, if the data is stationary at the level I(0), there is no further examination for stationer trend in the long-run. Thus in this case, an OLS regression is acceptable and the cointegration will not be necessary for continuing an ARDL model (Emeka & Kelvin, 2016).

4.2 Estimation Model for Zakat Collection

4.2.1 Estimation Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LNZN(-1)	0.262068	0.148570	1.763938	0.0845
LNZN(-2)	0.247904	0.147049	1.685865	0.0987
CPI_RATE	0.654832	0.217875	3.005533	0.0043
C	12.00987	4.297069	2.794898	0.0076
R-squared	0.249504	Mean dependent var		24.75350

Adjusted R-squared	0.199471	S.D. dependent var	0.654625
S.E. of regression	0.585708	Akaike info criterion	1.846115
Sum squared resid	15.43740	Schwarz criterion	2.000550
Log likelihood	-41.22983	Hannan-Quinn criter.	1.904708
F-statistic	4.986792	Durbin-Watson stat	1.880812
Prob(F-statistic)	0.004520		

Source: Eviews 13, processed by Author

The ARDL(2,0) estimation results above examine the impact of inflation (CPI_RATE) on zakat collection (LNZC). The coefficient for CPI_RATE is 0.654832 and is statistically significant at the 1% level (p-value = 0.0043), indicating a strong and positive short-run effect of inflation on zakat collection by 0.65 point. Meanwhile, the lagged values of LNZC at lag 1 and lag 2 are not statistically significant, though their positive coefficients suggest some degree of inertia or persistence in zakat collection behavior. The model has an R-squared of 0.2495, meaning about 25% of the variation in zakat collection is explained by the model. The overall model is statistically significant as shown by the F-statistic (4.986792, p = 0.0045). The Durbin-Watson stat is 1.88, which is close to 2, suggesting no serious autocorrelation issue. These findings support that inflation plays a significant role in influencing zakat collection performance in the short run. The study also provides a formulation of the model which can be seen as follows:

$$LNZC_t = 12.0099 + 0.262068 LNZC_{t-1} + 0.247904 LNZC_{t-2} + 0.654832 CPI\ rate + \varepsilon_t$$

4.2.2 Error Correction Model (ECM)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
COINTEQ*	-0.490027	0.103679	-4.726409	0.0000
D(LNZC(-1))	-0.247904	0.125284	-1.978733	0.0537

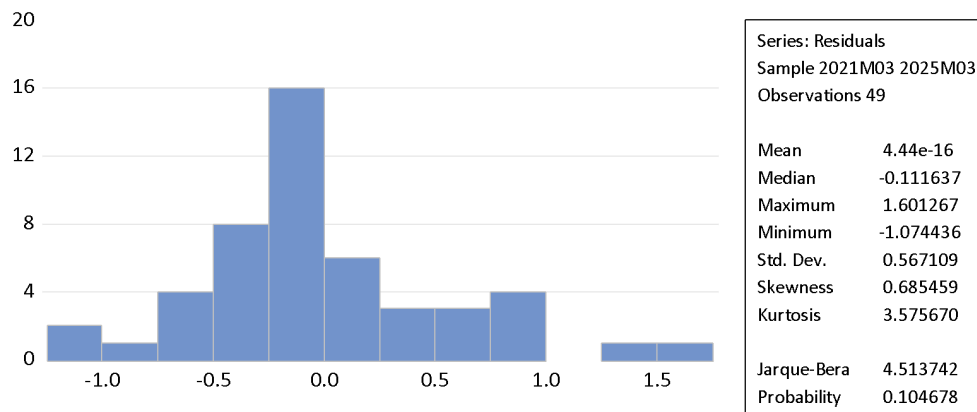
R-squared	0.443835	Mean dependent var	0.056092
Adjusted R-squared	0.432001	S.D. dependent var	0.760439
S.E. of regression	0.573110	Akaike info criterion	1.764483
Sum squared resid	15.43740	Schwarz criterion	1.841700
Log likelihood	-41.22983	Hannan-Quinn criter.	1.793779
F-statistic	37.50724	Durbin-Watson stat	1.880812
Prob(F-statistic)	0.000000		

Source: Eviews 13, processed by Author

The table shows the Error Correction Model (ECM) results for zakat collection (LNZC). The coefficient of the error correction term (COINTEQ*) is -0.490027 and is highly significant (p = 0.0000), indicating that about 49% of the imbalance from the previous period is corrected in the current period. This suggests that a long-run relationship exists between inflation and zakat collection. The coefficient of the first differenced zakat collection variable D(LNZC(-1)) is -0.247904 with a p-value of 0.0537, showing a weak short-run negative effect. The model has decent explanatory power with an R-squared of 0.4438, and the F-statistic of 37.51 (p = 0.0000) indicates that the model is overall statistically significant. The Durbin-Watson statistic of 1.88 suggests there is no serious autocorrelation problem. Overall, the findings support both short-run dynamics and a stable long-run relationship.

4.2.3 Classic Assumption Test for the Model

a. Normality Test



Source: Eviews 13, processed by Author

The histogram of residuals and the accompanying statistics indicate that the residuals are approximately normally distributed. The Jarque-Bera test value is 4.51 with a probability of 0.1047, which is above the 5% significance level. This means we fail to reject the null hypothesis of normality, suggesting that the residuals are normally distributed. The skewness (0.69) and kurtosis (3.58) are also within acceptable ranges, supporting the assumption of normality. Overall, this suggests that the normality assumption in the classical linear regression model is satisfied.

b. Heteroscedasticity Test

Heteroscedasticity Test: White			
F-statistic	1.519658	Prob. F(9,39)	0.1753
Obs*R-squared	12.72225	Prob. Chi-Square(9)	0.1756
Scaled explained SS	13.81838	Prob. Chi-Square(9)	0.1289

Source: Eviews 13, processed by Author

The results of the White heteroscedasticity test show that all probability values are above the 5% significance level (Prob. F = 0.1753, Prob. Chi-Square = 0.1756 and 0.1289). This means we fail to reject the null hypothesis of homoscedasticity, indicating that there is no significant evidence of heteroscedasticity in the model. In other words, the variance of the residuals is constant, which supports one of the key assumptions of classical regression.

c. Serial Correlation LM Test

Breusch-Godfrey Serial Correlation LM Test			
F-statistic	0.360545	Prob. F(2,43)	0.6994
Obs*R-squared	0.808154	Prob. Chi-Square(2)	0.6676

Source: Eviews 13, processed by Author

The results of the Breusch-Godfrey Serial Correlation LM Test show that both probability values are greater than 0.05 (Prob. F = 0.6994 and Prob. Chi-Square = 0.6676). This means we fail to reject the null hypothesis, which states that there is no serial correlation in the residuals. Therefore, we can conclude that the model is free from serial correlation problems, supporting the validity of the regression results.

4.3 Estimation Model for Zakat Distribution

4.3.1 Estimation Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNZD(-1)	0.086086	0.147228	0.584714	0.5621
LNZD(-2)	0.162941	0.152346	1.069545	0.2914
LNZD(-3)	-0.033693	0.137709	-0.244667	0.8080
LNZD(-4)	0.252453	0.125319	2.014484	0.0509
CPI_RATE	0.650847	0.195069	3.336499	0.0019
CPI_RATE(-1)	-0.163759	0.241929	-0.676891	0.5025
CPI_RATE(-2)	-0.468314	0.248321	-1.885924	0.0668
C	13.09785	4.636545	2.824916	0.0074
R-squared	0.410085	Mean dependent var		24.53430
Adjusted R-squared	0.304203	S.D. dependent var		0.590932
S.E. of regression	0.492922	Akaike info criterion		1.576910
Sum squared resid	9.475929	Schwarz criterion		1.891828
Log likelihood	-29.05738	Hannan-Quinn criter.		1.695416
F-statistic	3.873034	Durbin-Watson stat		2.189325
Prob(F-statistic)	0.002727			

Source: Eviews 13, processed by Author

The estimation results for the ARDL model on zakat distribution (LNZD) show that out of the lagged values of LNZD, only LNZD(-4) is significant at the 10% level ($p = 0.0509$), indicating a weak short-term inertia effect. CPI_RATE is highly significant ($p = 0.0019$), suggesting that the current inflation rate has a strong and positive influence on zakat distribution by 0.65 point. CPI_RATE(-2) is marginally significant at the 10% level ($p = 0.0668$), while other lags are not statistically significant. The overall model fit is moderate, with an R-squared of 0.41 and a statistically significant F-statistic ($p = 0.002727$), indicating that the explanatory variables jointly affect zakat distribution. The Durbin-Watson statistic of 2.18 suggests no serious autocorrelation problem in the residuals. The following are the results of the model estimation from the table above.

$$LnZD_t = 13.09785 + 0.086086 LnZD_{t-1} + 0.162941 LnZD_{t-2} - 0.033693 LnZD_{t-3} + 0.252453 LnZD_{t-4} + 0.650847 CPI_RATE_t - 0.163759 CPI_RATE_{t-1} - 0.468314 CPI_RATE_{t-2} + e_t$$

Variable	Coefficient	Std. Error	t-Statistic	Prob.
COINTEQ*	-0.532213	0.168543	-3.157730	0.0030
D(LNZD(-1))	-0.381701	0.157886	-2.417573	0.0202
D(LNZD(-2))	-0.218760	0.145965	-1.498722	0.1416
D(LNZD(-3))	-0.252453	0.119463	-2.113227	0.0407
D(CPI_RATE)	0.650847	0.159171	4.088977	0.0002
D(CPI_RATE(-1))	0.468314	0.200594	2.334639	0.0245
R-squared	0.664940	Mean dependent var		0.053728
Adjusted R-squared	0.624079	S.D. dependent var		0.784098
S.E. of regression	0.480750	Akaike info criterion		1.491803
Sum squared resid	9.475929	Schwarz criterion		1.727992
Log likelihood	-29.05738	Hannan-Quinn criter.		1.580683

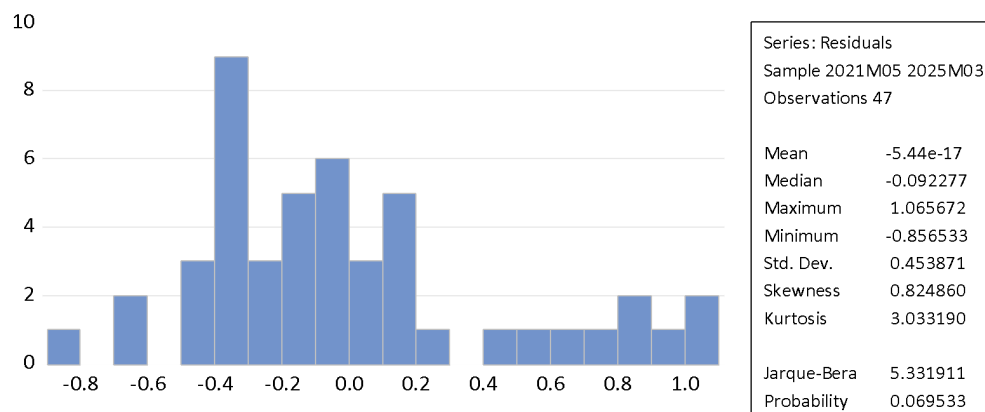
Source: Eviews 13, processed by Author

4.3.2 Error Correction Model

The results of the Error Correction Model (ECM) for zakat distribution indicate a significant long-run adjustment process, as shown by the negative and statistically significant error correction term (COINTEQ) with a coefficient of -0.53 ($p = 0.0030$). This means that about 53% of the disequilibrium from the previous period is corrected in the current period. In the short run, the first lag of zakat distribution ($D(LNZD(-1))$) and CPI_RATE are both statistically significant, with inflation having a strong positive influence on zakat distribution. Additionally, the first lag of CPI_RATE ($D(CPI_RATE(-1))$) also shows a significant positive impact ($p = 0.0245$). The model has a high explanatory power with an R-squared of 0.66 and a significant F-statistic ($p = 0.000000$), suggesting the model is reliable. The Durbin-Watson stat (2.19) confirms that there is no issue of serious autocorrelation.

4.3.3 Classic Assumption Test for the Model

a. Normality Test



Source: Eviews 13, processed by Author

The normality test result shown in the histogram above indicates that the residuals are approximately normally distributed. The Jarque-Bera statistic is 5.33 with a probability value of 0.0695, which is greater than the 0.05 significance level. This means we do not reject the null hypothesis of normal distribution. The residuals have a mean close to zero, slight positive skewness (0.82), and a kurtosis value of 3.03, suggesting the data is fairly symmetric and not overly peaked. Overall, the model's residuals pass the normality assumption.

b. Heteroscedasticity Test

Heteroskedasticity Test: White

F-statistic	0.787382	Prob. F(35,11)	0.7185
Obs*R-squared	33.59175	Prob. Chi-Square(35)	0.5361
Scaled explained SS	23.51333	Prob. Chi-Square(35)	0.9304

Source: Eviews 13, processed by Author

The White heteroscedasticity test results indicate that the model does not suffer from heteroscedasticity problems. All probability values from the test (0.7185 for the F-statistic, 0.5361 for Obs*R-squared, and 0.9304 for the Scaled explained SS) are greater than the 0.05 significance level. This means we fail to reject the null hypothesis of homoscedasticity, suggesting the residual variance is constant across observations. Hence, the model passes the heteroscedasticity assumption.

c. Serial Correlation LM Test

Breusch-Godfrey Serial Correlation LM Test

F-statistic	1.012163	Prob. F(2,37)	0.3733
Obs*R-squared	2.438051	Prob. Chi-Square(2)	0.2955

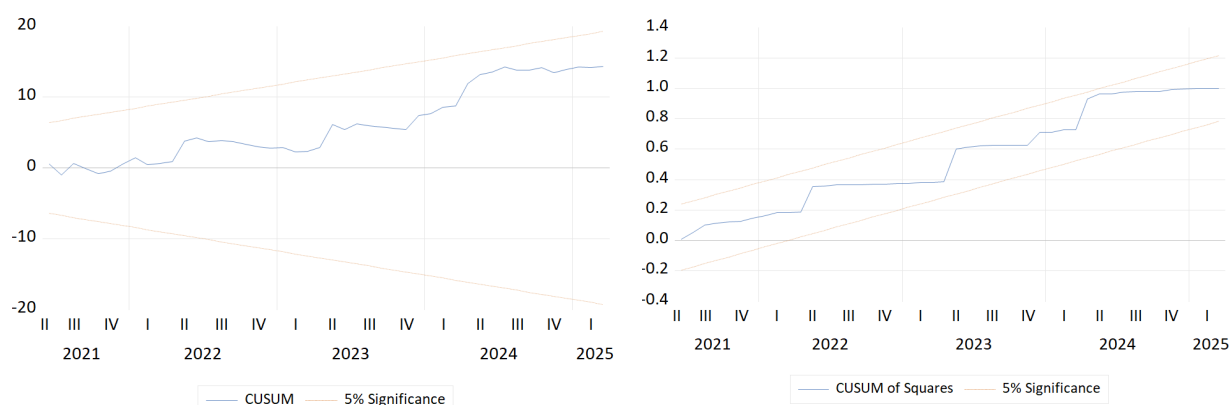
Source: Eviews 13, processed by Author

The Breusch-Godfrey Serial Correlation LM Test results show that there is no indication of serial correlation in the model. Both the probability values for the F-statistic (0.3733) and Obs*R-squared (0.2955) are greater than the 0.05 significance level. This means we fail to reject the null hypothesis of no serial correlation, suggesting that the residuals are not autocorrelated and the model satisfies this assumption.

4.4 Model Stability Test (CUSUM & CUSUM of Squares)

4.4.1. Stability Test for Zakat Collection Model

Figure 3. Stability Test For Zakat Collection Model



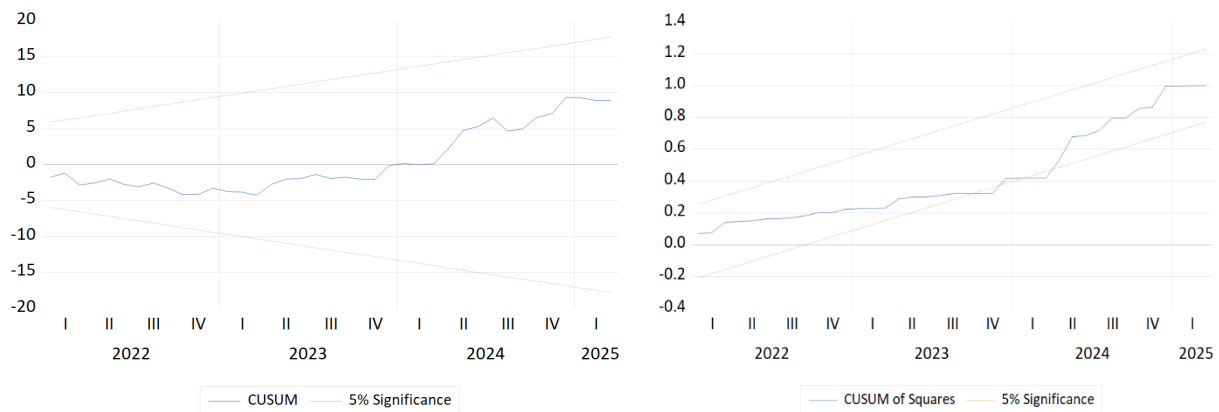
Source: Eviews 13, processed by Author

Figure 3 displays the results of the stability test for the zakat collection model using both the CUSUM and CUSUM of Squares tests. The CUSUM line remains within the 5% significance bounds

throughout the period, indicating that the model parameters are stable over time. Similarly, the CUSUM of Squares graph also shows that the line stays well within the critical boundaries, confirming that there is no structural instability. Therefore, the zakat collection model can be considered stable for the period from 2021 to early 2025

4.4.2. Stability Test for Zakat Distribution Model

Figure 4. Stability Test For Zakat Distribution Model



Source: Eviews 13, processed by Author

Figure 4 shows the results of the stability test for the zakat distribution model using the CUSUM and CUSUM of Squares methods. From the graphs, it can be seen that both lines stay within the 5% significance bounds throughout the observed period. This indicates that the parameters of the zakat distribution model are stable and consistent over time, with no sign of structural breaks or changes between 2022 and early 2025. Thus, the model is considered reliable for explaining zakat distribution behavior during this period.

The results of this study show that inflation, measured by the Consumer Price Index (CPI), has a significant and positive impact on zakat collection, both in the short-run and long-run. This finding supports the study by Kafabih (2024), who also found that inflation positively affects zakat collection in Indonesia using the ARDL approach. The positive relationship suggests that during inflationary periods, the nominal income or profits may increase, which can lead to higher zakat obligations.

However, the result contrasts with the findings of Irawan (2022), who discovered a negative relationship between inflation and zakat collection in BAZNAS. This difference could be due to the institutional scope, while Irawan focuses on one institution, this study observes national-level data, and possibly due to different macroeconomic contexts.

The result is also partly in line with Almeyda & Rusgianto (2023), who found that, among several macroeconomic factors, only GDP and domestic investment significantly affect zakat collection. Inflation, in their study, was not significant in partial analysis. Similarly, Islamiyati & Hany (2021) found that inflation does not have a significant relationship with zakat collection, though they did use ARDL as well. This shows that the influence of inflation may differ depending on the time frame, model specification, and observed institutional coverage.

In terms of short-run behavior, this study found that previous zakat collection (lagged values) also affects the current zakat collection performance, which aligns with the idea that zakat behavior may have inertia or path dependency. This is consistent with Monalisa (2022), who used the ECM model and found that inflation significantly influences zakat collection in the long-run, but not in the

short-run. Similarly, Novitasari and Rosyidi (2019) found that money circulation, one of the monetary variables, does not affect zakat collection, which supports the idea that short-term influences may be less strong or delayed.

Moreover, the contribution of this study lies in its attempt to not only analyze zakat collection, but also zakat distribution behavior. While many previous studies focused on zakat collection alone, this study broadens the scope by evaluating how macroeconomic variables like inflation also influence zakat distribution. This fills the gap mentioned in several earlier works, which did not investigate the relationship between macroeconomic factors and zakat distribution outcomes.

In addition, the finding that CPI significantly affects zakat distribution, especially in the short-run, shows that inflation may increase the urgency of zakat disbursement, perhaps due to rising living costs of mustahik. This finding extends the insights of previous researchers such as Munandar & Amirullah (2021), who focused more on the real sector's shocks in relation to zakat collection, without considering how these shocks translate to distribution behavior.

In conclusion, while earlier studies have provided valuable findings on the determinants of zakat collection, this study contributes new insights by examining both collection and distribution dynamics under macroeconomic changes, especially inflation. This broader approach could help zakat institutions to better plan their collection and distribution strategies during times of economic instability.

V. CONCLUSION AND RECOMMENDATION

This study aimed to explore the relationship between inflation (as represented by the Consumer Price Index) and the performance of zakat institutions, both in terms of zakat collection and zakat distribution in Indonesia. Using the ARDL and ECM models with monthly time series data from 2021 to 2025, the research found that inflation has a significant impact on zakat collection in both the short-run and long-run. It also found a short-term and long-term influence of inflation on zakat distribution.

The results show that as inflation rises, zakat collection also tends to increase, possibly due to higher nominal income, prices, or increased awareness during economic challenges. Meanwhile, the effect on zakat distribution suggests that inflation may push institutions to respond more quickly to the needs of beneficiaries (mustahik), whose purchasing power is affected by the rising cost of living. Compared to earlier studies, this research adds value by not only focusing on zakat collection but also including zakat distribution, which has rarely been analyzed. While some previous studies show different findings regarding the role of inflation, this study supports the view that inflation can have a meaningful effect, especially when both collection and distribution are considered together.

Zakat institutions should regularly monitor macroeconomic indicators like inflation to improve their planning and response strategies. In times of high inflation, proactive distribution strategies are needed to help mustahik maintain their basic needs. Moreover, government and regulators can support zakat management by creating macroeconomic policies that align with social protection goals. Policies that encourage zakat contributions during economic uncertainty may enhance zakat's role in poverty reduction. Furthermore, future studies could expand the analysis by including more macroeconomic variables (e.g., GDP, unemployment rate) and using a longer time frame. Moreover, qualitative research with zakat beneficiaries could help understand how inflation truly affects their livelihoods and how zakat helps them in facing economic hardships.

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