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The Effect Of Foreign Debt, Gold Prices And Interest Rates On Economic Growth In Indonesia In 2005-2024: The Islamic Economic Perspective

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Abstract

Purpose: This study aims to analyze the effect of foreign debt, gold prices, and interest rates on economic growth in Indonesia in the period 2005-2024, both from the conventional side and its suitability in the perspective of Islamic economics. **Methodology:** This study uses a quantitative approach with secondary time series data, where the Applied Analysis techniques are Vector Error Correction Model (VECM) to identify short-term and long-term relationships, and reinforced with Granger causality test, Impulse Response Function (IRF), and Forecast Error Variance Decomposition (FEVD). **Findings:** The results of Vector Error Correction Model (VECM) estimation showed that in the short term, foreign debt, gold price, and interest rate had no significant effect on Indonesia's economic growth and did not have a two-way causality relationship based on the Granger test. However, the Johansen cointegration test showed a long-term equilibrium relationship between variables. In the long term, gold prices have a positive and significant effect, interest rates have a negative and significant effect, while foreign debt has a positive but insignificant effect on Indonesia's economic growth. FEVD analysis shows that fluctuations in economic growth in the long term are still dominated by the variable shock itself (self-shock). The novelty of this study lies in the use of up-to-date empirical data coverage until 2024 that successfully captures the dynamics and recovery of the post-pandemic economy, as well as the integration of VECM econometric analysis with critical evaluation of the achievement *of falah* (ultimate welfare) and distributive justice in Islamic economics.

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A. Introduction

Economic growth is a key indicator that reflects the success of national development, because it shows an increase in the production capacity of a country in a sustainable manner and the ability to improve the welfare of society (Putra, 2018). In modern neoclassical economic growth theory in Indonesia, increased domestic and foreign investment and efficient use of capital are the main factors that determine long-term economic growth. This theory explains that high domestic savings and productive investment will increase capital accumulation, which further enlarges a country's production capacity. Macroeconomic factors such as interest rates and the price stability of assets, including gold, also play a role in determining investment efficiency, as they both affect the cost of capital and investor confidence in the market. Thus, a balance between savings, investment, and monetary policy is key in maintaining sustainable economic growth (Tarasov & Tarasova, 2019).

The development of Indonesia's economic growth throughout 2005-2024 shows that conditions change from time to time. Central Statistics Agency Data shows that before the Covid-19 pandemic, Indonesia's economic growth rate was relatively stable at around 5%. However, in 2020 the economy experienced a sharp decline to reach -2.07% because of the pandemic, before finally recovering in the following years. In the same period, the value of Indonesia's foreign debt continued to increase, from USD 134.5 billion in 2005 to USD 425.1 billion in 2024. In addition, gold prices also experienced a considerable surge, from Rp451.37 thousand to Rp2, 419.67 thousand. Meanwhile, interest rates show movements that are unstable or tend to fluctuate. Changes in various macroeconomic indicators indicate a linkage that has the potential to affect Indonesia's economic growth conditions.

Table 1. Descriptive Data of each variable

Year	Economic Growth (%)	External Debt (USD billion)	Gold Price (Rupiah)	Interest Rate (%)
2005	5,60	134,504	451,37	12,75
2006	5,5	132,633	619,04	9,75
2007	6,3	141,180	711,18	8,00
2008	6,1	155,080	880,80	9,25
2009	4,5	172,871	986,03	6,50
2010	6,1	202,413	1.238,98	6,50
2011	6,5	225,375	1.575,65	6,00
2012	6,23	252,364	1.678,32	5,75
2013	5,78	266,109	1.394,76	5,04
2014	5.02	293,328	1.251,84	5,66
2015	4,88	310,730	1.307,80	7,50
2016	5,02	316,407	1.249,97	6,00
2017	5,07	352,2	1.269,95	4,56
2018	5,17	376,8	1.268,79	5,10
2019	5,02	404,3	1.408,42	5,62
2020	,07	417,5	1.784,46	4,25
2021	3,69	415,1	1.793,38	3,52
2022	5,31	396,84	1.806,97	4,14
2023	5,04	392,2	1.976,17	6,00
2024	2,03	425,1	2.419,67	6,62

The data table shows that an increase in external debt is not always followed by an increase in economic growth. For example, in 2020 external debt increased to USD 417.5 billion, but economic growth contracted. A similar phenomenon is also seen in the

movement of gold prices and interest rates that do not always show a consistent relationship to economic growth. This indicates that the relationship between foreign debt, gold prices, and interest rates on economic growth is still an interesting empirical issue to be investigated further.

Various macroeconomic factors, especially the external sector and monetary policy, affect a country'S economic growth (P. & C., 2012). In this study, these factors are represented through external debt variables, gold prices, and interest rates. External debt is used as a source of development financing when domestic savings are insufficient, but an increase in debt that is not effectively managed can create fiscal pressure and inhibit economic growth (Papilaya, 2024). In addition, the price of gold serves as a safe haven asset that is sensitive to inflation and global economic uncertainty so that it can affect economic stability and investment decisions (Chirwa & Odhiambo, 2020). Meanwhile, the interest rate becomes a monetary instrument that affects consumption, savings and investment in the national economy (Kim, 2024).

Foreign debt is one of the sources of development financing used by developing countries when domestic savings have not been able to meet national investment needs (Putra, 2018). In the Harrod-Domar theory, external debt can promote economic growth if it is used productively to increase production capacity. However, debt that is not managed efficiently has the potential to create fiscal burdens and hinder economic growth (Mankiw, 2010).

In addition to external debt, the price of gold is also an important indicator of economic stability. Gold is known as a safe haven asset that is able to protect the value of wealth when there is inflation, exchange rate depreciation, and global economic uncertainty (Beny et al., 2020). Rising gold prices often reflect increasing economic uncertainty, which can affect people's investment behavior and national economic stability. Meanwhile, the interest rate is a monetary policy instrument used to control inflation and economic activity. Changes in interest rates affect borrowing costs and investment decisions. High interest rates tend to suppress investment and consumption, while low interest rates can encourage economic activity and national output growth (Samuel Richard et al., 2019).

In the Islamic economic perspective, economic growth should not only be measured by an increase in output, but should also reflect the fairness of distribution and blessing. The ideal economic growth is growth supported by the real sector and asset value stability. n this context, gold is considered to have a stable intrinsic value so that it can maintain people's purchasing power and reduce economic distortions due to inflation and currency depreciation (Imam, 2020). Therefore, economic stability based on real assets is considered more in accordance with Sharia principles than speculative growth.

Previous studies have shown different results. Research (Mariska Ishak et al., 2016) and (Aura & Tri, 2024) found that foreign debt has a positive effect on Indonesia's economic growth. In contrast, research (Adeteji et al., 2023) shows that foreign debt can actually put pressure on macroeconomic stability if it is not managed properly. In the gold price variable, (Kusnadi & Saragih, 2020) found a positive influence of gold prices on Indonesia's economic growth, while (Khan, 2015) stated that gold prices had no significant effect on economic growth. Differences in research results also occur in variable interest rates. (Fahrika, 2016) find the positive influence of interest rates on economic growth, while (Aizenman et al., 2016) indicates that interest rates can negatively affect economic activity under certain conditions. Economic growth is not only oriented to create an increase in production to improve welfare but also aimed at distributive justice. Justice is done by imposing goodness for every human being in any condition whose purpose is the opportunity for all members of society to obtain sufficiency and ensure the rotation of the wheels of the economy can be enjoyed by all levels of society without exception (Nurul, 2015).

Differences in the results of the study indicate a research gap on the influence of foreign debt, gold prices, and interest rates on economic growth. In addition, most previous studies have only focused on one or two specific variables and not many have examined all three variables simultaneously in the perspective of Islamic economics. Therefore, this study has the novelty of combining the variables of foreign debt, gold prices, and interest rates in one research model to analyze its effect on Indonesia's economic growth using data from the period 2005-2024 and examined in the perspective of Islamic economics.

The selection of the period 2005-2024 was based on the consideration that the period describes various important economic dynamics in Indonesia, ranging from the impact of the 2008 global financial crisis, post-crisis economic stabilization, the Covid-19 pandemic in 2020, to the recovery phase of the national economy after the pandemic. In addition, the time range provides an adequate amount of time series data to look at the short-term and long-term relationships between research variables more comprehensively. Thus, this study aims to analyze the influence of foreign debt, gold prices, and interest rates on Indonesia's economic growth in the period 2005-2024. This research is expected to provide academic contribution in the development of macroeconomic studies and Islamic economics, as well as being a consideration for the government in formulating effective and sustainable economic policies.

B. Method

This study uses a quantitative approach, which is a research method that focuses on processing data in the form of numbers and analyzed statistically to test hypotheses that have been established. The population in this study is all Indonesian macroeconomic data relating to foreign debt, gold prices, interest rates, and economic growth. The research sample is in the form of annual Time series data for the period 2005-2024. The Data used is secondary data obtained from official institutions, such as the Central Statistics Agency (BPS), Bank Indonesia (BI), The Ministry of Finance of the Republic of Indonesia, as well as the website Investing.com as a source of support. To give a clear limitation to the variables used in the study, the operational definition of variables is presented in the following table:

Table 2. Operational Definition

No	Variable	Operational Definition	Indicator / Measurement Method	Unit	Data Source
1	Economic growth (Y)	Economic growth is an increase in the ability to produce goods and services in a country in a certain period as measured by the growth of real Gross Domestic Product (GDP).	Percentage growth of Indonesia's real GDP based on the previous year's constant prices.	Percent (%)	Central Bureau of Statistics (BPS)
2	Foreign debt (X1)	Total liabilities of the Indonesian government and private sector to foreign parties that	Indonesia's total external debt at the end of the year.	Billion USD	Bank Indonesia (BI) and the Ministry of Finance of the

		must be repaid within a certain period.			Republic of Indonesia
3	Gold price (X2)	The selling value of World Gold used as an indicator of haven assets and economic stability.	Annual gold price (average closing price) in rupiah per gram.	Rupiah/Gram	Investing and other sources of support
4	Interest rate (X3)	the reference interest rate set by Bank Indonesia as a policy instrument moneter.	BI rate or BI 7-Day Reverse Repo Rate at the end of the year.	Percent (%)	Bank of Indonesia (BI)

The data analysis technique used in this study is Vector Error Correction Model (VECM). Using 8 steps, namely Test Data Analysis, Optimum Lag length test, VAR model stability test, integration test, Granger Cause Analysis, Vector error correction model estimation Model (VECM), impulse response function analysis (IRF), and analysis of error variant decomposition forecast (FEVD) (Juanda & Junaidi, 2011).

C. Results and Discussion

1. Results

Stationary Test Results

In time series analysis, the assumption of stationarity is very important because it reflects the equilibrium condition of the data, where the average value and its variance are relatively constant over time. A data is said to be stationary when it does not show a systematic upward or downward trend but rather fluctuates around a stable average value. Stability testing can be done through several approaches, such as time series plots, ACF and PACF plots, and unit root tests. In this study, the stationarity test was conducted using augmented Dickey-Fuller (ADF) method with a significance level of 5% (α = 0,05), where the data is declared stationary if the probability value (p-value) is smaller than the significance level (Juanda & Junaidi, 2011).

Table 3. ADF stationarity test results on 1st Difference

Variable	Level 1 T-Stasistic	Prob
Economic growth	-5.079605	0.0008
External debt	-7.657506	0.0000
Gold price	-5.524257	0.0003
Interest rate	- 7.032613	0.0000

Based on the results of the stationarity test using augmented Dickey-Fuller (ADF) method at the level level, it was obtained that the economic growth variable has a statistical t-value of -5.079605 with a probability of 0.0008. Furthermore, the external debt variable has a T-statistic value of -7.657506 with a probability of 0.0000, the gold price variable of -5.524257 with a probability of 0.0003, and the interest rate variable of -7.032613 with a probability of 0.0000. All these probability values are smaller than the 5% significance level (α =0.05), and the T-statistic value of each variable is greater in absolute terms than the critical value at the 5% significance level.

These results show that all variables in this study have been stationary at the level of the level without the need for further differentiation. Thus, the data used has fulfilled the assumption of stationarity, so it is feasible to proceed to the next stage of analysis, namely

cointegration testing and estimation of Vector Error Correction Model (VECM) to analyze short-term and long-term relationships between variables.

Optimum Lag Length Test

Determination of lag length in Vector Error Correction Model (VECM) is an important step that aims to obtain optimal parameter estimation and avoid autocorrelation problems in the model. Determination of optimal lag in this study was carried out by referring to several information criteria, namely Akaike Information Criterion (AIC), Schwarz Information Criterion (SIC/SC), and Hannan-Quinn Information Criterion (HQ). In general, the optimal lag is chosen based on the smallest value of each of these criteria, since it indicates the model that is most efficient in explaining the data (Juanda & Junaidi, 2011).

Table 4. Optimal Lag Test Results

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-735.6936	NA	5.81e+30	82.18818	82.38604*	82.21546
1	-716.1771	28.19046*	4.17e+30*	81.79746*	82.78676	81.93387*
2	-704.3538	11.82331	9.27e+30	82.26153	84.04228	82.50708

Based on the results of the optimum lag test, it was obtained that the smallest AIC, FPE, and HQ values were at the 1st lag, respectively at 81.79746, 4.17 e+30, and 81.93387. In addition, the highest Likelihood Ratio (LR) value is also found inthe 1st lag of 28.19046, which indicates that the addition of lag in the model provides a significant improvement in the lag. Meanwhile, the smallest value of Schwarz Criterion (SC) is at lag 0 which is equal to 82.38604, but other criteria do not support the selection of the lag. Thus, based on many criteria used, namely AIC, FPE, HQ, and LR, the optimal lag selected in this study is the 1st lag. Lag selection is expected to produce an optimal and stable model, so it can be used for advanced analysis in the framework of Vector Error Correction Model (VECM).

VAR Model Stability Test

Testing the stability of the model is an important stage in the analysis of Vector Autoregression (VAR) and Vector Error Correction Model (VECM) to ensure that the estimated model is in a stable condition and is suitable for further analysis. Stability test is done by looking at the roots of the characteristic polynomial function (characteristic roots). A model is said to be stable if all roots have a modulus value (absolute value) less than one (|root / < 1) or are in the unit circle (Juanda & Junaidi, 2011).

Table 5. VAR model stability test results

Root	Modulus
-0.451971 - 0.072783i	0.457794
-0.451971 + 0.072783i	0.457794
-0.279087 - 0.223391i	0.357481
-0.279087 + 0.223391i	0.357481
No root lies outside the unit circle VAR satisfies the stability condition	

Based on the results of stability testing, it was obtained that the entire value of the modulus of the roots of the polynomial is below one, which is respectively equal to 0.457794 and 0.357481. Those values come from complex root pairs, but they all still qualify |root| < 1. In addition, the test results also show that there are no roots that are outside the unit. Thus, it can be concluded that the VAR model in this study has met the stability conditions. This shows that the model used is good and feasible for further

analysis. Therefore, the model can be continued to the next stage, namely the analysis of Impulse Response Function (IRF) and Forecast Error Variance Decomposition (FEVD) to see the dynamics of the relationship between variables in the short and long term.

Cointegration Test

Cointegration test in this study was conducted using the Johansen method to determine the long-term relationship between variables in the model. Measurement of integration is done on the comparison between the value of the trace statistic with the value of the critical value at a significance level of 5% (α = 0.05). If the value of the trace statistic is greater than the critical value, then the null hypothesis (Ho) is accepted, which means that there is a cointegration relationship between variables, while if the value of the trace statistic is smaller than the critical value, an alternative hypothesis (Ha) is accepted, which indicates that there is no cointegration (Juanda & Junaidi, 2011).

Table 6. Cointegration Test Results

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.838374	62.52879	47.85613	0.0012
At most 1 *	0.565348	31.54680	29.79707	0.0311
At most 2 *	0.433365	17.38225	15.49471	0.0257
At most 3 *	0.365200	7.725567	3.841465	0.0054

Based on the results of Johansen's cointegration test, it is known that in the nonhypothesis the trace statistic value of 62.52879 is greater than the critical value of 47.85613 with a probability of 0.0012. Furthermore, the at most 1 hypothesis obtained a trace statistic value of 31.54680 which is also greater than the critical value of 29.79707 with a probability of 0.0311. In hypothesis at most 2, The trace statistic value of 17.38225 is greater than the critical value of 15.49471 with a probability of 0.0257, and in hypothesis at most 3 The trace statistic value of 7.725567 is greater than the critical value of 3.841465 with a probability of 0.0054. The results show that all trace statistic values are greater than the critical value at 5% significance level and all probability values are smaller than 0.05. Thus, it can be concluded that there is cointegration at each level of the test, which indicates the existence of a long-term relationship between the variables in the model. Therefore, the model used in this study is the Vector Error Correction Model (VECM).

Granger Causality Test

Causality test in this study was conducted to determine the causal relationship between variables in the VECM model using Granger Causality method. Conceptually, a variable is said to have a causality relationship according to Granger if the past value (lag) of the variable can improve the predictive ability of other variables. This test is done by comparing the probability values (prob.) with a significance level of 5% (α =0.05). If the probability value is less than 0.05, there is a causality relationship, while if it is greater than 0.05, there is no causality relationship between the variables (Juanda & Junaidi, 2011).

Table 7. Granger Causality Test Results

Null Hypothesis:	Obs	F-Statistic	Prob.
Foreign Debt does not cause Economic Growth	18	0.88781	0.4351
Economic Growth does not Granger Cause External Debt		0.84723	0.4510
Gold price does not Granger Cause	18	0.79084	0.4741

Economic Growth			
Economic Growth does not Granger Cause Gold Price	18	0.05015	0.9513
Interest rates does not Granger Cause Economic Growth		0.05763	0.9442
Economic Growth does not Granger Cause Interest rates		0.36314	0.7023
Gold Price does not Granger Cause Foreign Debt	18	1.89891	0.1890
Foreign Debt does not Granger Cause Gold Price		1.87189	0.1930
Interest Rates does not Granger Cause Foreign Debt	18	0.55194	0.5888
Foreign Debt does not Granger Cause Interest Rates		0.69255	0.5178
Interest Rates does not Granger Cause Gold Price	18	0.70720	0.5110
Gold Price does not Granger Cause Imterest Rates		0.40259	0.6766

Based on the results of the Granger causality test, it is known that all pairs of variables in this study have a probability value greater than the significance level of 5% (α =0.05). In the relationship between external debt (external debt) and economic growth (PE), each has a probability value of 0.4351 and 0.4510, which indicates the absence of a two-way causality relationship. Furthermore, the relationship between the price of gold (HE) and economic growth (PE) also does not show causality, with probability values of 0.4741 and 0.9513. Similarly, the relationship between interest rates (TSB) and economic growth (PE), obtained probability values of 0.9442 and 0.7023, so there is no causal relationship.

On the relationship between other variables, such as between the price of gold (HE) and external debt (ULN), obtained probability values of 0.1890 and 0.1930 indicating the absence of two-way causality. Furthermore, the relationship between the interest rate (TSB) and external debt (ULN) also does not show a causal relationship with a probability value of 0.5888 and 0.5178. Similarly, the relationship between the interest rate (TSB) and the price of gold (HE), with probability values of 0.5110 and 0.6766 which are all greater than 0.05. Thus, it can be concluded that there is no causality relationship, either one-way or two-way, between all variables in this study. This shows that statistically, no variable significantly affects other variables in the short term based on the Granger causality test.

Vecm Estimation

Vector Error correction Model (VECM) is an econometric analysis model that aims to determine the long-term behavior of a long-term variable. By comparing the value of t-statistic with t-table, where if the value of t-statistic is greater than the value of t-table then there is an influence between variables (Juanda & Junaidi, 2011).

Table 8. Long-term VECM test results

Variable	Coefficient	T-Statistic	T-Table	Description
Dforeign debt	0.000402	0.46932	2.120	Not Significant

Dprice of gold	0.006508	-3.58957	2.120	Significant
Dthe level of interest rates	-0.340657	-7.67205	2.120	Significant

Based on the table of vecm estimation results in the long term, the external debt variable has a positive but insignificant effect on economic growth because the T-statistic value is smaller than the t-table of 0.46932 < 2.120. Furthermore, the gold price variable has a negative and significant effect on economic growth with a T-statistic value greater than the T-table of -3.58957 > 2.120. Then, the interest rate variable has a negative and significant effect on economic growth with a T-statistic value greater than the T-table of -7.67205 > 2.120.

Table 9. Short-Term Test Results

Variable	Coefficient	T-Statistic	T-Table	Description
Foreign debt	-0.000183	-0.24986	2.120	Not Significant
The price of gold	0.001124	0.41769	2.120	Not Significant
The level of interest rates	-0.015966	-0.17906	2.120	Not Significant

Based on the table of vecm estimation results in the short term, the external debt variable has a negative but insignificant effect on economic growth because the T-statistic value is smaller than the T-table of -0.24986 < 2.120. Furthermore, the gold price variable has a positive but insignificant effect on economic growth with a T-statistic value smaller than the T-table of 0.41769 < 2.120. Then, the interest rate variable has a negative but insignificant effect on economic growth with a T-statistic value smaller than the T-table of -0.17906 < 2.120.

Impulse Responses Function (IRF) Test

Impulse response Function (IRF) test aims to see the effect due to the shock or shock received by a variable from the variable itself or from other variables. The dynamic behavior of the VECM model can be seen through the response of each variable to shocks from other variables. Impulse response Function (IRF) gives an idea of how the response of a variable in the future if there is interference with other variables. Thus, it is possible to know the duration of the influence of the disturbance of one variable on another until the effect disappears or returns to the equilibrium point (Juanda & Junaidi, 2011).

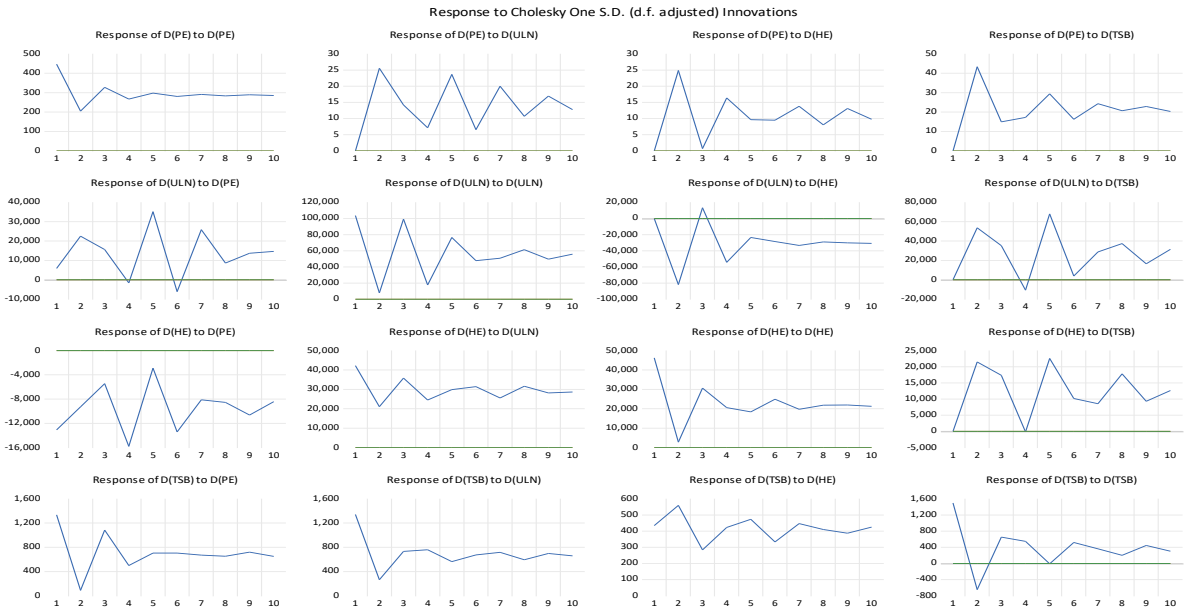

Figure 1. Impulse response Function (IRF) test results

a) Economic growth response (PE). The response of economic growth to the shock itself showed a very high positive value in the initial period, which amounted to 446.5421 in the first period, then decreased in the second period to 204.9107, and then fluctuated until the 10th period in the range of 280-326. This shows that the shock on economic growth responded positively but tended to decrease and stabilize in the medium term. PE response to external debt shocks (external debt) showed a positive and volatile pattern, with values ranging from 6.585241 to 25.58160, indicating that changes in external debt have a positive impact on PE. Meanwhile, the PE response to the gold price (HE) also tends to be positive even though it is relatively small and fluctuates, while the response to the interest rate (TSB) shows a fairly strong positive pattern, with the highest response value of 43.33400 in the second period, then fluctuates until the end of the period.

b) External debt (ULN)response. The external debt response to its own shocks showed a very large and positive value, especially in the first period of 103560.8, then fluctuated in subsequent periods, which indicates the effect of adjustment towards equilibrium. External debt response to economic growth (PE) tends to fluctuate with positive and negative values, which indicates that the influence of PE on external debt is unstable. The external debt response to the gold price (HE) tends to be negative in most periods, such as in the second period of -81983.95, which indicates that rising gold prices can reduce external debt. Meanwhile, the external debt response to the interest rate (TSB) showed a fluctuating pattern with a predominance of positive values, which means that changes tend to increase external debt.

c) Gold price response (HE). The response of the gold price to the shock itself showed a large and relatively stable positive value, as in the first period of 46268.72 and fluctuated in subsequent periods. The HE response to economic growth (PE) tends to be negative throughout the period, which indicates that an increase in PE is responded to by a decrease in gold prices. Meanwhile, HE's response to external debt (external debt) shows a positive pattern and is quite stable, which means external debt has a positive impact on gold prices. The He response to the interest rate (TSB) tends to fluctuate, with positive and negative values, thus showing an

inconsistent influence.

d) Interest rate response (TSB). The response to the shock itself showed a fluctuating pattern, with positive values in most periods, although it was negative in the second period. The response to economic growth (PE) tends to be positive and stable after the initial period, which indicates that an increase in PE will be responded to by an increase in TSB. Furthermore, the response to external debt (external debt) showed a positive and relatively stable pattern throughout the period, which means that external debt has a positive impact on the external debt. Meanwhile, the response to the gold price (HE) also showed a positive pattern that is quite consistent, so it can be concluded that changes in gold prices responded positively by interest rates. Overall, the results of IRF showed that the response between variables tends to fluctuate in the initial period and began to show a steady trend in subsequent periods. This indicates a process of adjustment towards long-term equilibrium in the VECM model.

Forecast Error Variance Decomposition (FEVD) Test

Test Forecast Error Variance Decomposition (FEVD) aims to provide information about the proportion of the movement of the effect of shock on a variable to the shock of other variables in the current period and the period to come (Juanda & Junaidi, 2011).

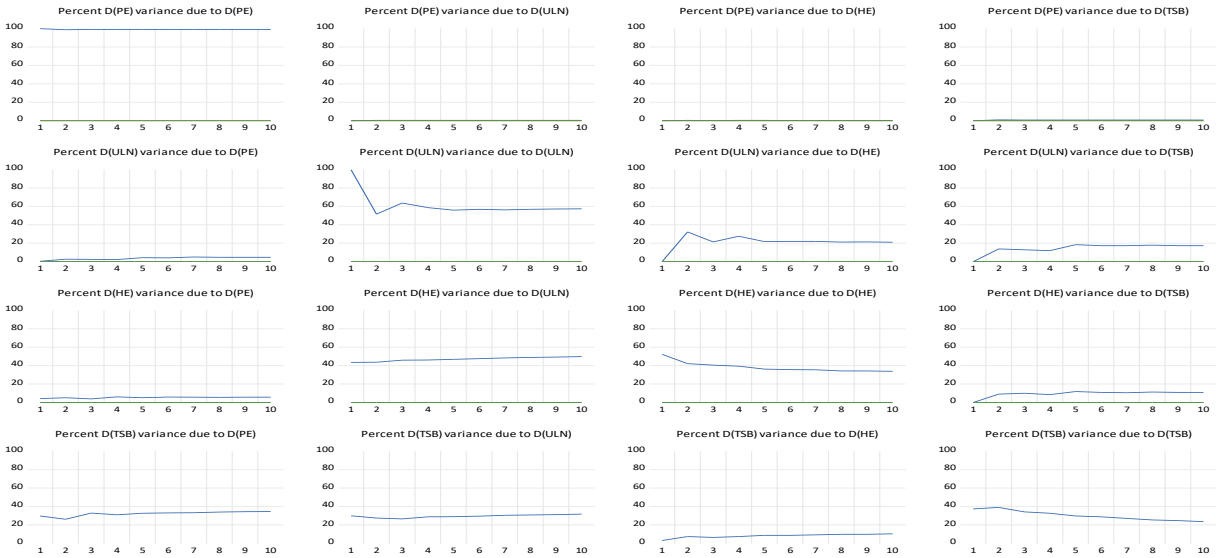

Figure 2. Test results (FEVD)

Based on the analysis of Forecast Error Variance Decomposition (FEVD), obtained an overview of the contribution of each variable in explaining the variation (fluctuation) of other variables in the short to long term as follows:

a) Variance Decomposition of Economic Growth (PE). In the initial period, the variation in economic growth was fully explained by the shock of the variable itself by 100%. However, over time until the 10th period, the contribution of itself is still very dominant at 98.96849%. Meanwhile, the contribution of other variables was relatively small, namely external debt (ULN) of 0.267121%, gold price (HE) of 0.172118%, and interest rate (TSB) of 0.592273%. This shows that in the long run, fluctuations in economic growth are more influenced by the shock itself than other variables.

b) Variance Decomposition of Foreign Debt (ULN). In the first period, the variation of external debt was dominated by itself by 99.68676%. But in the 10th period, the contribution decreased to 57.21334%. On the other hand, the contribution of other

variables began to increase, namely the gold price (HE) by 21.03052%, the interest rate (TSB) by 17.26904%, and economic growth (PE) by 4.487094%. This indicates that in the long run, external debt fluctuations are influenced not only by themselves, but also by other variables, especially gold prices and interest rates.

c) Variance Decomposition of Gold Price (HE). In the initial period, the variation in the price of gold was dominated by itself by 52.31767% and external debt by 43.50236%. However, in the 10th period, the contribution from itself decreased to 33.77881%, while the contribution from external debt increased to 49.75240%. In addition, the contribution of the interest rate amounted to 10.82709% and economic growth amounted to 5.641707%. This shows that in the long run, gold price fluctuations are more influenced by external debt than other variables.

d) Variance Decomposition of Interest Rate (TSB). In the first period, the variation of the interest rate was affected by itself by 37.32768%, external debt by 29.89706%, and economic growth by 29.64208%, while the contribution of the gold price was relatively small. However, in the 10th period, the contribution from itself decreased to 23.53608%. In contrast, the contribution from economic growth increased to 34.48535% and external debt to 31.71737%, as well as the price of gold by 10.26120%. This shows that in the long run, fluctuations in interest rates are more influenced by economic growth and external debt.

Overall, the FEVD results show that in the short term each variable tends to be dominated by its own shock. However, in the long run, the role of other variables began to increase in explaining the variation of each one, although with varying degrees of contribution. This indicates a dynamic relationship between variables in the VECM model.

2. Discussion

External Debt on Economic Growth

The results showed that foreign debt has a positive but insignificant effect on Indonesia's economic growth in the long term. This is indicated by the T-statistic value of 0.46932 which is smaller than the T-table of 2.120. Meanwhile, in the short-term external debt also does not show a significant effect on economic growth. These conditions indicate that foreign debt has not been the main factor that is able to drive Indonesia's economic growth optimally during the study period.

The positive effect shows that an increase in external debt tends to be followed by an increase in economic growth, although its contribution is relatively small. Theoretically, external debt can be an additional source of financing to increase national investment and production capacity as described in the Harrod-Domar theory. However, if the utilization is not fully directed to the productive sector, the impact on economic growth becomes less than optimal and has the potential to cause fiscal pressure in the long term (Mankiw, 2010).

In the current condition of Indonesia, the increase in foreign debt mainly occurs in the post-covid-19 pandemic period to support national economic recovery, state budget financing, infrastructure development, and maintain fiscal stability. Bank Indonesia noted that Indonesia's external debt position in 2024 is still used to support development financing and maintain national economic stability. These conditions indicate that foreign debt is still an important instrument in financing national development, but an increase in debt that is not balanced by real sector productivity has the potential to increase the country's economic burden in the long term (BI, 2024).

The results are in line with research (Adeteji et al., 2023) which states that external debt does not always have a significant effect on economic growth if it is not balanced by effective and productive fiscal management. In the Islamic economic perspective, debt is permissible if it is used for the benefit and productive activities that provide benefits to

society. However, Islam also emphasizes the principle of prudence and balance in debt management so as not to cause economic dependence and excessive burden in the future. (Siddiqi, 2006) explaining that financial management in Islamic economics should be directed to the creation of Justice, balance, and the welfare of society in a sustainable manner.

Gold Price on Economic Growth

The results showed that the price of gold has a positive and significant effect on Indonesia's economic growth in the long term. This is indicated by the T-statistic value of -3.58957 which is greater than the T-table of 2.120. Meanwhile, in the short term the price of gold does not show a significant effect on economic growth. This condition shows that the influence of gold prices on economic growth requires a long-term adjustment process.

A positive coefficient indicates that an increase in the price of gold is likely to be followed by an increase in economic growth. Theoretically, gold has a function as a haven asset that people use to maintain the value of wealth when there are inflation and global economic uncertainty. Therefore, gold price movements are often associated with economic stability and people's investment behavior (Beny et al., 2020).

In the global economic conditions of the 2020-2024 period, the increase in gold prices was influenced by rising global inflation, economic uncertainty after the Covid-19 pandemic, and international geopolitical tensions. This condition causes gold demand to increase as investors look for more stable investment instruments to maintain the value of their assets. This phenomenon strengthens the function of gold as a safe haven asset in maintaining economic stability and the value of community wealth (Chirwa & Odhiambo, 2020). The results of this study are in line with research that states that the price of gold has a positive relationship with economic growth in the long term.

In the Islamic economic perspective, gold is seen as a real asset that has intrinsic value and is relatively stable compared to fiat money. The use of gold as a guard of value instrument can protect people's purchasing power from inflation and currency depreciation to support national economic stability. This is in line with the view (Imam, 2020) who explained that gold has an important role in maintaining economic value stability and supporting economic growth based on real assets in the Sharia perspective.

Interest rates on Economic Growth

The results showed that interest rates have a negative and significant effect on Indonesia's economic growth in the long term. This is indicated by the T-statistic value of -7.67205 which is larger than the T-table of 2.120. Meanwhile, in the short-term interest rates do not show a significant effect on economic growth. Negative influences indicate that rising interest rates tend to lower economic growth. High interest rates will increase borrowing costs so that people and businesses tend to reduce consumption and investment. These conditions can ultimately suppress production activity and slow national economic growth (Mankiw, 2010).

In the current Indonesian conditions, Bank Indonesia maintains its interest rate policy as the main instrument in maintaining inflation and rupiah exchange rate stability amid global economic uncertainty. The BI Rate policy shows that interest rates are still an important instrument in controlling inflation and national macroeconomic stability. However, high interest rates can also suppress investment and business financing in the real sector so that economic growth becomes slower (BI, 2024). The results of this study are in line with research (Aizenman et al., 2016) which suggests that high interest rates can depress economic activity under certain conditions.

In the perspective of Islamic economics, the interest system is seen to contain elements of riba which is prohibited because it has the potential to create economic inequality and inhibit the growth of the real sector. The Islamic economic system

emphasizes profit-sharing-based financing and productive economic activities rather than the interest system. According to (Budiantoro et al., 2018), the implementation of the Sharia economic system based on justice and the real sector is considered more capable of creating stable and sustainable economic growth.

The Islamic Economic perspective looks at the influence of foreign debt, gold prices, and interest rates on economic growth in Indonesia

In the perspective of Islamic economics, the relationship between foreign debt, gold prices, and interest rates to economic growth is not only viewed from the side of increasing output and macroeconomic stability, but also associated with the principles of Justice, balance, benefit, and economic sustainability (Ahmad, 1992). Islamic economics emphasizes that economic growth must be able to create equitable welfare (falah), free from practices that harm society, and not contrary to sharia principles (Beik & Arsyianti, 2015). Therefore, every economic policy, including state financing, monetary stability, and investment, must be directed to safeguard the benefit of the Ummah and avoid elements of riba, gharar, and injustice (Rodiah, 2015).

Foreign debt in Islamic economics is basically allowed as long as it is used for productive purposes, does not cause injustice, and is able to provide benefits to the wider community (Siddiqi, 2006). In the context of Economic Development, debt can be an alternative financing when domestic funding sources are insufficient to support national investment and development (P. & C., 2012). However, Islam emphasizes that debt management must be done carefully so as not to cause economic dependence or burdensome burdens on future generations (Fauzi & Muhammad, 2022). Debt that is used productively for the development of the real sector, infrastructure, education, and public welfare can promote sustainable economic growth (Putra, 2018). Conversely, if debt is used consumptively and inefficiently, it can cause fiscal pressure and economic instability (Mankiw, 2010).

The price of gold in the perspective of Islamic Economics has an important value because gold has long been used as a store of value and a symbol of economic stability (Beny et al., 2020). In conditions of economic uncertainty, gold is often used as a hedge asset (safe haven) to maintain security from inflation and currency devaluation (Wang et al., 2021). Islam views that the use of gold as an investment instrument is permissible as long as it is done fairly and does not contain elements of excessive speculation (maysir) (Nurkusuma Muhammad Al et al., 2024). Fluctuations in gold prices in this study indicate that gold has a link with economic stability and economic growth in the long term, especially because gold serves as a hedge asset amid global economic uncertainty (Olabisi & Adewale, 2020). However, gold price stability still has a role to play in maintaining public confidence in the economic and financial system (Purwanti, 2022).

Meanwhile, the interest rate in the perspective of Islamic Economics has special attention because it relates to the practice of riba which is prohibited in Islamic law (Rahim, 2021). In the conventional economic system, interest rates are used as an instrument of monetary policy to control inflation and influence investment (Tricia & Danarti, 2024). However, Islamic economics rejects the interest mechanism because it is considered to contain elements of injustice and exploitation (Fauzi & Muhammad, 2022). Islam emphasizes profit and loss sharing as a more equitable and balanced alternative to economic activity (Sa'diyah et al., 2021). Therefore, although the results show that interest rates only have a significant effect in the long term on economic growth, Islamic economics still considers that ideal economic growth should be built through the real sector, productive investment, and mutually beneficial cooperation without riba (Madani & Widiastuti, 2021).

Overall, the relationship between foreign debt, gold prices, and interest rates to economic growth in the Islamic perspective shows that economic development is not only oriented to the growth of statistical figures, but also must pay attention to moral aspects, social justice, and economic sustainability (Mustofa et al., 2022). Good economic growth according to Islam is growth that is able to create the welfare of society at large, reduce inequality, and maintain economic stability without violating sharia principles (LB & L, 2019). Islam prohibits the practice of usury in economic activities because it can cause injustice and damage the economic balance of society (Budiantoro et al., 2018). In the context of this study, the paragraph relates to the variable interest rate which in the conventional economic system is identical to interest or usury (Agustin, 2024).

D. Conclusion

Based on the results of research using the Vector Error Correction Model (VECM) method, it can be concluded that in the short-term foreign debt, gold prices, and interest rates have no significant effect on Indonesia's economic growth. However, in the long run, gold prices have a positive and significant effect, interest rates have a negative and significant effect, while foreign debt has a positive but insignificant effect on Indonesia's economic growth. In the Islamic economic perspective, economic growth is not only oriented to increasing output, but also to justice, balance, and the benefit of society through strengthening the real sector, productive debt management, and a usury-free economic system.

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F. Author Contributions Statement

Dimas Priadi conceived and designed the study, collected and curated the data, conducted the econometric analysis using the Vector Error Correction Model (VECM), interpreted the findings, and prepared the original manuscript draft. Supaijo contributed to the development of the research framework, supervised the research process, validated the analytical procedures and results, and provided critical revisions to improve the academic quality of the manuscript. Alief Rakhman Setyanto contributed to the literature review, data verification, interpretation of results from the perspective of Islamic economics, and manuscript editing and refinement. All authors participated in discussing the results, reviewed and approved the final version of the manuscript, and agreed to be accountable for all aspects of the work, ensuring its accuracy and integrity.

G. Conflict of Interest

The authors declare no conflict of interest. This research was conducted independently and objectively, without any financial, professional, institutional, or personal relationships that could influence the design, conduct, analysis, interpretation, or reporting of the study. All stages of the research and manuscript preparation were carried out in accordance with accepted academic and ethical standards.

H. AI Usage Statement

The authors declare that Artificial Intelligence (AI) was used only for language editing, grammar correction, and improving the clarity of the manuscript. AI was not used to generate research ideas, design the study, collect or analyze data, interpret

findings, or formulate scientific conclusions. All intellectual contributions, critical analyses, and final decisions regarding the content of the manuscript were made solely by the authors, who assume full responsibility for the accuracy, originality, and integrity of the work. The use of AI complied with the ethical standards of academic publishing and research integrity.

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