THE EFFECT OF INFLATION, INVESTMENT, GOVERNMENT EXPENDITURE AND POVERTY ON ECONOMIC GROWTH IN INDONESIA

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Abstract

This study aims to determine the effect of Inflation, Investment, Government Expenditure and Poverty on Economic Growth in Indonesia in 1999 - 2020. This study uses secondary data for 1999-2020 obtained from the Indonesian Central Statistics Agency, NSWI BKPM, APBN KEMENKEU. The data is analyzed using the Vector Error Correction Model (VECM). The results showed that, in the short run, inflation did not significantly affect economic growth. But in the long run it did have a positive effect on economic growth. In the short run, the investment did not affect economic growth, but in the long run it did have a positive and significant effect on economic growth. The government expenditure in the short run did not affect economic growth, while in the long run government expenditure did have a negative and significant effect on economic growth. Finally, both in short run and long run, poverty did not affect economic growth in Indonesia.

Keywords : ***Inflation, Investment, Government Expenditure, Poverty, Economic Growth Vector Error Correction Model***

1. INTRODUCTION

Economic growth is one of the important indicators of a country's economy which aims to increase national income. The intended indicator is to provide a kind of sign about development in the past as well as for the future. Economic growth is still an important goal in a country's economy, especially for developing countries such as Indonesia. Economic growth in Indonesia must also be followed by positive changes in improving the welfare and prosperity of the people as mandated by the 1945 Constitution. Because of that, as the economy grows, more businesses produce new outputs that are needed by consumers at home and abroad. subsequently Investors in the stock market become more optimistic about their share prices. Business confidence increases, encouraging them to create more jobs and absorb more labor.

BPS (Central Statistics Agency) records the development of economic growth in Indonesia. Economic growth reaches 5.03 percent in 2016 and experiences a very slow increase to 5.17 percent in 2018. However, in 2019 to 2020 there is a very drastic decline at -2.07 percent, the low economic growth of Indonesia is due to the decline in consumption, investment, and the large number of governments spending due to the COVID-19 pandemic. The determinants of economic growth in Indonesia are focused on four variables, namely inflation, investment, government spending and poverty.

Inflation from 2016 to 2019 experiences a very slow decline. Economic growth fell drastically in 2020 because of covid-19 which has an impact on increasing the value of inflation Mahzalena & Juliansyah, (2019) a decrease in the inflation rate will increase economic growth and vice versa. In 2019 and 2020 inflation falls about 1.68 percent, followed by decresing economic growth about -2.07 percent.

The increase in inflation in 2017 is caused by government policies, caused bythe prices of goods or services. The Central Statistics Agency (BPS) announces that inflation occurs due to the increase in the price of fuel oil, basic electricity tariffs, food and transportation, and financial services. According to BPS data, food items experience inflation of 2.26 percent and transportation, communication and financial services by 0.75 percent, the basic electricity tariff at 0.81 percent.

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Domestic investment in Indonesia tends to increase in the last five years. The decline in economic growth of 5.02% in 2019 to -2.07% is followed by an increase in investment of 17.61% or Rp. 386,498,389 billion to Rp. 413,535,524 billion or 6.99 percent. Investment injection is very influential to increase economic growth in a pandemic situation.

Government spending in 2016 to 2018 decreases by -0.02% or IDR 766,163 billion, but rises again in 2019 and 2020. Mahzalena & Juliansyah, (2019) states that an increase in government spending will increase economic growth, but what happened in Indonesia when government spending is 3.64% or Rp 856,945 billion in 2020, economic growth falls to -2.07.

The increase in Indonesian government spending, especially capital goods, is not able to boost economic growth. This is because the spending capital goods do not have a direct impact on the people's economy and are less productive assets. Government spending is part of fiscal policy, which is a government action to regulate the course of the economy by determining the amount of government revenues and expenditures each year, which is reflected in the State Revenue and Expenditure Budget (APBN) documents for national and Regional Revenue and Expenditure Budgets (APBD) for regions. The purpose of this fiscal policy is to stabilize prices, output levels, as well as employment opportunities and spur or encourage economic growth, Putri.dkk (2018)

The increase in the percentage of the poor in Indonesia decreases from 2016 - 2019, but in 2019 - 2020 the percentage of the poor

increases from 9.66% in the previous year to 9.78%. In the other hand the economic growth in 2020 decreases from 5.02 in 2019 to -2.07%.

The phenomenon of poverty has been going on for a long time, although various efforts have been made to overcome it. Especially for Indonesia, as a developing country, the problem of poverty is a very important and fundamental problem in its development efforts. Poverty in Indonesia is still very large even though economic growth increases. The largest percentage of the poor occurres in 2016 which is 10.86 percent, who live in a cycle of poverty. The purpose of this study is to determine how much influence of inflation, investment, government spending and poverty on economic growth in Indonesia.

2. IMPLEMENTATION METHOD
Vector Error Correction Model (VECM)

The study is analyzed using vecm and which has been widely used by researchers. VECM is first popularized by Engle and Granger in correcting short-term versus long-term disequilibrium. VECM is used to estimate data that is not stationary at the level but has a cointegration relationship. This model basically uses a restricted form of VAR. This additional restriction must be given due to the existence of non-stationary but cointegrated data forms. VECM then utilizes the co-integration restriction information into the model specification. This specification restricts the long-run relationship of endogenous variables so that they converge into their cointegration relationship, but still allow for the short run dynamic state. Nugroho et al., (2016). VECM analysis uses stationary test stages, determination of lag length, Granger causality test, and cointegrity test.

Test Stationary

Stationarity test / unit root test (Unit Root Test) is performed to determine whether or not a variable is stationary. The data is said to be stationary if the data is close to the average. The form of stationarity test equation is the ADF (Augemented Dickey Fuller) analysis. If this test shows the statistical ADF value is greater than on the contrary Critical Value, then the data is stationary. If the statistical ADF value is less than the Mackinnon Critical Value, then the data is not stationary.

In addition, to pay attention to the probability of the stationary test, if it is at a confidence level of 5% or below 5%, the data can be said to be stationary.

Determination of Lag Length

In general, there are several parameters that can be used to determine the optimal lag length, including AIC (Akaike Information Criterion) and SIC (Schwarz Information Criterion). Determination of the optimal lag length is obtained from the VAR equation with the smallest AIC value, or SIC and Hannan-Quinn (HQ). The Eviews program has indicated asterisks for the lag that is set as the optimum lag.

Test Granger Causality

Causality test is conducted to determine whether there is a relationship between endogenous (dependent) variables so that they can each other be treated as exogenous (independent) variables. The causality test in this study is conducted using the Granger's casuality method. The predictive power of the information that has been obtained both from theory and previous research can indicate a causal relationship between variables over a long period of time. The method used to analyze the causality relationship between the observed variables is the Granger causality test. In this study the causal relationship is used to see the direction of the relationship between the variables of economic growth, inflation, investment, government spending and the percentage of poor people.

Test Cointegrity

Cointegration test to determine whether the independent and dependent variables are cointegrated so that there is a long run relationship between variables. In this study, to see cointegration, it is carried out through the Johansen cointegration test. If the trace statistic < critical value, as well as the max eign stat < critical value, this means that there is no cointegration in the equation model and vice versa. Then through Johansen has the opportunity to test the form of a finite cointegration vector.

Var Stability Testing

VAR stability testing is carried out before conducting further analysis, because if the VAR estimation results combined with the error correction model are unstable, then the impulse response function (IRF) and forecasting error variance decomposition (FEVD) are invalid. Testing the stability of the VAR estimation that has been formed, then the VAR stability condition check is carried out in the form of roots of characteristic polynomial. A VAR system is said to be stable if all its roots have a modulus less than 1.

Vector Error Correction Model (VECM) Estimation

Vector Error Correction Model (VECM) is a VAR model development for time series that is not stationary and has one or more cointegration relationships. The dynamic behavior of VECM can be seen through the response of each dependent variable to shocks in that variable and to other dependent variables. There are two ways to see the characteristics of the VECM model, namely through the impulse response function and variance decomposition.

3. RESULTS AND DISCUSSION
VECM Test Results

In finding the magnitude of the influence between the dependent variable on the independent variable, the Vector Error Correction Model (VECM) analysis method is used. In using the VECM model, it is necessary to first test stationarity, search for optimum lag, VAR stability test, cointegration test and Granger causality test. Then the research results can be seen in the estimation results of VECM, impulse response, variance decomposition and forecasting.

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Stationarity Test Results

Data stationarity is the state of a time series data that has a value that tends to approach the average. This stationarity test is important in time series data analysis because if there is a non-stationary data condition, and an estimate is made using non-stationary data, it will give false regression results or called spurious regression, where the estimation results are high but in fact there is no relationship between variables. To test the stationarity of the data, the Augmented Dicky Fuller unit root test is used. Stationarity test results can be seen in the following table:

Table 1. Stationarity Test Results

Variable	Unit Root	ADF T-Statistics	Critical Value 5%	Probability ADF	Information
Economic growth	Level	-2.355871	-3.012363	0.1652	Not
	1st Difference	-3.459539	-3.202686	0.0205	Stationary
	2nd Difference	-5.428450	-3.029970	0.0004	Stationary
Inflation	Level	-3.508982	-3.012363	0.0181	Stationary
	1st Difference	-6.849336	-3.029970	0.0000	Stationary
	2nd Difference	-6.017372	-3.065585	0.0002	Stationary
Investation	Level	4.954463	-3.012363	1.0000	Not
	1st Difference	-2.010337	-3.020686	0.2802	Not
	2nd Difference	-7.293627	-3.029970	0.0000	Stationary
Government Expenditure	Level	0.851124	-3.012363	0.9925	Not
	1st Difference	-3.985427	-3.020686	0.0069	Stationary
	2nd Difference	-5.032747	-3.040391	0.0009	Stationary
Poverty	Level	-2.899646	-3.012363	0.0622	Not
	1st Difference	-6.692944	-3.020686	0.0000	Stationary
	2nd Difference	-6.815456	-3.029970	0.0000	Stationary

Source: Processed Data, 2022

Based on the table above, it can be concluded that the variables of economic growth, investment, government spending and poverty are not stationary at the level, only inflation is stationary at the level. Then each variable is stationary at first different except for investments which are not stationary at first different. Investment is stationary on the second different, seen from the statistical t value which is greater than the critical value or probability below 0.05. It can be concluded that the data in the study is used as a stationary in the second difference for further data processing.

Lag Determination Results

The influence of independent variables on the dependent variable is rarely direct. Often, the impact felt by the dependent variable due to the independent variable has a time lapse. This time interval is called lag. Knowing the lag in the study will provide an overview of the time interval required by the dependent variable in responding to changes in the independent variable and will be used as a basis for seeing the right time interval to determine the effect between variables. In determining the appropriate optimum lag level, it is seen from each of the smallest values of the 5 available criteria, namely LR: sequential modified LR test statistic (each test at 5% level), FPE (Final prediction error), AIC (Akaike information criterion), SC (Schwarz information criterion), HQ (Hannan-Quinn information criterion).Nugroho and Rizal (2016).

Table 2. Lag Determination Results

lag	LogL	LR	FPE	AIC	SC	HQ
0	-805.9176	NA	2.39e+27	77.23025	77.47895	77.28422
1	-699.1275	152.5573*	1.07e+24*	69.44071*	70.93289*	69.76455*

Source: Processed Data, 2022

Based on table 2 above, the five goodness criteria show the smallest value in lag 1, namely LR: sequential modified LR test statistic (each test at 5% level), FPE (Final prediction error), AIC (Akaike information criterion), HQ (Hannan-Quinn information criterion), and SC (Schwarz information criterion), the goodness value suggested by each goodness criteria is the smallest value, marked with a star (*). Because all the criteria for goodness indicate the right lag for this study is at lag 1, this study uses the 1st optimum lag to define the period of influence of each independent variable on the dependent variable.

VAR Stability Test Results

The stable VAR equation has a stable error correction value. If the value of the VAR error correction is not stable, the results of the impulse response and variance decomposition are invalid, the VAR stability test has been carried out with the following results:

Table 3. VAR. Stability Test Results

Root	Modulus
1.043917 - 0.053289i	1.045276
1.043917 + 0.053289i	1.045276
0.313567	0.313567
-0.126175 - 0.108270i	0.166260
-0.126175 + 0.108270i	0.166260

Warning: At least one root outside the unit circle.
VAR does not satisfy the stability condition.

Cointegration Test Results

Cointegration is two or more variables that have random values, but the movement of the values of these variables is linear. Cointegration can occur because the relationship affects between variables so that the movement of the values of the variables is in line. With the occurrence of cointegration, it is concluded that the long run movement of the value of a variable has a unidirectional tendency or there is a long run relationship. To find out whether there is a long run or short run relationship in this study and to see whether there is an imbalance that will occur, a cointegration test is carried out. If there is an imbalance, then an error correction model (ECM) is needed. In this study, the cointegration test is carried out using the Johansen cointegration test in the eviews 10 application.

Table 4. Cointegration Test Results

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistics	Critical Value	Prob.**

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None *	0.919428	126.2257	69.81889	0.0000
At most 1 *	0.859668	75.85356	47.85613	0.0000
At most 2 *	0.688090	36.57874	29.79707	0.0071
At most 3	0.322790	13.27792	15.49471	0.1050
At most 4 *	0.239761	5.482458	3.841466	0.0192

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level

* Denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Source: Data Processed, 2022

To find out whether a variable is cointegrated or not in the Johansen cointegration test, it can be seen from the trace statistic and maximum eigen value to the critical value at an error rate of 5%. Research variables are said to be cointegrated if the trace statistic or eigen value is greater than the critical value of 5%. Nugroho, and Rizal (2016).

Based on table 4.4 above, it can be seen that all trace statistical values are greater than the critical value of 5%. In none, namely economic growth, the trace statistic value is greater than the critical value 5%, which is 126.2257 > 69.81889. At most 1, namely inflation, the trace statistic value is greater than the critical value 5%, which is 75.85356 > 47.85613. At most 2 investments, the trace statistic value is greater than the critical value 5%, namely 36.57874 > 29.79707, At most 3-government spending, the trace statistic value is smaller than the critical value 5%, namely 13.27792 < 15.4947, which means that there is no cointegration on these variables, at most 4 the percentage of poor people, the value of the trace statistic is greater than the critical value of 5%, which is 5.482458 > 3.841466.

The value of ECT or cointEq is valid if the coefficient is negative with a significant probability of 5% second-different. In this study, the CointEq (-1) value is -0.110361 and is significant at seconddifferent 5%, which means that the VECM model has met the validity requirements, so that in this study it can be concluded that the model will lead to a short run balance towards the long run with speed 1 percent per year.

Granger Causality Test Results

The Granger Causlity test is intended to determine whether there is a reciprocal relationship between variables (Masta, 2014). Then various references for determining the dependent variable in the study, but still on the rationality of thinking. The following is the Granger causality test in table 5.

Table 5. Granger Causality Test Results

Pairwise Granger Causality Tests
Date: 07/03/22 Time: 22:42
Sample: 1999 2020
Lags: 1

Null Hypothesis:	Obs	F-Statistics	Prob.
INF does not Granger Cause PE	21	0.10939	0.7447
PE does not Granger Cause INF		1.13457	0.3009
INV does not Granger Cause PE	21	9.51947	0.0064
PE does not Granger Cause INV		0.00290	0.9577

PP does not Granger Cause PE	21	3.16132	0.0923
PE does not Granger Cause PP		2.62480	0.1226
PPM does not Granger Cause PE	21	2.52260	0.1296
PE does not Granger Cause PPM		4.65871	0.0446
INV does not Granger Cause INF	21	9.00647	0.0077
INF does not Granger Cause INV		1.46653	0.2416
PP does not Granger Cause INF	21	13.7459	0.0016
INF does not Granger Cause PP		1.44195	0.2454
PPM does not Granger Cause INF	21	9.04194	0.0076
INF does not Granger Cause PPM		32.0583	2.E-05
PP does not Granger Cause INV	21	9.21303	0.0071
INV does not Granger Cause PP		0.78594	0.3870
PPM does not Granger Cause INV	21	3.18934	0.0910
INV does not Granger Cause PPM		1.72450	0.2056
PPM does not Granger Cause PP	21	6.15077	0.0233
PP does not Granger Cause PPM		10.3708	0.0047

Source: Processed Data, 2022

Based on table 5 above, it can be seen that the inflation variable does not have a direct relationship to the amount of economic growth and vice versa, economic growth does not have a direct relationship to inflation as evidenced by the Granger probability value greater than the 0.05 (5%) confidence level, which is 0.7447. > 0.05 and 0.3009 > 0.05.

The direct investment variable has a direct relationship to economic growth, which is 0.0064 <0.05. In contrast to the variable economic growth which does not have a direct relationship to investment as evidenced by the Granger probability value greater than the 0.05 (5%) confidence level, which is 0.9577 > 0.05.

The government Expenditure variable does not have a unidirectional relationship to economic growth and vice versa, economic growth does not have a unidirectional relationship to government expenditure. as evidenced by the Granger probability value is greater than the 0.05 (5%) confidence level, which is 0.0923 > 0.05 and 0.1226 > 0.05.

The percentage of poor population does not have a direct relationship to economic growth, namely 0.1296 > 0.05, in contrast to economic growth which has a direct relationship to the percentage of poor people. as evidenced by the Granger probability value is smaller than the 0.05 (5%) confidence level, which is 0.0446 < 0.05.

Investment variable has a unidirectional relationship to inflation that is equal to 0.0077 <0.05. In contrast to the Inflation variable which does not have a direct relationship to investment as evidenced by the Granger probability value greater than the 0.05 (5%) confidence level, which is 0.2416 > 0.05.

The Government Expenditure variable has a unidirectional relationship to inflation, which is 0.0016 <0.05. In contrast to the inflation variable which does not have a direct relationship to government spending as evidenced by the Granger probability value greater than the 0.05 (5%) confidence level, 0.2454 > 0.05.

The Percentage of Poor Population has a unidirectional relationship to Inflation that is equal to 0.0076 <0.05. In contrast to the inflation variable which does not have a direct relationship

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to percentage of poor people as evidenced by the Granger probability value greater than the 0.05 (5%) confidence level, which is 2.E-05 > 0.05.

The Government Expenditure variable has a unidirectional relationship to investment, which is 0.0031 < 0.05. In contrast to the Investment variable which does not have a direct relationship to government spending as evidenced by the Granger probability value is greater than the 0.05 (5%) confidence level, which is 0.3870 > 0.05.

The variable Percentage of the Poor does not have a unidirectional relationship to Investment and vice versa, Investment does not have a unidirectional relationship to the Percentage of the Poor as evidenced by the Granger probability value greater than the confidence level of 0.05 (5%) which is 0.0910 > 0.05 and 0.2056009 > 0.05.

The Variable Percentage of Poor Population has a unidirectional relationship to Government Expenditure, which is 0.0233 < 0.05. Vice versa with the Government Expenditure variable which has a unidirectional relationship to the percentage of the poor as evidenced by the Granger probability value of 0.0047 < 0.05.

Analysis of Variance Decomposition

Analysis of Variance Decomposition describes the relative importance of each variable in the VAR system due to the presence of Schock Variance Decomposition which is also useful for predicting the contribution of the Percentage of Variance for each variable due to changes in certain variables in the VAR system. Masta (2014). To see the results of the variance decomposition test, it can be seen in the following table:

Table 6. Variance Decomposition of Economic Growth

Variance Decomposition of PE: Period	SE	PE	INF	INV	PP	PPM
1	1.914796	100,0000	0.000000	0.000000	0.000000	0.000000
2	2.661817	97.37595	0.228275	2.175837	0.063033	0.156906
3	3.492599	96.99478	0.637942	1.815377	0.059141	0.492758
4	4.369880	96.13224	0.751284	2.443060	0.037846	0.635568
5	5.033936	95.73715	0.681034	2.713389	0.029931	0.838492
6	5.808095	95.57841	0.709233	2.688504	0.037684	0.986172
7	6.481480	95.18313	0.793337	2.905299	0.033906	1.084326
8	7.103564	94.95064	0.844363	2.993846	0.033922	1.177231
9	7.712879	94.80161	0.854908	3.060785	0.034940	1.247758
10	8.280160	94.65003	0.884446	3.122515	0.035868	1.307146

Source: Processed Data, 2022

From Table 6 above, it can be seen that initially the variable economic growth in the first year is still strongly influenced by economic growth itself. This can be seen from the amount of the contribution, which is 100 percent. Where other variables have not given a shock to economic growth at all. However, in the third year in the short term, other variables in the study begin to have an effect even though the portion is still very small, namely the economic growth variable of 0.63 percent, the investment variable of 1.81 percent, and government spending of 0.59 percent then the percentage variable. poor population by 0.49 percent.

In the long run, in the 10th year, the contribution to economic growth still affects the variable of economic growth itself, which is 94.65 percent, inflation is 0.88 percent, investment is 3.12 percent, and government spending is 0.035 percent then the percentage of the poor by 1.30 percent. This indicates that during the period of this study, it is explained that the variables that affect economic growth are the variables of economic growth itself. And the influence of other variables has not contributed much.

Table 7. Variance Decomposition Inflation

Variance Decomposition of INF: Period	SE	PE	INF	INV	PP	PPM
1	3.103022	1.305376	98.69462	0.000000	0.000000	0.000000
2	3.454241	14.84981	81.26473	1.869393	1.948739	0.067331
3	3.683955	13.09910	78.06737	5.904514	2.229854	0.699157
4	4.061449	22.09525	70.25021	4.909008	2.016760	0.728770
5	4.224190	23.12750	69.02549	4.978049	2.195249	0.673708
6	4.237693	23.11315	68.63482	5.271518	2.181495	0.799023
7	4.272970	23.97396	67.55284	5.332655	2.184991	0.955548
8	4.325515	23.49541	68.15479	5.207985	2.132423	1.009400
9	4.346985	23.26627	68.38732	5.158019	2.125591	1.062808
10	4.353739	23.21201	68.28733	5.209137	2.119088	1.172436

Source: Processed Data, 2022

From Table 7 above, it can be seen that initially the inflation variable in the first year is still strongly influenced by the amount of inflation itself. This can be seen from the amount of the contribution, which is 98.69 percent. Where other variables have not given a shock to inflation at all. Only the variable of economic growth is 1.30 percent. However, in the third year in the short run, other variables in the study begin to have an influence where the inflation variable itself is 78.06 percent, and another variable that influenced is economic growth of 13.09 percent. The investment variable is 5.90 percent, and government spending is 2.22 percent, then the percentage variable for the poor is 0.69 percent.

In the long run in the 10th year, the contribution to inflation still affects inflation itself, which is 68.28 percent, variable economic growth is 23.21 percent, investment is 5.20 percent, and government spending is 2.11 percent then the percentage of population poor by 1.17 percent. This indicates that during the period of this study, it is explained that the variables that affect inflation in the short and long term are influenced by the variables with the greatest contribution, namely the inflation variable itself and economic growth.

Table 8. Investment Decomposition Variance

Period	SE	PE	INF	INV	PP	PPM
1	0.202153	18.07039	0.014532	81.91508	0.000000	0.000000
2	0.499786	81.83279	1.427278	15.59601	0.456522	0.687408
3	0.551258	81.32894	4.062210	12.94335	0.378341	1.287160
4	0.698465	83.70185	5.251228	8.648601	0.440315	1.958009

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5	0.822753	86.18378	4.847133	6.234872	0.370003	2.364210
6	0.942610	86.80328	5.234006	4.797933	0.391176	2.773604
7	1.074711	87.49101	5.511030	3.690922	0.375528	2.931515
8	1.180581	87.86097	5.577866	3.060069	0.361430	3.139668
9	1.293156	88.24097	5.560504	2.550610	0.369881	3.278038
10	1.398728	88.46604	5.613493	2.184187	0.365596	3.370685

Source: Processed Data, 2022

From table 8 above, it can be seen that initially the investment variable in the first year is still strongly influenced by the amount of investment itself. This can be seen from the amount of the contribution, which is 81.91 percent. Where other variables have not given a shock to investment at all. Only the economic growth variable is 18.07 percent and the inflation variable is 0.01 percent. However, in the third year in the short run, other variables in the study begin to have an influence where the investment variable itself contributes 12.94 percent, and other variables that influences the economic growth of 81.32 percent. The inflation variable is 4.06 percent, and government spending is 0.37 percent, then the percentage variable for the poor is 1.28 percent.

In the long run, in the 10th year, the contribution to investment still affects the investment itself, which is 2.18 percent, variable economic growth is 88.46 percent, inflation is 5.61 percent, and government spending is 0.36 percent, then the percentage the poor by 3.37 percent. This indicates that during the period of this study, it is explained that the variables that affect investment are the investment variables themselves. And the variable with the biggest contribution is economic growth, while the influence of other variables has not contributed much.

Table 9. Variance Decomposition of Government Expenditure

Variance Decomposition of LOG(PP): Period	SE	PE	INF	INV	PP	PPM
1	0.076241	0.271830	37.33380	30.54051	31.85386	0.000000
2	0.291890	72.99249	13.02148	8.995033	2.394042	2.596957
3	0.439999	72.77049	10.89062	11.60548	1.263265	3.470143
4	0.606322	75.27567	9.805556	10.21902	0.672819	4.026932
5	0.774638	76.45365	9.023987	9.936795	0.416533	4.169038
6	0.923228	76.76699	8.733984	9.834779	0.294305	4.369941
7	1.070342	77.31607	8.411000	9.587915	0.219012	4.466003
8	1.206086	77.57689	8.195137	9.510590	0.172527	4.544857
9	1.334389	77.78604	8.062967	9.404682	0.141321	4.604991
10	1.455706	77.94917	7.945542	9.340461	0.119122	4.645710

Source: Processed Data, 2022

From Table 9 above, it can be seen that initially the government expenditure variable in the first year is still strongly influenced by the amount of government spending itself. This can be seen from the amount of contribution that is equal to 31.85 percent. Where the percentage of the poverty has not given a shock to government spending at all. Only economic growth variable is 0.27 percent, inflation variable is 37.33 percent, and investment variable is 30.54 percent. However, in the third year in the short run, other variables in the study begin to have an influence where the government expenditure variable itself contributes 1.26 percent, and another variable that

influences economic growth is 72.77 percent. Inflation variable is 10.89 percent, and investment is 65 percent.

In the long run, in the 10th year, the contribution to government spending still affects government spending itself, which is 0.11 percent, variable economic growth is 77.94 percent, inflation is 7.94 percent, and investment is 9.34 percent. The percentage of the poor is 4.64 percent. This indicates that during the research period, it is explained that the variables that affect government spending are influenced by the variables with the largest contribution, namely the variables of economic growth and investment.

Table 10. Variance Decomposition Percentage of Poor Population

Variance Decomposition of PPM: Period	SE	PE	INF	INV	PP	PPM
1	0.549769	4.985179	0.284861	0.342197	38.36531	56.02245
2	0.932673	9.136565	21.45181	0.982400	27.73188	40.69735
3	1.337984	28.80973	14.30145	0.743924	23.51360	32.63129
4	1.572978	34.07189	10.41227	0.604922	22.61642	32.29449
5	1.765757	35.44266	8.991201	0.524257	22.16023	32.88166
6	1.994906	37.77648	8.471398	0.411253	21.27445	32.06642
7	2.215591	40,65809	7.280397	0.345200	20.51781	31.19850
8	2.399639	42.27379	6.396044	0.343623	20.04229	30.94425
9	2.572718	43.23832	5.949019	0.327289	19.68449	30.80089
10	2.749957	44.37090	5.562813	0.302375	19.31354	30.45037

Cholesky Ordering: PE INF LOG(INV) LOG(PP) PPM

Source: Processed Data, 2022

FromTable 10 above contributes to the percentage of the poverty by 56.02 percent, economic growth by 4.98 percent, inflation by 0.28 percent, investment by 0.34 percent, and government spending by 38.36 percent. However, in the third period, in the short run, the percentage of poor people contributes 32.63 percent, and economic growth is 28.80 percent. The inflation variable is 14.30 percent, and the investment is 0.74 percent, then the government spanding variable is 23.51 percent.

In the long run, in the 10th period, the percentage of poor people is 30.45 percent, the variable for economic growth is 44.37 percent, inflation is 5.56 percent, and investment is 0.30 percent, then government spending is 19.31 percent. So, the variance descomposition of economic growth is the most dominant contribution of other variables, so that economic growth is still the factor that most influences the percentage of the poverty.

4. CONCLUSION

Based on the results of research conducted using the Vector Error Correction Model (VECM) method, the conclusions in this study according to the problem formulation can be started as follows:

1. By using the Granger causality analysis method, the results show that the inflation variable does not have a direct and reciprocal relationship to growth of economic and vice versa, the investment variable has a one-way relationship to economic growth, the government spanding does not have a direct and reciprocal relationship to the of growth economy and

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vice versa, And the percentage of the poor also has no relationship to economic growth, but on the contrary economic growth has a direct relationship to the percentage of the poverty.

2. Using the Vector Error Correction Model (VECM) model, this study can conclude that in the short run inflation does not have a significant effect on economic growth, but in the long run it has a positive effect on economic growth.
3. In the short run, investment has no effect on economic growth, but in the long run it has a positive and significant effect on economic growth.
4. The variable of government expenditure in the short run has no effect on economic growth, while in the long run government spanding has a negative effect on economic growth.
5. Percentage of poor population that has no influence on economic growth in the short run, as well as in the long run.
6. Variables of economic growth, investment and the percentage of poor people in this study have a contribution that tends to be greater than the variables of government spending and inflation, then investment is the variable that has the most dominant contribution compared to other variables in this study.

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