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ECONOMIC FACTORS ON INFLATION

Muhammad Hidayat, Guntur Eko Saputro
nandodayat@gmail.com, Gunturekosaputroarm95@gmail.com
[1]*Defense Economic Study Program, Indonesian Defense University, Sentul Jakarta Indonesia*
[2]*Defense Economic Study Program, Indonesian Defense University, Sentul Jakarta Indonesia*

Corresponding author: *Guntur Eko Saputro
Email: *gunturekosaputroarm95@gmail.com*

ABSTRACT

Inflation is a process of increasing prices in general and continuously related to market mechanisms which can be caused by various factors, among others, increased public consumption, excess liquidity in the market that triggers consumption, or even speculation, including the consequences of the non-smooth distribution of goods. A country's economy would be healthy if its economic growth is stable and shows a positive direction. This is reflected in macroeconomic activities. One of the macroeconomic indicators to see the economic stability of a country is inflation. The purpose of this paper is to analyze economic factors on inflation. Qualitative research and data collection techniques in the form of literature studies and Library Research. The results of the study show that based on the results of the research and discussion that have been described previously, several conclusions can be drawn as follows The money supply and the BI Rate together affect the dependent variable, namely inflation, The money supply has a negative effect on inflation in Indonesia and BI Rate has a positive effect on inflation in Indonesia.

KEYWORDS

Economic, inflation, Indonesia.

I. Introduction.

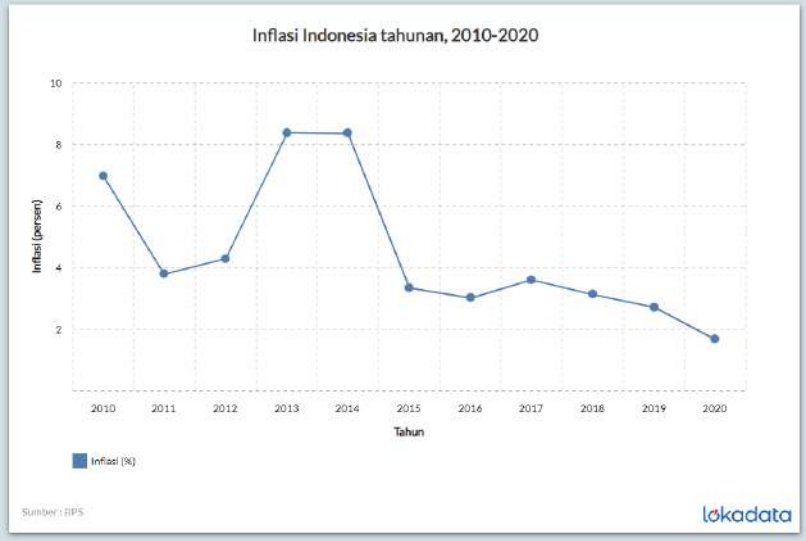
A country's economy would healthy if its economic growth stable and shows a positive direction. This is reflected in macroeconomic activities. One of the macroeconomic indicators to see the economic stability of a country is inflation (Kalolo, 2016). From an economic perspective, inflation is a monetary phenomenon in a country where the rise and fall of inflation tend to cause economic turmoil because inflation affects economic growth, the international trade balance, the value of debt and receivables between countries, interest rates, domestic savings, unemployment, and public welfare.

Inflation is a process of increasing prices in general and continuously related to market mechanisms which can be caused by various factors, among others, increased public consumption, excess liquidity in the market that triggers consumption or even speculation, to include the consequences of non-smooth distribution of goods. In other words, inflation is also a continuous process of decreasing the value of a currency. Inflation is a process of an event, not a high or low-price level. That is, the price level that is considered high does not necessarily indicate inflation. Inflation is an indicator to see the level of change, and is considered to occur if the process of price increases takes place continuously and influences each other. The term inflation is also used to mean an increase in the money supply which is sometimes seen as a cause of rising prices. There are many ways to measure inflation, the two most commonly used are the Consumer Price Index (CPI) and the Gross Domestic Product (GDP) Deflator.

Cost-push inflation occurs due to the scarcity of production or also includes the scarcity of distribution, although demand in general does not change significantly. The existence of this non-smooth distribution flow or a decrease in available production from the normal average demand can trigger an increase in prices in accordance with the law.

Demand for supply, or also because of the formation of a new economic value position for the product due to a new distribution pattern or scale. Reduced production itself can occur due to various things such as technical problems at the source of production (factories, plantations, etc.), natural disasters, weather, or scarcity of raw materials to produce the production, speculation (hoarding), etc. related in the market. Likewise, the same thing can happen to distribution, where in this case the infrastructure factor plays a very important role. Below is a table on the development of inflation in Indonesia from 2010 to 2020.

Table 1. Indonesia Inflation Year on Year



In Indonesia, the inflation rate is relatively high, so that many secondary economic problems lurk. In addition, inflation in Indonesia is very “sensitive” and rises very easily. Inflation in Indonesia is likened to an endemic

disease and has its roots in history. One way to reduce the rate of inflation is the Money Supply. Inflation is strongly influenced by the money supply in a country.

According to Dornbusch, in the short term, the increase in money supply growth will have an impact on rising inflation and output levels, but the increase is lower than the money supply growth. While in the long term, money growth is usually constant, expectations have been adjusted for actual inflation and output so that it can be said that without an increase in the money supply, inflation will not occur.

The BI Rate or Bank Indonesia interest rate is a policy interest rate that reflects the monetary policy stance or stance set by Bank Indonesia and announced to the public. Bank Indonesia will raise the BI Rate if inflation is estimated to exceed the set target, if inflation is below the set target, Bank Indonesia will lower the BI Rate.

Based on the previous explanation, the author is interested in analyzing the Economic Factors Against Inflation. Then it is formulated that:

1. Do the money supply and the BI Rate affect inflation together?
2. Does the money supply affect inflation?
3. Does the BI Rate affect inflation?

The purpose of this research is to:

1. To determine and analyze the effect of the money supply and the BI Rate together on inflation.
2. To find out and analyze the effect of the money supply on inflation.
3. To determine and analyze the effect of the BI Rate on inflation.

II. Research Methods

This study was conducted to analyze inflation in Indonesia, where inflation is the dependent or dependent variable (Y) and the variables that affect inflation, namely the Money Supply and the BI Rate, are independent variables or the independent variable (X). The data used in this study are annual data from 2010-2020. The type of data used in this research is secondary data in the form of numbers regarding inflation, the money supply, and the BI Rate is taken from 2010-2020 (10 years).

Multiple linear regression is an appropriate analytical method when the study involves one dependent variable which is estimated to be related to one or more independent variables. The multiple linear regression analysis models used to test the hypothesis is as follows:

$$Y = b0 + \beta1X1 + \beta2X2 + \beta3X3 + \varepsilon t$$

The data analysis method used is the multiple linear regression analysis methods with the help of SPSS for Windows software. The use of the analysis method in regression in testing the hypothesis is first tested whether the model has met the classical assumptions or not.

III. Theoretical basis

The increase in the price of goods and services on an ongoing basis is the definition of inflation in general or interpreted as a whole the value of money decreases, the higher the price increase, the lower the value of money (Manurung, 2016).

Types of inflation according to the origin of inflation are divided into (Perlambang, 2017):

a. Inflation originating from within the country (domestic inflation) Inflation originating from within the country arises, for example, because of a budget deficit financed by printing new money, crop failures and so on.
b. Inflation originating from abroad (imported inflation) Inflation from abroad to within the country can easily occur in countries with open economies. This inflation transmission can occur through price increases, both imports and exports, both by demand inflation and cost inflation.

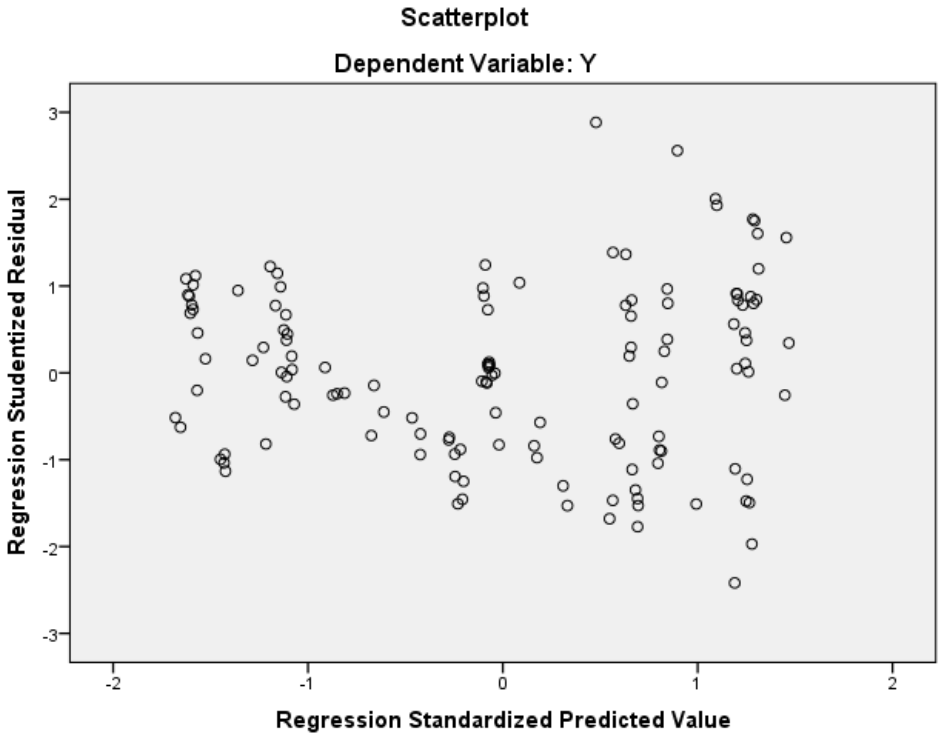
According to Damayanti (2010), money in circulation is an obligation of the monetary system to the domestic private sector or the public, which consists of currency, demand deposits, and quasi money. Currency and demand deposits can be used directly by the public to make cash payments, while quasi-money is deposited in savings accounts and time deposits or bank deposits that cannot be withdrawn at any time.

The BI Rate is the policy interest rate that reflects the monetary policy stance set by Bank Indonesia and announced to the public. The BI Rate is an indication of the short-term interest rate that Bank Indonesia wants to achieve the inflation target. The BI Rate is used as a reference in monetary operations to direct the interest rate for 1-month Bank Indonesia Certificates (SBI) resulting from open market operations auctions to be around the BI Rate (*on the website www.bi.go.id*).

IV. **Result and analysis and discussion.**

Classical Heteroscedasticity Assumption Test

Heteroscedasticity occurs when the variance is not constant or changing. Heteroscedasticity to show the value of variance (Y — Y) between Y values is not the same or hetero. Or heteroscedasticity tests the occurrence of differences in residual variance from one observation period to another observation period. From the data processed by using the SPSS 24.0 program contained in the appendix, it can be seen that the points spread randomly and are spread above and below the number 0 on the Y axis. It can be concluded that in this regression model there is no heteroscedasticity.



Classical Autocorrelation Assumption Test

The autocorrelation test aims to test whether in a regression model there is a correlation between the confounding error in period t and the error in period t-1. The test that can be used to detect deviations from this classic assumption is the Durbin Watson test (D-W stat).

Testing autocorrelation in a model aims to determine whether there is a correlation between the confounding variable (et) in a certain period and the confounding variable in the previous period (et-1). An easy way to detect autocorrelation can be done with the Durbin Watson test.

With the following conditions: according to Santoso, if the number in Durbin Watson ranges from -2 to +2 then the regression coefficient is free from autocorrelation interference, while if the DW number is below -2, it means that there is a positive autocorrelation and if the DW number is above +2, it means that there is a negative autocorrelation. . In accordance with the data in table 4.4 below which shows the value of Durbin Watson is 0.234 which is between -2 to +2, it can be said that the regression coefficient is free from autocorrelation disorders.

Model Summary[b]

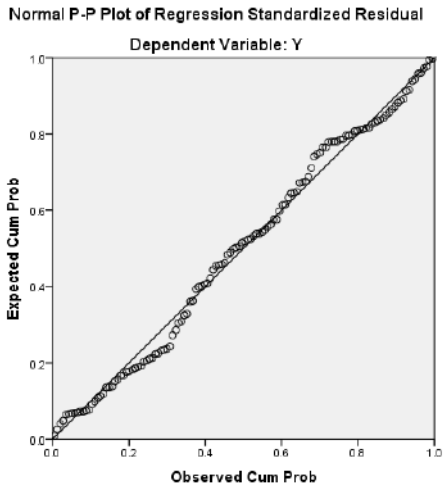
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.757[a]	.573	.566	1.18451	.234

a. Predictors: (Constant), X2, X1

b. Dependent Variable: Y

Classical Assumption Test for Normality

Normality test aims to test whether in a regression model, the dependent variable, the independent variable or both have a normal distribution or not. A good regression odel is a normal or close to normal data distribution. To test the normality of this



Classical Multicollinearity Assumption Test

Multicollinearity is a situation where the independent variables are correlated with one another. This test aims to test whether the regression model found a correlation between the independent variables. A good regression model should not correlate with the independent variables. Detection of multicollinearity in a model can be seen from several things, namely if the Variance Inflation Factor (VIF) is not more than 10 and if the tolerance is not less than 0.1, then the model can be said to be free from multicollinearity. As seen in the table of processed data using SPSS, it can be said that there is no multicollinearity between independent variables in the regression model.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-1.284	.803		-1.599	.112		
	X1	-7.548E-7	.000	-.135	-2.165	.032	.851	1.175
	X2	1.101	.099	.694	11.131	.000	.851	1.175

a. Dependent Variable: Y

Coefficient of Determination Test (R2)

The coefficient of determination R2 test is carried out to find out how far the independent variable or the independent variable in this case consists of the Money Supply and the BI Rate, is able to explain the dependent variable, namely inflation.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.757[a]	.573	.566	1.18451	.234

a. Predictors: (Constant), X2, X1

b. Dependent Variable: Y

From the results of data processing using SPSS, it shows that R2 = 0.573 can be interpreted that the independent variables, namely the Money Supply and the BI Rate, can explain 57.3% of the dependent variable, namely inflation. Meanwhile, 42.7% were influenced by other factors that were not examined.

F Test

This test is intended to see the overall ability of the independent variables, namely the Money Supply (X1) and the BI Rate (X2) to be able to explain the simultaneous effect on the inflation variable (Y).

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	242.695	2	121.348	86.488	.000[b]
	Residual	180.994	129	1.403		
	Total	423.689	131			

a. Dependent Variable: Y

b. Predictors: (Constant), X2, X1

By looking at the regression results in the table above, it shows that F count = 86,488 while F table = 3.07. Thus the two independent variables jointly affect the dependent variable, namely inflation.

T Test

This test is conducted to see whether each independent variable affects the dependent variable. In this case, it can be seen the effect of the variable Amount of Money Supply and BI Rate on Inflation.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	-1.284	.803		-1.599	.112		
	X1	-7.548E-7	.000	-.135	-2.165	.032	.851	1.175
	X2	1.101	.099	.694	11.131	.000	.851	1.175

a. Dependent Variable: Y

1) T Test of Variable Amount of Money Supply (X1)
   Based on the results of the observation of the data above, it is known that T arithmetic (2.165) > T table (1.65666) thus H0 is accepted and H1 is rejected with a significant level of 0.032 which is above 0.05, meaning that the money supply variable has a negative effect on inflation in Indonesia.
2) BI Rate Variable T Test (X2)
   Based on the observation of the data above, it is known that T count (11.131) > T table (1.65666) thus H0 is accepted and H1 is rejected with a significant level of 0.032 which is above 0.05, meaning that the BI Rate variable has a positive effect on inflation in Indonesia.

Multiple Regression Analysis

Based on the results of calculations using the SPSS program as shown in the table below, it can be seen that the regression model obtained is:

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	-1.284	.803		-1.599	.112		
	X1	-7.548E-7	.000	-.135	-2.165	.032	.851	1.175
	X2	1.101	.099	.694	11.131	.000	.851	1.175

a. Dependent Variable: Y

Y = -1,284 -7,54 X1 + 1.101 X2

1) The constant value of the above equation is -1.284 which indicates the inflation rate by ignoring the X1 and X2 factors.
2) Variable Amount of Money Supply (X1) has a negative regression coefficient value of -7.54 to inflation. This means that when there is an increase of 1 percent, inflation will decrease by -7.54.
3) The BI Rate variable (X2) has a positive regression coefficient value of 1.101 against inflation. This means that when there is an increase of 1 percent, inflation will increase by 1.101.

V. Conclusion

Based on the results of the research and discussion that have been described previously, several conclusions can be drawn as follows:

1. The money supply and the BI Rate together affect the dependent variable, namely inflation.
2. The money supply has a negative effect on inflation in Indonesia.
3. BI Rate has a positive effect on inflation in Indonesia.

VI. Recommendation

For further research, it is recommended to add other variables that are expected to find the best solution to overcome inflation in Indonesia.

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