INFLATION FLUCTUATIONS AND ECONOMIC TURBOS IN INDONESIA

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Abstract : This study aims to determine whether the money supply, investment, consumption, and economic growth variables have a significant effect on inflation. To find out whether the variables of government expenditure, unemployment, and inflation have a significant effect on economic growth. The data analysis model in this study is simultaneous regression. The data analysis technique used is the quantitative method. Data were processed from the Central Bureau of Statistics from 2007 to 2021. The results of this study indicate that based on the estimation results, the t-count value is obtained, the money supply variable has a significant effect on inflation. The investment variable has no significant effect on inflation. The consumption variable has no significant effect on inflation. The economic growth variable has no significant effect on inflation. The government expenditure variable has a significant effect on economic growth. The unemployment variable has a significant effect on economic growth. The inflation variable has a significant effect on economic growth. In order to reduce the inflation rate to a low level, Bank Indonesia should use monetary policy to reduce the money supply.
*Keywords: Inflation, Economic Growth*

INTRODUCTION

Controlling inflation or maintaining price stability is one of the macroeconomic issues in addition to several other important macroeconomic issues such as achieving high economic growth, overcoming the problem of unemployment, maintaining a balance of payments and a fair and equitable distribution of income. The phenomenon of inflation for a very important economic indicator has attracted the attention of economists. When there are social, political and economic upheavals at home and abroad, people always associate it with inflation. The economic stability of a country is based on the existence of price stability in the sense that there are no large price changes that can harm the public as well as consumers and producers by causing damage to the economic base (Zulfahmi, 2012). Mild and stable inflation stimulated economic growth. Controlled inflation increases corporate profits, higher profits encourage future investment and ultimately encourage economic growth. High inflation, on the other hand, has a devastating impact on a country's economy, which can undermine social and political stability. Adverse effects on a country's economy are a decrease in investment interest, slow economic growth, poor income distribution and a decrease in people's purchasing power, which hinders the development process. Inflation is often related to the state of a country's economy. Inflation is an economic condition with a general and continuous price trend. It is certainly not the silver lines and flows

caused by different elements. Inflation is a very important problem in the economy of any country and it is a phenomenon that the currency is always the one that destroys the position because the loss policy to deal with inflation is usually the general economic growth. The occurrence of domestic shocks causes price fluctuations in the domestic market, which end up accelerating inflation for the economy. The phenomenon of inflation can be seen as follows:
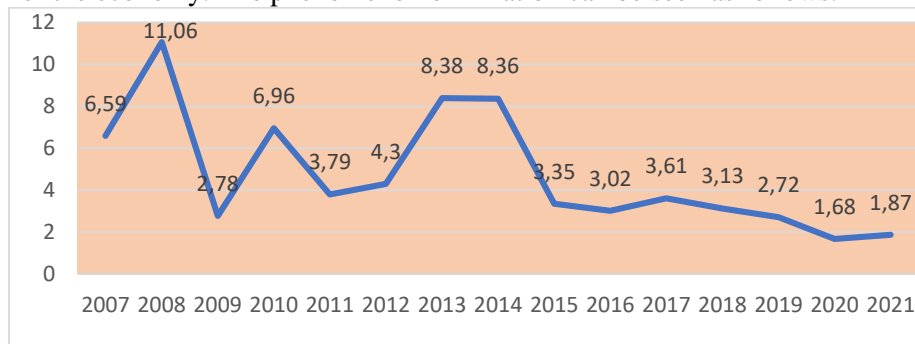
Source: Central Bureau of Statistics

Figure 1.1 Graph of Indonesia's Inflation Rate for the 2007-2021 period

The graph above shows a sharp rise in inflation in 2008 that reached above 11 percent. Developing countries always try to encourage economic growth. Economic growth is a long-term problem that needs to be addressed in all countries with very fast economic growth. Every country has the same goal, which is to accelerate its economic development. A country is said to develop when its goods and services increase, in other words it has the potential to increase its GDP. When a country fails to develop its economy, it can create new economic and social problems such as high poverty and inflation rates. Economic growth can be measured by gross domestic product (GDP). The following is a graph of gross domestic product in Indonesia as follows:
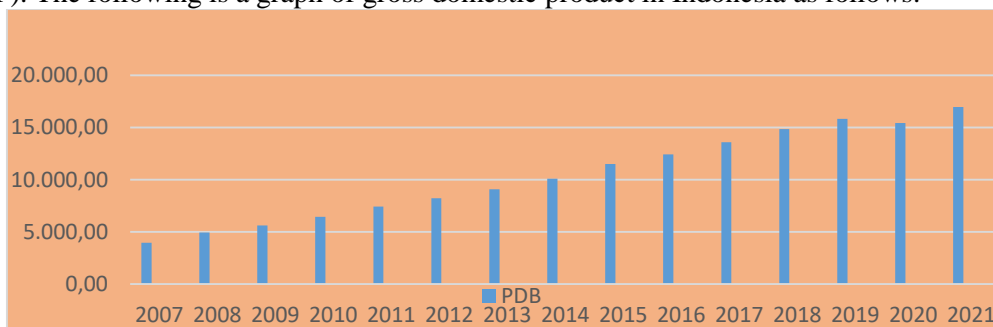
Source: Central Bureau of Statistics

Figure 1.2 Gross Domestic Product in Indonesia in 2007-2021

The graph above shows that GDP from 2007 to 2019 has increased and in 2020 there has been a decrease of 15,434.2 trillion from the previous year in 2019, which was 15,833.9 trillion. This decline in GDP is the impact of the Covid-19 pandemic. The economy of a country can be said to be developing if the economic activities of its inhabitants have a direct impact on increasing the production of goods and services. By knowing the level of economic growth, the government can plan state revenues and future development. On the other hand, from the entrepreneur's point of view, the rate of economic growth can be based on the preparation of product and resource development plans. On the basis of the phenomenon of inflation and economic growth described above, the authors are interested in analyzing the rate of inflation and economic turmoil in Indonesia.

LITERATURE REVIEW

1. Inflation Tori

Quantitative theory, which emphasizes the process of inflation in relation to money

circulation and psychology or public expectations of rising prices (expectations) in the future. According to this theory, inflation is caused when the money supply increases. The inflation rate is determined by the growth rate of money and people's expectations of future price increases.

The Keynesian inflation theory, asserts that inflation is caused because people want to live beyond their financial means. In other words, the process of inflation is a struggle for a share of production between groups of people who want a larger share than the ability of society. This struggle process eventually creates a situation where people's demand for goods always exceeds the amount of goods available, or what is often referred to as the accumulation of inflation deficits.

Structuralist theory, often called the theory of long-run inflation, states that inflation is caused by the rigidity of the economic structure, in which the supply of food and exported goods causes the production of goods to grow more slowly than demand increases. Thus, it appears that the supply (supply) of goods and services in society is less than the supply (demand) of goods and services in society, so that the prices of goods and services rise.

2. Economic Growth Theory

Classical Economic Growth Theory, this theory is a theory pioneered by Adam Smith, David Ricardo, Malthus and John Stuart Mill. According to this theory, economic growth is influenced by four factors, namely, population or population, amount of capital goods, land area and natural resources and technology used. This theory examines the effect of population growth on economic development. This theory assumes that land, natural resources and technology do not change. The relationship between per capita income and population is known as the optimal population theory. (Rinaldi Syahputra, 2017).

Neoclassical Economic Theory, neoclassical theory developed in the 50's. Based on the analysis of economic development, it will continue to develop according to the classical economic approach. The economists who pioneered the development of the growth theory were Robert Solow, Edmund Phelps, Harry Johnson and J. Meade. In the neoclassical analysis, economic development depends on growth and the provision of factors of production and the level of technological development, because in the economy there are still full employment opportunities, and the capacity of fixed assets sometimes reaches its full potential (Rinaldi Syahputra, 2017).

Harrod-Domar Growth Theory, Harrod-Domar growth theory is the development of John Maynard Keynes' macro growth theory. Basically, according to Harrod-Domar, every economy must set aside or save half of its national income to add or replace basic goods. The pace of economic growth requires new investment, which is an inflow of net financial or fixed capital (capital).

Schumpeter's theory, Schumpeter's theory emphasizes innovation introduced by entrepreneurs and claims that technological progress is mainly determined by entrepreneurs in society who see opportunities and dare to take risks to open new companies and expand existing ones.

RESEARCH METHOD(S)

According toRussiadi (2013), associative/quantitative research is research that aims to determine the relationship between two or more variables and patterns/forms of influence, where this research builds a theory that functions to explain, predict and test a symptom. To support the quantitative analysis, a simultaneous model is used to see the relationship between the independent variables and the dependent variable studied in Indonesia.
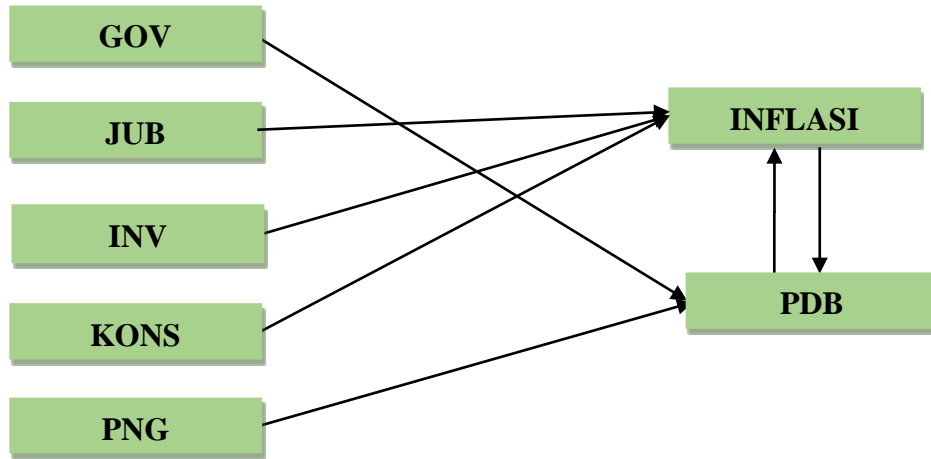
Figure 3 : Simultaneous Conceptual Framework

The data analysis method used is a system of simultaneous equations with the eviews 10 program as follows:

Log(INF)=C(10)+C(11)*log(JUB)+C(12)*log(INV)+C(13)*log(KONS)+C(14)*log(PDB)
Log(PDB)=C(20)+C(21)*log(GOV)+C(22)*log(PNG)+C(23)*log(INF)

From the above equation it can be seen the identification of simultaneity as follows:

Equation 1 Simultaneous Identification K – k (5 – 2) = m – 1 (3 – 1) Exetly Identifid

Equation 2 Simultaneous Identification K – k (5– 2) = m– 1 (3 – 1) Over Identifid

FINDINGS AND DUSCUSSION

1. Findings

Estimation of 2 (two) simultaneous equations is carried out using the Two-Stage Least Squares model, in order to obtain the following results:

Table 1 : Simultaneous Equation Estimation

System: SIMULTAN
Estimation Method: Two-Stage Least Squares
Date: 09/22/22   Time: 18:09
Sample: 2007 2021
Included observations: 15
Total system (balanced) observations 30

	Coefficient	Std. Error	t-Statistic	Prob.
C(10)	17.35526	5.478437	3.167922	0.0046
C(11)	-2.181162	1.249834	-1.745161	**0.0956**
C(12)	-0.104077	0.173522	-0.599793	0.5551
C(13)	-0.021244	0.104726	-0.202857	0.8412
C(14)	1.596629	1.401545	1.139192	0.2675
C(20)	10.37831	0.768242	13.50916	0.0000
C(21)	0.166846	0.044794	3.724765	**0.0013**
C(22)	-1.750101	0.166861	-10.48839	**0.0000**
C(23)	-0.211431	0.107950	-1.958611	**0.0636**

Determinant residual covariance	0.000724

Equation:
LOG(INF)=C(10)+C(11)*LOG(JUB)+C(12)*LOG(INV)+C(13)
$\quad$ *LOG(KONS)+C(14)*LOG(PDB)
Instruments: JUB INV KONS PDB GOV PNG C
Observations: 15

R-squared	0.559572	Mean dependent var	1.411742
Adjusted R-squared	0.383401	S.D. dependent var	0.565188
S.E. of regression	0.443807	Sum squared resid	1.969644
Durbin-Watson stat	2.178598		

Equation:
LOG(PDB)=C(20)+C(21)*LOG(GOV)+C(22)*LOG(PNG)+C(23)
$\quad$ *LOG(INF)
Instruments: JUB INV KONS PDB GOV PNG C
Observations: 15

R-squared	0.965425	Mean dependent var	9.160354
Adjusted R-squared	0.955996	S.D. dependent var	0.461281
S.E. of regression	0.096763	Sum squared resid	0.102995
Durbin-Watson stat	2.839553		

Source: Research Result Output

Based on the results of the structural equation output, the following equation is obtained:
Equation 1 Test Results (Inflation)
The first equation is the equation used to determine simultaneously on Inflation and Economic Growth with the results of the equation:

Inflasi=17.35526-2,181162*l(JUB)-0,104077*l(INV)-0,021244*(KONS)+1,595629*(PDB)

Based on the estimation, the coefficient of each variable can be obtained, namely:

The negative JUB coefficient is 2.181162, which means that an increase in the JUB is 1 percent, then inflation will increase by 2.181162 percent

• Negative INV coefficient of 0.104077, which means that an increase in INV is 1 percent, then inflation will decrease by 0.104077 percent

• The negative KONS coefficient is 0.021244, which means that an increase in KONS is 1 percent, then inflation will decrease by 0.021244 percent

• The GDP coefficient is positive 1.595629, which means that an increase in GDP by 1 percent means that inflation will increase by 1.595629 percent.

• T-count shows, JUB (prob: 0.0956<0.10), has a significant effect on INFALSION, while INV (prob: 0.551 >0.10) and KONS (prob: 0.8412>0.10) are not significant affect (INFLATION).

• Determination Test of R Square Value of 0.559 or 55.9% which means that the variables of the Amount of Money in Circulation (JUB), Investment (INV), Consumption (KONS) and Economic Growth (GDP) are able to influence the variable Inflation (INF) of 55.9% and the remaining 44.1% is influenced by other variables that are not included in the research model.

Equation 2 Test Results (Economic Growth)

The first equation is an equation that is used to determine simultaneously on economic growth with the results of the equation:

PDB=10.37831+0.166846*(GOV)-1.750101*(PNG)-0.211431*(INF)

Based on the estimation, the coefficient of each variable can be obtained, namely:

• Positive GOV coefficient of 0.166846 which means that an increase in GOV is 1 percent, then GDP will increase by 0.166846 percent

• The PNG coefficient is negative 0.1750101, which means that if an increase in EXPORT is 1 percent, GDP will decrease by 0.1750101 percent

• The negative coefficient of INFLATION is 0.211431 which means that if an increase in INFLATION is 1 percent, GDP will decrease by 0.211431 percent.

• T-count indicates, CAD (prob: 0.8051>0.05); EXPORT (prob: 0.7589>0.05); and INFLATION (prob: 0.4104>0.05) is not significant to economic stability (exchange rate).

• Determination Test of R Square Value (0.965) or 96.5% which means that the Government Expenditure (GOV), Unemployment (PNG) and Inflation (INF) variables are able to explain the Economic Growth (GDP) variable of 96.5% and the remaining 3 .5% is explained by other variables that are not included in the research model.

2. Duscussion

a. Simultaneous Analysis of Money Supply, Investment, Consumption and Economic Growth Against Inflation.

The results of this study are in line with the results of Suhesti Ningsih's research (2018) where the money supply affects inflation, but not in line with Heru Parlambang's research (2012) where in this study the money supply has a negative and insignificant effect on inflation, and is not in line with Theodores Manuela Langi's research (2014) where the money supply variable is not significant for inflation in Indonesia, but the results of this study are in accordance with the theory that the more money in circulation, the higher the percentage rate of inflation. This research is in accordance with the quantitative theory, inflation can only occur if there is an increase in the money supply, the rate of inflation is determined by the rate of increase in the money supply and by people's expectations regarding price increases in the future.

The results of this study are also in line with the results of research conducted by Djambak (2011) that investment has no significant effect on inflation. The results of this study are not in line with the results of Silvia et al. (2013) where investment has a significant effect on inflation. This research is not in line with Sasana's research (2008) where the investment variable has a significant effect on inflation. Investment has a negative effect on inflation because inflation will deplete currency values from time to time, including investment. Therefore, investors must buy investment products with greater returns or follow the inflation rate. The results of this study are not in accordance with the current phenomenon where in July 2022 high inflation affects investment, namely the increase in raw material prices becomes a small profit for investors, for example culinary food investors where the prices of raw materials such as chilies, onions and others increase. so on to be an influence on the profit of selling a restaurant, namely getting a small profit and can be detrimental to the company.

It is known that consumption has a negative and insignificant effect on inflation. The results of this study are also in line with Muttaqim's research, (2019) where short-term consumption variables have no effect on inflation in Aceh. This research is not in accordance with the Demand-Pull Inflation theory, in which an increase in consumption or Aggregate Demand (AD) will cause

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an increase in prices (inflation). We can see the phenomena associated with rising inflation due to strengthening public consumption, as happened in January 2022, inflation rising due to strengthening public consumption. There are two main reasons for the increase in the inflation rate in January 2022. The first cause for the increase in inflation in January 2022 is the strengthening of public consumption activities. While the second cause is the increase in commodity prices and some food prices.

b. It is known that economic growth has a positive and insignificant effect on inflation. The results of this study are not in line with previous research conducted by Herman Ardiyansyah (2017) where economic growth variables have a significant effect on inflation and. In this study it is not in line with previous research conducted by Rahmadeni and Nindya Wulandari (2017) where the economic growth variable has a significant effect on the inflation variable. Because when the economy is growing rapidly, there are many job opportunities that generate high levels of income and with it spending that exceeds the ability of the economy to produce goods and services. This excessive spending will cause inflation.

c. Simultaneous Analysis of Government Expenditure, Unemployment, and Inflation on Economic Growth

It is known that government expenditure has a positive effect. Elastic means that an increase in government expenditure will result in a greater percentage increase in economic growth. Meanwhile, unemployment and inflation have a negative In-elastic effect, meaning that an increase in inflation will result in a smaller percentage decline in economic growth.The results of this study are in line with previous research conducted by Mutia Sari, et al (2016) where government spending has a significant effect on economic growth. The government expenditure variable has a significant effect on economic growth because government spending policies can directly encourage economic growth. The results of this study are also in line with research conducted by Hasan (2013) that government spending has a significant effect on economic growth. This research is in accordance with the theory stated by Keynes, government spending will have an impact on the domestic economy. It is known that unemployment has a negative and significant effect on economic growth. The results of this study are in line with previous research conducted by Umi Kalsum (2017) where the unemployment variable has a significant effect on economic growth in Indonesia. The unemployment variable has a significant effect on economic growth because a low unemployment rate in an economy will have a higher economic growth rate when compared to a higher unemployment rate. And unemployment has a negative effect on economic growth, that is, if unemployment is high, economic growth will decrease. The results of this study are in line with previous research conducted by Aziz Septiatin (2016) where the unemployment variable has a significant effect on economic growth. The results of this research are in accordance with the theory stated by Murni (2006), namely, an increase in unemployment can reduce economic growth because people's purchasing power decreases so that it can cause a decrease in interest for entrepreneurs to invest. Based on this opinion, there is an influence between unemployment and economic growth.

It is known that the inflation variable has a negative and significant effect on economic growth. The results of this study are not in line with previous research conducted by Yusra Mahzalena (2019) where the inflation variable has no significant effect on inflation. This study is also not in line with previous research by Umi Kalsum (2017) where the inflation variable has no significant effect on economic growth in North Sumatra. The results of this study are in line with previous research conducted by Yaenal Arifin (2016) where inflation has a significant effect on economic growth in Indonesia. This research is in line with previous research conducted by Asnawi (2018) where the inflation variable has a significant effect on economic growth. The results of this study are in accordance with Keynes' theory explaining the relationship between inflation and economic growth, namely where rising inflation will cause economic growth to decline.

CONCLUSION AND RECOMMENDATION

1. Conclusion

The money supply, investment, consumption have a negative effect on inflation. This means that an increase in the money supply, investment and consumption will result in a smaller percentage decrease in inflation. Meanwhile, economic growth has a positive effect. Elastic means that an increase in economic growth will result in a greater percentage increase in inflation. Government expenditure has a positive effect. Elastic means that an increase in government expenditure will result in a greater percentage increase in economic growth. Meanwhile, unemployment and inflation have a negative In-elastic effect, meaning that an increase in inflation will result in a smaller percentage decline in economic growth.

2. Recommendation

In order to reduce the inflation rate to a low level, Bank Indonesia should use monetary policy to reduce the money supply. For further research, it is recommended to add exchange rate, export, BI rate and other variables that can affect inflation and use different methods such as VAR, SVAR and ARDL Panels, so as to compare the results and add insight into other variables that can affect inflation.

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