INDEPENDENT *: Journal Of Economics*
E-ISSN : 2798-5008
Page: 1-10

Volume 4 Nomor 1
2024

The Influence of Money Supply, Interest Rates, Household Consumption on Inflation in Indonesia

Mutiara Fitrianti
Bachelor of Economics, Faculty of Economics and Business, Universitas Negeri Surabaya, Indonesia
Email: mutiara.20023@mhs.unesa.ac.id

Lucky Rachmawati
Bachelor of Economics, Faculty of Economics and Business, Universitas Negeri Surabaya, Indonesia
Email: luckyrachmawati@unesa.ac.id

Abstrak

Fenomena inflasi masih sering terjadi di negara berkembang seperti Negara Indonesia. Tingkat Inflasi di Indonesia mengalami kondisi yang fluktuasi. Permasalahan inflasi di Indonesia disebabkan oleh banyak faktor. Salah satunya yakni penambahan jumlah uang yang beredar. Penelitian ini bertujuan untuk menganalisis pengaruh jumlah uang beredar, suku bunga, dan konsumsi rumah tangga terhadap tingkat inflasi di Indonesia tahun 2009-2022. Dengan menggunakan metode analisis regresi linear berganda memuat hasil bahwa 2 variabel bebas berpengaruh positif dan signifikan terhadap inflasi tahun 2009-2022 yakni variabel suku bunga dan konsumsi rumah tangga. Sedangkan variabel jumlah uang beredar tidak berpengaruh signifikan terhadap inflasi di Indonesia.

Kata Kunci : Jumlah Uang Beredar, Suku Bunga, Konsumsi Rumah Tangga, Inflasi

Abstract

The phenomenon of inflation still often occurs in developing countries such as Indonesia. The inflation rate in Indonesia experiences fluctuating conditions. The inflation problem in Indonesia is caused by many factors. One of them is increasing the amount of money in circulation. This research aims to analyze the influence of the money supply, interest rates and household consumption on the inflation rate in Indonesia in 2009-2022. Using the multiple linear regression analysis method, the results show that 2 independent variables have a positive and significant effect on inflation in 2009-2022, namely the interest rate and household consumption variables. Meanwhile, the money supply variable does not have a significant effect on inflation in Indonesia.

Keywords: Money Supply, Interest Rates, Household Consumption, Inflation

INTRODUCTION

How to cite: Fitrianti, M. & Rachmawati, L. (2024). The Influence of Money Supply, Interest Rates, Household Consumption on Inflation in Indonesia. *INDEPENDENT : Journal Of Economics*, 4(1), 1–10.

The case of inflation in Indonesia is still a major topic that is often discussed in the economic world. Inflation is often feared by developing countries, because basically developing countries must keep the inflation rate as low as possible so that the economy built remains at a stable level (Kalalo et al., 2016). Indonesia must avoid high inflation rates in order to maintain its economic growth. Inflation in Indonesia from 2009 to 2022 experienced fluctuating conditions. This is due to many factors, one of which is due to the constantly increasing money supply. An increase in the volume of money supply will cause an increase in inflation. In that span of years, the highest inflation occurred in 2013 reaching 8.38%, one of the factors causing it was the increase in the price of subsidized fuel oil and the subsequent increase in public transportation costs. According to Bank Indonesia (2024), there are several reasons to suppress the inflation rate to stay at a low point, these include the impact of inflation which results in a decrease in income received by the community, public confidence in investment decreases, and high inflation becomes a comparison of neighboring countries that can affect the pressure on the rupiah exchange rate. The central bank as the monetary authority has the authority that aims to maintain the stability of the rupiah, in addition through the policies that have been issued aim to keep the inflation rate low and stable (Mukrimaa et al., 2016). One of the policies implemented by Bank Indonesia in handling inflation cases is the policy of controlling interest rates. When inflation experiences a high enough increase, Bank Indonesia raises interest rates to suppress the rate of inflation (Ferdiansyah, 2017). Norpirin (1998) states that when inflation rises, interest rates tend to increase. The increase in interest rates has the effect of stimulating business people to increase investment activities by restoring real sector conditions and to support exchange rate appreciation. Increased interest rates have an effect even though it cannot be predicted with certainty. Inflation can also occur due to demand side pressures. Increased demand can lead to higher prices of goods in the market. Macroeconomic theory reveals that in addition to the amount of money in circulation, inflation can also be caused by aggregate demand consisting of consumption, government spending, investment, and net export-import (Akbar, 2012). Consumption is an expenditure made by household actors to fulfill life. The amount of consumption is determined by the income received by the community. Consumption will increase when a person's income increases, but not as much as the income received (Nur, 2012).

Table 1. Development of Inflation, Money Supply, Interest Rates, and Household Consumption in Indonesia 2009-2022

Yearly	Developmen tof Inflation (%)	Money Supplay (Milyar Rupiah)	Interest Rates (%)	Household Consump tion (%)
2009	2.78	2141384	6.5	50.62
2010	6.96	2471206	6.5	51.43
2011	3.79	2877220	6	49.45

2012	4.3	3304645	5.75	52.08
2013	8.38	3730197	7.5	50.66
2014	8.36	4173327	7.75	50.04
2015	3.35	4548800	7.5	47.47
2016	3.02	5004977	4.75	48.68

Source : Badan Pusat Statistik dan Bank Indonesia

It can be seen from the table above that the inflation variable is experiencing fluctuating conditions. Before the pandemic in 2019 inflation in Indonesia reached 2.72% (yoy). After the pandemic inflation in Indonesia inflation decreased by 1.04 percent to 1.68% (yoy). This was caused by the covid-19 pandemic which resulted in a decrease in people's income. The decline in income that occurred resulted in people not being interested in investing and of course resulted in a decrease in the amount of consumption by household actors. As economic conditions improve, however, it can be seen from the table that the amount of money in circulation increases every year until in 2022 the amount of money circulation reaches 8528022 billion rupiah. Money circulation is of course based on the demand that has been made by the community to conduct daily transactions. Based on research conducted by Edalmen (2019) shows that there is an influence between the money supply on inflation with a positive trend. In a study conducted by Silasa (2016) states that in the long run the amount of money in circulation has a positive effect. In the sense that when there is an increase in the amount of money in circulation, it can have an impact on increasing inflation at a higher level. The increase in the amount of money in circulation is not proportional to the availability of the community in saving money that happens next, people tend to store wealth in the form of goods compared to cash (Nur, 2012). The long-term effect caused by an increase in the money supply is to affect future prices beyond the expected level and disrupt economic growth (Hidayat, 2020). The handling of inflation cases that have been pursued by monetary policy is by setting interest rates. Demands from business people and economic experts say the money supply is related to the decline in Bank Indonesia interest rates. In this way, it is expected to restore the real sector through investment activities. Investors will be interested in investing when interest rates rise. However, Bank Indonesia also considers many factors to match the target achieved (Akbar, 2012). When inflation is declared high, Bank Indonesia raises its short-term nominal interest rate with a note that the money supply is also reduced. It is expected that the policy can reduce the high cases of inflation in Indonesia (Pratiwi & Prasetyia, 2013). Keynes stated that the increase in prices is not only based on the addition of money, but fluctuations can occur due to consumption. Increased consumption will lead to rapid demand for goods and services to be produced. If it is not matched by the production process, it will result in price increases. In the short term, an increase in consumption only determines the nominal value of output. However, in the long run the increase in demand will increase output and the prevailing price level in the market (Santosa, 2017). Inflation has become one of the classic problems that often occur in the economy that causes a decline in the incomes of the people as well as a new negative impact on the economic growth of a country Putri (2017) some developed countries as well as developing countries are facing problems of unstable economic growth. Like the Indonesian nation that relies on the monetary system and the global economy (Agusmianata et al., 2018). Increasing inflation has always been observed, and efforts to remain in a low-trend position do not cause domestic economic imbalances (Jannah, 2022). Inflation at low levels can drive a country to increase its production capacity, while high inflation can also trigger uncertainty in economic conditions(Pratiwi & Prasetyia, 2013). Inflation can be triggered by an increase in the money distributed, an excessive increase will drive the price of goods and services to rise. When this happens continuously will diminish the prosperity of society. The amount of money circulating depends not only on the decision of the central bank, but also on the income of the household and the bank where they store their wealth. Panjaitan et al (2021) Monetary policy is also aimed at stabilizing rupee value. By using monetary targeting interest rates as operational targets as well as inflation as a single policy target. The interest rate is the price of money borrowed or proceeds from investment activities (Nofiatin, 2013). The rate of interest is set by the Bank of Indonesia in accordance with the inflation targeting framework, which is used as a reference to control inflation(Kalalo et al., 2016). The Bank of Indonesia says inflation can be triggered by pressure on the supply side. It usually happens because of increased production costs and has an impact on the depression of exchange rates. The increase in the cost of production can trigger the rise in the price of goods and services and may trigger inflation. On the contrary, when the price starts to fall will be followed by strengthening the exchange rate so that appreciation occurs in the domestic currency (Jannah, 2022). Consumption expenditures are purchases made by individuals or households to buy goods and services used to meet daily need (Nur, 2012). Keynes (1937) revealed a strong correlation between inflation and household consumption, which is linked to increased incomes. When in this position, people tend to increase the amount of consumption but not as much as the income they receive (Mansur et al., 2023). Food consumption is divided into 52 types of beans, fish, meat, etc. While non-food consumptions consists of 47 types of clothing, household facilities, health. Factors that influence the inflation rate include household income, quantity of goods consumed, interest rate, level of education, location of residence. Dwi (2023) there are strategies used in tackling inflation: 1. Strengthening monetary policy The central bank can implement strict policies regarding the amount of money to be distributed to the public. The government can tighten fiscal policy by reducing government spending and also raise tax rates to divide aggregate demand and control inflation. 3. Government wage controls and entrepreneurs can stabilize wage levels to reduce production costs. When wage rates rise, the prices of goods and services remain stable. 4. Government market intervention can involve market interventions to regulate supply and demand in the market. This can control prices and suppress inflation rates.

RESEARCH METHODS

This research uses a type of quantitative research, using secondary data that is distinguished by a time series that is limited from 2009-2022. The data obtained comes from the official website of the Central Bureau of Statistics and Bank Indonesia. This study uses the assumption of dependent variables and independent variables. The dependent variable (Y) is inflation, while the independent variables (X) in this study include Money Supply, Interest Rates, Household Consumption. The analysis technique used in this research is Multiple Linear Regression Analysis which aims to see the effect of independent variables on the dependent variable. The requirements for using this test must pass the classical assumption test with the following criteria (Widarjono, 2018) : (1) the data is normally distributed; (2) the data does not contain heteroscedasticity; (3) the data does not have multicollinearity; (4) the data is free from autocorrelation problems. The Regression model can be written as follows:

$$LOG(Y) = C + \beta_1 LOG(X_1) + \beta_2 X_2 + \beta_3 LOG(X_3) + e$$

Description:
Y = Inflation in Indonesia
C = Constant
X_1 = Money Supply
X_2 = Interest Rate
X_3 = Household Consumption
e = error

As an effort to prove the hypothesis in this study, it is carried out through the t-statistic value, the f statistical value, and the coefficient of determination (R^2) value. This value is obtained from the test that will be carried out, namely:

1. t test

   The t test is a partial or individual test between the independent variable and the dependent variable. The purpose of this test is to see how much influence the independent variable individually has in influencing the dependent variable. In this study using a significance level of 0.05%. If the probability value shows a number <0.05%, it can be said that the independent variable has a significant effect on the dependent variable. Vice versa, if the probability value shows a number> 0.05%, it can be said that the independent variable does not have a significant effect on the dependent variable.

2. f test

   The f test is a simultaneous or joint test. The purpose of this test is to see the effect of the independent variables together in influencing the dependent variable. If the value of prob f statistics is smaller than 0.05%, it can be said that together the independent variables affect the dependent variable. Likewise, on the contrary, when the value of prob f statistics is greater than alpha 0.05% means that the independent variables used in the study do not simultaneously affect the dependent variable.

3. Test Coefficient of Determination / R^2

   The purpose of this test is to determine how much the model's ability to influence the dependent variable. Proven by looking at the R^2 number. If the value shown is close to 1, it means that the independent variable can provide the ability regarding the information needed to analyze the dependent variable.

RESULTS AND DISCUSSION

Classical Assumption Test

Based on the tests that have been carried out, the results will be displayed in table 2 below:

Table 2. Hasil Uji Asumsi Klasik, Eviews 12

Test Type	Measurement	Condition	Value	Description
Normality Test	Jarque-Berra	nilai > 0,05	0.69404	Data is normally distributed
Heteroscedasticity Test	Probability	nilai > 0,05	0.1081	does not contain heteroscedasticity problem
Multicollinearity Test	VIF	nilai < 10	1.948202 1.295954 1.598061	does not contain multicollinearity problem
Autocorrelation Test	R-Squared	nilai >	0.2092	does not contain autocorrelation problem

0,05

Source: Data obtained by the author, 2024

Table 2 shows good results and is in accordance with the requirements of the classic assumption test provisions. It can be interpreted that the data used has passed the classical assumption test. The next stage that will be carried out is multiple linear regression analysis which is used to answer the hypothesis that has been determined. The multiple linear regression analysis test contains the f test, t test, and the coefficient of determination test. This test is carried out to answer the hypothesis whether it is rejected or accepted. For that below is presented a table of multiple linear regression analysis results of money supply, interest rates, household consumption on inflation in Indonesia.

Table 3. Multiple linear regression analysis test results using eviews 12

Variable	Coefficient	Std.Error	t-statistic	Prob.
C	-53.69861	15.30994	-3.507435	0.0057
LOG(X1)	0.465358	0.232654	2.000217	0.0734
X2	0.339039	0.065557	5.171668	0.0004
LOG(X3)	11.75255	3.366728	3.490792	0.0058
R-squared = 0.799065				
Prob(f-statistic) = 0.000809				

Source: Data obtained by the author, 2024

a. Multiple Linear Regression Test
From the regression test results above, the following equation is obtained:

$$LOG(Y) = -53.69861 + 0.465358\ LOG(X1) + 0.339039\ X2 + 11.75255\ LOG(X3)$$

1. The constant is -53.69861 if the independent variables are considered constant, then it represents a decrease in inflation of -53.69861.
2. The coefficient of X1 or money supply has a positive value of 0.465358 on the inflation rate.
3. The X2 coefficient or interest rate has a positive value of 0.339039 on the inflation rate.
4. The coefficient of X3 or household consumption has a positive value of 11.75255 on the inflation rate.

b. F Test (Simultaneous)

It can be seen from table 3 that the prob(f-statistic) is 0.000809 <0.05 so it can be concluded that the independent variable affects the dependent variable simultaneously.

c. t Test (Partial)

Can be seen from table 3 can be explained as follows:

1. X1 has a probability value of 0.0734 > 0.05, which means that the money supply has no significant effect on inflation
2. X2 has a probability value of 0.0004 <0.05, which means interest rates have an effect on inflation
3. X3 has a probability value of 0.0058 < 0.05, which means that household consumption has an effect on inflation 3.

DISCUSSION

Effect of Money Supply on Inflation

Based on the test results that have been carried out, the money supply using the broad money supply approach (M2) has a positive but insignificant effect on inflation in Indonesia. Which means that the increase or decrease in the money supply has no effect on the increase in inflation. This is in line with research conducted by Agusmianata et al., (2018) which states that the money supply is positive in increasing inflation in Indonesia. This means that an increase in the money supply can affect the inflation rate. Based on the quantity theory also states that inflation can be influenced by the amount of money circulated in society. The quantity theory reveals excessive demand for money due to increased public demand for goods and services. In the long run, the increase in money supply affects prices in the future. This study is not in line with research conducted by Putri (2017) which states that the money supply has a negative effect on inflation in Indonesia. It is suspected that the negative is because the money supply used in the broad sense (M2) has a high percentage because M2 consists of quasi money and also time deposits. So the value is too high used to describe the inflation rate in Indonesia.

Effect of Interest Rate on Inflation

Based on the test results that have been carried out interest rates have a positive and significant effect on inflation in Indonesia. This means that when interest rates increase, it will affect the increase in the inflation rate in Indonesia. This is in accordance with the gibson paradox theory which states that there is a unidirectional movement between interest rates and inflation. In line with research conducted by Agusmianata et al (2018), Jannah (2022), and Putri (2017) which states that Bank Indonesia interest rates have a significant positive effect on inflation. According to the data in table 1, in 2013 inflation increased by 8.38%

followed by an increase in interest rates, which at that time also reached the highest figure of 7.75%. Interest rate policy is set as an effort to control inflation. The rise and fall of interest rates is regulated by Bank Indonesia as the Banking authority service. In the short term, an increase in interest rates can affect the increase in the inflation rate. However, the long-term effect of rising interest rates causes future prices to increase and can trigger inflation. Policies related to interest rates are set to stimulate investors to invest capital in exchange for high interest rates. Thus, it can improve the economy to remain at a low and stable inflation.

Effect of Household Consumption on Inflation

Based on the test results that have been done there is a significant positive effect of household consumption on inflation. Supported by research conducted by Mansur et al (2023) and Nur (2012) which states that household consumption has a significant positive effect on inflation in Indonesia. In accordance with the causes of inflation, namely the existence of high demand can cause an increase in the price of goods and services. This demand can be caused by increasing consumption. Consumption that continues to increase can be caused by the income received by the community experiencing an increase which ultimately affects the amount they consume. Household spending has great potential in influencing a country's inflation rate. When households increase their purchases of goods and services, the demand for those products will rise. However, if the increase in demand is not matched by the availability of adequate supply, then there is likely to be a general increase in prices, referred to as demand inflation. Conversely, a decline in household consumption, due to factors such as a drop in income, economic uncertainty, or an increase in the price of essential goods, may result in a decrease in demand for goods and services. If this drop in demand is significant, producers tend to lower their prices to attract consumers, which can eventually lead to deflation. As such, household consumption plays a significant role in shaping the supply and demand dynamics in the market. Changes in consumer spending patterns directly impact aggregate demand, which in turn affects the overall price level.

Effect of Money Supply, Interest Rate, Household Consumption on Inflation

Judging from the f test shows a value of 0.000809 <0.05, which means that together the independent variables used in this study have an influence on the increase in the inflation rate. Inflation is a problem that is often discussed because of its unpredictable movement. To avoid economic downturn, Indonesia must be able to suppress the inflation rate. So that what happened in 1997-1998 does not happen again. Where in that year inflation in Indonesia rose to 72%. The cause of the increase in inflation in this year was due to the printing of too much money used for war needs.

One economic issue that is frequently brought up by economists, including government officials, is inflation. In 1966, Indonesia experienced a hyperinflasia that reached 650%. The cause of this crisis is that there are too many people who use money that is used to fuel revolutions and undermine other concerns. Between 1997 and 1998, Indonesia experienced a tinggi inflation that reached 72% (Putri, 2017). The persistent inflasi in a country's economy is a problem that is very difficult to discuss, since it indicates the leaky dampness caused by inflasi (Mansur et al., 2023).

A long-lasting casus of inflation on the state of the economy and the growth of a nation. The current state of the economy is referred to as stagnant (Agusmianata et al., 2018). The stability of prices is influenced by inflation rates. If the population grows, the population's income will also grow, which will lead to a decline in the population's sense of community (Mukrimaa et al., 2016).

CONCLUSION

Inflation, which is the general increase in prices for goods and services, requires careful handling to prevent its negative impact on the economy. Efforts to address this problem involve various strategies. Monetary authorities, such as central banks, may use interest rate policies to control consumer spending. On the other hand, governments may resort to fiscal measures, such as spending reductions or tax increases, to suppress aggregate demand. Direct intervention in the market, price controls, as well as increased production are also solutions adopted to maintain a balance between demand and supply. Better economic education is also needed to change consumer and producer behavior towards inflation. A combination of these strategies can help control inflation without causing excessive disruption to economic growth.

REFERENCE

Agusmianata, N., Militina, T., & Lestari, D. (2018). Pengaruh Jumlah Uang Beredar dan Tingkat Suku Bunga serta Pengeluaran Pemerintah terhadap Inflasi di Indonesia. *Forum Ekonomi*, *19*(2), 188. https://doi.org/10.29264/jfor.v19i2.2125

Akbar, D. A. (2012). Kausalitas Inflasi, Tingkat Suku Bunga, dan Jumlah Uang Beredar: A Case of Indonesia Economy. *Jurnal Ilmiah STIE MDP*, *2*(1), 59–68.

Bank Indonesia. (n.d.). 2024. https://www.bi.go.id/id/

Dwi, A. (2023). No Title. *Strategi Mengatasi Inflasi*. https://feb.umsu.ac.id/strategi-mengatasi-inflasi/

Edalmen. (2019). Jumlah Uang Beredar , Nilai Tukar Perdagangan Luar. *Ekonomi*, *XXIV*(01), 15–30.

Ferdiansyah, F. (2017). Analisis Pengaruh Jumlah Uang Beredar (M1), Suku Bunga Sbi, Nilai Tukar Suku Bunga Deposito Terhadap Tingkat Inflasi. *Media Ekonomi*, *19*(3), 43–68. https://doi.org/10.25105/me.v19i3.771

Hidayat, P. (2020). *ANALISIS KAUSALITAS DAN KOINTEGRASI ANTARA JUMLAH UANG BEREDAR, INFLASI, DAN PERTUMBUHAN EKONOMI DI INDONESIA*. *July*, 1–23.

Jannah, M. (2022). *Analisis Determinan Faktor Penentu Inflasi Di Indonesia Tahun 2010-2021 Analysis of Determinants of Inflation Determinants in Indonesia*. *4*, 153–165.

Kalalo, H. Y. T., RotinsuluOldy, T., Maramis, & B., M. T. (2016). Analisis Faktor-Faktor Yang Mempengaruhi Inflasi. *Jurnal Berkala Ilmiah Efisiensi*, *16*(01), 706–717.

Mansur, S., Waibo, Z., & Hasnin, M. (2023). Analisis Pertumbuhan Ekonomi, Pengeluaran Konsumsi Rumah Tangga dan Tingkat Suku Bunga terhadap Inflasi di Provinsi Maluku Utara. *Jurnal Ekonomi Pembangunan Unkhair*, *14*(1), 1–12.

Mukrimaa, S. S., Nurdyansyah, Fahyuni, E. F., YULIA CITRA, A., Schulz, N. D., د, غسان., Taniredja, T., Faridli, E. M., & Harmianto, S. (2016). FAKTOR-FAKTOR YANG MEMPENGARUHI INFLASI DI INDONESIA. *Jurnal Penelitian Pendidikan Guru Sekolah Dasar*, *6*(August), 128.

Nofiatin, I. (2013). Hubungan Inflasi, Suku Bunga, Produk Domestik Bruto, Nilai Tukar, Jumlah Uang Beredar, dan Indeks Harga Saham Gabungan (IHSG) Periode 2005–2011. *Jurnal Aplikasi Manajemen*, *II*(66), 215–222.

Nur, E. (2012). KONSUMSI DAN INFLASI INDONESIA Ermon Muh. Nur. *Kajian Ekonomi*, *1*(April), 55–77.

Panjaitan, P., Purba, E., & Damanik, D. (2021). *PENGARUH JUMLAH UANG BEREDAR DAN NILAI TUKAR TERHADAP INFLASI DI SUMATERA UTARA*. *3*(1).

Pratiwi, A., & Prasetyia, F. (2013). Determinan Inflasi Indonesia: Analisis Jangka Panjang Dan Pendek. *Jurnal Ilmiah Mahasiswa FEB*, *1*(1). http://jimfeb.ub.ac.id/index.php/jimfeb/article/view/195

Putri, V. (2017). Analisis Pengaruh Jumlah Uang Beredar, Suku Bunga Sertifikat Bank Indonesia Dan Suku Bunga Kredit Investasi Terhadap Inflasi Di Indonesia. *JOM Fekon*, *4*(1), 2017.

Santosa, A. B. (2017). Analisis Inflasi di Indonesia. *Prosiding Seminar Nasional Multi Disiplin Ilmu & Call Papers UNISBANK Ke-3 (SENDI_U 3) 2017*, 445–452.

Silasa, H. A. D. (2016). Analisis Jangka Panjang dan Jangka Pendek Variabel Makroekonomi dalam Upaya Menstabilkan Inflasi di Indonesia. *Jurnal Ilmiah Mahasiswa FEB UNAIR*, 1–18. https://jimfeb.ub.ac.id/index.php/jimfeb/article/view/2750

Widarjono, A. (2018). *Ekonometrika Pengantar dan Aplikasinya Disertai Panduan Eviews* (Kelima). UPP STIM YKPN.