

## Differences in the Effect of Monetary Policy and Fiscal Policy on Inflation in Indonesia During COVID-19 and Russia-Ukraine Geopolitical Tensions



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**ABSTRACT:** The dynamics of the global economy during the COVID-19 pandemic and geopolitical tensions in Eastern Europe are marked by inflation problems experienced by countries around the world. The purpose of this study is to determine the effect of monetary policy and fiscal policy on inflation during the two crisis periods in Indonesia. This study uses secondary data sourced from the Ministry of Finance, Bank Indonesia, and the Ministry of Trade. The data used is a monthly time series from January 2019 to April 2023. The analysis methods used in this study are multiple linear regression and independent samples t-test. The results of this study indicate that BI interest rates, government expenditure, and taxes have a significant effect on inflation. Meanwhile, the money supply (M2) has no significant effect on inflation. There is a significant difference between money supply (M2) and inflation in the COVID-19 period and Russia-Ukraine geopolitical tensions. Meanwhile, there is no significant difference between BI interest rates, government expenditure, and taxes during the COVID-19 pandemic and Russia-Ukraine tensions.

**KEYWORDS:** Monetary, Fiscal, Policy, Inflation, Economic Crisis

### I. INTRODUCTION

In the inaugural ASEAN+3 Economic Cooperation and Financial Stability Forum 2022, the Minister of Finance Sri Mulyani stated that dynamic developments in the global economy have presented considerable challenges to policymakers (Kemenkeu.go.id, 2022). Moreover, inflation is a persistent issue encountered by all countries over time. It denotes the tendency of prices to increase generally and continuously (Mankiw, 2006).

The widespread COVID-19 outbreak since early 2020 has not only resulted in a global health crisis, but also massive economic impacts. COVID-19 has significantly affected demand and supply, hampering the ability of producers to produce and consumers to consume. This phenomenon had a lasting impact on the economy to date. Previous research by de Soyres, Francois et al. (2023) stated that the weakening of demand and supply of goods and services during the COVID-19 pandemic was caused by the government's mobility restriction policy. In addition, weakening purchasing power also occurred as a result of mass layoffs carried out by several companies. The pandemic has created unprecedented economic conditions, with changes in household consumption behaviour as the virus spreads (de Soyres et al., 2023).

Indonesia's recent economic problems are not only caused by the COVID-19 pandemic. Inflation problems that occurred in 2022 were triggered by geopolitical conflicts in eastern Europe. Geopolitical turmoil between Russia and Ukraine has caused world oil prices to soar because Russia is the largest producer of oil commodities in Europe, they protect energy commodities to carry out military missions. Based on data from the Ministry of Finance, the total subsidized fuel compensation that was provided previously was not on target because subsidized fuel was consumed more by businesses and households than the poor (Ministry of Finance, 2022). The government diverted fuel subsidies and compensation into Cash Transfer Program (BLT BBM). The allocation was diverted to protect the poor and vulnerable from the pressure of price fluctuations. In the end, the government decided to raise the base price of all types of fuel. Inflation during this period was of the cost push inflation type, where the increase in product prices was caused by the price of the oil (Setjen DPR RI, 2013).

Inflation is the main target of monetary policy. Bank Indonesia as an independent central bank has the authority to regulate monetary instruments to achieve price and exchange rate stability. Monetary policy is related to the regulation of interest rates,

## Differences in the Effect of Monetary Policy and Fiscal Policy on Inflation in Indonesia During COVID-19 and Russia-Ukraine Geopolitical Tensions

bank liquidity, and control of money supply. Monetary policy is synchronized with fiscal policy which involves regulating government expenditure and revenue. The government through the Ministry of Finance manages fiscal instruments through budget policies, economic stimulus, and tax incentive to achieve macroeconomic targets and expected economic growth.



**Figure 1. Inflation Growth Rate from January 2019 to April 2023**

Source: Bank Indonesia 2023 (Data Processed)

Figure 1 shows that the inflation rate was relatively low throughout the COVID-19 pandemic. However, since the geopolitical tensions between Russia and Ukraine in February 2022, the inflation rate has reversed, rising sharply to 5.95% in September 2022. This is the highest level recorded since 2014. It is believed that there are differences in the treatment of economic policies (both fiscal and monetary) during these two periods. Further investigation is required to determine the impact of monetary and fiscal policies on inflation during the COVID-19 pandemic and the period of tension between Russia and Ukraine.

Fiscal policy was first believed in 1883 by British economist Thomas Maynard Keynes. Keynesian believed that increasing consumption expenditure and government investment or net exports can increase aggregate demand. Fiscal policy through government expenditure affects the aggregate demand side of an economy in the short term, then affects the long-term supply side of the economy's capacity stimulus. As explained in a study by Francis de Soyres, Dylan Moore and Julio Ortis (2023), fiscal incentives during the pandemic have increased aggregate demand. However, people/households do not spend the additional money from fiscal incentives as they should, which becomes an obstacle for the economy to expand. Fiscal policy has 3 functions related to monetary policy in controlling inflation, including economic stabilization function, resource allocation function and distribution function (Saragih, J. P, 2016).

Fiscal policy synchronises with the business cycle as automatic stabilizers. In sluggish economic conditions this policy encourages economic growth through policies of increasing government expenditure and decreasing taxes (Surjaningsih et al., 2012). Meanwhile, when the economy is overheating due to high aggregate demand, government expenditure is reduced and taxation is increased to maintain the ideal balance of demand and supply so that it does not become overheated (Saragih, J.P., 2016). During the Great Depression in America, monetarists believed that controlling the supply of money in the economy could help manage inflation and demand for goods and services. Bank Indonesia as the monetary authority must be able to ensure that every decision made can affect the rate of output, interest rates, prices and other macroeconomic variables (Baroroh, 2012). Monetary policy needs to be consistent with the final target or avoid time inconsistency (Saragih, J. P, 2016). In implementing controlling the stability of the inflation rate, Indonesia and several countries use the ITF (Inflation Targeting Framework) approach, which makes inflation the final target.

Based on Article 21 of Law No. 17/2003 on State Finance, the Government and Bank Indonesia coordinate in the determination and implementation of economic policy. The best monetary-fiscal policy mix is an expansionary monetary and fiscal policy mix (Saragih, J. P, 2016), the mix is the most effective policy scenario applied as a counter-cyclical to encourage economic growth and maintain the inflation rate.

According to previous research, government expenditure is more effective in overcoming inflation problems in Indonesia (Kurniawan B., 2017). Fiscal policy in handling inflation in Indonesia is more effective than monetary policy. Paramita, R., 2021).

The effectiveness of two economic policies using concluded that monetary policy is more effective in the short term and fiscal policy is more effective in the long term (Reni Opriyanti and Regina Niken Wulantari, 2017). The implementation of monetary policy through the BI interest rate was only effective in controlling inflation before the COVID-19 crisis, but was not effective during the COVID-19 crisis (Agnes Thalia Kartika, 2021).

# Differences in the Effect of Monetary Policy and Fiscal Policy on Inflation in Indonesia During COVID-19 and Russia-Ukraine Geopolitical Tensions

This research is important as a novelty value development from previous studies by placing a number of differentiators from previous studies. The purpose of this research is to analyse macroeconomic policies in Indonesia during the existence of phenomena that have an impact on the economy. This study aims to determine the effect of money supply, BI interest rates, government expenditure and taxes on inflation. In addition, to reveal the direction of economic policy (contractionary or expansionary) applied in a certain period, the effectiveness of the policy is evaluated by the actual inflation rate.

## II. LITERATURE REVIEW AND HYPOTESIS

### A. Literature Review

Based on Law Number 3/2004 on Bank Indonesia, article 1, paragraph (10), "Monetary policy is a policy that is determined and implemented by Bank Indonesia to achieve and maintain the stability of the value of the rupiah which is carried out, among others, through controlling the money supply (M2) and interest rates". Monetary policy needs to be consistent with the ultimate goal and avoid time inconsistency. The central bank, in order to achieve monetary goals, regulates the money supply and interest rate policy (BI Rate) using monetary policy instruments which include open market operations, regulation of the discount rate, regulation of the minimum reserve money, and moral appeals.

Expansionary monetary policy or easy money policy is a policy implemented by the Central Bank to increase the amount of money supply to reduce the inflation rate, increase people's purchasing power, and reduce unemployment. Contractionary monetary policy is a central bank policy issued to tighten the money supply to slow down economic growth and reduce the inflation rate.

Fiscal policy is a government policy that manages the revenue and expenditure of a country, aimed at achieving economic stability. It encompasses budgetary regulations that oversee government expenditure in the state budget (APBN) and tax regulations that control the taxes levied by the government.

Expansionary fiscal policy refers to a situation whereby the government increases its spending (budget deficit) and reduces taxes. The aim is to stimulate economic growth by boosting aggregate demand and output in the economy (Surjaningsih et al., 2012). A budget deficit arises when government expenditure exceeds state revenues and is used as a measure to support the economy. Contractionary fiscal policy involves the reduction of public expenditure and an increase in taxes by the government, resulting in a decrease in aggregate demand for consumer goods and services. This, in turn, can alleviate inflationary pressures.

According to Boediono (2014), inflation is the tendency for prices to rise continuously. Inflation has two causal factors: demand inflation, which arises due to increased public demand for goods and services, and cost inflation, which results from an increase in the cost of production, leading to a rise in the price of goods (Boediono, 2014).

### B. Hypotesis

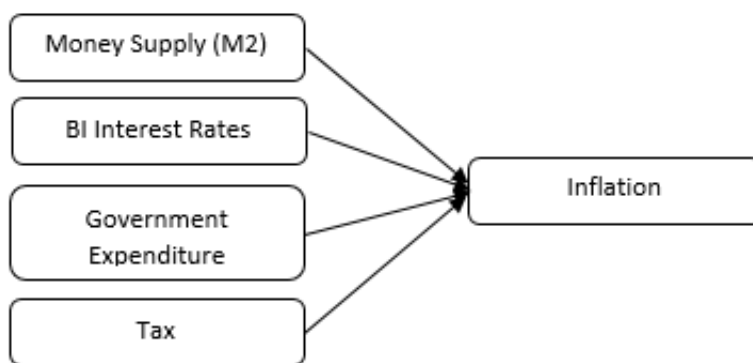


Figure 2. Research Framework Model

Source: Authors

The study hypothesises a significant impact of (M2) money supply, BI interest rates, government expenditure and taxes on inflation during the COVID-19 and Russia-Ukraine geopolitical tensions. Another hypothesis states a significant average differential between money supply (M2), BI interest rates, government expenditure, taxes and inflation during the two crises.

# Differences in the Effect of Monetary Policy and Fiscal Policy on Inflation in Indonesia During COVID-19 and Russia-Ukraine Geopolitical Tensions

## III. OPERATIONAL DEFINITIONS AND RESEARCH METHODS

### A. Operational Definitions

Money Supply (M2) is the broad money supply, which includes currency + demand deposits (M1), quasi-money and SBI securities held by the private sector with a remaining term of up to one year. The money supply (M2) data are monthly data in units of billion Rupiah.

The BI interest rate is the benchmark interest rate or the BI-7 Day Reverse Repo Rate policy rate. In this study, BI interest rate data is presented monthly in percentages (%).

Government expenditure represents the actual value of the realisation of total government expenditure, which is presented in monthly data in units of trillion Rupiah. The expenditure includes central government expenditure, subsidies and transfers to regions and village funds according to the state budget.

Tax revenue is the realisation of government tax revenue from the APBN realisation report in monthly data statistics with units of trillion Rupiah. Such revenue includes income tax, VAT, land and building tax, excise and international trade tax revenues.

The inflation rate is the level of price increases of goods and services over a period of time (Bank Indonesia, 2023). The presented inflation rate is monthly data, measured in units of percent (%).

### B. Research Methods

This research utilises a quantitative approach that presents data in the form of numbers or amounts in certain units of measurement. The object of research is the realisation report of APBN revenue and expenditure from the Directorate General of National Treasury, inflation and interest rate data from Bank Indonesia, and money supply (M2) data from the Ministry of Trade. The type of research data used is secondary data in the form of monthly statistics with documentary study data collection techniques. The sample type is time series data with a research period from January 2019 to April 2023. This study has 52 samples of 2 monetary variables and 2 fiscal variables.

This research goes through a series of classic assumption analyses, including normality test, multicollinearity test, autocorrelation test, and heteroscedasticity test. After fulfilling the classical assumption requirements, multiple linear regression tests are carried out to determine the effect and relationship between economic policy variables and inflation variables and independent sample t-test analysis to determine the average difference during the COVID-19 period and the Russia-Ukraine geopolitical tension. The regression equation in question is as follows

$$INF = \alpha + \beta_1 JUB + \beta_2 SBI + \beta_3 BP + \beta_4 TAX + e$$

Source: The Authors

Description:

INF = Inflation

$\alpha$  = Constant

$\beta_1, \beta_2, \beta_3, \beta_4$  = Coefficient Regression Value

JUB = Money Supply (M2)

SBI = BI Interest Rate

BP = Government Expenditure

TAX = Tax

e = Error

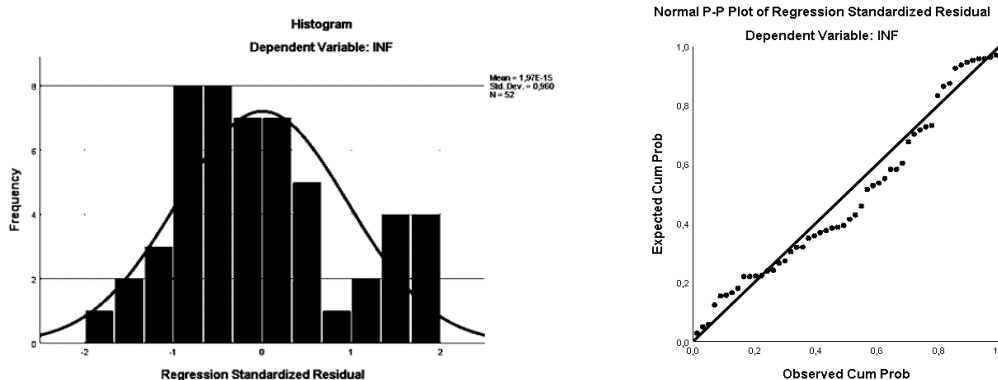
The coefficient of determination is used to measure the regression model in knowing how much influence the economic policy variables have on the inflation rate as the final target.

According to Ghozali (2018: 98), the F statistical test is conducted to determine whether the fiscal and monetary policy variables in the model simultaneously affect the inflation variable. The Independent Sample t Test was used to analyse the average difference between the variable values of the COVID-19 period and the Russia-Ukraine geopolitical tensions.

# Differences in the Effect of Monetary Policy and Fiscal Policy on Inflation in Indonesia During COVID-19 and Russia-Ukraine Geopolitical Tensions

## IV. RESULT

### A. Normality Test



**Figure 3. Normality Test**  
Source: Authors (Data processed)

Based on Figure 3, it can be seen that the histogram graph has a bell-shaped distribution pattern and points to the right and the plotting points approach and follow the diagonal line. It can be concluded that this research data is normally distributed.

### B. Multicollinearity and Heteroscedasticity Test

**Table 1. Multicollinearity and Heteroscedasticity Test**

Multicollinearity Test				Heteroscedasticity Test	
Coefficients <sup>a</sup>				Coefficients <sup>a</sup>	
Model		Collinearity Statistics		Model	Sig.
		Tolerance	VIF		
1	(Constant)			(Constant)	0,734
	JUB	0,908	1,101	JUB	0,664
	SBI	0,908	1,102	SBI	0,004
	TAX	0,652	1,534	TAX	0,845
	BP	0,654	1,53	BP	0,326

Source: Authors (Data processed)

According to Table 1, it is known that the VIF value of money supply, BI interest rate, government expenditure, and taxes is less than 10.00 with a tolerance value greater than 0.10, so it can be concluded that there are no symptoms of multicollinearity in this regression model.

Table 1 shows that the probability value (Sig.) of money supply (M2), taxes, and government expenditure is greater than 0.05, so it can be concluded that there are no symptoms of heteroscedasticity. Meanwhile, the BI interest rate has a probability value of less than 0.05, it can be concluded that heteroscedasticity occurs because the data has a stagnant cycle in several consecutive times (non-stationary data).

### C. Autocorrelation Test

**Table 2. Autocorrelation Test**

Runs Test	
	Unstandardized Residual
Test Value <sup>a</sup>	-,00046
Cases < Test Value	25
Cases >= Test Value	26
Total Cases	51
Number of Runs	28
Z	,427
Asymp. Sig. (2-tailed)	,669

Source: Authors (Data processed)

## Differences in the Effect of Monetary Policy and Fiscal Policy on Inflation in Indonesia During COVID-19 and Russia-Ukraine Geopolitical Tensions

According to table 2, it is known that the Test Value is 0.00046 with a probability value of 0.669, so it can be concluded that there is no autocorrelation between residuals in this model.

### D. Multiple Linear Regression Test of COVID-19 Period

Table 3. Multiple Linear Regression Test of COVID-19 Period

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-,009	,022		-,431	,669
	JUB	6,291E-10	,000	,053	,263	,794
	SBI	,583	,155	,751	3,761	,001
	BP	-1,500E-5	,000	-1,587	-3,996	,000
	TAX	2,780E-5	,000	1,625	4,186	,000

Source: Authors (Data processed)

Based on the result in table 3, the regression equation is obtained as follows:

$$INF = -0.009 + 6.291E-10 JUB + 0.583 SBI - 0.000015 BP + 0.000028 TAX + e$$

The constant value of (-0.009) indicates that the money supply (M2), BI interest rate, government expenditure, and taxes assumed to be constant will reduce inflation by 0.009 (0.9%). The  $\beta_1$  value of 6.291E-10 indicates that if the money supply (M2) increases by IDR 1 billion then inflation increases by 6.291E-8% assuming other variables are constant. The  $\beta_2$  value of 0.583 indicates that if the interest rate increases by 1% then inflation increases by 58.3% assuming other variables are constant. The value of  $\beta_3$  of -0.000015 indicates that if government expenditure increases by IDR 1 trillion, inflation will decrease by 0.0015%, assuming other variables are constant. The  $\beta_4$  value of 0.000028 indicates that if taxes increase by IDR 1 trillion, inflation will increase by 0.0028%, assuming other variables are constant.

### E. Multiple Linear Regression Test of Russia-Ukraine Geopolitical Tensions Period

Table 4. Multiple Linear Regression Test of Russia-Ukraine Geopolitical Tensions Period

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,109	,173		,629	,545
	JUB	-1,789E-8	,000	-,385	-,720	,490
	SBI	1,338	,607	1,110	2,203	,055
	BP	-4,810E-5	,000	-3,595	-2,759	,022
	TAX	8,202E-5	,000	4,227	3,303	,009

Source: Authors (Data processed)

Table 4 shows the relationship between economic policy variables and inflation in the period of Russia-Ukraine geopolitical tensions with the following regression equation:

$$INF = 0.109 - 1.789E-8 JUB + 1.338 SBI - 4.810E-5 BP + 8.202E-5 TAX + e$$

The constant value of (0.109) indicates that the money supply (M2), BI interest rate, government expenditure, and taxes assumed to be constant will reduce inflation by 0.109 (10.9%). The  $\beta_1$  value of -1.789E-8 indicates that if the money supply (M2) increases by IDR 1 billion, inflation will decrease by 1.789-6% assuming other variables are constant. The  $\beta_2$  value of 1.338 indicates that if the interest rate increases by 1% then inflation increases by 133.8% assuming other variables are constant. The  $\beta_3$  value of 0.000048 indicates that if government expenditure increases by IDR 1 trillion, inflation decreases by 0.0048% assuming other variables are constant. The  $\beta_4$  value of 0.000082 indicates that if taxes increase by IDR 1 trillion then inflation increases by 0.0082% assuming other variables are constant.

### F. Partial t Test

The partial t-test results during the COVID-19 pandemic (Table 3) reveal the relationship between economic policy variables and inflation as follows. Money supply (M2) has no significant effect on inflation, as evidenced by the calculated t value of money

## Differences in the Effect of Monetary Policy and Fiscal Policy on Inflation in Indonesia During COVID-19 and Russia-Ukraine Geopolitical Tensions

supply (M2) being smaller than the t table value ( $0.263 < 1.692$ ). BI interest rate has a significant effect on inflation, as evidenced by the t value of BI interest rate being greater than the t table ( $3.761 > 1.692$ ). Government expenditure has a significant effect on inflation, as evidenced by the t value of government expenditure being greater than the t table ( $3.996 > 1.692$ ). Tax has a significant effect on inflation, as evidenced by the t value of tax being greater than the t table value ( $4.186 > 1.692$ ).

The partial t-test results on Russia-Ukraine geopolitical tensions (Table 4) reveal the effect of economic policy variables on inflation as follows. Money supply (M2) has no significant effect on inflation, as evidenced by the t-value of money supply (M2) being smaller than the t table ( $-0.720 < -1.796$ ). BI interest rate has a significant effect on inflation, as evidenced by the t value of BI interest rate being greater than the t table ( $2.203 > 1.796$ ). Government expenditure has a significant effect on inflation, as evidenced by the t value of government expenditure being greater than the t table ( $2.759 > 1.796$ ). Taxes have a significant influence on inflation, as evidenced by the t value of tax being greater than the t table ( $3.303 > 1.796$ ).

### G. Coefficient of Determination ( $R^2$ )

Table 5. Coefficient Determination ( $R^2$ )

Coefficient Determination ( $R^2$ )	
COVID-19 Period	Russia-Ukraine Geopolitical Tensions Period
R Square	R Square
0,823	0,783

Source: Authors (Data Processed)

The coefficient of determination test (table 5) measures the regression model's ability to explain how much influence economic policy variables have on the inflation rate. It is known that the R-squared value during the COVID-19 period is 0.823, it can be concluded that the money supply (M2), BI interest rates, government expenditure, and taxes are able to explain inflation by 82.3%, the rest (17.7%) is influenced by factors outside the research model. In other periods, the R-squared value during the Russia-Ukraine geopolitical tensions was 0.823, it can be concluded that the money supply (M2), BI interest rates, government expenditure, and taxes were able to explain inflation by 78.3%, the rest (21.7%) was influenced by factors outside the research model.

### H. F Test (ANOVA)

Table 6. F Test (ANOVA)

ANOVA			
COVID-19 Periods		Russia-Ukraine Geopolitical Tensions Periods	
Probability (Sig.)	F	Probability (Sig.)	F
0	37,172	0,002	9,043

Source: Authors (Data Processed)

Based on the results of the ANOVA analysis (Table 6), it can be concluded that the money supply (M2), BI interest rate, government expenditure, and taxes simultaneously have a significant effect on inflation during the COVID-19 pandemic. This is evidenced by a significant value of 0.000 which fulfils the provisions of the significance value ( $<0.05$ ).

The results of the ANOVA analysis also concluded that during the Russia-Ukraine tension the money supply (M2), BI interest rates, government expenditure, and taxes simultaneously had a significant effect on inflation. Evidenced by a significant value of 0.002 which fulfils the provisions of the significance value ( $<0.05$ ).

### I. Independent Samples t Test

Table 7. Group Statistics Independent Samples t Test

Group Statistics					
	MASA	N	Mean	Std. Deviation	Std. Error Mean
JUB	COVID-19 PERIOD	37	6561857,77514	614545,681023	101030,687613
	RUSSIA-UKRAINE GEOPOLITICAL TENSIONS PERIOD	15	8075328,10200	255626,542225	66002,489392
SBI	COVID-19 PERIOD	37	,04439	,009472	,001557
	RUSSIA-UKRAINE GEOPOLITICAL TENSIONS PERIOD	15	,04500	,010177	,002628

## Differences in the Effect of Monetary Policy and Fiscal Policy on Inflation in Indonesia During COVID-19 and Russia-Ukraine Geopolitical Tensions

BP	COVID-19 PERIOD	37	1208,09459	778,014698	127,904829
	RUSSIA-UKRAINE GEOPOLITICAL TENSIONS PERIOD	15	1207,64333	870,893710	224,863789
TAX	COVID-19 PERIOD	37	704,65676	430,112336	70,710032
	RUSSIA-UKRAINE GEOPOLITICAL TENSIONS PERIOD	15	975,69600	596,852589	154,106676
INF	COVID-19 PERIOD	37	,022076	,0073553	,0012092
	RUSSIA-UKRAINE GEOPOLITICAL TENSIONS PERIOD	15	,045560	,0115925	,0029932

Source: Authors (Data Processed)

Based on the results of the statistical analysis (Table 7), it is known that the money supply (M2) during the Russia-Ukraine geopolitical tensions (IDR 8,075,328,102 billion) was higher than during the COVID-19 pandemic (IDR 6,561,857,775 billion). The BI interest rate during the Russia-Ukraine geopolitical tensions (4.5%) was higher than during the COVID-19 pandemic (4.43%). Government expenditure during the COVID-19 pandemic (IDR 1,208.09459 trillion) was higher than during the Russia-Ukraine geopolitical tensions (IDR 1,207.64333 trillion). Taxes received during the Russia-Ukraine geopolitical tension (IDR 975.696 trillion) were higher than during the COVID-19 pandemic (IDR 639.10667 trillion). The inflation rate during the Russia-Ukraine geopolitical tension (4.56%) was higher than during the COVID-19 pandemic (2.2%).

**Table 8. Independent Samples t Test**

<i>Independent Samples Test</i>				
	Levene's Test for Equality of Variances			Description
	T	Df	Sig.	
JUB	-9,178	50	0,000	Has a significant difference.
SBI	-0,205	50	0,838	Has no significant difference
BP	0,002	50	0,999	Has no significant difference
TAX	-1,835	50	0,073	Has no significant difference
INF	-8,767	50	0,000	Has a significant difference.

Source: Authors (Data Processed)

According to the results of the independent samples t-test (Table 8), we can conclude that there is a significant difference between money supply (M2) and inflation in the COVID-19 period and the Russia-Ukraine geopolitical tensions, as evidenced by the calculated t-value for money supply (M2) and inflation, which is greater than the t-table value (>1.676). There is no significant difference between BI interest rates, government expenditure and taxes during the COVID-19 pandemic and the Russia-Ukraine tensions, as evidenced by the t-value for BI interest rates, government expenditure and taxes being smaller than the t-table value (<1.676).

## V. DISCUSSION

### **A. The effect of M2 on inflation during the COVID-19 pandemic & Russia-Ukraine geopolitical tensions.**

Evidence shows that the money supply (M2) has no significant effect on inflation during the two crisis periods. This finding contradicts Mishkin's theory posited in Kurniawan (2017). In uncertain economic climates, monetary policy that seeks to control the money supply (M2) is less effective in overcoming inflation problems. The most important factor is the high threat of layoffs, which reduces the propensity to consume. The demand for services has diminished as a result of the government's policy of imposing mobility restrictions during the COVID-19 pandemic (de Soyres, Francois et al., 2023). The money supply (M2) saw an increase during the period of Russia-Ukraine tensions, as it was supported by an increase in bank credit and third-party funds.

### **B. The effect of the BI interest rate on inflation during the COVID-19 pandemic & Russia-Ukraine geopolitical tensions.**

The Bank Indonesia (BI) interest rate has a significant effect on inflation during the two crisis periods. This outcome is consistent with the research conducted by Agnes Thalia Kartika (2021), which established that monetary policy plays a crucial role in controlling the inflation rate, primarily through the determination of the BI Rate. This study revealed a time inconsistency phenomenon detected in the first 5 months of the Russia-Ukraine tension period. During this period, inflation increased sharply, but the central bank did not take counter-cyclical measures by implementing a contractionary monetary policy. This led to a significant impact, marked by a rise in the inflation rate to 5.95%, the highest recorded level since 2014.



## **Differences in the Effect of Monetary Policy and Fiscal Policy on Inflation in Indonesia During COVID-19 and Russia-Ukraine Geopolitical Tensions**

### ***C. The Effect of Government Expenditure on Inflation during the COVID-19 Pandemic & Russia-Ukraine Geopolitical Tensions.***

Government expenditure has a significant effect on inflation during the two crises. Fiscal incentives in strategic program in national economic recovery have maintained people's purchasing power during the COVID-19 pandemic and the energy crisis due to Eastern European tensions. Lower inflation indicates a supply-demand balance in the domestic market. To address this situation, the government allocated budget from the state budget (APBN) and regional budget (APBD) for the program to accelerate economic recovery through a series of economic stimulus.

The Stimulus I policy aims to strengthen the domestic economy, Stimulus II focuses on maintaining people's purchasing power and facilitating exports and imports, and Stimulus III allocates funds for additional spending and handling the continued economic impact caused by the COVID-19 pandemic. Fiscal policy has been effective in controlling inflation. This is in line with research by de Soyres, F. et al. (2022) and Kurniawan, B (2017). This research reflects the Keynesian theory which states that government intervention can drive the economy.

### ***D. The Effect of Taxes on Inflation during the COVID-19 Pandemic & Russia-Ukraine Geopolitical Tensions.***

Taxes have a significant effect on inflation during the two crises. During expansive economic condition, fiscal policy as an automatic stabiliser must be able to prevent the economy from overheating. Through the ratification of the Harmonisation of Tax Regulations Law (UU HPP) in 2022, tax revenue growth is projected to be more progressive in the following years. Positive tax revenue trends can balance state spending aimed at protecting the public economy against the impact of global uncertainty risks.

### ***E. The Difference in Money Supply (M2) during COVID-19 and Russia-Ukraine Geopolitical Tensions.***

The money supply (M2) during the two crisis periods has a significant average difference. The total money supply (M2) during the COVID-19 period was IDR 6,561,857.775 billion, lower than during the Russia-Ukraine geopolitical tensions period which amounted to IDR 8,075,328.102 billion. The low money supply (M2) during COVID-19 was due to the decline in people's purchasing power, demand for money, and low ownership of central bank certification (SBI). Bank Indonesia took an expansionary policy to stimulate economic activity by expanding loose credit, purchasing certificate, and other securities through open market operations aimed at improving macro-prudential stability and increasing the availability of credit for companies and financial institutions. Unfortunately, it has not been effective due to the uncertain economic condition and high layoff rate. Investment and consumption activities began to increase when mobility restrictions were eased and the COVID-19 growth rate declined.

### ***F. The Difference in BI Interest Rates during COVID-19 and Russia-Ukraine Geopolitical Tensions.***

The BI interest rate during the two crisis periods has an insignificant average difference. The average of BI interest rates during the COVID-19 period (4.43%) was lower than during the Russia-Ukraine tension period (4.5%). "The Keynes' General Theory", states that interest rates are adjusted to balance the supply and demand for liquidity assets and money. Bank of Indonesia has kept the interest rates at 3.5% for 18 months to stimulate credit demand for investment and consumption in favour of accelerating economic recovery. However, there was a time inconsistency in the first 5 months of the Russia-Ukraine tension period where inflation contracted due to a rise in energy commodity prices and supply bottlenecks due to protectionism.

### ***G. The Difference in Government Expenditure during COVID-19 and Russia-Ukraine Geopolitical Tensions.***

Government expenditure during the two crisis periods has an insignificant average difference. The average government expenditure during COVID-19, which was IDR 1,208.09459 trillion, was greater than that during the Russia-Ukraine tensions, which was IDR 1,207.64333 trillion. In line with the argument of de Soyres, F. et al. (2023). Governments around the world are providing massive fiscal support to mitigate the health and economic impacts of COVID-19.

In addition, fiscal incentive is aimed at increasing people's purchasing power and maintaining demand in the domestic market amid the COVID-19 pandemic. During the Russia-Ukraine geopolitical tension, the government took steps to reallocate and refocus the budget for health care, social protection for the poor & vulnerable communities and support for domestic businesses, especially MSMEs. In addition, this policy is to encourage the acceleration of National Economic Recovery (PEN) which has gradually improved.

### ***H. The Difference in Taxes during COVID-19 and Russia-Ukraine Geopolitical Tensions.***

Taxes in the two crisis periods have an insignificant average difference. The average tax during the COVID-19 pandemic of IDR 704,656.76 billion was less than the Russia-Ukraine tensions period of IDR 975,696 billion. Tax revenue increased during the

# Differences in the Effect of Monetary Policy and Fiscal Policy on Inflation in Indonesia During COVID-19 and Russia-Ukraine Geopolitical Tensions

Russia-Ukraine tension period, supported by the implementation of the Harmonisation of Tax Regulations Law, in which there were adjustments to tax rates, including VAT, which was increased from 10% to 11%.

During the COVID-19 period, government policies was relaxing tax revenue with incentives in the form of tariff reduction, tax write-offs and tax relief. The government provides tax incentives for Income Tax 21 & Final Income Tax and VAT on business rentals to encourage job creation and support domestic industries to survive the crisis. Factors that are considered to affect the level of tax revenue include public income, price growth, and export and import activities.

## *I. The Difference in Inflation during COVID-19 and Russia-Ukraine Geopolitical Tensions.*

Inflation during the two crisis periods has a significant average difference. The average inflation rate during the Russia-Ukraine tension period has increased from the COVID-19 pandemic. The average inflation rate during COVID-19 was 2.2%, while during the Russia-Ukraine tension it was 4.5%. The low inflation rate during the COVID-19 period was due to low consumption and purchasing power. People had enough purchase power from the fiscal incentives provided but choose to save money so that consumption was hampered.

In February 2022, the inflation rate contracted, driven by rising global oil prices and food prices. In addition, tensions in Eastern Europe led to trade protectionist policies by the countries involved, resulting in supply bottlenecks that caused commodity prices to rise. The increase in product prices was caused by the increase in the price of raw materials for production, so this inflation is a type of cost-push inflation.

## **CONCLUSION**

Based on the test results and analysis, it is concluded that the money supply (M2) does not significantly affect inflation so that its control does not have a real impact on the inflation rate. The BI interest rate has a significant effect on inflation so that monetary policy in setting the benchmark interest rate is needed to achieve inflation targets. Government spending has a significant effect on inflation, fiscal policy in adjusting state spending is needed to regulate economic stability and domestic markets. Taxes have a significant effect on inflation, tax regulation is needed as automatic stabilizers of the Indonesian economy. Based on the results of the T-test, it is known that there are significant differences in the money supply (M2) and inflation between the COVID-19 period and the Russia-Ukraine geopolitical tensions. Meanwhile, there is no significant difference in BI interest rates, government spending and taxes between the COVID-19 pandemic period and the Russia-Ukraine tensions.

## **SUGGESTION**

Researchers suggest that the government should increase their provision of incentives and fiscal stimulus, with appropriate targeting. This is due to the crucial role of fiscal policy in controlling inflation during the COVID-19 pandemic and the geopolitical tensions between Russia and Ukraine. Bank Indonesia is expected to look further at the concept of time inconsistency and comprehensively pay attention to other factors that can cause inflation contraction.

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