



EFFECTIVENESS OF FISCAL AND MONETARY POLICY IN SUPPRESSING INFLATION RATE IN TRI COUNTRIES (TURKEY, RUSSIA, INDONESIA)

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Abstract

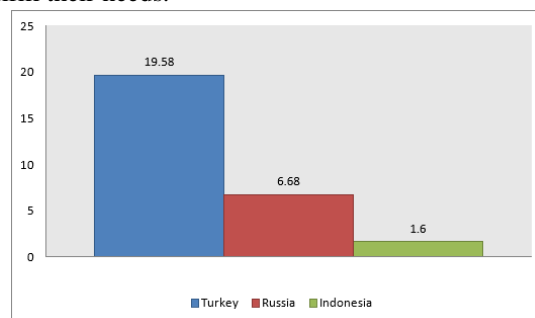
The purpose of this study is to determine the effect of fiscal and monetary policy variables on Inflation in Turkey, Russia and Indonesia. The variables used in this study are Inflation, Exchange Rate, Money Supply, Gross Domestic Product, Taxes and Government Spending. The method used is Panel ARDL. The results showed that in overcoming Inflation, Turkey, Russia and Indonesia used the Variables of Money Supply and Taxes. But in the panel it turns out that the amount of money in circulation and taxes are also able to be a leading indicator to overcome inflation in Turkey, Russia and Indonesia, but its position is not stable in the short run and long run. While the main Leading indicator in overcoming Inflation in Turkey, Russia and Indonesia is Gross Domestic Product and its position is stable when viewed from the short run and long run. Thus it is recommended to the Central Bank in each country Turkey, Russia and Indonesia to take monetary policy through the Money Supply. It is recommended to the government through fiscal policy, namely Government Expenditure to encourage exchange rate stability and efforts to increase Gross Domestic Product to accelerate growth in the short and long term.

Keywords : Inflation, Money Supply, Exchange Rate, Taxes, Government Expenditure, Gross Domestic Product

1. INTRODUCTION

The economy of a country is something that is very influential for the prosperity and welfare of the people in that country. The government will measure the success of its country's economy with various methods or indicators that are most representative of changes in the economy. A country is said to be good if its economy is growing, one of which is in terms of its real national income or in terms of real income per capita which continues to increase over time. A good economy can also be seen from the declining unemployment rate, meaning that more jobs are available for the people.

Low and stable inflation is needed by an economy in an effort to improve the welfare of society. A low and stable inflation rate encourages productive investment, increases employment, and ultimately increases people's income. An increase in people's income will increase people's purchasing power and this indicates an increase in people's ability to meet the needs of clothing, food, education and health. In other words, there is an increase in community welfare because people are able to increase their ability to fulfill their needs.



Source: trading economics.com

Figure 1. The inflation of Turkey, Russia, Indonesia

It is known that of the twenty-two G20 countries, there are three countries that I chose randomly with the highest inflation rate in mid-2021, namely Turkey, Russia, Indonesia. The cause of



this inflation is the lack of policy coordination in handling in suppressing the inflation rate in each country. Turkey is a country with an inflation rate percentage of 19.58%, Russia is 6.68%, and the lowest inflation rate of the three countries is Indonesia with a total percentage of only 1.60%. The 2008 crisis started with a financial crisis, followed by a banking crisis and then developed into an economic crisis (Susilo, 2010). Thus, the shocks of the financial crisis from the United States resulted in economic instability and eventually increased the inflation rate. In that year the world economy was facing difficulties.

The process of stabilizing inflation, various countries and international organizations realize the importance of economic growth, because increasing economic growth can reduce inflation rates (Putri S. d., 2013). There have been many studies that say that there is a relationship between economic growth and inflation, such as research conducted by (Ramdani, 2015) which says that economic growth can affect the level of inflation. The same thing expressed by Chani and Zeman in (Sabir, 2012) which says there is a negative relationship between economic growth and the level of Inflation. Basically, one of the economic performance of a country is measured by good economic growth, so that if economic growth increases, it can produce good economic conditions.

According to (Jonidi, 2012) the increase in economic growth can have an impact on reducing the number of poor people in each region, the increase in economic growth must also be accompanied by an increase in technology and labor absorption. Likewise, according to (Rusiadi & Novalina, 2018) in their research, they say that the factor that most affects poor people in developing countries is Gross Domestic Product or Economic Growth.

2. LITERATURE REVIEW

Monetary policy is all actions or efforts of the central bank to influence the development of monetary variables (Money Supply, Interest Rates, and Exchange Rates) to achieve the desired goals. As part of macroeconomic policy, the objective of monetary policy is to help achieve macroeconomic goals including: economic growth, employment, price stability, and balance of payments. These four objectives are the ultimate goal of monetary policy (Natsir, 2011). Monetary policy is the policy of the monetary authority or central bank in the form of monetary economic control to achieve the desired economic development.

Inflation is a phenomenon that often occurs in developing countries and even in developed countries. Inflation has a very broad impact on the macroeconomy. High inflation will worsen income distribution, increase the inflation rate, reduce domestic savings, cause a trade balance deficit, inflate the amount of foreign debt and cause political instability. Initially, inflation was defined as an increase in the money supply or an increase in liquidity in an economy. This definition refers to the general symptoms caused by an increase in the money supply which is thought to have caused a rise in prices. Inflation can briefly be defined as a tendency for prices of goods and services to rise generally and continuously.

Gross Domestic Product is a process of continuous change in the condition of a country's economy towards a better situation within a certain period of time. Gross Domestic Product is generally used to measure economic development, economic welfare, economic progress and changes in the long-term economic fundamentals of a country. Basically, economic growth is defined as the process of real GDP and real income increasing continuously through per capita productivity.

The money supply is money that is in the hands of the public. However, this definition continues to evolve, along with the development of a country's economy. The scope of the definition of money supply in developed countries is generally broader and more complex than in developing countries. Classical economists (but not all of them) tend to define the money supply as currency because it is money that is actually the purchasing power that can be used immediately. Money supply can be defined in a narrow, broad, and broader sense (Leviani, 2016).



1. RESEARCH METHODS

In this study using panel data, namely by using data between time and data between regions or countries. Panel ARDL is used to obtain the estimation results of each individual characteristic separately by assuming the existence of cointegration in the long-term lag of each variable. Autoregressive Distributed Lag (ARDL) introduced by Pesaran et al. (2001) in Rusiadi (2014). This technique examines whether each lag variable lies in I(1) or I(0). Instead, the ARDL regression result is a test statistic that can compare with two asymptotic critical values.

$$INF_{it} = \alpha + \beta_1 KUR_{Sit} + \beta_2 JUB_{it} + \beta_3 GDP_{it} + \beta_4 GOV_{it} + \beta_5 TAX_{it} + e$$

Here is the regression panel formula by country:

$$INF_{Turkey} = \alpha + \beta_1 KUR_{Sit} + \beta_2 JUB_{it} + \beta_3 GDP_{it} + \beta_4 GOV_{it} + \beta_5 TAX_{it} + e$$

$$INF_{Russia} = \alpha + \beta_1 KUR_{Sit} + \beta_2 JUB_{it} + \beta_3 GDP_{it} + \beta_4 GOV_{it} + \beta_5 TAX_{it} + e$$

$$INF_{Indonesia} = \alpha + \beta_1 KUR_{Sit} + \beta_2 JUB_{it} + \beta_3 GDP_{it} + \beta_4 GOV_{it} + \beta_5 TAX_{it} + e$$

Panel ARDL Criteria:

The accepted ARDL Panel model is a model that has a cointegrated lag where the main assumption is that the coefficient value in the short run equation has a negative slope with a significant level of 5%. Panel ARDL Model Requirements: the value is negative (-0.579) and significant (0.012 < 0.05) then the model is accepted.

2. RESULTS AND DISCUSSION

Inflation is very disruptive to activities, both economic and non-economic. Increased inflation can lead to economic instability. In Turkey, inflation is skyrocketing at a percentage of 75.3%, almost ten times higher than the inflation rate in Germany in the same month. The increase in inflation in Turkey is due to the increase in gas and fuel prices, which amounted to 224% and alcohol 91.6% in 2021. Turkey's economy was experiencing turbulent times long before Russia invaded Ukraine. The Turkish government's efforts to reduce inflation have come to nothing. The government tried to raise the minimum wage drastically but that only resulted in prices soaring even higher. The Turkish President himself also asserted that Inflation is the result of high interest rates, which is contrary to the economic theory of other central banks. (Topcu, 2022).

Russian inflation surged to its highest level since 2002 as international sanctions were imposed. The sanctions were imposed due to Vladimir Putin's invasion of Ukraine, which depressed prices and disrupted supply chains. Russia risks rising inflationary pressures if its oil exports fall significantly due to the European embargo over the Ukraine war, the Central Bank of Russia cut its key interest rate by 150 basis points on Friday to 9.5% in June, bringing the rate back to pre-war levels. If Russia's oil exports plummet, this will trigger pro-inflationary pressures due to a contracting trade balance and a weaker ruble. The annual inflation rate in Russia fell to 17.1% in May 2022, below market expectations of 17.3%. The US dollar traded against the Russian ruble at 57.8350, up 2.5850 or 4.68 %, since the previous trading session (Bicer, 2022). Price increases in April 2022 reached 17.8% when compared to the previous year. The figure was just below analysts' forecast of 18% according to a Bloomberg survey of 16 economists, even for products such as fuel the price increase was as high as 20.4% (Subekti, 2022).

Core inflation in July 2022 was kept low at 0.28% (mtm), as was core inflation in June 2022 which amounted to 0.19% (mtm). Meanwhile, the Central Bureau of Statistics noted that the increase in prices or inflation in July 2022 compared to the previous year (y-o-y) increased to 4.94%. This figure is the highest since October 2015, which was 6.25%. According to BPS, inflation in July 2022 was mostly contributed by an increase in food and beverage prices. The increase was mainly influenced by inflation in car and house rental commodities, which was driven by an increase in community mobility (NEWS, 2022).



Table 1. Estimate of Panel ARDL

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
Long Run Equation				
JUB	0.103193	0.086173	1.197507	0.2439
LOGKURS	-16.30514	4.673737	-3.488673	0.0021
LOGPDB	-42.24475	11.49855	-3.673919	0.0013
TAX	-0.051967	0.406419	-0.127866	0.8994
LOGGOV	22.62803	10.76088	2.102804	0.0471
Short Run Equation				
COINTEQ01	-0.931220	0.632190	-1.473007	0.0449
D(JUB)	-0.902258	0.273791	-3.295420	0.0033
D(LOGKURS)	-41.09401	56.24665	-0.730604	0.4727
D(LOGPDB)	-38.74563	45.77483	-0.846440	0.0064
D(TAX)	0.094638	0.914748	0.103458	0.9185
D(LOGGOV)	-6.091741	22.97350	-0.265164	0.7934
C	293.0946	191.7569	1.528470	0.1406
Mean dependent var	-0.305246	S.D. dependent var	3.141565	
S.E. of regression	1.830247	Akaike info criterion	4.072625	
Sum squared resid	73.69572	Schwarz criterion	5.086193	
Log likelihood	-71.74301	Hannan-Quinn criter.	4.455654	

Source: data processed, Eviews v. 9

Model panel ARDL yang diterima adalah model yang memiliki lag yang terkointegrasi dimana asumsi utamanya adalah nilai koefisien memiliki slope negatif dengan tingkat signifikan 5%. Syarat tersebut pada model Panel ARDL: nilai negatif (-0.93) dan signifikan ($0.04 < 0.05$) maka model diterima. Berdasarkan penerimaan model tersebut, maka analisis data dilakukan dengan panel negara.

Table 2. Panel ARDL for Turkey

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
COINTEQ01	0.329602	0.038193	8.629808	0.0033
D(JUB)	-0.734391	0.034298	-21.41186	0.0002
D(LOGKURS)	-49.85746	408.9542	-0.121915	0.9107
D(LOGPDB)	-37.23917	523.1264	-0.071186	0.9477
D(TAX)	0.769211	0.084568	9.095779	0.0028
D(LOGGOV)	38.42542	591.1310	0.065003	0.9523
C	-83.95280	2723.419	-0.030826	0.9773

Source: data processed, Eviews v. 9

Table 3. Panel ARDL for Russia

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
COINTEQ01	-1.479546	0.055116	-26.84412	0.0001
D(JUB)	-0.534803	0.025323	-21.11904	0.0002
D(LOGKURS)	60.41369	1136.656	0.053150	0.9610
D(LOGPDB)	39.77474	578.0855	0.068804	0.9495
D(TAX)	-1.715402	0.580368	-2.955713	0.0597
D(LOGGOV)	-18.50088	902.8868	-0.020491	0.9849
C	420.8846	13920.92	0.030234	0.9778

Source: data processed, Eviews v. 9

Table 4. Panel ARDL for Indonesia

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	-1.643716	0.060008	-27.39172	0.0001
D(JUB)	-1.437579	0.143890	-9.990788	0.0021
D(LOGKURS)	-133.8383	2197.906	-0.060894	0.9553
D(LOGPDB)	-118.7725	1504.621	-0.078938	0.9421
D(TAX)	1.230105	0.240537	5.113984	0.0145
D(LOGGOV)	-38.19977	552.7679	-0.069106	0.9493
C	542.3519	18364.35	0.029533	0.9783

Source: data processed, Eviews v. 9

Based on the overall results, it is known that what is significant in the long run affecting Inflation in Turkey, Russia and Indonesia is the Exchange Rate and Gross Domestic Product. Then in the short term that affects Inflation is the Money Supply and Gross Domestic Product. The following table summarizes the results of Panel ARDL:

Table 5. The Summary of Panel ARDL

Variable	Turkey	Rusiaa	Indonesia	Short Run	Long Run
Money supply	1	1	1	1	0
Exchange rate	0	0	0	0	1
GDP	0	0	0	1	1
Tax	1	1	1	0	0
Gov. Expend	0	0	0	0	0

It can be seen in the table above that the value of 1 means significant and the value of 0 means insignificant to Inflation. The following is a summary of overcoming Inflation in the long run in Turkey, Russia and Indonesia:

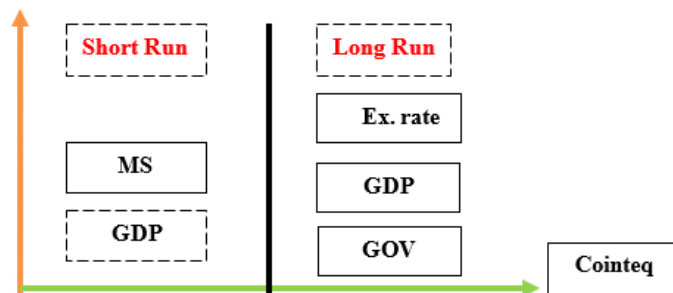


Figure 2. Tackling inflation for Turkey, Russia, Indonesia

Leading indicators in overcoming Inflation, namely in Turkey, Russia and Indonesia in overcoming Inflation are carried out by variables of Money Supply and Taxes. In research (Yusuf, 2013) said that contractive monetary policy itself is recognized as being able to overcome or reduce the rate of Inflation, where the decreasing Money Supply can reduce the Inflation rate as a result of contractive (tight) monetary policy will encourage aggregate demand which plays a positive role in reducing Inflation (Yusuf, 2013). if there is a decrease in the inflation rate, then VAT will decrease due to a decrease in the selling price which becomes the DPP of VAT. The increase in the VAT tax base will affect the level of VAT revenue. The tax base will increase when it occurs because then the price of goods and services will also increase (Irwanyah, 2022).

In the panel it turns out that the Money Supply and Taxes are also able to be a leading indicator to overcome Inflation in Turkey, Russia and Indonesia, but the position is not stable in the short run and long run. In this case it is in accordance with the opinion of (Budiantoro, 2013) which



says that a decrease in interest rates can increase the amount of money in the hands of the public, where if the amount of money in circulation is low this can encourage lower inflation. This can make the economy grow and develop which has an impact on improving people's welfare, so this can also affect taxes, where if the price of goods and services increases, it has an impact on increasing taxes on these goods and services.

The main leading indicator in overcoming Inflation in Turkey, Russia and Indonesia is Gross Domestic Product, where this is a position of stability when viewed from the short run and long run, where GDP is affected by the inflation rate. In real terms, government spending also increases in line with the increase in Gross Domestic Product (GDP). The calculation of GDP considers domestic production without regard to the ownership of factors of production. Therefore, economic growth is the same as GDP growth. So that if inflation increases, it will affect economic growth (Gross Domestic Product), and vice versa (Darmayanti, 2014).

3. CONCLUSION

In overcoming Inflation, Turkey, Russia and Indonesia use Money Supply and Tax Variables. In the panel it turns out that the Money Supply and Taxes are also able to be a leading indicator to overcome Inflation in Turkey, Russia and Indonesia, but its position is not stable in the short run and long run. The main leading indicator in overcoming Inflation in Turkey, Russia and Indonesia is Gross Domestic Product and its position is stable when viewed from the short run and long run.

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