Vol. 5, No.12; 2021

ISSN: 2456-7760

# ANALYSIS OF MONETARY POLICY TRANSMISSION THROUGH INFLATION EXPECTATIONS: INDONESIA, CHINA, INDIA (ICI)

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#### Abstract

This study aims to analyze monetary policy through inflation expectations in Indonesia, China, India (ICI). This study used secondary data from 2000 to 2019—data analysis model with Panel Vector Error Correction Model (PVECM). The results of the PVECM analysis through the inflation expectations line show that the control of economic stability of the ICI country is carried out by variable inflation expectations and gross domestic product in the short term. It is carried out by variable interest rates, inflation expectations, and investment in the long run. The results of the IRF analysis show that the response stability of all variables is formed in the medium and long-term periods. The results of the FEVD analysis show that there are variables that have the most significant contribution in the variable itself, either in the short, medium, or long term. The interaction analysis results of each variable transmission of monetary policy show that the path of interest rates and inflation expectations can maintain and control the economic stability of the ICI country.

Keywords: Monetary policy, Inflation expectations, PVECM, Inflation, Growth.

# 1. Introduction

Monetary policy is an effort to achieve a sustainable level of economic growth by maintaining price stability (Tanjung, et al., 2017; Tanjung, et al., 2019; Tanjung, 2021). Monetary policy is also taken to achieve the inflation target, resulting in changes in the transmission channels of monetary policy (Bernanke & Blinder, 1992; Mishkin, 2004). The pattern of changing and undirected macroeconomic variables will affect monetary policy transmission in the long run. In achieving economic stability, monetary policy is also required through macroeconomic fundamentals. To create a strong monetary policy framework, there needs to be support from more optimal macroeconomic stability.

The mechanism of transmission of monetary policy of inflation expectations is more concerned with the influence of monetary policy on inflation expectations by the public that will affect economic actors (Güler, 2016). Theoretically, inflation expectations are influenced by inflation (inertia) and the credibility of monetary policy (Goeltom, M., 2005). (Warjiyo, 2017) stated that the credibility of monetary policy is demonstrated by its ability to achieve inflation targets and control the exchange rate. The more credible monetary policy, the stronger the impact on

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ISSN: 2456-7760

inflation expectations of economic actors (Khan, 2018). This means that inflation expectations by economic actors will tend to be close to the inflation target set by the central bank.

Monetary policies carried out in ICI countries, and inflation tended to fluctuate with variations from 2000 to 2019. Indonesia experienced the highest inflation increase in 2006 of 13.11 per cent compared to the previous year of 10.45 per cent. China's highest inflation occurred in 2008, reaching 5.92 per cent compared to the last year at 4.81 per cent. The highest inflation rate in India occurred in 2010 at 11.98 per cent compared to the previous year at 10.88 per cent. However, inflation rates in 2019 for ICI Countries have stabilized at single digits. The causes of this inflation include the increase in world oil prices and domestic fuel prices, the global economic crisis in the United States, and changes in household consumption interest due to policy changes in India.

It is known that there is a volatile trend of gross domestic product from 2000 to 2019 in Indonesia, China, and India (ICI). Gross domestic product in China continues to increase every year. In 2014 GDP growth in Indonesia amounted to 890.81 billion US dollars; there was a decrease in the previous year, which reached 912.52 billion US dollars. The annual increase in the gross domestic product also occurs in India, although the increase is not significant.

In Indonesia, China, India (ICI) Countries, there were fluctuations in interest rates from 2000 to 2019. Indonesia's highest rill rate occurred in 2002 reached 12.32 per cent; this is done to reduce the inflation rate; if inflation decreases, then interest rates will increase. However, the lowest inflation in Indonesia occurred in 2008 to reach -3.58 per cent. China experienced the lowest interest rate in 2010 of -1.98 per cent. The Indian state experienced the lowest interest rate in 2008 of -2.30 per cent. This is due to the impact of the global economic crisis and rising world oil prices.

Monetary policy transmission aims to examine two important aspects, namely to know the transmission line that has the most effect on the economy as the basis of monetary policy strategy and the second goal to understand how strong the influence and length of grace on each transmission line works to influence the rate of change in inflation. In connection with this, it is necessary to conduct a scientific assessment of macroeconomic stability in Indonesia, China, and India (ICI) based on monetary policy transmission through inflation expectations channels.

# 2. Method

This study aims to analyze the ability of monetary policy transmission mechanisms through inflation expectations channels in controlling the macroeconomic stability of Indonesia, China, India (ICI). This study uses secondary data starting from 2000-2019 taken through the World Bank Data. This study used the VECM Panel (PVECM) method(Baltagi, B., 2005). The variables used in this study are the variables Interest Rate (SB), Exchange Rate (KURS), Inflation Expectations (EINF), Amount of Money (JUB), Consumption (KON), Investment (INV), Gross Domestic Product (PDB), and Inflation (INF). Before estimating the PVECM model, some of the steps are the Stationarity Test, Optimum Lag Test, and Cointegration Test (Enders, 2014).

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The Standard Form of the VECM Panel system to be used in estimation are as follows:  

$$SB_{ti} = \beta_{10}KURS_{t-p} + \beta_{11}EINF_{t-p} + \beta_{12}JUB_{t-p} + \beta_{13}KON_{t-p} + \beta_{14}INV_{t-p} + \beta_{15}PDB_{t-p} + \beta_{16}INF_{t-p} + \beta_{17}SB_{t-p} + e_t 1$$

$$KURS_{ti} = \beta_{20}EINF_{t-p} + \beta_{21}JUB_{t-p} + \beta_{22}KON_{t-p} + \beta_{23}INV_{t-p} + \beta_{24}PDB_{t-p} + \beta_{25}INF_{t-p} + \beta_{26}SB_{t-p} + \beta_{27}KURS_{t-p} + e_t 2$$

$$EINF_{ti} = \beta_{30}JUB_{t-p} + \beta_{31}KON_{t-p} + \beta_{32}INV_{t-p} + \beta_{33}PDB_{t-p} + \beta_{34}INF_{t-p} + \beta_{35}SB_{t-p} + \beta_{36}KURS_{t-p} + \beta_{37}EINF_{t-p} + e_t 3$$

$$JUB_{ti} = \beta_{40}KON_{t-p} + \beta_{41}INV_{t-p} + \beta_{42}PDB_{t-p} + \beta_{43}INF_{t-p} + \beta_{44}SB_{t-p} + \beta_{45}KURS_{t-p} + \beta_{46}EINF_{t-p} + \beta_{52}INF_{t-p} + e_t 4$$

$$KON_{ti} = \beta_{50}INV_{t-p} + \beta_{51}PDB_{t-p} + \beta_{52}INF_{t-p} + e_{53}SB_{t-p} + \beta_{54}KURS_{t-p} + \beta_{55}EINF_{t-p} + \beta_{56}JUB_{t-p} + \beta_{67}KON_{t-p} + e_t 5$$

$$INV_{ti} = \beta_{60}PDB_{t-p} + \beta_{61}INF_{t-p} + \beta_{62}SB_{t-p} + \beta_{63}KURS_{t-p} + \beta_{64}EINF_{t-p} + \beta_{65}JUB_{t-p} + \beta_{67}INV_{t-p} + e_t 6$$

$$PDB_{ti} = \beta_{70}INF_{t-p} + \beta_{71}SB_{t-p} + \beta_{72}KURS_{t-p} + \beta_{73}EINF_{t-p} + \beta_{74}JUB_{t-p} + \beta_{75}KON_{t-p} + \beta_{76}INV_{t-p} + e_t 7$$

$$INF_{ti} = \beta_{80}SB_{t-p} + \beta_{81}KURS_{t-p} + \beta_{82}EINF_{t-p} + \beta_{83}JUB_{t-p} + \beta_{84}KON_{t-p} + \beta_{85}INV_{t-p} + \beta_{86}PDB_{t-p} + \beta_{87}INF_{t-p} + \beta_{83}JUB_{t-p} + \beta_{84}KON_{t-p} + \beta_{85}INV_{t-p} + \beta_{86}PDB_{t-p} + \beta_{87}INF_{t-p} + \beta_{83}IUB_{t-p} + \beta_{84}KON_{t-p} + \beta_{85}INV_{t-p} + \beta_{86}PDB_{t-p} + \beta_{87}INF_{t-p} + \beta_{83}IUB_{t-p} + \beta_{84}KON_{t-p} + \beta_{85}INV_{t-p} + \beta_{86}PDB_{t-p} + \beta_{87}INF_{t-p} + \beta_{83}IUB_{t-p} + \beta_{84}KON_{t-p} + \beta_{85}INV_{t-p} + \beta_{86}PDB_{t-p} + \beta_{87}INF_{t-p} + e_{t}3$$

#### 3. Results

#### **Panel Unit Root Test**

The unit root test was carried out for each variable in the study, interest rate (SB), consumption (KON), investment (INV), gross domestic product (PDB), inflation (INF). The unit root test is used the *Augmented Dickey-Fuller test approach* (ADF).

Variable	<b>ADF</b> values	Prob.	Stationary at
SB	-2.18317	0.0145	level
KURS	-4.84133	0.0000	1 <sup>st</sup> Difference
eINF	-1.88431	0.0298	1 <sup>st</sup> Difference
JUB	-9.43766	0.0000	1 <sup>st</sup> Difference
KON	-5.79330	0.0000	1 <sup>st</sup> Difference
INV	-9.81926	0.0000	1 <sup>st</sup> Difference
PDB	-1.88019	0.0300	1 <sup>st</sup> Difference
INF	-8.84603	0.0000	1 <sup>st</sup> Difference

Tuble 1, 1 uner eine Root rest Result	Table 1	, Panel	Unit	Root	Test	Result
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Source: Research Result

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ISSN: 2456-7760

The result shows that the interest rate variable (SB) is stationary at the level, while the other variables are stationary at the first Difference. The next step is determining the optimal lag. The optimal lag test in this study uses the minimum AIC criteria. The optimal lag test result can be seen in the table below.

# **Optimal Lag**

 Table 2. Result of Determining Optimal Lag

Lag	LogL	LR	FPE	AIC	SC	HQ
1	-655.8919	NA	1506.568	29.99549	32.49043*	30.93833*
2	-597.9363	77.27407	2335.951	30.24735	35.23722	32.13303
3	-550.1418	47.79456	8171.886	30.92257	38.40738	33.75109
4	-396.8752	102.1777*	819.7107*	27.20313*	37.18287	30.97449

Sources: Research Result

The above lag determination results showed that the lag values of 4 *Akaike Information Criterion* (27,203) were lower compared to lag 1,2,3. The conclusion is that the use of the model at lag 4 is more optimal compared to lag 1,2,3.

# **Cointegration Test**

Cointegration testing was conducted through the *Johansen-Fisher* Cointegration Test. Here are the results of the cointegration test:

Johansen Fisher Panel Cointegration Test									
Unrestricted Cointegration Rank Test (Trace and Maximum Eigenvalue)									
Hypothesized	Hypothesized Fisher Stat.*								
No. of CE(s)	Prob.	(from max-eigen test)	Prob.						
None	0.0000	113.2	0.0000						
At most 1	0.0000	60.92	0.0000						
At most 2	0.0000	17.06	0.0091						
At most 3 0.0072 7.881 0.2469									
At most 4	At most 4 0.0717 6.061 0.4164								
At most 5	At most 5 0.2280 4.631 0.5919								
At most 6	0.4183	3.557	0.7363						
At most 7	At most 7 0.3886 6.317 0.3886								
* Probabilities are	e computed using	g asymptotic Chi-square dist	ribution.						

Sources: Research Result

Johansen's cointegration test results based on table 3 show that three equations are integrated at the level of 5 per cent significance. So it can be concluded that there is a long-term relationship between the observed variables. So that data analysis can be continued.

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# Panel VECM Result

At this stage, the VECM Panel estimation test will establish both short-term and long-term relationships on the observed variables. Here are the observations of VECM Panel estimates:

Short-Term							
Variable	Coefisien	T-statistic					
SB	-0.534896	[-1.12931]					
Kurs	5.291475	[ 0.51393]					
eINF	-482.7186	[-1.74187]					
JUB	-0.105686	[-0.95990]					
KON	-0.298456	[-0.57214]					
INV	0.257748	[ 1.55555]					
PDB	473.5850	[ 1.71920]					
INF	0.730532	[ 4.02787]					
Long-Term							
Variable	Coefisien	T-statistic					
SB	-0.534896	[-3.79773]					
Kurs	-0.313067	[-1.67446]					
eINF	-2399.864	[-5.24996]					
JUB	-0.110957	[-1.03412]					
KON	-1.106048	[-1.16602]					
INV	0.660203	[ 3.30457]					
PDB	2400.159	[ 5.25141]					
INF	1.034687	[ 7.50065]					

#### Table 4. Panel VECM Result

Based on the results of the VECM Panel's estimates, the short-term inflation expectation path variable inflation expectations have a negative and significant effect on controlling the economic stability of the ICI country. Inflation expectations are a form of forecasts formed from economic indicators of future inflation. This means that if inflation expectations rise by 1per cent, there will be a decrease in the inflation rate. Gross domestic product and inflation also have a positive and significant effect in controlling the economic stability of the ICI country in the short term.

PVECM's long-term estimates show that interest rates are negative and significant in controlling the economic stability of the ICI country. Variable investment and gross domestic product also have a positive and significant effect in controlling the economic stability of the ICI country.

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Figure 1. Result Impulse Response Function of VECM Model 2000:2019

Based on the picture above, it can be seen that in the short term, shocks in interest rates will be responded to by dominant changes in Inflation Expectations. Dominant changes in output responded to changes in inflation expectations. Dominant changes in inflation respond to shocks that occur in the output. But in the long term, these shocks have decreased and are headed for convergence.

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Period	SB	LN_KURS	LN_EINF	JUB	LN_KON	LN_INV	LN_PDB	INF
1	100.0000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	80.77117	3.063172	0.750325	1.441466	0.002407	0.294913	12.94582	0.730725
5	60.22500	2.242877	3.559190	1.520790	0.435764	6.089161	21.40446	4.522753
10	54.34183	1.575176	3.189656	1.534546	0.586670	8.464221	25.84926	4.458639
15	52.23338	1.298557	3.002533	1.530518	0.654000	9.412408	27.45150	4.417099
20	51.11990	1.153012	2.902270	1.528242	0.689044	9.913287	28.30096	4.393288
KURS								
1	12.17398	87.82602	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
2	14.42494	78.49393	3.627795	0.343624	0.105180	0.240324	1.025986	1.738228
5	19.13254	62.83770	7.249773	0.599356	0.444305	5.545339	3.558491	0.632495
10	19.95803	57.15375	9.858591	0.812205	0.569042	7.494101	3.784942	0.369343
15	20.17470	55.50842	10.61806	0.874159	0.608590	8.082656	3.840708	0.292713
20	20.27387	54.74819	10.97101	0.902924	0.626788	8.353977	3.865619	0.257612
EINF								
1	19.20049	32.24955	48.54996	0.000000	0.000000	0.000000	0.000000	0.000000
2	14.78232	28.70341	51.06759	0.804122	0.342571	3.732064	0.463694	0.104230
5	15.91149	21.78496	49.58903	1.101695	0.636966	9.458927	1.466976	0.049960
10	15.65241	19.83477	49.77507	1.301841	0.723244	11.18084	1.507353	0.024475
15	15.58387	19.31451	49.80322	1.355341	0.748510	11.65823	1.518949	0.017371
20	15.55223	19.07858	49.81734	1.379701	0.759944	11.87420	1.523825	0.014185
JUB								
1	2.526551	0.105005	0.158468	97.20998	0.000000	0.000000	0.000000	0.000000
2	3.056981	1.442830	2.185986	91.45930	0.330545	0.321460	1.178095	0.024800
5	2.465974	0.881587	5.403139	87.12334	0.160059	0.215884	2.557801	1.192219
10	2.429518	0.749892	6.476278	85.95181	0.119503	0.185336	2.840628	1.247034
15	2.417946	0.695036	6.837746	85.57831	0.104759	0.177467	2.926819	1.261921
20	2.412318	0.667617	7.020589	85.38924	0.097341	0.173519	2.970368	1.269013
KON								
1	0.540740	0.014538	2.489097	0.002391	96.95323	0.000000	0.000000	0.000000
2	0.834227	0.247634	11.71836	0.232258	84.81491	0.460520	0.734540	0.957552
5	1.002512	0.774772	15.65884	0.150101	79.38666	0.619307	1.043539	1.364274
10	1.097198	0.930904	17.41566	0.079225	77.09506	0.670551	1.196516	1.514884
15	1.131572	0.985288	18.00915	0.054050	76.31487	0.687951	1.252413	1.564715
20	1.149112	1.012951	18.31233	0.041216	75.91645	0.696674	1.280932	1.590335
INV								
1	2.315071	0.769296	8.119221	1.281307	4.405474	83.10963	0.000000	0.000000
2	5.135034	0.745905	8.145697	1.107068	5.320519	77.94776	1.288504	0.309512
5	3.498898	1.467482	8.431823	0.576392	8.059267	70.33957	5.557548	2.069022
10	2.727110	2.013789	10.20448	0.324326	9.598379	65.24090	7.251568	2.639446
15	2.407669	2.260496	10.94879	0.227018	10.22739	63.13863	7.917399	2.872602
20	2.238105	2.391308	11.34743	0.175380	10.56112	62.02225	8.269619	2.994795
PDB								
1	19.59196	31.95568	48.41731	0.001067	0.000334	0.000278	0.033382	0.000000
2	14.94497	28.89077	50.84585	0.827312	0.345148	3.663100	0.390045	0.092805
5	16.03765	21.92290	49.50277	1.132317	0.645835	9.409529	1.299147	0.049847
10	15.76378	19.96426	49.70339	1.333956	0.732587	11.13585	1.341776	0.024398
15	15.69150	19.44116	49.73488	1.387799	0.758056	11.61500	1.354305	0.017298
20	15.65817	19.20402	49.75049	1.412307	0.769578	11.83170	1.359630	0.014114
INF								

Table.5 Variance decomposition Result

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1	23.17905	8.919148	4.697388	0.106423	2.279535	0.188053	5.683028	54.94738
2	24.17279	18.81965	2.687968	0.134248	2.963108	5.467939	9.485777	36.26853
5	29.87385	17.36216	2.116435	0.103233	2.546511	7.539651	11.18405	29.27411
10	31.94762	17.62671	1.731734	0.073358	2.453689	8.487923	11.68624	25.99272
15	32.69296	17.69976	1.610595	0.062816	2.428856	8.787134	11.82687	24.89100
20	33.08179	17.74044	1.546581	0.057296	2.415832	8.944824	11.90175	24.31149

Based on table 5, it can be seen that in the first period, the shock response of interest rates to the exchange rate is positive; this indicates that the contribution of the change of interest rate in affecting the exchange rate by 12.17 per cent. This contribution continues to strengthen to the 20th (long-term) period by 20.27 per cent. The first period of the shock response from the exchange rate to inflation expectations was positive, indicating that the change from the exchange rate to the inflation expectation of 32.24 per cent. But in the 5th to 20th period decreased to 19.07 per cent.

The first period of the shock response of inflation expectations to the amount of money in circulation was positive, indicating that the change from inflation expectations to the amount of money in circulation was 0.15 per cent. This contribution continued to strengthen to the 20th period by 7.02 per cent. The first period of shock response of the amount of money in circulation to consumption was positive; this indicates that the contribution of the change from the amount of money in circulation to consumption of 0.002 per cent. From the 2nd period to the 20th period in the long run, decreased contributions by 0.04 per cent.

The first period of the shock response from consumption to inflation was positive, indicating that the contribution of change from consumption to investment was 4.40 per cent. This contribution continued to increase over the long-term period by 10.56 per cent. The first period of shock response from investment to the gross domestic product was positive, indicating that the change in investment contribution to the gross domestic product was 0.0002 per cent. This contribution continued to strengthen to a long-term period of 11.83 per cent. The first period of the shock response of gross domestic product to inflation was positive, indicating that the contribution of change from gross domestic product to inflation was 5.68 per cent. This contribution continued to increase over the long-term period by 11.90 per cent.

#### 4. Discussion

#### **Monetary Policy for Variable Interest Rate**

Based on the analysis of monetary policy interaction through interest rates, it is known that the most contributions in the short, medium and long term are gross domestic product and investment. The conclusion is that variable interest rate control is more effectively carried out by gross domestic product and investment in both short, medium, and long term in Indonesia, China, India (ICI). The results of this study are by the implications of the classic theory that people's savings are a function of interest rates. The higher the deposit rate, the higher the people's desire to save, and vice versa.

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#### Monetary Policy for Variable Exchange Rate

Based on the analysis of monetary policy interaction through exchange rates, it is known that interest rates and inflation expectations are the variables that contribute the most to controlling the exchange rate in the short, medium, and long term. The conclusion is that monetary policy through exchange rates is most influenced by variable interest rates and inflation expectations in the short, medium, and long term in Indonesia, China, India (ICI). The Fisher Effect International Theory uses interest rates to explain rates. This theory also explains that foreign currencies will appreciate when foreign interest rates are higher than the interest rates of the country of origin. Countries with relatively high interest rates will cause their currencies to depreciate. This theory can be concluded that the difference in interest rates in some countries is caused by inflation. In addition to interest rates, inflation expectations are also effective in controlling monetary policy through exchange rates.

#### **Monetary Policy for Variable Inflation Expectations**

Based on the analysis of monetary policy interaction variable inflation expectations, the most contributing factors in controlling inflation expectations are variable exchange rates and interest rates in the short, medium, and long term. The conclusion is that monetary policy through the path of inflation expectations is controlled by interest rates and exchange rates in the short, medium, and long term in Indonesia, China, India (ICI). Monetary policy in managing inflation expectations due to changes in exchange rate expectations. The results of this study are also supported by the theory of purchasing power parity (PPP) which explains the relationship between the level of inflation expectations and the exchange rate, namely the expectation of exchange rate changes caused by expectations of changes in the inflation rate determined by purchasing power of a country's currency compared to other countries.

#### **Monetary Policy for Variable Amount of Money**

Based on the analysis of monetary policy interaction results through the amount of money in circulation, the most contributing in controlling the amount of money in circulation is variable interest rates and inflation expectations in the short term. In contrast, the most contributing is inflation expectations with gross domestic product in the medium and long term. The conclusion is that variable amounts of money supply are controlled by interest rates and inflation expectations in the short term. In the medium and long term, inflation expectations and gross domestic product are controlled in Indonesia, China, and India (ICI). The results of this study are by the implications of the Keynes Theory, which states that interest rates are the most crucial element in monetary theory. In this theory, interest rates are also a reference to determine the demand for money and will ultimately affect expectations in the community.

# **Monetary Policy for Variable Consumption**

Based on the analysis of monetary policy interaction through consumption, the most contributing to controlling consumption are variable inflation and inflation expectations in the short, medium, and long term. The conclusion is that variable consumption is controlled by inflation expectations and inflation in the short, medium, and long term in Indonesia, China, India (ICI). The results of this study are by the implications of the demand-pull theory of inflation, which

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states that inflation is caused by variable changes that affect aggregate demand to create a state of excess demand.

# **Monetary Policy for Variable Investment**

Based on the analysis of monetary policy interaction through investment, the most contributing factors to controlling investment are variable inflation and consumer expectations in the short, medium, and long term. The conclusion is that investment variables are controlled by inflation and consumption expectations in the short, medium, and long term in Indonesia, China, India (ICI). The results of this study are also by the Classic Theory which states that people's savings are a function of interest rates. Investment is a function of the interest rate, if the interest rate is high then the higher also the public's desire to save. However, the determination of high or low-interest rates can be determined from the expectations raised in the community.

# Monetary Policy for Variable GDP

Based on the analysis of monetary policy interaction through gross domestic product, the most contributing to controlling gross domestic product are variable inflation and exchange rate expectations in the short, medium, and long term. The conclusion is that the variable gross domestic product is controlled by inflation and exchange rate expectations in the short, medium, and long term in Indonesia, China, India (ICI). The effect of inflation expectations on the gross domestic product is by Warjiyo (2017) opinion, which states that the relationship of expectations to GDP stems from inflation expectations that occur in the community to affect actual sector activity.

# **Monetary Policy for Variable Inflation**

Based on the analysis of monetary policy interaction through inflation, the most contributing to controlling inflations are variable interest rates and exchange rates in the short, medium, and long term. The conclusion is that variable inflation is controlled by interest rates and exchange rates in the short, medium, and long term in Indonesia, China, India (ICI). The results of this study are by the implications of the mechanism of transmission of monetary policy through the path of inflation expectations stating that the more credible monetary policy, which is demonstrated through its ability to control interest rates and exchange rate stability, the stronger the impact inflation expectations.

Meanwhile, the effect of inflation expectations on aggregate offerings occurs through changes in the pattern of product price formation by the company. Then the effect of inflation expectations on aggregate demand and supply will determine the rate of inflation and rill output in the economy.

Based on the presentation, it can be seen that monetary policy instruments used through the path of inflation expectations are still weak; this can be seen from the monetary policy response to each variable that does not contribute to each other sustainably; this result is in line with the findings (Goeltom, M., 2005; Güler, 2016). There was a downward response from the exchange rate to inflation expectations and the amount of money in circulation to consumption. Therefore, it can be concluded that there is a gap in the mechanism of transmission of monetary policy

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through the path of inflation expectations. The results of this study are by the results of research conducted by Habibah (2015), which states that the mechanism of transmission of monetary policy through the path of inflation expectations requires a long grace period in stabilizing the economy in the Brici country. The inflation expectation path is considered less than optimal in stabilizing the economy as well as the rate of inflation in the Brici country.

The weakness of this research is that it has not been able to see the shock of one variable and its impact on each country.

#### Conclusion

The cointegration test results on the path of inflation expectations can be concluded that there is a long-term relationship between the observed variables, namely interest rates, exchange rates, inflation expectations, the amount of money in circulation, consumption, investment, gross domestic product, and inflation. PVECM estimates through the aggregate inflation expectation path show that variable inflation expectations have a negative and significant effect, and GDP variables have a positive and significant influence both in the short and long term. While controlling economic stability in Indonesia, China, India (ICI) in aggregate through the path of inflation expectations can be done with variable interest rates as the main indicators for the short term, while for the medium and long term can be done with variable inflation expectations as the main indicator. The transmission period or time lag required to control economic stability in Indonesia, China, India (ICI) is 16 periods for the inflation expectation line. future research can use the simultaneous model to see the shock and its impact on each country, as well as adding the number of countries such as South Korea, Singapore, Malaysia and Japan.

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ISSN: 2456-7760

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