ANALYSIS OF NONACCELERATING INFLATION RATE OF UNEMPLOYMENT (NAIRU) AS AN ALTERNATIVE MONETARY POLICY TARGET: A MECHANISM STUDY OF MONETARY POLICY TRANSMISSION POLICY IN INDONESIA 2006-2019

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ABSTRACT

The purpose of this research is to conduct an analysis of NAIRU (NonAccelerating Inflation Rate of Unemployment) as an alternative monetary policy target with a study on the mechanism of monetary policy transmission in the interest rate pathway in Indonesia. This type of research is applied research so that the data used are secondary data with several variables from macroeconomic and monetary variables. The method used in this study is the first to estimate NAIRU using the Ball-Mankiw approach and to estimate the relationship between NAIRU and Inflation using VECM. The results of this study indicate that in the mechanism of monetary policy transmission of the interest rate path when using alternative NAIRU objectives, it is evident that Inflation and NAIRU have a tradeoff in both the short and long term

Keywords: NAIRU, Phillips curve, VECM

INTRODUCTION

One of the main issues in the macro economy is the reciprocal relationship that occurs between the inflation rate and unemployment. Monetary policy and fiscal policy also have a long-term goal of equilibrium in the macro economy which can be seen from the balance between the inflation rate and unemployment. But then what becomes an important aspect and characteristic of the economy and becomes a starting point for analysis in macroeconomic theory is the view that the free market system cannot realize the full use of labor (full employment), price stability (inflation rate) and, jointly strong economic growth together . Every economy will always face the problem of unemployment, rising prices, and unstable economic growth.

Researchers try to illustrate why inflation in Indonesia is also regarded as the number one enemy of society. First, the inflation rate was 17.11% due to the increase in the price of fuel oil (BBM) by more than 100% in 2005. The increase in the rate of inflation has not only added to the misery of people who are already poor, but has also increased the number of members of society below the poverty line. If inflation is the enemy of society number one, the enemy of society number two is unemployment. The reason is also clear, unemployment is a problem that continues to accumulate, increasing from year to year. In August 2019 the Indonesian Sakernas noted that there were 8.13 million people who were still underemployed. The high unemployment rate in Indonesia,

In almost all developing countries the problem of inflation and unemployment is a fundamental problem, because if unemployment increases, the real income achieved by the community will be lower than the potential income and cause the real income received by the community will decrease. Furthermore, the relationship between the inflation rate and unemployment is when the level of output in society is higher with a higher price level, so this can affect the lower unemployment. Because companies will need more labor when producing more and then the price level will be higher than before, meaning that inflation has increased.

In 1957 Phillips had discovered a relationship between inflation and unemployment in the British economy so that the term Phillips curve emerged. Then Friedman conducted an analysis that implicitly contained the concept of NAIRU (Non Accelerating Inflation Rate of Unemployment) but did not use the term NAIRU. Conceptually, NAIRU refers more to the lowest unemployment rate that can be achieved without experiencing the risk of rising inflation. Whereas theoretically, NAIRU is more on decreasing the unemployment rate accompanied by an increase in expected inflation, so there is a trade-off that occurs between the inflation rate and unemployment.

Whereas the monetary policy transmission mechanism is a series of relationships between changes in monetary policy, changes in output, employment and inflation. The Indonesian monetary policy transmission mechanism has adopted the Inflation Targetting Framework (ITF) since mid-2005. The Inflation Targetting Framework (ITF) is a framework adopted by Bank Indonesia as a monetary authority in controlling monetary policy, namely by using interest rates as its operational infrastructure, where previously Indonesia is implementing operational targets for the money supply.

In achieving the ultimate goal of monetary policy, namely inflation, there are several strategic steps taken by the competent authorities. In addition to monitoring the variable yeast developments in the real economy, the monetary authority also monitors the effectiveness of the monetary policy transmission mechanism to the real sector which is generally through several channels such as the interest rate channel, asset price channel, credit channel, expectations channel and value channel exchange. These five channels are what we often call the monetary policy transmission mechanism.

The research gap of this research is the gap between the Phillips curve theory and its application in the State of Indonesia. Where in the Phillips curve theory there is a tradeoff between inflation and unemployment. So this research intends to conduct an analysis of the Nonaccelerating Inflation Rate of Unemployment (NAIRU) as an alternative target for monetary policy by studying the mechanism of monetary policy transmission in the interest rate pathway in Indonesia.

LITERATURE REVIEW

MONETARY POLICY TRANSMISSION MECHANISM IN INDONESIA

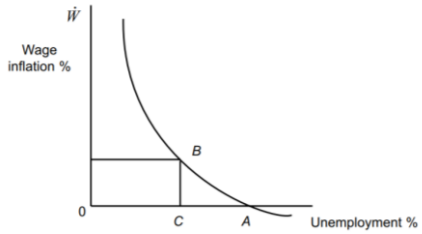
The monetary policy transmission mechanism in Indonesia has five channels, one of which is the expectation path. The amount of inflation that continues to experience fluctuations, uncertainty in the exchange rate, the declining production sector and uncertainty conditions in the global economy makes a misinterpretation of the policy direction that makes a boomerang for the country's economy. Broadly speaking, monetary policy in Indonesia adheres to the Inflation Targetting Framework or ITF. Where the final target in the monetary policy transmission mechanism in Indonesia is inflation or overall price stability.

THE SIMPLE PHILLIPS CURVE

In this study using several theories with grand theory or the main theory is the Phillips curve. Phillips curve theory shows that changes in inflation are influenced by economic conditions relative to their productive capacity and other factors. Productive capacity can be measured by potential output which is a function of the natural rate of unemployment. Natural unemployment is the level of unemployment that is consistent with the provision of full employment.

The keyness theory has suggested that the economy in a recession can reduce unemployment by expanding aggregate demand, so fiscal policy tends to provide a stronger instrument than monetary policy. High unemployment in the 1930s in Britain occurred when demand was low and in 1950 there was an increase or expansion which subsequently increased unemployment. The Phillips curve illustrates the relationship between the unemployment rate and the rate of change in wages or salaries.

Figure 2.1: The Simple Phillips Curve



The implication of The Simple Phillips Curve above is that the economy is run at various levels of employment and consequently to output, the unemployment rate can be reduced without increasing inflation and if the government wants the economy to continue running below the unemployment rate as desired, new inflation will occur. Empirical support for the Phillips curve trade-off was found in many countries in the early 1960s, but the statistical study requires theoretical support.

Many macroeconomic keyness assumes that prices are constant. Where the price of the analysis in the price level is not the inflation rate. Lipsey in the 1960s provided theoretical support but neoclassical economists remained skeptical, because in conventional microeconomic analyzes the level of employment depends on real wages rather than wages such as the Phillips curve. One way to bring statistical evidence in line with microeconomic theory is assuming the expected inflation rate is zero. In other words, workers will always take money that is equivalent to their real wages.

Next Friedman and Phelps separately explained the trade-off and the result was adding expectations to the Phillips curve. Of the many attempts made to explain the displacement is the theory that rational labor market decisions are based on real wages. So this is an amalgamation of neoclassical theory which is more dominated by market behavior.

NAIRU (NonAccelerating Inflation Rate of Unemployment)

NAIRU is an extension of the NonAccelerating Inflation Rate of Unemployment, which theoretically refers to a decrease in the unemployment rate with an increase in the estimated inflation rate. NAIRU can also be defined as an unemployment rate that occurs when the inflation rate does not accelerate. This means that the unemployment rate that occurs when there is no tendency for inflation to change. This was first stated by Franco Modigliani and Lucas Papademos in 1975, namely NIRU (Non-Inflationary Rate of Unemployment) as a concept of the natural rate of unemployment previously proposed by Milton Friedman.

Monetary policy carried out with the assumption of NAIRU is usually sufficient to involve the possibility of increasing unemployment in the economy to prevent an increase in inflation above the predetermined number of targets. The initial form of NAIRU was found in Abba P. Lerner's work in 1951 which stated that the low level of labor achieved through aggregate demand was different from the high level of labor with added income policies (wage and price controls). Friedrich von Hayek argues that a government that seeks to achieve full employment will accelerate inflation because some of the skills of each person are considered worthless.

In short, the NAIRU theory states that if the unemployment rate is above NAIRU with output below its potential level, inflation will fall. However, if the unemployment rate is below NAIRU with the level of actual output above potential output, then inflation is expected to rise. Before 1995 the Fed estimated NAIRU to be around 6%, but with a decrease in the unemployment rate to around 4% in the late 1990s, without an increase in inflation and even a slight decline, so that some critics were raised who questioned the value of the Phillips curve theory. According to them the Phillips curve theory no longer applies or alternatively they believe that there is great uncertainty about the value of NAIRU, which has fallen below the 5% mark for reasons that are considered unclear.

Several studies have been conducted as stated by Cioran 2014 which concluded that there is a negative relationship between inflation and unemployment. Then, Utomo in 2013 stated in his research that there was a positive relationship between inflation rates and unemployment rates. Whereas for case studies outside Indonesia Ngoo Yee Ting and Loi Siew conducted case studies in Malaysia and Robcova in 2010 which conducted studies for cases in countries in the Baltic region.

From the description of the literature review in this study, it can be obtained the hypothesis in this study that it is suspected that the mechanism of monetary policy transmission of the effective interest rate path can affect the alternative targets of NAIRU in Indonesia.

RESEARCH METHODS

This type of research in this study is applied research, meaning that research that tries to implement theory by confronting data or perhaps it can be called empirical theoretical research by making optimal use of secondary data. The variables used in this study consisted of several monetary economic variables including Bank Indonesia reference interest rates, deposit rates, loan interest rates, aggreat demand represented by consumption and investment, output force, inflation and NAIRU. The time period used in this study is the time period from January 2006 to December 2019 using quarterly data. Data obtained from published Bank Indonesia website sources.

The research approach used is a descriptive quantitative approach. Furthermore, this study uses the time series data method and data testing using the VECM (Vector Error Correction Model). Then for the stage in VECM testing is the first Stationarity Test, then cointegration test is carried out, the next stage if cointegration does not occur then proceed with the VAR (Vector Autoregressive) test but, if a cointegration relationship exists between the variables then proceed with the VECM test.

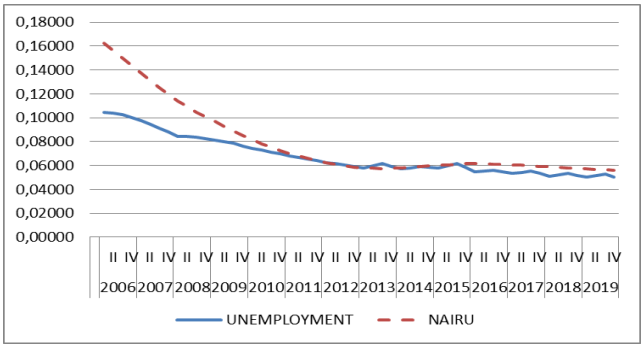
VECM is a form of VAR that is restricted (Enders 2007). This additional restriction must be given because of the existence of data forms that are not stationary at the level level, but are cointegrated. VECM then utilizes the cointegration restriction information into its specifications. Therefore, VECM is often referred to as a VAR design for non-stationary series that has a cointegration relationship. Thus, in VECM there is a speed of adjustment from short to long term. The following is the VECM model of the monetary policy transmission mechanism of interest rate pathways used by researchers:

RESULTS AND DISCUSSION

Estimated NonAccelerating Inflation Rate of Unemployment (NAIRU) in Indonesia

This research conducted NAIRU estimation using Ball-Mankiw approach. The NAIRU estimation process using the Ball-Mankiw approach assumes that expected inflation is inflation that occurred in the previous period (t-1). Furthermore, this approach also extracts NAIRU using the Hodrick Prescott filter.

Graph 4.1: NAIRU Movement and Unemployment Open 2006-2019



Source: Processed Results with Eviews 8.0

From the results of the NAIRU estimation test on Eviews and some NAIRU estimation theories from previous studies, it can be illustrated in the graph above. Graph 4.1 above shows the movement between the open unemployment rate and the estimated NAIRU in Indonesia in 2006 to 2019. From the graph above it can be seen that the movement between NAIRU and the open unemployment rate is more stable from 2010 to 2019.

Stationarity Test

The Unit Root (Stationary) test results in this study indicate that all variables in the NAIRU analysis as an alternative target for monetary policy used in this study were stated to be stationary at a significance level of 5% at a certain degree level. Whereas the NAIRU variable which is at the * level is tested using the Phillips Perron method because NAIRU is an estimation variable.

Optimum Lag

Based on the calculation of each criterion, it can be seen that the optimal lag in this study is lag 2. Determination of the optimal lag in this study has been significant in the LR, FPE, AIC and HQ criteria.

Cointegration Test

Cointegration test in this study uses the Johansen System Cointegration Test method available in eviews 8.0 software with a critical value of 0.05 or 5%, and the results of the cointegration test of this study can be explained that in the critical value of 5% there is a rank variable that is not have cointegration relations. This can be seen from the Prob value of 0.6058 which is greater than the critical value of 0.05 or 5%. H0 or Null Hypothesis for cointegration test is no cointegration occurs, so it can be concluded that in this study H0 is rejected so that cointegration occurs between variables in this study.

VECM Test Interest Rates

Table 4.1: VECM Test Results Short-Term Interest Rate Pathway

Error Correction:	D (INFLATION)	D (NAIRU)
CointEq1	-0.142845	-4.34E-06
	[-3.89347]	[-30,1452]
D (INFLATION (-1))	0.096324	2.62E-05
	[0.53625]	[37.2475]
D (INFLATION (-2))	0.177764	1.02E-06
	[1.18128]	[1.72752]
D (NAIRU (-1))	6144,237	1.954133
	[3.37451]	[273,580]
D (NAIRU (-2))	-4,451,440	-0.920921
	[-2,55547]	[-134,766]
C	1.885201	7.45E-05
	[1.84512]	[18.5766]

Source: Processed Results with Eviews 8.0

Based on the results presented in Table 4.1 above, it can be concluded that all variables used in the pathway model are of significant interest at a critical value of 5%. Furthermore, from the output of the Vector Error Regression Model (VECM) test results using the eviews tool above, it can be seen that the NAIRU variebel in lag-1 has the strongest influence among other variables and has a positive direction. Then for the short-term estimation results show that the Inflation variable in the first lag has a positive effect on the NAIRU variable at a critical value of 5% of 2.62%. It means, if there is an increase of 1 percent in the previous period, it will increase NAIRU by 2.62%. While the effect of the NAIRU variable on inflation in the first lag with a positive direction of 61, 4% and in the second lag the negative effect is -4.41%. This means that if there is an increase in NAIRU by 1 percent in the previous two periods it will cause inflation to decrease by 4.41%.

Table 4.2: VECM Test Results for Long-Term Interest Rate Pathway

Cointegrating eq:	Cointeq1
Nairu (-1)	1,000,000
Inflation (-1)	-0.005302
	[-77.9764]
Birate (-1)	-0,000921
	[-5,49811]
Depo (-1)	-0,000433
	[-1.87401]
Loans (-1)	-0.003799
	[-7,56931]
Investment (-1)	4.14e-08
	[8,03962]
Consumption (-1)	-3.95e-08

	[-17.7168]
Outputgap (-1)	4.37e-08
	[8.83578]
C	0.046124

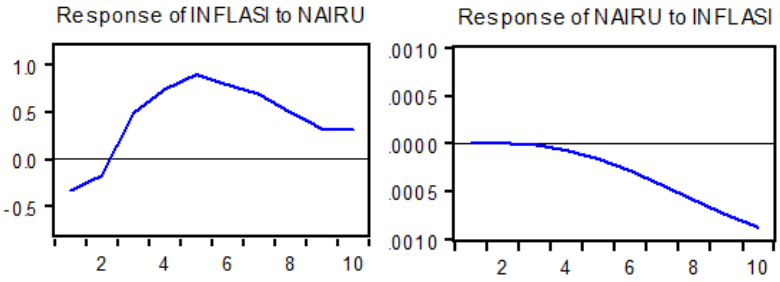
Source: Processed Results with Eviews 8.0

Table 4.2 above shows the results of the long-term VECM test from the interest rate path. From the table above it can be seen that the Inflation variable has a negative influence on the NAIRU variable that is equal to 0.005 percent. That is, if an increase in inflation of 1 percent will cause the NAIRU value to decrease by 0.005%. Furthermore, for the variable BI Rate and loan interest rates, which also have a negative relationship to NAIRU in the long run.

Impulse Response Funtion and Variance Decomposition

Furthermore, for the results of the IRF and VD tests in this study, it can be seen in the following figure:

Figure 4.1: IRF Test Results



From the IRF test results above, it can be seen that the response from NAIRU and Inflation if any of these variables experience shock or shock. The response from inflation if NAIRU experiences impulses is likely to show positive movement. While the response from NAIRU when inflation experiences impulses tends to show a negative direction. Next, the variance decomposition results are as follows:

Table 4.3: Test Results for Variance Decomposition

Variance Decomposition of NAIRU:			Variance Decomposition of INFLATION:		
Period	Period	NAIRU	INFLATION	NAIRU	INFLATION
1	1	8.095911	91.90409	100.0000	0.000000
2	2	8.077798	81.80835	95,07828	1.243578
3	3	16.29814	66.46084	83.89052	9.088047
4	4	29.80406	50.90671	70,53675	19,71849
5	5	38.48585	41,11466	61,85949	26.74696
6	6	40.20260	37,15946	55,78962	31.58352
7	7	40,11772	34.26169	51.31863	34,97821
8	8	40.00184	32,49634	47,96237	37.38072
9	9	39.65126	31,57639	45.39991	39.12931
10	10	39.20318	30.28611	43,40011	40.44604

CONCLUSION

The conclusion from the results of this study is that NAIRU is proven to have a short-term and long-term relationship to inflation through the transmission of monetary policy in the interest rate channel in Indonesia. So that the trade off occurs between NAIRU and Inflation in Indonesia. In this case, the next conclusion shows that the concept of Phillips curve theory has been proven in Indonesia through the transmission of monetary policy in the interest rate pathway. The effectiveness of the monetary policy transmission mechanism for interest rate pathways has also effectively influenced alternative NAIRU final targets in Indonesia.

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ATTACHMENT

Vector Error Correction Estimates

Date: 04/16/20 Time: 21:11

Sample (adjusted): 2006Q4 2019Q4

Included observations: 53 after adjustments

Standard errors in () & t-statistics in []

Cointegrating Eq:	CointEq1
BIRATE (-1)	1.000000
DEPO (-1)	0.470010
	(0.21654)
	[2,17051]
LOANS (-1)	4.125887
	(0.53782)
	[7.67152]
INVESTMENT (-1)	-4.50E-05
	(9.5E-06)
	[-4.72873]
CONSUMPTION (-1)	4.29E-05

	(4.2E-06)							
	[10,1259]							
OUTPUTGAP (-1)	-4.75E-05							
	(5.9E-06)							
	[-8.02159]							
INFLATION (-1)	5.758774							
	(0.11292)							
	[50,9969]							
NAIRU (-1)	-1,086,135							
	(39.1568)							
	[-27.7381]							
C	-5,009,695							

Error Correction:	D (BIRATE)	D (DEPO)	D (LOANS)	D (INVESTMENT)	D (CONSUMPTION)	D (OUTPUTGAP)	D (INFLATION)	D (NAIRU)
CointEq1	-0.007162	0.000746	0.006379	-1,087,523	-3,052,630	-1,525,305	-0.142845	-4.34E-06
	(0.01218)	(0.01107)	(0.00470)	(414,306)	(2260.03)	(997,436)	(0.03669)	(1.4E-07)
	[-0.58801]	[0.06743]	[1,35736]	[-2.62493]	[-1.35070]	[-0.15292]	[-3.89347]	[-30,1452]
D (BIRATE (-1))	0.386515	0.587725	0.098398	-5,989,923	-4,716,743	10560.90	0.271516	-3.33E-06
	(0.18671)	(0.16967)	(0.07204)	(6350.99)	(34644.6)	(15289.9)	(0.56241)	(2.2E-06)
	[2,07010]	[3.46392]	[1.36580]	[-0.09431]	[-0.13615]	[0.69071]	[0.48278]	[-1.50876]
D (BIRATE (-2))	-0.075642	-0.262290	-0.139908	12732.44	45265.46	5046,267	-0.736345	-8.19E-08
	(0.19573)	(0.17787)	(0.07552)	(6657.74)	(36317.9)	(16028.4)	(0.58957)	(2.3E-06)
	[-0.38646]	[-1.47465]	[-1.85249]	[1.91243]	[1,24637]	[0.31483]	[-1.24896]	[-0.03540]
D (DEPO (-1))	0.029036	0.354019	0.205898	-14138.59	-14684.33	-36376.70	1.290293	4.93E-06
	(0.21485)	(0.19524)	(0.08290)	(7308.13)	(39865.7)	(17594.2)	(0.64716)	(2.5E-06)
	[0.13514]	[1,81324]	[2.48364]	[-1.93464]	[-0.36834]	[-2.06754]	[1.99377]	[1.94207]
D (DEPO (-2))	-0.053862	-0.005249	-0.084961	14431.45	-5,651,767	27838.22	0.078622	4.00E-06
	(0.19652)	(0.17858)	(0.07583)	(6684.57)	(36464.2)	(16093.0)	(0.59194)	(2.3E-06)
	[-0.27408]	[-0,02939]	[-1.12044]	[2.15892]	[-0.15499]	[1.72983]	[0.13282]	[1.72232]

D (LOANS (-1))	-0.932070	-0.469016	0.008085	20227.40	163042.5	3582,620	0.235331	-1.34E-05
	(0.55163)	(0.50128)	(0.21285)	(18763.7)	(102356.)	(45173.4)	(1.66160)	(6.5E-06)
	[-1,68965]	[-0.93563]	[0.03799]	[1.07801]	[1,59290]	[0.07931]	[0.14163]	[-2,06238]
D (LOANS (-2))	0.072809	0.103795	0.249683	15703.66	-42338.90	-62549.94	-2,276,216	-1.23E-05
	(0.54320)	(0.49362)	(0.20960)	(18476.7)	(100790.)	(44482.5)	(1,63619)	(6.4E-06)
	[0.13404]	[0.21027]	[1.19126]	[0.84992]	[-0.42007]	[-1.40617]	[-1.39117]	[-1.91759]
D (INVESTMENT (-1))	7.92E-07	1.65E-07	-9.01E-07	-0.559501	-0.711650	-0.263058	8.66E-06	-1.65E-10
	(4.5E-06)	(4.1E-06)	(1.7E-06)	(0.15366)	(0.83821)	(0.36993)	(1.4E-05)	(5.3E-11)
	[0.17540]	[0.04026]	[-0.51716]	[-3.64118]	[-0.84901]	[-0.71110]	[0.63617]	[-3.09799]
D (INVESTMENT (-2))	-3.11E-06	-3.38E-06	4.07E-07	-0.237242	1.070041	-0.233280	-4.11E-06	-1.79E-10
	(4.5E-06)	(4.1E-06)	(1.7E-06)	(0.15175)	(0.82782)	(0.36535)	(1.3E-05)	(5.3E-11)
	[-0.69736]	[-0.83423]	[0.23650]	[-1.56333]	[1,29260]	[-0.63852]	[-0.30578]	[-3.40228]
D (CONSUMPTION (-1))	-3.96E-06	-2.31E-06	-4.71E-07	-0.109800	-0.413962	-0.352834	5.14E-06	1.39E-10
	(2.0E-06)	(1.8E-06)	(7.6E-07)	(0.06713)	(0.36617)	(0.16161)	(5.9E-06)	(2.3E-11)
	[-2.00684]	[-1.28912]	[-0.61809]	[-1.63571]	[-1.13050]	[-2,18330]	[0.86505]	[5.97362]
D (CONSUMPTION (-2))	-3.96E-08	6.74E-08	-2.12E-07	-0,021804	-0.505065	-0.447824	5.15E-06	6.39E-11
	(1.8E-06)	(1.6E-06)	(7.0E-07)	(0.06143)	(0.33512)	(0.14790)	(5.4E-06)	(2.1E-11)
	[-0.02194]	[0.04108]	[-0.30385]	[-0.35492]	[-1.50711]	[-3.02786]	[0.94579]	[2,99637]
D (OUTPUTGAP (-1))	5.41E-07	2.0E-06	1.11E-06	0.491112	1.150516	-0.296546	-4.81E-06	-1.87E-10
	(1.2E-06)	(1.1E-06)	(4.6E-07)	(0.04081)	(0.22261)	(0.09824)	(3.6E-06)	(1.4E-11)
	[0.45128]	[1.90997]	[2,39616]	[12.0348]	[5,16841]	[-3.01846]	[-1.33186]	[-13,1661]
D (OUTPUTGAP (-2))	4.12E-06	3.60E-06	9.16E-07	0.274909	-0.116375	-0.091798	-1.56E-05	-9.42E-11
	(3.2E-06)	(2.9E-06)	(1.2E-06)	(0.10882)	(0.59361)	(0.26198)	(9.6E-06)	(3.8E-11)
	[1,28930]	[1.23772]	[0.74205]	[2.52626]	[-0.19605]	[-0.35039]	[-1.61394]	[-2.49278]
D (INFLATION (-1))	-0.001521	0.033855	-0.014648	2667,261	810,8551	1361,403	0.096324	2.62E-05
	(0.05963)	(0.05419)	(0.02301)	(2028.42)	(11065.0)	(4883.40)	(0.17962)	(7.0E-07)

	[-0.02551]	[0.62475]	[-0.63661]	[1.31495]	[0.07328]	[0.27878]	[0.53625]	[37.2475]
D (INFLATION (-2))	-0.031019	0.043606	0.006201	1578,484	-3,323,392	1631,887	0.177764	1.02E-06
	(0.04996)	(0.04540)	(0.01928)	(1699.35)	(9269.92)	(4091.16)	(0.15048)	(5.9E-07)
	[-0.62089]	[0.96050]	[0.32167]	[0.92888]	[-0.35851]	[0.39888]	[1.18128]	[1.72752]
D (NAIRU (-1))	1940,423	568.0840	278,0052	3977750.	37513073	57942556	6144,237	1.954133
	(604,481)	(549,305)	(233,242)	(2.1E + 07)	(1.1E + 08)	(5.0E + 07)	(1820.78)	(0.00714)
	[3.21007]	[1,03419]	[1.19191]	[0.19346]	[0.33446]	[1.17053]	[3.37451]	[273,580]
D (NAIRU (-2))	-1,742,284	-5,499,242	-3,147,237	5306338.	-8809933.	-51469847	-4,451,440	-0.920921
	(578,303)	(525,517)	(223,142)	(2.0E + 07)	(1.1E + 08)	(4.7E + 07)	(1741.93)	(0.00683)
	[-3.01275]	[-1.04644]	[-1.41042]	[0.26976]	[-0,08210]	[-1.08684]	[-2,55547]	[-134,766]
C	0.206207	0.096832	-0.146223	67668.40	130364.1	42875.10	1.885201	7.45E-05
	(0.33920)	(0.30824)	(0.13088)	(11537.9)	(62938.9)	(27777.3)	(1.02172)	(4.0E-06)
	[0.60792]	[0.31414]	[-1.11720]	[5.86489]	[2.07128]	[1.54353]	[1.84512]	[18.5766]
R-squared	0.613261	0.768409	0.719500	0.898621	0.698699	0.838070	0.702462	0.999997
Adj. R-squared	0.425417	0.655921	0.583257	0.849379	0.552352	0.759419	0.557943	0.999995
Sum sq. resids	5.407046	4.465015	0.805027	6.26E + 09	1.86E + 11	3.63E + 10	49,05791	7.55E-10
SE equation	0.393048	0.357172	0.151660	13369.43	72930.06	32186.74	1.183915	4.64E-06
F-statistics	3.264727	6.831070	5.281005	18,24931	4.774282	10.65549	4.860703	653614.5
Log likelihood	-1,471,514	-9,642,227	35.75629	-5,677,462	-6,576,623	-6,143,112	-7,315,554	586.6238
Akaike AIC	1.234533	1.043103	-0.670049	22.10363	25.49669	23,86080	3.439832	-2.145,750
Schwarz SC	1.903689	1.712259	-0,000893	22.77279	26.16585	24.52995	4.108988	-2,078,834
Mean dependent	-0.118868	-0.084340	-0.110755	21707.40	32276.91	-1,562,887	-0.223208	-0.001772
SD dependent	0.518525	0.608904	0.234929	34448.52	109003.0	65621.52	1.780662	0.002147

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