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Analysis of the Phillips Curve Theory in Controlling Inflation and Unemployment in the AJITIP Country

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Abstract. *This study aims to analyze the optimization of monetary policy and fiscal policy (current policies) in stabilizing the economy, precisely in overcoming the unemployment rate during the pandemic in the 6 lowest unemployment countries. Where monetary variables (Money Supply, Exchange Rate and Real Interest Rate), fiscal policy (Government spending), and economic stability (Inflation, GDP, and Wages). This study uses secondary data or time series, namely from 2008 to 2020. The data analysis model in this study is the ARDL Vector Panel model. The results of the IRF analysis showed that the stability of the variable response was formed in the 8th period or medium term and the 15th or long-term period, where the response of other variables to changes in one variable showed variations both from positive to negative responses and vice versa, and there were variables whose responses remained positive to negative from short to long-term. The results of the FEVD analysis show leading indicators as operational targets. Then the results of the ARDL Panel analysis show that in terms of the Inflation Panel, the Amount of Money Supply, Interest Rates, Gross Domestic Product, Government Expenditure, Exchange Rates, and Wages are able to maintain economic stability, precisely at the unemployment rate in the 6 lowest unemployment countries, in the short and long term.*

Keywords *Monetary Policy, Fiscal Policy, Economic Stability*

1. INTRODUCTION

Achieving inflation stability is important in a country's economy. With a stable inflation rate, it is hoped that it will be able to bring a positive climate to the economy, especially in terms of maintaining conducive business climate conditions, so that unemployment can be overcome. One of the efforts that can be made to maintain inflation stability is through monetary policy using monetary economic variables or instruments such as Interest Rates (SB), Money Supply (JUB) and Exchange Rates (KURS). Monetary policy is a policy of the monetary authority or central bank in the form of controlling the amount of the monetary economy to achieve the desired development of economic activities (Burhani, 2014). The existence of COVID-19 cases in Indonesia also causes "panic buying" which means excessive shopping activities due to panic from events that are happening around him (CNN Indonesia, 2020). Through this incident, of course, there will be a scarcity of resources due to an increase in consumer demand that is not balanced with the appropriate quantity of economic production. Then from the scarcity of resources, it will trigger an increase in prices in general, resulting in an increase in the inflation rate in Indonesia. Therefore, in this report, the author will discuss the influence of COVID-19 on the inflation rate in Indonesia. (Callista, 2020).

The impact of the Covid-19 pandemic seems to shake the Indonesian economy because the country is experiencing a weakening of consumption. Quoting Tempo.co, Perry Warjiyo, Governor of Bank Indonesia, revealed that the weakening of consumption, which then had an

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impact on reducing the inflation rate, was a concern for the central bank. The inflation rate in May 2020 was recorded very low, only 0.07% (month to month) or 2.19% (year on year). And it seems that the trend of weak inflation will still continue.And the real sector economy will take longer to recover if the government does not accelerate stimulus during the Covid-19 pandemic to suppress unemployment, intervene in people's purchasing power, and maintain the financial condition of the business world. As for inflation itself, Bank Indonesia (BI) Governor Perry Warjiyo stated that BI ensures that inflation conditions will be maintained in the midst of the Covid-19 pandemic. (Saputra, 2020).

Table 1. Countries with Inflation Rates

Country	Last	Before	References	Unit
Iceland	5.9	5.3	2020-05	%
Indonesia	4.99	5.28	2020-03	%
United States	11.1	13.3	2020-06	%
Japan	2.9	2.6	2020-05	%
Thailand	1	1.1	2020-03	%
Belarus	0.2	0.3	2020-03	%

As shown in table, the 6 countries including: the United States, Iceland, Indonesia, Japan, Belarus, and Thailand will be the countries that will be studied in this study that have a low unemployment rate in the world and are expected to be countries that are able to control their unemployment rate. In total, the Unemployment Rate from seven countries is 26.19%. Countries (United States, Iceland, Indonesia, Japan, Thailand, Belarus,), these six countries are included in the three developed countries, namely the United States, Japan and Iceland then there are three developing countries, namely, Thailand, Belarus and Indonesia. The United States, a developed country located in the central continent of North America, is also a prosperous country that has a low unemployment rate, which is around 11.8% There are many large companies in the world, namely companies from the United States that not only open jobs for their own country, but also for many job seekers around the world, besides that America is also one of the heterogeneous countries that makes a very good type of work.

Iceland is also a country with a small population that makes all its citizens worthy, the unemployment rate in Iceland is considered quite low and even drops from year to year.In 2020 the unemployment rate in Iceland only reached 5.9%, and that means it is still among the lowest in Europe. Indonesia with large natural resources (natural resources), increasing GDP and growth of quality and quantity of labor and Indonesia has an unemployment rate of 4.99 percent in 2020 compared to 5.28% in 2019, when the unemployment rate in Propang decreased due to the increasing number of workers who want to seek work. Japan is a developed country on

the Asian continent also does not want to lose in terms of employment. The unemployment rate in Japan is quite low when compared to other countries in Asia, even when compared to South Korea. With an unemployment rate of only 2.9%, it is not surprising that this country is one of the most productive countries in the world. Belarus is a Thriving country located on the European continent the 72nd largest economy in the world based on GDP, Belarus has a relatively well-developed industrial base, as well as a large agricultural base and a higher education level with an unemployment rate of 0.2%, this rich country only has an unemployment rate of 0.1% and means that Qatar is a country in the world where almost all its citizens work actively. From the description above, there is a problem phenomenon that will be researched, namely by analyzing the response of macroeconomic variables that affect each other in controlling inflation and unemployment through the detection of adaptive models. In the countries with the lowest unemployment rates in the world consisting of (the United States, Iceland, Indonesia, Japan, Belarus).

Table 2. Unemployment Rate Data in The Country with The Lowest Unemployment Rate

It	YEAR	United States	Iceland	Indonesia	Japan	Belarus	Thailand
		PNG	PNG	PNG	PNG	PNG	PNG
1	2008	5.78	2.95	7.21	4.00	6.39	1.18
2	2009	9.25	7.22	6.11	5.10	6.10	0.94
3	2010	9.63	7.56	5.61	5.10	6.13	0.62
4	2011	8.95	7.03	5.15	4.52	6.10	0.66
5	2012	8.07	6.00	4.47	4.30	6.08	0.58
6	2013	7.38	5.38	4.34	4.00	6.06	0.49
7	2014	6.17	4.90	4.05	3.60	5.98	0.58
8	2015	5.28	3.98	4.51	3.40	5.91	0.60
9	2016	4.87	2.98	4.30	3.10	5.84	0.69
10	2017	4.36	2.74	4.18	2.80	5.65	0.83
11	2018	3.90	2.70	4.51	2.40	4.76	0.77
12	2019	3.68	2.84	4.69	2.29	4.59	0.75
13	2020	11.1	5.9	4.99	2.9	5.2	1

Based on the Table and Graph of the data above, it is known that the Unemployment Rate shows various fluctuations from 2008 - 2020 in the country with the lowest unemployment rate in the world. Iceland experienced a fairly drastic increase, with the unemployment rate in 2009 at 7.22% from 2.25% from the previous year. This is because of the financial crisis that occurred during 2008-2011, the financial crisis that occurred had a serious negative impact on the Icelandic economy. And in the United States also experienced an increase in 2009 of 9.25% from 5.78% from the previous year due to the financial crisis caused by the hidden from the

mortgage market or clogged credit in the property sector which resulted in a decline in production, inflationary pressure and even an increase in unemployment. The financial crisis that occurred can be interpreted as the level of consumption will inevitably decrease so that the economy will not develop.

2. LITERATURE REVIEW

Lipsey (1997) stated that inflation is an average price increase at all levels of goods/services prices. Meanwhile, Mankiw (2000) stated that the inflation rate is the entire increase in the price level of goods, services and production factors. Inflation occurs at a time of imbalance between aggregate demand and supply where aggregate demand is greater than aggregate supply. Monetarists state that inflation is a monetary phenomenon where the inflation rate that occurs is caused by the growth of the money supply, where the shift in aggregate supply is directly responded to by the shift in aggregate demand so that it causes an increase in prices (Hervino, 2011). The formula for calculating the inflation rate:

Inf = IHKn−IHKn−1 IHKn−1 x 100% or Inf = Dfn− Dfn−1 Dfn−1

According to Suparmoko (2007), unemployment is the inability of the labor force to get a job according to what they need or want. So it can be concluded that unemployment is a condition in which a person who is already classified as a labor force has not yet found a job and is trying to find a job. Meanwhile, according to the Central Statistics Agency (BPS) in employment indicators, unemployment is a population that does not work but is looking for a job or is preparing a new business or a resident who is not looking for a job because they have been accepted to work but have not started working. According to Murni (2006) unemployment is a person who does not have a job or has no income. Sukirno (2008) explained that unemployment is a situation in which a person belonging to the labor force wants to get a job but has not been able to get it.

Mishkin (2008:4) states that the interest rate is the cost of the loan or the price paid for the loan fund. (Darmawi, 2005:181) in Efni (2007:3), states that the interest rate is the price that must be paid by the borrower to obtain funds from the lender for a certain period of time. Wiyani and Andi Wijayanto (2005:890) also in Efni (2007:3) stated that interest is a reward given to a person for a certain amount of loans or savings, where the amount is determined in the form of a percentage. The interest rate determines the amount of savings or investments. If there is an increase in interest rates, it will reduce the desire of the public and investors to invest but will actually increase the offer of savings.

Money is a stock of assets that can be used for transaction purposes (Herlambang, 2017). Money is a supply of assets that can be immediately used to make transactions. Money supply (M2) includes currencies in circulation, demand money, quasi-money. Quasi-money consists of time deposits, savings, and foreign exchange accounts/savings owned by the domestic private sector. The amount of money available is called the money supply, in an economy that uses commodity money, the amount of money in circulation is the amount of the commodity and the government controls the money supply. According to (Basukianto, 2015), in an effort to maintain an efficient growth rate, intervention from the government is needed, namely to reduce the primary sector and increase the role of the non-primary sector. According to Munthe & Hamdi, (2015) The exchange rate is the price of a local currency against a foreign currency. So, the exchange rate is the value of a rupiah currency that is translated into the country's currency and others. Price comparison rateLuwihadi et al., (2017).

3. METHODS

The material in this study uses quantitative material with the ARDL Panel approach. The quantitative material in this study is related to independent variables and dependent variables that are spread in panels in 6 countries , namely Iceland, Japan, Thailand, the United States, Belarus and Indonesia. Data analysis is adjusted to macroeconomic variables in monetary policy with the ARDL PANEL approach. The scope of this research is focused on monetary policy in each country that is able to be a leading indicator to stabilize the value of the rupiah. The data observed includes GDP, Unemployment,uinterest rates, money supply, gov, exchange rate and wages in 6 countries Iceland, Japan, Thailand, the United States, Belarus and Indonesia. Data was collected in Indonesia in a time series from 2001 to 2020.

Panel data by using data between time and data between regions or countries. ARDL panel regression is used to obtain the results of estimating each individual characteristic separately by assuming long-term cointegration Lag each variable. Autoregressive Distributed Lag (ARDL) introduced by Pesaran et al. (2001) in Russiadi (2014). This technique examines each Lag variable is located on I(1) or I(0). On the other hand, the result of ARDL regression is a test statistic that can be compared with two critical values that asymptotic.

$INFit=\alpha+\beta_1 PNGt+\beta_2 SBit+\beta_3 JUBit+\beta_4 PDBit+\beta_5 GOVit+\beta_6 KURSit+\beta 7UPAHit+e$……(1)

$PNGit=\alpha+\beta_1 INFt+\beta_2 SBit+\beta_3 JUBit+\beta_4 PDBit+\beta_5 GOVit+\beta_6 KURSit+\beta 7UPAHit+e$……(2)

The basic idea of data stationarity test with unit root test can be explained through the following model:

$Yt = \rho Yt\text{-}1 + et$……(3)

If equation (2) is subtracted from both sides by Yt-1, it will produce the following equation:

$Yt - Yt\text{-}1 = \rho Yt\text{-}1 - Yt\text{-}1 + et = (\rho\text{-}1)Yt\text{-}1 + et$……..…(4)

The equation can be written as:

$\Delta Yt = \theta\rho Yt\text{-}1 + et$……(5)

the equation of equation can be written as:

$\Delta Yt = e(t)$……(6)

4. RESULTS AND DISCUSSION

Infation and unemployment are complicated problems that are always faced by the State related to the poor quality of economic growth. The Phillips curve that describes the tradeoff between inflation and unemployment does not apply in Indonesia. The tendency that is in accordance with the Phillips curve is obtained from the relationship between unemployment and economic growth. Between unemployment and inflation cannot be prioritized which one will be handled first, it all depends on the condition of the economy. As a result of the pandemic, the global economy has also experienced a crisis, resulting in a decline in the stock market index, thus affecting the domestic economy. Along with the outbreak of this virus that has hit the whole world, resulting in economic losses due to the impact on domestic liquidity. To maintain smooth growth, the government issued three policies, namely fiscal, non-fiscal, and economic sectors. The three policies are related to the needs of the community in fields such as business, taxes, and others.

Panel analysis with Auto Regresive Distributin Lag (ARDL) tested pooled data, which is a combination of cross section (country) data with time series data (annual), the results of the ARDL panel are better than ordinary panels, because they are able to be co-integrated for a long time and have the most consistent lag distribution in theory, by using Eviews 10 software, the following results are obtained:

Table 3. ARDL Panel Outputs

Dependent Variable: D(PGR)
Method: ARDL
Date: 11/15/22 Time: 14:27
Sample: 2008 2021
Included observations: 84
Maximum dependent lags: 1 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (1 lag, automatic): INF SBR JUB PDB GOV *KURS* UPH
Fixed regressors: C
Number of models evalulated: 1
Selected Model: ARDL(1, 1, 1, 1, 1, 1, 1, 1)
Note: final equation sample is larger than selection sample

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
		Long Run Equation		
INF	-0.283657	0.049400	-5.742048	0.0000
SBR	-0.097025	0.041008	-2.366032	0.0249
JUB	-0.116699	0.026835	-4.348666	0.0002
PDB	-0.009903	0.004450	-2.225595	0.0340
GOV	3.718630	0.400583	9.283043	0.0000
KURS	-0.175083	0.027805	-6.296906	0.0000
UPH	-1.183328	0.164749	-7.182631	0.0000
		Short Run Equation		
COINTEQ01	-0.030941	0.050670	-0.610643	0.5462
D(INF)	-0.013244	0.012669	-1.045448	0.3045
D(SBR)	0.028656	0.013543	2.115884	0.0431
D(JUB)	0.005649	0.005050	1.118656	0.2725
D(PDB)	-0.360320	0.756802	-0.476109	0.6376
D(GOV)	10.14259	2.789203	3.636375	0.0011
D(KURS)	0.011877	0.009941	1.194646	0.2419
D(UPH)	0.033363	0.019814	1.683805	0.1030
C	4.522021	5.881210	0.768893	0.4482
Mean dependent var	-0.071667	S.D. dependent var		1.027186
S.E. of regression	0.094609	Akaike info criterion		-2.421207
Sum squared resid	0.259573	Schwarz criterion		-0.726892
Log likelihood	169.9543	Hannan-Quinn criter.		-1.737960

The accepted ARDL Panel model is a model with cointegrated lag where the main assumption is that the coefficient value has a negative slope with a level of 5% of the ARDL Panel Slope Model: the negative value is -0.03 94 and significant with a prob value of 0.05 < 0.54, then it can be seen that the ARDL panel model used in this study is rejected. Based on the acceptance of the model, the data analysis was carried out with a panel per country.

Table 4. Analysis of The United States Country Panel

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	-0.084478	0.000681	-123.9758	0.0000
D(INF)	0.023176	0.000180	128.9055	0.0000
D(SBR)	0.041919	0.000228	183.5625	0.0000
D(JUB)	0.023947	4.10E-05	583.8666	0.0000
D(PDB)	-3.816452	0.938861	-4.064982	0.0268
D(GOV)	23.01998	0.401917	57.27545	0.0000
D(KURS)	0.051901	0.000360	144.3372	0.0000
D(UPH)	0.058224	0.001472	39.54513	0.0000
C	10.76969	15.52500	0.693700	0.5378

Inflation has a positive (0.02) and significant effect on unemployment as indicated by a probability value of a sigs that is less than 0.05, which is 0.00. The Real Interest Rate has a positive (0.04) and significant effect on unemployment as indicated by a probability value of sig that is smaller than 0.05, which is 0.00.The Money Supply has a positive (0.02) and significant effect on unemployment as indicated by a probability value of sig that is less than 0.05, which is 0.00. GDP has a significant negative influence (-3.81) and significant on unemployment as indicated by a probability value of a sig smaller than 0.05, which is 0.02. Government Expenditure (GOV) has a positive (23.01) and significant influence on unemployment as shown by a probability value of sig that is smaller than 0.05, which is 0.00. KURS has a significant positive influence (0.05) and a significant effect on unemployment as

shown by a probability value of sig that is smaller than 0.05, which is 0.00. Significant wages have a positive effect (0.05) and significant on unemployment as shown by a probability value of sig that is smaller than 0.05, which is 0.00.

Table 5. Analysis of The Icelandia Country Panel

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	0.006148	6.56E-05	93.76765	0.0000
D(INF)	-0.008410	6.48E-05	-129.8140	0.0000
D(SBR)	0.009016	5.75E-05	156.8300	0.0000
D(JUB)	-0.008672	1.22E-05	-708.8414	0.0000
D(PDB)	-3.46E-05	4.09E-09	-8460.712	0.0000
D(GOV)	9.876521	0.103299	95.61092	0.0000
D(KURS)	0.005470	1.91E-05	285.8305	0.0000
D(UPH)	0.011507	0.000673	17.08547	0.0004
C	-0.464471	0.340976	-1.362183	0.2664

Inflation has a negative (-0.00) and significant effect on unemployment as indicated by a probability value of sig that is smaller than 0.05, which is 0.00. The real interest rate has a positive (0.00) and significant effect on unemployment as indicated by a probability value of sig that is less than 0.05, which is 0.00. The money supply has a negative (-0.00) and significant effect on unemployment as shown by a probability value of sig that is smaller than 0.05, which is 0.00. GDP has a negative (-3.46) and significant effect on unemployment as indicated by a probability value of sig that is less than 0.05, which is 0.00.Government Expenditure has a positive (9.87) and significant influence on unemployment as shown by a probability value of sig that is smaller than 0.05, which is 0.00. KURS has a positive (0.00) and significant influence on unemployment as shown by a probability value of sig that is smaller than 0.05, which is 0.00. Wages have a positive (0.01) and significant influence on unemployment as shown by a probability value of sig that is smaller than 0.05, which is 0.00.

Table 6. Analysis of The Indonesia Country Panel

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	0.002320	2.59E-06	896.8650	0.0000
D(INF)	0.006381	2.64E-05	241.6192	0.0000
D(SBR)	0.004062	4.07E-05	99.74504	0.0000
D(JUB)	-5.30E-05	4.09E-07	-129.4412	0.0000
D(PDB)	0.000698	4.50E-06	154.9670	0.0000
D(GOV)	3.460416	0.013652	253.4710	0.0000
D(*KURS*)	-0.011287	1.19E-05	-949.7854	0.0000
D(UPH)	0.013225	0.000137	96.25098	0.0000
C	-0.174108	0.013205	-13.18499	0.0009

Inflation has a positive (0.00) and significant effect on unemployment as shown by a probability value of a sig smaller than 0.05, which is 0.00. The real interest rate has a positive (0.00) and significant effect on unemployment as indicated by a probability value of sig that is less than 0.05, which is 0.00. The money supply has a negative (-5.30) and significant effect on unemployment as shown by a probability value of sig that is smaller than 0.05, which is

0.00. GDP has a positive (0.00) and significant influence on unemployment as indicated by a probability value of sis smaller than 0.05, which is 0.00. Government Expenditure (GOV) has a positive (3.46) and significant influence on unemployment as shown by a probability value of sig that is smaller than 0.05, which is 0.00. KURS has a negative (-0.01) and significant influence on unemployment as indicated by a probability value of sig that is smaller than 0.05, which is 0.00. Wages have a positive (0.01) and significant influence on unemployment as shown by a probability value of sig that is smaller than 0.05, which is 0.00

Table 7. Analysis of The Japan Country Panel

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	0.051154	0.001156	44.24891	0.0000
D(INF)	-0.043615	0.000407	-107.2650	0.0000
D(SBR)	0.019921	7.04E-05	282.8809	0.0000
D(JUB)	0.000584	0.000132	4.408378	0.0217
D(PDB)	1.834169	0.556752	3.294408	0.0459
D(GOV)	9.686780	0.301864	32.08987	0.0001
D(KURS)	0.003432	0.000149	22.96432	0.0002
D(UPH)	-0.001789	0.003569	-0.501272	0.6507
C	-4.786902	9.463429	-0.505832	0.6478

Inflation has a negative (-0.04) and significant effect on unemployment as shown by a probability value of sig that is less than 0.05, which is 0.00. Real interest rates have a positive (0.01) and significant effect on unemployment as indicated by a probability value of sig smaller than 0.05, which is 0.00. The money supply has a positive (0.00) and significant influence on unemployment as indicated by a probability value of sig that is smaller than 0.05, which is 0.02. GDP has a positive (1.83) and significant influence on unemployment as shown by a probability value of a sig smaller than 0.05, which is 0.04. Government Expenditure (GOV) has a positive (9.68) and significant influence on unemployment as shown by a probability value of sig that is smaller than 0.05, which is 0.00. KURS has a positive (0.00) and significant influence on unemployment as shown by a probability value of sig that is smaller than 0.05, which is 0.00. Wages have a negative (0.00) and insignificant effect on unemployment as indicated by a probability value of a sig greater than 0.05, which is 0.65.

Table 8. Analysis of The Thailand Country Panel

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	0.092873	0.000524	177.3649	0.0000
D(INF)	-0.057585	2.66E-05	-2165.015	0.0000
D(SBR)	0.006846	5.70E-06	1201.837	0.0000
D(JUB)	0.000560	4.03E-06	138.9264	0.0000
D(PDB)	-0.001523	1.00E-07	-15163.52	0.0000
D(GOV)	9.362151	0.031828	294.1522	0.0000
D(KURS)	-0.007998	1.37E-05	-583.1499	0.0000
D(UPH)	-0.002439	0.000439	-5.550858	0.0115
C	-8.903106	2.681915	-3.319682	0.0451

Significant inflation has a negative effect (-0.05) and significant on unemployment as shown by a probability value of sig that is less than 0.05, which is 0.00. The real interest rate has a positive (0.00) and significant effect on unemployment as indicated by a probability value of sig that is less than 0.05, which is 0.00. The money supply has a positive (0.00) and significant effect on unemployment as indicated by a probability value of sig that is smaller than 0.05, which is 0.00. GDP has a negative (-0.00) and significant influence on unemployment as indicated by a probability value of sig that is less than 0.05, which is 0.00. Government Expenditure (GOV) has a positive (9.36) and significant influence on unemployment as shown by a probability value of sig smaller than 0.05, which is 0.00. KURS significantly has a negative influence (-0.00) and is significant on unemployment as shown by a sig probability value that is less than 0.05, which is 0.00. Wages have a negative (0.00) and significant effect on unemployment as indicated by a probability value of sig that is smaller than 0.05, which is 0.00.

Table 9. Analysis of The Belarusia Country Panel

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	-0.253665	0.000904	-280.6478	0.0000
D(INF)	0.000588	5.38E-05	10.92005	0.0016
D(SBR)	0.090172	0.000135	670.0006	0.0000
D(JUB)	0.017530	1.46E-05	1202.470	0.0000
D(PDB)	-0.178780	0.027249	-6.560911	0.0072
D(GOV)	5.449686	0.047856	113.8768	0.0000
D(KURS)	0.029741	2.94E-05	1009.964	0.0000
D(UPH)	0.121447	0.000352	345.1738	0.0000
C	30.69102	4.698189	6.532522	0.0073

Inflation has a positive (0.00) and significant effect on unemployment as shown by a probability value of a sig smaller than 0.05, which is 0.00. Real interest rates have a positive (0.09) and significant effect on unemployment as shown by a probability value of sig smaller than 0.05, which is 0.00. The money supply has a positive (0.01) and significant effect on unemployment as indicated by a probability value of sig that is less than 0.05, which is 0.00. GDP has a negative (-0.17) and significant influence on unemployment as indicated by a probability value of a sig smaller than 0.05, which is 0.00. Government Expenditure (GOV) has a positive (5.44) and significant influence on unemployment as shown by a probability value of a sig smaller than 0.05, which is 0.00. KURS has a positive (0.02) and significant influence on unemployment as indicated by a probability value of sigs that is smaller than 0.05, which is 0.00. Wages have a positive (0.12) and significant influence on unemployment as indicated by a probability value of sig that is smaller than 0.05, which is 0.00.

Table 10. Inflation ARDL Panel Analysis

Dependent Variable: D(INF)
Method: ARDL
Date: 12/29/22 Time: 06:25
Sample: 2008 2021
Included observations: 84
Maximum dependent lags: 1 (Automatic selection)
Model selection method: Akaike info criterion (AIC)
Dynamic regressors (1 lag, automatic): PGR SBR JUB PDB GOV KURS UPH
Fixed regressors: C
Number of models evalulated: 1
Selected Model: ARDL(1, 1, 1, 1, 1)
Note: final equation sample is larger than selection sample

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
Long Run Equation				
PGR	1.071687	0.315917	3.392302	0.0015
SBR	-0.108602	0.061178	-1.775167	0.0833
JUB	0.167772	0.089011	1.884854	0.0666
PDB	-0.072017	0.997217	-0.072218	0.9428
GOV	3.718630	0.400583	9.283043	0.0000
KURS	-0.175083	0.027805	-6.296906	0.0000
UPH	-1.193008	0.104719	-8.282731	0.0000

The accepted ARDL panel model is one that has cointegrated lag where the main assumption is that the coefficient value has a negative slope with a significant level of 5%. These conditions in the ARDL Panel model: the value is negative (-0.50) and significant (0.00 < 0.05) then the model is accepted. Based on the acceptance of the model, data analysis is carried out with a state panel.

Table 11. Analysis of The United States Inflation Panel

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	-0.879270	0.002139	-411.1294	0.0000
D(PGR)	-0.007024	2.51E-05	-279.9042	0.0000
D(SBR)	1.414097	0.016262	86.95612	0.0000
D(JUB)	0.057584	0.000314	183.1510	0.0000
D(PDB)	0.718726	0.314831	2.282899	0.1067
D(GOV)	0.002152	0.034754	0.061921	0.9545
D(KURS)	-0.021252	1.02E-05	-2074.182	0.0000
D(UPH)	0.052091	0.024624	0.071911	0.1535
C	-15.81262	2.661133	-5.942064	0.0095

Unemployment is significant in affecting inflation. This can be seen in the probability value of the sig of 0.00 < 0.05. Where if unemployment decreases, it can increase inflation. Interest rates are significant in affecting Inflation, this can be seen in the probability value of the sig of 0.000.05. The Money Supply is significant in influencing Inflation, this can be seen in the probability value of the sig of 0.000.05. Gross Domestic Product does not significantly affect Inflation. This can be seen from the probability value of the sig of 0.10>0.05.GOV does not significantly affect Inflation. This can be seen from the probability value of the sig of 0.95>0.05. Where GOV has no effect on Inflation. The exchange rate is significant in

influencing Inflation, this can be seen in the probability value of the sigs of 0.00. Wages do not significantly affect inflation, this can be seen from the value of the sist probability of 0.15>0.05.

Table 12. Analysis of The Japan Inflation Panel

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	-0.279703	0.018155	-15.40604	0.0006
D(PGR)	-0.063052	0.000455	-138.5296	0.0000
D(SBR)	1.534273	0.078122	19.63954	0.0003
D(JUB)	0.004360	0.001381	3.156213	0.0510
D(PDB)	2.997858	2.558037	1.171937	0.3258
D(GOV)	2.240649	0.518144	4.324375	0.0228
D(KURS)	-0.029355	0.000286	-102.5084	0.0000
D(UPH)	3.196828	0.858007	4.191977	0.9128
C	-5.396977	6.617479	-0.815564	0.4745

Unemployment is significant in affecting inflation. This can be seen in the probability value of the sig of 0.00 < 0.05. Where if unemployment decreases, it can increase inflation. Interest rates are significant in affecting Inflation, this can be seen in the probability value of the sig of 0.000.05. The Money Supply is not significant in affecting Inflation, this can be seen in the probability value of the sig of 0.051>0.05. Gross Domestic Product does not significantly affect Inflation. This can be seen from the value of the probability of the sig of 0.32>0.05. GOV significantly affects Inflation. This can be seen from the probability value of the sig of 0.020.05. The exchange rate is significant in influencing Inflation, this can be seen in the probability value of the sig of 0.000.05. Wages do not significantly affect inflation, this can be seen from the value of the sist probability of 0.91>0.05.

Table 13. Icelandia Inflation Panel Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	2.013554	0.679394	2.963751	0.0594
D(PGR)	-0.210472	0.012796	-16.44872	0.0005
D(SBR)	2.902518	3.695196	0.785484	0.4895
D(JUB)	0.262402	0.074281	3.532561	0.0386
D(PDB)	-0.995697	4.072140	-0.244514	0.8226
D(GOV)	7.528797	15.04888	0.500290	0.6513
D(KURS)	-0.239531	0.009854	-24.30785	0.0002
D(UPH)	4.996828	0.558007	2.191007	0.1128
C	33.06453	180.3450	0.183341	0.8662

Unemployment is significant in affecting inflation. This can be seen in the probability value of the sig of 0.00 < 0.05. Where if unemployment decreases, it can increase inflation. Interest rates are not significant in affecting Inflation, this can be seen in the probability value of the sig of 0.480.05. The Money Supply is significant in influencing Inflation, this can be seen in the probability value of the sig of 0.03>0.05. Gross Domestic Product does not significantly affect Inflation. This can be seen from the probability value of the sig of 0.82>0.05. GOV does not significantly affect Inflation. This can be seen from the probability

value of the sig of 0.650.05. The exchange rate is significant in influencing Inflation, this can be seen in the probability value of the sig of 0.02. Wages do not significantly affect inflation, this can be seen from the value of the probability of the sig of 0.11>0.05.

Table 14. Analysis of Thailand's Inflation Panel

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	-0.465733	0.028615	-16.27609	0.0005
D(PGR)	0.005059	0.001112	4.548476	0.0199
D(SBR)	2.037346	0.944540	2.156971	0.1199
D(JUB)	0.163670	0.016775	9.757091	0.0023
D(PDB)	1.541937	3.181201	0.484703	0.6611
D(GOV)	1.515094	3.702055	0.409258	0.7098
D(KURS)	-0.051464	0.000552	-93.15204	0.0000
D(UPH)	1.115064	2.712015	0.109750	0.1068
C	-8.316651	9.295370	-0.894709	0.4369

Unemployment is significant in affecting inflation. This can be seen in the probability value of the sig of 0.01 < 0.05. Where if unemployment decreases, it can increase inflation. Interest rates are not significant in affecting Inflation, this can be seen in the sik probability value of 0.110.05. The Money Supply is significant in influencing Inflation, this can be seen in the probability value of the sig of 0.00>0.05. Gross Domestic Product does not significantly affect Inflation. This can be seen from the probability value of the sig of 0.66>0.05. GOV does not significantly affect Inflation. This can be seen from the probability value of the sig of 0.700.05. The exchange rate is significant in influencing Inflation, this can be seen in the probability value of the sigs of 0.00. Wages do not significantly affect inflation, this can be seen from the value of the probability of the sig of 0.11>0.05.

Table 15. Analysis of Indonesia's Inflation Panel

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	-1.813416	0.001117	-1623.081	0.0000
D(PGR)	0.045708	0.000128	358.1320	0.0000
D(SBR)	2.198764	0.021219	103.6201	0.0000
D(JUB)	-0.098070	0.000137	-715.1262	0.0000
D(PDB)	2.249806	0.161110	13.96441	0.0008
D(GOV)	-0.762793	0.050697	-15.04615	0.0006
D(KURS)	0.007032	6.51E-05	108.0596	0.0000
D(UPH)	0.054221	0.168122	208.5220	0.0000
C	-34.99751	5.418984	-6.458316	0.0075

Unemployment is significant in affecting inflation. This can be seen in the probability value of the sig of 0.00 < 0.05. Where if unemployment increases, it can increase inflation. Interest rates are significant in influencing Inflation, this can be seen in the probability value of the sig of 0.00. The Money Supply is significant in influencing Inflation, this can be seen in the probability value of the sig of 0.00>0.05. Where the money supply increases, inflation also

increases. Gross Domestic Product significantly affects Inflation. This can be seen from the probability value of the sig of 0.00>0.05. GOV significantly affects Inflation. This can be seen from the probability value of the sig of 0.000.05. The exchange rate is significant in influencing Inflation, this can be seen in the probability value of the sigs of 0.00. Wages significantly affect inflation, this can be seen from the value of the sist probability of 0.00>0.05.

Table 16. Belarus Inflation Panel Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	2.013554	0.679394	2.963751	0.0594
D(PGR)	-1.135836	0.073045	-15.54985	0.0006
D(SBR)	-0.034087	0.002254	-15.12422	0.0006
D(JUB)	-0.076637	0.006529	-11.73797	0.0013
D(PDB)	0.001192	0.002556	0.466239	0.6728
D(GOV)	4.375189	10.31371	0.424211	0.7000
D(KURS)	0.110822	0.008066	13.73875	0.0008
D(UPH)	0.260054	0.010707	24.28725	0.0002
C	33.06453	180.3450	0.183341	0.8662

Unemployment is significant in affecting inflation. This can be seen in the probability value of the sig of 0.00 < 0.05. Where if unemployment increases, it can increase inflation. Interest rates are significant in affecting Inflation, this can be seen in the probability value of 0.00. The Money Supply is significant in influencing Inflation, this can be seen in the probability value of the sig of 0.00>0.05. Where the money supply increases, inflation also increases. Gross Domestic Product does not significantly affect Inflation. This can be seen from the probability value of the sig of 0.67>0.05. GOV does not significantly affect Inflation. This can be seen from the probability value of the sig of 0.70. The exchange rate is significant in influencing Inflation, this can be seen in the probability value of the sigs of 0.00. Wages significantly affect inflation, this can be seen from the value of the sist probability of 0.00>0.05.

The six AJIPTIP countries in overcoming the unemployment rate and inflation in the country experienced different things. The results of the above study are similar to the studies that have been summarized, namely the research (Dogan, 2012) states that inflation and unemployment have a relationship, and are consistent with the Phillips Curve, but according to (Vermeulen, 2017) that the unemployment rate does not depend on aggregate demand and high inflation and deflation can be detrimental to employment and can be detrimental to economic growth, because the rise and fall of inflation depends on the unemployment.

In the United States itself, in overcoming Unemployment and Inflation, the Fed has taken extraordinary measures to combat the impact of COVID-19. They kept interest rates at zero for a long time, have also provided more liquidity, bought assets, and entered different markets to

ensure they are running smoothly and market interest rates anticipate the Fed will be dovish and willing to hold higher inflation for a longer period (Hamdani, 2020).

However, at the time of the pandemic, Japan has not been hit by inflation as hard as the United States or some European countries and some companies here have tried 116 not to pass on the increase in costs to their consumers in the midst of weak demand, so the government and other officials provide and meet the needs in each region and to take additional measures so that the community remains prosperous and prices do not soar (Suhendar, 2022).

In Thailand, the Covid-19 pandemic has hit very hard, but the two main drivers of Thailand's growth are tourism and trade. The government has responded with a series of actions, including tax incentives and stimulus packages of US$ 1.7 billion and a cash program worth US$ 7 billion during the pandemic to minimize unemployment and reduce prices, which have been very effective in supporting the problems of inflation and unemployment (Lestari, 2021).

Fiscal support, he continued, will be the key to supporting recovery during the pandemic because monetary easing runs on its own. Meanwhile, the Bank of Thailand maintained its key interest rate to keep inflation at bay. Bank CentrL said fiscal measures and policy coordination among government agencies will be crucial to support the economy during the pandemic and beyond. (Lestari, 2021).

Meanwhile, in Indonesia, the Government of Indonesia has taken comprehensive policies in the fiscal and monetary fields to deal with Covid-19. In the fiscal sector, the Government carries out a policy of refocusing activities and budget reallocation. The social safety net is given to increase people's purchasing power through the Family Hope Program (PKH), Smart Indonesia Card (KIP), Basic Food Card and prosperous rice. Ministries/Institutions/Regional Governments are expected to increase 117 labor-intensive programs, including Village Funds. Meanwhile, business incentives are carried out to help business actors, especially MSMEs and the informal sector, to avoid a decline in welfare or an increase in unemployment. In the monetary sector, the monetary policy taken must be in line with fiscal policy in minimizing the impact of Covid-19 on the national economy. Therefore, monetary authorities must be able to maintain the rupiah exchange rate, control inflation and provide monetary stimulus for the business world. It is hoped that there will be a relaxation of banking credit and intensify the distribution of People's Business Loans (KUR) so that unemployment does not occur (Sasongko, 2020).

However, in Belarus it is very different, where in overcoming unemployment, namely by regulating fines for the unemployed. If they are unable to pay, there is a risk of being held back

for a while. This policy reminds us of Soviet-era tactics that criminalize people who do not contribute to the state. However, the Belarusian government stated that the purpose of the decree is to stimulate working citizens to commit to labor activities and fulfill their constitutional obligations in funding state spending. Where the President of Belarus, Aleksandr Lukashenko, said that his country does not need to take special measures to face or anticipate the coronavirus outbreak (Melnichuk, 2020).

Table 17. Unemployment's Panel ARDL

Variabel	Amerika Serikat	Islandia	Indonesia	Jepang	Thailand	Belarus	Short Run	Long Run
INF	I	I	I	I	I	I	O	I
SBR	I	I	I	I	I	I	I	I
JUB	I	I	I	I	I	I	O	I
PDB	I	I	I	I	I	I	O	I
GOV	I	I	I	I	I	I	I	I
KURS	I	I	I	I	I	I	O	I
UPH	I	I	I	I	I	I	O	I

In the panel, it turns out that INF, SBR, JUB, and, GOV are also able to become leading indicators for the control of the United States, Israel, Indonesia, Japan, Thailand, and Belarus. The results of the study (Mohseni & Jouzaryan, 2016) show that the authorities of economic and social institutions, so they can try to reduce and control unemployment and inflation to achieve economic growth. Monetary policy controls the amount of monetary money such as the money supply, price stability, interest rate, carried out by the central bank, while 120 fiscal policies control the economy (fiscal) by changing the government's revenue and expenditure budgets. The application of fiscal policy and monetary policy in its development creates a policy mix (blend policies) which will then develop studies on the coordination of monetary policy and fiscal policy (Seftarita, 2005). As for light inflation, where inflation is below ten percent. Light inflation is actually able to have a positive impact on entrepreneurs, to increase their production, so that later entrepreneurs need labor, and the availability of jobs for people who are unemployed. Then based on the overall results, it is known that significant in the long term affects Inflation in the United States, Iceland, Indonesia, Japan, Thailand, Belarus, which affects PGR.

Table 18. Inflation's Panel ARDL

Variabel	Amerika Serikat	Islandia	Indonesia	Jepang	Thailand	Belarus	Short Run	Long Run
PGR	I	I	I	I	I	I	1	I
SBR	I	0	I	I	0	I	0	0
JUB	I	I	I	0	I	I	0	I
PDB	0	0	I	0	0	0	0	0
GOV	0	0	I	I	0	0	I	I
KURS	I	I	I	I	I	I	1	I
UPH	0	0	I	0	0	I	1	0

In a panel discussion, it turns out that PGR and the exchange rate are also able to become leading indicators for controlling inflation in the United States, Israel, Indonesia, Japan, Thailand, and Belarus. The results of the study (Mohseni & Jouzaryan, 2016) show that the authorities of economic and social institutions, so that they can try to reduce and control unemployment and inflation to achieve 121% economic growth. Where reducing the unemployment rate can increase inflation, and vice versa. This is supported by previous research that if the government has a low inflation rate, there will be an increase in the unemployment rate. So it can be said that if the unemployment rate is low, inflation will increase (Nur, 2019). As for light inflation, where inflation is below ten percent. Light inflation is actually able to have a positive impact on entrepreneurs, to increase their production, so that later entrepreneurs need labor, and the availability of jobs for people who are unemployed.

5. CONCLUSION

Based on the results of the research that has been presented in the previous chapters, the following conclusions can be drawn: In terms of inflation panel, Interest Rates, Money Supply, and Government are the leading indicators in the six countries. However, his position is unstable in short runs and long runs.

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