

Can Covid-19 Change The Open Economy Model And Economic Stability In 7H-Countries?

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Abstract

This study discusses changes in the open economy model in supporting economic stability after the COVID-19 7H-countries, where the countries are Turkey, Uruguay, Belarus, Kenya, Mongolia, Indonesia, and Mexico. This research uses the simultaneous regression analysis method and ARDL Panel. The study results show that consumption, investment, government spending, and Inflation are open economic models that can support financial stability during the COVID-19 pandemic. However, the leading indicators on the panel only affect the Long Run, namely GDP, consumption, and exports. At the same time, for the Short Run, the open economy variables have not been able to become leading indicators of economic stability.

Keywords The Open Economy Model, Covid-19, Economic Stability

1. INTRODUCTION

An open economy aims to support the creation of sustainable economic stability. Economic stability can increase economic growth and welfare (Chetty, R., J. N. et al. 2020) (Lustig N. et al. 2020) (Sayed, A., and B. Peng. 2021). Strengthening the resilience of the domestic economy both domestically and abroad is a step in maintaining economic stability (Watulingas et al., 2016) (Chetty, R., J. N.et, al. 2020)." Inflation is the rate of change in prices. The prices level is the accumulation of past inflations" (Dornbusch et al., 2008:39) (Ma, C., J. et al. 1. 2020). Inflation can determine the economic condition (Totonchi, 2011:459) (Sheiron, et al. 1 2021).

The exchange rate is one indicator that can see a country's economy (Nguyen, V. C., et al. 1 2020) (Hatmanu et al. 1 2020). Then the price increase affects the number of goods demanded (Mankiw,

2012: 67) (Ballmer, A, S et al. 1 2020). When exports increase, economic growth will also increase (Dhea Zatira et al. 1 2021) (Kalaitzi, A.S. et al. 1 2020). The depreciation of the Rupiah value or a currency devaluation, because in foreign markets, it affects the value of exports in that country (Sukirno, 2012:408) (Khachatryan, G. A., et all 2020) (Nuyen, V. C., et al. 1 2020). When the value of exports decreases, economic growth will also decrease (Barbero J et al. 1. 2021). The Rupiah exchange rate will continue to be in a vulnerable position during the spread of the Covid-19 outbreak, which causes panic in the global market that makes foreign funds run away as well as liquidity pressures and the urge to get Dollars to make the Dollar superior to everything (Haryanto, 2020).

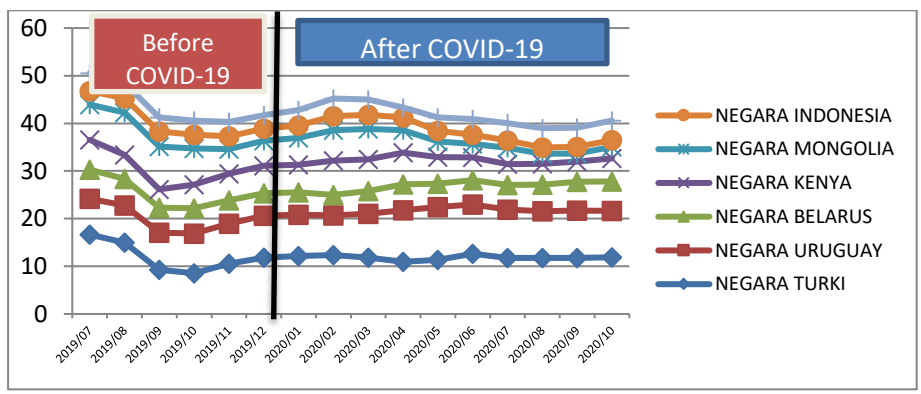


Figure 1. : Graph of Post-Covid-19 Inflation

Source: Tradingeconomics

The graph above shows that Inflation in the last 12 months from July 2019 to November 2020 experienced an increase in the seven countries. Inflation risks for the seven global countries, Turkey's Inflation in November rose to 10.56% from the previous month, Uruguay in May rose to 10.85% from a year earlier, Belarus in March rose to 4.9% from the last month, Kenya in February rose to 6.8% from the previous month, Mongolia in April rose to 6.4% from the previous month, Indonesia in March also experienced an increase of 2.96% from the last month, even Mexico in February also experienced a rise of 3.7% from the last month.

Inflation also plays a vital role in influencing the mobility of funds through formal financial institutions (Endri, 2008) (Abu-Rayash, A. et al. 1. 2020). Moreover, domestic failures and shocks will cause price fluctuations in the domestic market and end up with Inflation in the economy (Basir, 2003; 265) (Dejan Zivkovic et al. 2020). And a high level of Inflation will not promote a country's economic development (Murni, 2006) (Sheiron et al. 1 2021).

Table 1 : Economic Stability in In 7H-countries

KASUS COVID-19	Quartly	Countries						
		TURKI	URUGUAY	BELARUS	KENYA	MONGOLIA	INDONESIA	MEXICO
Before Covid-19	Q3/2019	204062.595	13693.842	13550.54	24574.624	3619801	287806.178	316073.3
	Q4/2019	208699.165	13849.233	15146.745	23520.438	3654.894	285674.562	318320.9
After	Q1/2020	176097.697	14166.056	17594.743	22535.627	2729.959	275578.992	306560.8

Covid-19	Q2/2020	151664.026	12666.72	16887.581	27233.824	3322.568	249016.019	214384.3
	Q3/2020	196871.97	10717.013	14460.136	24815.066	3379.982	264616.269	264430.8

Source: Ceicdata

The risk of Covid-19 also adversely affects other economic stability variables, namely the economic growth rate (GDP/GDP). Judging from the data above, it is explained that in the first quarter of 2020, during the Covid-19 period, Indonesia's GDP decreased from 285674,562 USD to 275574,405 USD. Likewise, in Mexico and also Belarus, the GDP of the two countries in the 2nd quarter of 2020 fell from 17594,743 US\$ to 16887,581 US\$, Mongolia also experienced the same thing, namely a decrease in GDP from 3478,713 US\$ to 2700,399 US\$ in the 1st quarter of 2020 Uruguay in the 2nd quarter of 2020 fell from 14166,056 USD to 12666.72 US\$, Kenya's GDP in the 1st quarter of 2020 dropped from 23520,438 US\$ to 22535,568 US\$, Turkey in the 1st quarter of 2020 decreased from 208699,165 US\$ to 176097,697 US\$.

The above phenomena encourage the making of this research. So this research is entitled "The Open Economic Model in Supporting Post-Covid-19 Economic Stability in the Seven Highest Inflation Countries".

2. Literature Review and Hypothesis Development

Open-Economy Model

An open monetary economic analysis with rational expectations determines the floating exchange rate. Trade relations with certain countries adhere to the fiat money system, meaning that paper money sold by the monetary authority is an internal transaction tool. The price of one unit of a currency against another is determined by the foreign exchange market, which is called the exchange rate. A macroeconomic aggregation model is an analytical tool in determining currency exchange rates.

The inclusion of international trade in the I.S. Model explains the open economy model, namely:

$$y = c + i + g + xn$$

Keterangan:

- y = aggregate real output,
- c = household real consumption
- i = company's real investment or consumption
- g = government real consumption
- xn = eksport netto

If net real exports are positive, domestic production is greater than consumption, investment, and government consumption. Household actual consumption is determined by aggregate output and interest rate, $c = C(y, r)$. The actual consumption of firms is also determined by the aggregate real production and the real interest rate. Namely $i = I(y, r)$. On the other hand, net real exports are a negative function of the relative prices of exports and imports [Q] and comparable domestic output to foreign countries [y^*], namely:

$$x = x\left(Q, \frac{y}{y^*}\right)$$

The substitution will produce an I.S. model in an open economy, namely:

$$y = C(y, r) + I(y, r) + G + x \left(Q, \frac{y}{y^*} \right)$$

$$y = D(r, Q, y^*, g)$$

Where $D_r < 0$ and $D_{YF}, D_G > 0$. The equation formulation in an explicit function assumes that the aggregate output is $\ln(Y_t) = y_t$ and the relative price is $\ln(Q_t) = q_t$. The open economy I.S. model in linear form can be formulated with three equations, namely:

$$y_t = \beta_0 + \beta_1 r_t + \beta_2 q_t + v_t$$

If $\beta_1, \beta_2 < 0$. The real interest rate is the nominal interest rate fewer inflation expectations, i.e.:

$$r_t = R_t - E_t(p_{t+1} - p_t)$$

The relative price of domestic products to foreign products depends on the exchange rate. Suppose the domestic price level is $\ln(P_t) = p_t$, the foreign price level is $\ln(P^*_t) = p^*_t$, and the domestic currency exchange rate is $\ln(E_t) = e_t$, so the relative price is

$$Q_t = \frac{P_t}{E_t \times P^*_t} \text{ or } q_t = p_t - (e_t + p^*_t)$$

The open economy L.M. model consists of two equations: money demand and interest rate parity conditions. The domestic interest rate [R] is the foreign interest rate [R*] plus the expected depreciation of the domestic currency. The demand for the stock of money and the condition for interest rate parity is

$$m_t - p_t = \alpha_0 + \alpha_1 y_t + \alpha_2 R_t + \varepsilon_t$$

$$R_t = R^*_t + E_t(e_{t+1} - e_t)$$

From the equation, it is known that the price level and foreign interest rate are exogenous variables. On the other hand, the interest rate and the domestic currency exchange rate are endogenous variables. In contrast, the determination of relative prices, actual aggregate output, and accurate interest rates is adjusted according to the Classical or Keynes models.

3. Methodology

3.1 Research Approach

This research approach is associative/quantitative research. According to (Rusiadi 2013): Associative/quantitative analysis determines the degree of relationship and pattern/form of influence between two or more variables. With this research, a theory will be built that functions to explain, predict and control a symptom.

3.2 Research Place and Time

This research was conducted on the seven highest inflation countries or the Seven Highest Inflation Countries, namely Turkey, Uruguay, Belarus, Mongolia, Indonesia, Mexico, and Kenya. The planned research time is from July 2020 to December 2020.

3.3 Types and Sources of Data

The data used in this research are secondary data from the World Bank, <http://www.worldbank.org>, [Ceicdata.com](http://ceicdata.com), and [Tradingeconomics](http://tradingeconomics.com).

3.4 Data Collection Techniques

The data collection technique used in this research uses a documentation study, namely collecting and processing data from previous information related to the problem under study. The data used in this study is secondary data taken and processed from the Worldbank (World Bank) and Bank Indonesia, Celtic data, and Tradingeconomics from 2009 – 2018 (10 years).

Data Analysis

3.5.1 Two-stage least square

Two-stage least square is a unique tool in instrumental variables regression. As the name suggests, this method involves two stages of OLS.

Stage 1. Regression was carried out on only the predetermined variables to eliminate the correlation between the endogenous variables and the error term (reduced form). The estimated value of each endogenous variable is obtained.

Stage 2. Regress the original equation (reduced form) by replacing the variable with its estimated value (which is obtained from the 1st stage)

To qualify, a variable in equation one must be inconsistent with other equations (Gujarati, 1999). In this case, identifying the equation can be done by entering or adding, or removing several exogenous (or endogenous) variables into the equation (Sumodiningrat, 2001).

Based on the above criteria, the identified equations in this study are as follows:

$$\text{LOG(PDB)} = \text{C}(11) + \text{C}(12)*\text{LOG}(\text{KRT}) + \text{C}(13)*\text{LOG}(\text{INV}) + \text{C}(14)*\text{LOG}(\text{GOV}) + \text{C}(15)*\text{LOG}(\text{EKS}) + \text{C}(16)*\text{LOG}(\text{INF}) + e1$$

$$K = 5, k = 2, m = 5$$

$$\text{LOG}(\text{INF}) = \text{C}(21) + \text{C}(22)*\text{LOG}(\text{EKS}) + \text{C}(23)*\text{LOG}(\text{KURS}) + \text{C}(24)*\text{LOG}(\text{SB}) + \text{C}(25)*\text{LOG}(\text{PDB}) + e2$$

$$K = 5, k = 2, m = 4$$

Based on the above formula, the four equations above can be tested for identification as follows:

Table 2: Table of Equation Identification Test

Equation	K-K	m-1	Result	Identification
Inflation	5-2	5-1	4>1	Over identified
Export	5-2	4-1	3>1	Over identified

The analysis method uses Two-Stage Least Squares or a two-stage regression model, namely:

Stage 1: Equation reduce form

$$\text{LOG(PDB)} = \text{C}(11) + \text{C}(12)*\text{LOG}(\text{KRT}) + \text{C}(13)*\text{LOG}(\text{INV}) + \text{C}(14)*\text{LOG}(\text{GOV}) + \text{C}(15)*\text{LOG}(\text{EKS}) + \text{C}(16)*\text{LOG}(\text{INF}) + e1$$

Stage 2: enter the estimated export value from the reduce form equation into the initial equation, namely:

$$\text{LOG(INF)} = \text{C(21)} + \text{C(22)*LOG(EKS)} + \text{C(23)*LOG(KURS)} + \text{C(24)*LOG(SB)} + \text{C(25)*LOG(PDB)} + e_2$$

The hypotheses in this study are:

1. The variable of the open economy model has a significant simultaneous effect on economic stability in the Seven Highest Inflation Countries
2. The open economy model is effective in economic stability in each of the Seven Highest Inflation Countries

3.5.2 Panel ARDL

This study uses panel data, namely by using data between time and data between regions or countries. ARDL panel regression is used to obtain the estimation results of each characteristic separately by assuming the existence of cointegration in the long-term lag of each variable. This technique examines each lag variable located at I(1) or I(0). On the other hand, the ARDL regression result is a test statistic compared with two asymptotic critical values.

Panel Regression Test with the formula :

$$\text{INF}_{it} = \alpha + \beta_1 \text{KRT}_{it} + \beta_2 \text{GOV}_{it} + \beta_3 \text{PDB}_{it} + \beta_4 \text{INV}_{it} + \beta_5 \text{EKS}_{it} + e$$

Here's the regression panel formula by country:

$$\text{INF}_{\text{TURKIIt}} = \alpha + \beta_1 \text{KRT}_{it} + \beta_2 \text{GOV}_{it} + \beta_3 \text{PDB}_{it} + \beta_4 \text{INV}_{it} + \beta_5 \text{EKS}_{it} + e$$

$$\text{INF}_{\text{URUGUAYt}} = \alpha + \beta_1 \text{KRT}_{it} + \beta_2 \text{GOV}_{it} + \beta_3 \text{PDB}_{it} + \beta_4 \text{INV}_{it} + \beta_5 \text{EKS}_{it} + e$$

$$\text{INF}_{\text{BELARUST}} = \alpha + \beta_1 \text{KRT}_{it} + \beta_2 \text{GOV}_{it} + \beta_3 \text{PDB}_{it} + \beta_4 \text{INV}_{it} + \beta_5 \text{EKS}_{it} + e$$

$$\text{INF}_{\text{MONGOLIAt}} = \alpha + \beta_1 \text{KRT}_{it} + \beta_2 \text{GOV}_{it} + \beta_3 \text{PDB}_{it} + \beta_4 \text{INV}_{it} + \beta_5 \text{EKS}_{it} + e$$

$$\text{INF}_{\text{INDONESIAIt}} = \alpha + \beta_1 \text{KRT}_{it} + \beta_2 \text{GOV}_{it} + \beta_3 \text{PDB}_{it} + \beta_4 \text{INV}_{it} + \beta_5 \text{EKS}_{it} + e$$

$$\text{INF}_{\text{MEKSIKot}} = \alpha + \beta_1 \text{KRT}_{it} + \beta_2 \text{GOV}_{it} + \beta_3 \text{PDB}_{it} + \beta_4 \text{INV}_{it} + \beta_5 \text{EKS}_{it} + e$$

$$\text{INF}_{\text{KENYAIt}} = \alpha + \beta_1 \text{KRT}_{it} + \beta_2 \text{GOV}_{it} + \beta_3 \text{PDB}_{it} + \beta_4 \text{INV}_{it} + \beta_5 \text{EKS}_{it} + e$$

Description:

INF = Inflation (%)

KRT = Household consumption (US\$)

GOV = government consumption (US\$)

PDB = Gross Domestic Product (US\$)

INV = Investment (US\$)

EKS = Export (US\$)

e : error term

β : regression coefficient

α : constant

i : observation (6 countries)

t : time 17 years

ARDL Panel Criteria:

The accepted ARDL Panel model is a model that has a cointegrated lag, where the primary assumption is that the coefficient value in the Short Run Equation has a negative slope with a significant level of 5%. ARDL Panel Model Requirements: the value is negative (-0.597) and effective (0.012 < 0.05), then

the model is accepted.

4. Result and Discussion

4.1 Result Simultan

The first equation is the equation used to simultaneously determine economic growth and inflation with the following equation:

$$\text{LOG(PDB)} = C(10) + C(11)*\text{LOG(KRT)} + C(12)*\text{LOG(INV)} + C(13)*\text{LOG(GOV)} + C(14)*\text{LOG(EKS)} + C(15)*\text{LOG(INF)} + e1$$

$$\text{PDB} = 0.002 + 0.778*\text{KRT} + 0.013*\text{INV} + 0.013*\text{GOV} + 0.196*\text{EKS} + 0.003*\text{INF} + e$$

Based on the estimation results above, it can be shown that $R^2 = 0.998787$, which means that the variables KRT, INV, GOV, EKS, INF can explain Inflation of 99.87%, and the remaining 0.13% of GDP is influenced by other variables outside the estimates in the model.

Based on the estimation results, the t-count value is obtained, for some variables affect the GDP variable, namely KRT, GOV, EKS at $\alpha = 5$ percent, KRT with a prob value of $0.00000 < 0.05$, GOV with a prob value of $0.0001 < 0.05$, EKS with a prob value of $0.0000 < 0.05$, and INF with a prob value of $0.0478 < 0.05$ so that the variables KRT, GOV, EKS and INF are declared to have a significant effect on GDP. Meanwhile, INV $0.1099 > 0.05$ was said to have no significant impact on GDP.

The second equation is the equation used to simultaneously determine economic growth and inflation with the following equation:

$$\text{LOG(INF)} = C(20) + C(21)*\text{LOG(EKS)} + C(22)*\text{LOG(KURS)} + C(23)*\text{LOG(SB)} + C(24)*\text{LOG(PDB)} + e2$$

$$\text{INF} = 6.964 + 7.041*\text{EKS} - 0.027*\text{KURS} + 0.044*\text{SB} - 8.989*\text{PDB} + e$$

Based on the estimation results above, it can be shown that $R^2 = 0.126892$, which means that the variables EKS, EXCHANGE, S.B., GDP can explain Inflation of 12.68%, and the remaining 87.33% of GDP is influenced by other variables outside the estimates in the model.

Based on the estimation results obtained by the t-count value, there are no variables that affect the GDP variable where the prob values of EKS, EXCHANGE, S.B., and PDB < 0.05 so that the variable is declared influential but not significant.

4.2 Reult Panel ARDL Model

4.3

Table 3 : Output Panel ARDL

Dependent Variable: D(LNINF)

Method: ARDL

Date: 12/30/21 Time: 19:14

Sample: 2006 2019

Included observations: 96

Maximum dependent lags: 1 (Automatic selection)

Model selection method: Akaike info criterion (AIC)

Dynamic regressors (1 lag, automatic): LNPDB LNKRT LNINV

LNGOV

LINKS

Fixed regressors: C

Number of models evaluated: 1

Selected Model: ARDL(1, 1, 1, 1, 1, 1)

Note: final equation sample is more significant than selection sample

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
Long Run Equation				
LNPDB	2.995959	1.145000	2.616558	0.0117
LNKRT	-4.382911	0.841044	-5.211272	0.0000
LINING	0.091332	0.050286	1.816247	0.0753
LNGOV	0.426599	0.485083	0.879434	0.3834
LINKS	0.729439	0.220497	3.308164	0.0017
Short Run Equation				
COINTEQ01	-0.950199	0.203046	-4.679715	0.0000
D(LNPDB)	-3.639653	4.348656	-0.836961	0.4066
D(LNKRT)	3.669423	4.280586	0.857225	0.3954
D(LINK)	-0.002825	0.057115	-0.049469	0.9607
D(LNGOV)	1.927154	1.988622	0.969090	0.3372
D(LINKS)	-0.534027	0.865949	-0.616695	0.5402
C	5.545400	1.381847	4.013035	0.0002
Mean dependent var	-0.038042	S.D. dependent var	0.563912	
S.E. of regression	0.323713	Akaike info criterion	0.611723	
Sum squared resid	5.239498	Schwarz criterion	1.984772	
Log-likelihood	22.19043	Hannan-Quinn criteria	1.167985	

*Note: p-values and any subsequent tests do not account for model selection.

Sumber: Output Eviews, 2021

The accepted ARDL Panel Model is a model that has a cointegrated lag where the main assumption is that the coefficient value has a negative slope with a level of 5%. ARDL Panel Model requirements: negative value (-0.95) and significant ($0.000 < 0.05$) then the model is accepted.

4.4 Discussion

4.3.1 Simultaneous Analysis of the Open Economy Model on Economic Stability in The Seven Highest Inflation Countries

a. The effect of simultaneity of KRT, INV, GOV, Exports, and Inflation on GDP

Based on the results of data analysis, it is known that KRT has a positive inelastic effect on GDP. INV has a positive inelastic impact on GDP. GOV has a positive inelastic effect on GDP. Exports have a positive inelastic effect on GDP. Inflation has a positive inelastic impact on GDP.

The results found that household consumption variables showed a positive influence on economic growth (GDP) in Indonesia (Eka Fitri Yanti, 2020) (Abu Bakar, 2020). According to the author,

the results align with Merri Anitasari's research. In the context of an open economy model, government expenditure is one of the variables that make up Gross Domestic Product (GDP) apart from household sector demand for consumer goods and services (C), business sector demand for investment goods (I), government spending on goods and services (G), and foreign sector spending on exports and imports (X.M.).

In theory, household consumption also impacts determining fluctuations in economic activity from one time to another. Meanwhile, in the long term, public consumption patterns have a significant influence on economic growth (Sukirno, 2013:173) (Baker, S. R., et al. 1. 2020) (Almeida, V., S. 2021).

The results of this study indicate that the investment variable has a positive effect on economic growth (Alice et al. 1, 2021).

To increase economic growth, a country needs investment, namely capital. The government or the private sector can make investments. The government invests without expecting profit but to provide public goods that support the economy. For example, government investments are made to provide infrastructure (roads, health, education). Private investment can come from abroad (foreign investment) and from within the country (domestic investment) (Rus Mircea-Iosif. 2020). In theory, this government spending policy is part of fiscal policy as a form of government intervention in the economy. The functions carried out by the government can be carried out by fiscal policy (with one emphasis) through government spending or spending policies. From here, through its policies, the government can make purchases to obtain goods and services to meet public needs through the government's goods/services procurement mechanism. The study results stated that Inflation had a positive effect on economic growth. (Amir, 2021).

a. The Effect of Simultaneous Exports, Exchange Rates, Interest Rates (S.B.) and GDP on Inflation
Based on the results of data analysis, it is known that exports have a positive elastic effect on Inflation. On the other hand, the exchange rate has a negative inelastic impact on Inflation. S.B. has a positive inelastic effect on Inflation. On the other hand, GDP has a negative inelastic effect on Inflation.

This study found that the export variable had a positive effect on Inflation (Novi Ani Ajeng Saputri, 2020).

Inflation in an open economy is also influenced by the international trade situation, namely imports and exports. Exports affect the supply of products available to domestic consumers and, therefore, prices. Global trade functions like an open door so that the flow of products can reduce domestic price pressures into the country. When demand exceeds the level of domestic output, the mismatch between demand and supply conditions leads to inflationary conditions. Responding to this excess demand can take advantage of import policies.

On the other hand, when demand is below the level of domestic output, Inflation will begin to decrease. The results of this study indicate that the exchange rate has a positive effect on Inflation in Indonesia (Moh. Faizin, 2020) (Bayu, 2021). The research results on the GDP variable positively impact the eight superpower countries.

b. Leading Indicator Indicator Open Economic Model in supporting economic stability in The seven highest inflation Countries by Panel

The panel shows that GDP, KRT, and EKS can become leading indicators to support economic

stability in The Seven Highest Inflation Countries but are not stable in the Long Run. However, for the Short Run, among the open economic model variables, GDP, KRT, INV, GOV, and EKS, none of them can become a leading indicator in supporting financial stability in The Seven Highest Inflation Countries.

Domestic Product (GDP) has a positive effect on Inflation as explained by the causes of Inflation in demand-pull Inflation. An increase in aggregate demand (Aggregate Demand/A.D.) which is not matched from the aggregate supply side (Aggregate Supply/U.S.), will create an inflation gap or inflationary gap, which is the source of Inflation. In addition, according to Keynesian theory, an increase in the expenditure side of GDP will increase the effective demand of society. For example, suppose the amount of effective demand for commodities increases at the current price level, exceeding the maximum number of goods produced by the community. In that case, an inflationary gap will arise and cause inflation problems (Anggraini, 2017).

5. Conclusion

The simultaneous effect of the open economy model in The Seven Highest Inflation Countries is that KRT has a positive inelastic impact on GDP. INV has a positive inelastic impact on GDP. GOV has a positive inelastic impact on GDP. Exports have a positive inelastic impact on GDP. Inflation has a positive inelastic effect on GDP.

Simultaneous effect of the open economy model in the seven highest inflation countries that exports have a positive elastic impact on Inflation. The exchange rate has a negative inelastic effect on Inflation. S.B. has a positive inelastic effect on Inflation. GDP has a negative inelastic effect on Inflation. Investment (INV) is the leading indicator that supports economic stability (INF) in Turkey, Uruguay, Kenya is through investment (INV). The leading indicators that can help financial stability in Mongolia are GDP, household consumption, investment, and exports. However, GDP, household consumption, investment, government spending, and exports are not the leading indicators of an open economy model to support economic stability in Indonesia and Mongolia. The panel shows that GDP, KRT, and EKS can become leading indicators to help financial stability in The Seven Highest Inflation Countries but are not stable in the Long Run. However, for the Short Run among the open economic model variables, GDP, KRT, INV, GOV, and EKS, none can become a leading indicator in supporting financial stability in The Seven Highest Inflation Countries.

Reference :

- Abu Bakar, 2020. Analisis Pengaruh Pengeluaran Konsumsi Rumah Tangga Dan Pengeluaran Pemerintah Terhadap Indeks Pembangunan Manusia Kabupaten Mimika. Program Studi Ekonomi Pembangunan STIE Jambatan Bulan.
- Abu-Rayash, A., & Dincer, I. (2020). Analysis of mobility trends during the COVID-19 coronavirus pandemic: Exploring global aviation and travel impacts in selected cities. In *Energy Research and Social Science*. <https://doi.org/10.1016/j.erss.2020.101693>
- Alice, Ekklesia, Lena Sepriani, dan Yohana Juwitasari Hulu, 2021. Pengaruh Investasi Penanaman Modal Terhadap Pertumbuhan Ekonomi Melalui Peningkatan Produk Domestik Bruto di Indonesia. Program Studi Manajemen, Fakultas Ekonomi, Universitas Internasional Batam. Indonesia.

- Almeida, V., S. Barrios, M. Christl, S. De Poli, A. Tumino, and W. van der Wielen. 2021. "The Impact of COVID-19 on Households' Income in the E.U." *Journal of Economic Inequality* 19; 413-31.
- Almeida, V., S. Barrios, M. Christl, S. De Poli, A. Tumino, and W. van der Wielen. 2021. "The Impact of COVID-19 on Households' Income in the E.U." *Journal of Economic Inequality* 19; 413-31.
- Almut Balleer, Sebastian Link, Manuel Menkhoff, Peter Zorn, 2020. Demand versus Supply: Price adjustment during the Covid-19 pandemic.
- Amir Salim, Fadilla. 2021. Pengaruh Inflasi Terhadap Pertumbuhan Ekonomi Indonesia. Sekolah Tinggi Ekonomi dan Bisnis Syariah Indo Global Mandiri (STEBIS) Palembang
- Aromi, J. D., M. P. Bonel, J. Cristiá, M. Llada, and L. Palomino. 2021. "Socioeconomic Status and Mobility During the COVID-19 Pandemic: An Analysis of Eight Large Latin American Cities." IADB Working Paper 1184, Inter-American Development Bank, Washington, DC.
- Asfia, Murni, 2006, *Ekonomika Makro*, Jakarta, PT. Refika Aditama.
- Azwar, S. (2016). *Reliabilitas dan Validitas*. Yogyakarta: Pustaka Pelajar.
- Baker et al., 2020 Baker S.R., Bloom N., Davis S.J., Kost K.J., Sammon M.C., Viratyosin T.
- Baker, S. R., R. A. Farrokhnia, S. Meyer, M. Pagel, and C. Yannelis. 2020a. "How Does Household Spending Respond to an Epidemic? Consumption During the 2020 COVID-19 Pandemic." NBER Working Paper 26949, National Bureau of Economic Research, Cambridge, MA.
- Balleer, A, S Link, M Menkhoff and P Zorn (2020), "Demand or supply? Price adjustment during the Covid-19 pandemic," *Covid Economics* 31, 23 June
- Barbero J, de Lucio JJ, Rodríguez-Crespo E (2021) Effects of COVID-19 on trade flows: Measuring their impact through government policy responses. *PLoS ONE* 16(10): e0258356. <https://doi.org/10.1371/journal.pone.0258356>
- Basir Barthos, Drs. 2003. *Manajemen Kearsipan*, PT Bumi Aksara. Jakarta.
- Bayu Martanto, Syamsurijal Tan; M. Syurya Hidayat. 2021. Analisis tingkat inflasi di Indonesia Tahun 1998-2020 (pendekatan error correction model). Prodi Magister Ilmu Ekonomi, Program Pascasarjana, Universitas Jambi
- Bracco, J., L. Galeano, P. Juarros, D. Riera-Crichton, and G. Vuletin. 2021. "Social Transfer Multipliers in Developed and Emerging Countries." Policy Research Working Paper 9627, World Bank. Washington, DC.
- Chetty, R., J. N. Friedman, N. Hendren, M. Stepner, and The Opportunity Insights Team. 2020. "How Did COVID-19 and Stabilization Policies Affect Spending and Employment? A New Real-Time Economic Tracker Based on Private Sector Data." NBER Working Paper 27431, National Bureau of Economic Research, Cambridge, MA.
- Chudik, A., K. Mohaddes, and M. Raissi (2021), Covid-19 fiscal support and its effectiveness, *Economic Letters* 205, 109939
- Dejan Živkov, Jelena Kovačević & Nataša Papić-Blagojević (2020) Measuring the effects of Inflation and Inflation uncertainty on output growth in the central and eastern European countries, *Baltic Journal of Economics*, 20:2, 218-242.
- Dhea Zatira. Titis Nistia Sari. Metha Dwi Apriani, 2021. PERDAGANGAN INTERNASIONAL TERHADAP PERTUMBUHAN EKONOMI INDONESIA. <https://jurnal.untirta.ac.id/>
- Dornbusch, Rudiger, Stanley Fischer, dan Richard Startz. 2008. Tenth Edition; *Macroeconomics*. New York: McGraw-Hill Companies
- Eka Fitri Yanti, Lucia Rita Indrawati, dan Panji Kusuma Prasetyanto. 2020. Analisis Pengaruh

- Pmtb, Pengeluaran Konsumsi Pemerintah, Dan Kemiskinan Terhadap Ipm Di Indonesia Periode 2010-2018). Fakultas Ekonomi, Universitas Tidar, Magelang, Indonesia.
- Endri. 2008. Analisis Faktor-faktor yang Mempengaruhi Inflasi di Indonesia tahun 1997-2005.
- Gujarati, Damodar, 1999, *Ekonometrika Dasar*, Erlangga, Jakarta
- Haryanto. (2020). Dampak Covid-19 terhadap Pergerakan Nilai Tukar Rupiah dan Indeks Harga Saham Gabungan (IHSG). *Jurnal Perencanaan Pembangunan: The Indonesian Journal of Development Planning*, 4(2), 151–165.
- Hatmanu, Mariana, Cristina Căuțișanu, and Mihaela Ifrim. 2020. The Impact of Interest Rate, Exchange Rate and European Business Climate on Economic Growth in Romania: An ARDL Approach with Structural Breaks. *Sustainability* 12: 2798.
- Kalaitzi, A.S., Chamberlain, T.W. Exports and Economic Growth: Some Evidence from the GCC. *Int Adv Econ Res* 26, 203–205 (2020). <https://doi.org/10.1007/s11294-020-09786-0>
- Khachatryan, G. A., & Grigoryan, A. (2020). Export Growth Dynamics and Real Exchange Rate: Evidence from Armenia. *International Economic Journal*, 34(3), 493-509.
- Lustig N., V. Martinez Pabon, F. Sanz, and S. D. Younger. 2020. "The Impact of COVID-19 Lockdowns and Expanded Social Assistance on Inequality, Poverty, and Mobility in Argentina, Brazil, Colombia, and Mexico." Working Paper 556, Center for Global Development, Washington, DC.
- Ma, C., J. Rogers, and S. Zhou. 2020. "Global Economic and Financial Effects of 21st Century Pandemics and Epidemics." *Covid Economics, Vetted and Real-Time Papers* 5: 56-78.
- Mankiw N, Gregory, dkk. 2012, *Pengantar Ekonomi Makro*. Jakarta: Salemba Empat.
- Mariana Hatmanu, Cristina Căuțișanu and Mihaela Ifrim, 2020. The Impact of Interest Rate, Exchange Rate and European Business Climate on Economic Growth in Romania: An ARDL Approach with Structural Breaks. Faculty of Economics and Business Administration. Alexandru Ioan Cuza University of Iasi.
- Moh. Faizin. 2020. Analisis hubungan kurs terhadap inflasi. *Jurnal Akutansi dan Keuangan*.
- Nguyen, V. C., & Do, T. T. (2020). Impact of exchange rate shocks, inward FDI and import on export performance: A cointegration analysis. *Journal of Asian Finance, Economics, and Business*, 7(4), 163–171. <https://doi.org/10.13106/jafeb.2020.vol7.no4.163>.
- Novi Ani Ajeng Saputri, 2020. Pengaruh Inflasi dan Nilai Tukar Terhadap Ekspor Indonesia Periode Tahun 2008-2017
- Nuyen, V. C., & Do, T. T. (2020). Cointegration analysis is the impact of exchange rate shocks, inward FDI, and imports on export performance. *Journal of Asian Finance, Economics, and Business*, 7(4), 163-171.
- Rus Mircea-Iosif. 2020. An Empirical Investigation on Determinants of Sustainable Economic Growth. Lessons from Central and Eastern European Countries. *Journal of Risk and Financial Management* 13: 146.
- Rusiadi, Subiantoro, Hidayat, 2013. *Metode Penelitian*, Medan : Penerbit USU press.
- Sayed, A., and B. Peng. 2021. "Pandemics and Income Inequality: A Historical Review." *S.N. Business and Economics* 1 (4): 54
- Sheiron Masimba Tafadzwa Mandeya and Shin-Yu Ho, 2021. Inflation, Inflation Uncertainty and The Economic Growth Nexus: An Impact Study Of South Africa.
- Sukirno, S. (2012). *Makro Ekonomi Teori Pengantar*. Jakarta: Fakultas Ekonomi UI dengan Bima Grafika.

- Sukirno, S. (2013). Makro Ekonomi Teori Pengantar. Jakarta: Fakultas Ekonomi UI dengan Bima Grafika.
- Sumodiningrat, 2001, Pengantar Statistika, Jakarta: Penerbit Andi.
- The Indonesia Economic Prospects (IEP) (2020). Indonesia Economy Prospects Towards a Secure and Fast Recovery. Jakarta, Indonesia. www.worldbank.org/iep
- The unprecedented stock market impact of COVID-19 National Bureau of Economic Research Working Paper (26945) (2020)
- Totonchi, Jalil 2011. Macroeconomic Theories of Inflation International Conference on Economics and Finance Research. (IPEDR). Vol. 4, pp.459-462
- Watulingas, Judy, dkk. 2016. Pengaruh Aspek Moneter dan Fiskal Terhadap Inflasi Di Indonesia. Jurnal Berkala Ilmiah Efisiensi Fakultas Ekonomi dan Bisnis Universitas Sam Ratulangi Manado. Vol. 16. No. 01.
- Worldbank (2020), Global Economy Prospect. A world bank Group Flasing Group. www.worldbank.org.