

**Article Type:** Research Paper

Determinants of Inflation in Indonesia: Do Changes in World Oil Prices Matter?

Defani Ivena Putri, Arintoko, Nunik Kadarwati, and Indrawan Firdauzi*

**AFFILIATION:**

Department of Development
Economics, Faculty of Economics
and Business, Universitas Jenderal
Soedirman, Central Java, Indonesia

***CORRESPONDENCE:**

indrawan.firdauzi@unsoed.ac.id

THIS ARTICLE IS AVAILABLE IN:

<http://journal.umy.ac.id/index.php/jerss>

DOI: [10.18196/jerss.v8i2.22626](https://doi.org/10.18196/jerss.v8i2.22626)

CITATION:

Putri, D. I., Arintoko, A., Kadarwati, N., & Firdauzi, I. (2024). Determinants of Inflation in Indonesia: Do Changes in World Oil Prices Matter? *Journal of Economics Research and Social Sciences*, 8(2), 222-231.



This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International (CC BY-SA 4.0)

Abstract: This research was conducted to investigate the effect of world oil prices, interest rates, and money supply on inflation in Indonesia. This study uses the Autoregressive Distributed Lag (ARDL) analysis method. The data used were monthly data from January 2014-May to 2022. The results show that interest rates do not significantly affect inflation in the short or long run. Money supply has a negative relationship with inflation in the short and long run. In the short term, world oil prices have a negative effect on inflation. Meanwhile, world oil prices have a positive and significant relationship with inflation in the long run. This finding implies that it is necessary to emphasize policies other than interest rates when controlling inflation, such as more straightforward bureaucratic policies, ease of investment services, and a more effective import trading system. Bank Indonesia should also remain consistent and focus on prudence when implementing macroeconomic policies. The government must also consider the timeframe for determining the oil price policy because it has different short-term and long-term effects.

Keywords: ARDL; Inflation; Interest Rate; Money Supply; World Oil Prices

JEL Classification: E31; E44; Q43; C22

Introduction

The inflation issue has consistently garnered significant attention from government officials due to its status as a prominent macroeconomic concern. Inflation is defined as an increase in the general price level (Samuelson & Nordhaus, 2010). Inflation of a high magnitude is indicative of escalating prices of commodities, which diminishes the purchasing power of individuals and results in a surplus of goods, resulting in a decrease in national income (Wollie, 2018). Conversely, insufficiently low inflation can lead to a lack of incentive for producers, resulting in a sluggish business sector and reduced economic growth (Ali & Asfaw, 2023).

The relationship between inflation and a country's economy is a critical factor that has a significant impact on the welfare of its citizens. As illustrated in Figure 1, the fluctuations in inflation levels can greatly influence a country's economy, and it is essential for the government and Central Bank of Indonesia to maintain appropriate inflation levels to ensure stability. The government and the Central Bank of Indonesia must monitor and regulate inflation levels to prevent them from being too high or too low, as these extremes can lead to negative economic consequences.

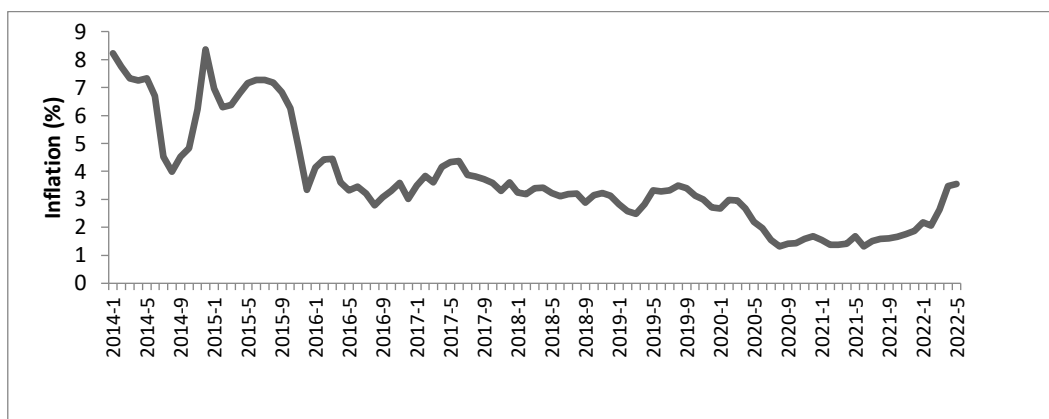


Figure 1 Monthly Inflation of Indonesia from January 2014 to May 2022

Figure 1 shows that inflation has permanently changed and fluctuated every month. In December 2014, inflation was the highest from January 2014 to May 2022, with an inflation of 8.36 percent. This is because, in December 2014, there was an increase in the price of fuel oil. The rise in fuel prices affected transportation and the prices of goods on the market. In addition, seasonal factors such as Christmas and New Year also cause prices to increase. Meanwhile, August 2020 had the lowest inflation rate from January 2014 to May 2022, only 1.32 percent. According to the Central Bank of Indonesia (2021), low domestic demand caused low inflation during the Covid-19 pandemic.

The pandemic has caused the economies of countries worldwide, including Indonesia, to experience a decline (Rauf et al., 2023). When the Covid-19 pandemic occurred, people's mobility was limited to prevent the spread of the coronavirus. The limited mobility of people hinders economic activity, which hampers the economy. Of course, this will indirectly affect inflation in Indonesia (Andika et al., 2022).

One of the monetary policies used to control inflation is Bank Indonesia's benchmark interest rate. The interest rate change will affect several macroeconomic indicator variables, ultimately affecting inflation (Yodiatmaja, 2012). The benchmark interest rate is the monetary policy reference rate, which is determined every month by observing the condition of the Indonesian economy at the Board of Governors' Meeting (RDG) of Bank Indonesia. The reference interest rate from January 1, 2014, to August 18, 2016, is the BI Rate. Under the BI Rate policy, money from banking institutions kept at Bank Indonesia cannot be disbursed immediately. However, banks must wait one year for the funds to be disbursed. However, on August 19, 2016, Bank Indonesia implemented a new policy interest rate, the BI-7 Days Reverse Repo Rate (BI7DRR), to strengthen the monetary operations framework. In implementing BI7DRR, banks can withdraw money after depositing and settling it for seven days in Bank Indonesia. This allows the new policy rate to quickly affect the money market, banking, and real sectors (Central Bank of Indonesia, 2023).

Besides interest rates, the money supply also affects inflation. Rapid and uncontrolled money supply growth leads to high inflation, reducing real income and slowing economic

growth. Meanwhile, a money supply that is too tight will slow economic activity. Monetarists argue that inflation is a monetary phenomenon that arises because of excess money supply (Boediono, 2014). Research conducted by Sutawijaya (2012) provides evidence that money supply can increase inflation.

In addition, the phenomenon of rising fuel prices in December 2014 affected not only transportation but also market prices. This condition shows that monetary policy, through setting interest rates and controlling the money supply, can influence inflation, and fuel prices can also greatly influence inflation fluctuations (Sasmitasiwi & Cahyadin, 2008). Fuel comes from crude oil raw materials, where oil supplies in Indonesia are not only met by domestic production but also from abroad by importing oil from world oil-exporting countries, such as Saudi Arabia, Nigeria, and Australia. World oil prices continue to fluctuate with different magnitudes and impact oil-importing countries, including Indonesia. Oil is a vital raw material that significantly influences Indonesia's economic activity. This raw material is used in almost every financial activity in Indonesia; therefore, the presence of this oil is significant for the economy (Artami & Hara, 2018). The international price of crude oil is based on the Brent and West Texas Intermediate (WTI) types because these two types of crude oil are commonly found worldwide. Indonesia uses Brent oil to calculate the price of crude oil in the Indonesian Crude Price (ICP). Therefore, fluctuations in the price of Brent-type oil internationally will, of course, impact the domestic economy. Rising oil prices can cause general prices of goods to increase. This trend can encourage fluctuations in inflation, which need to be controlled so that the economy becomes healthier.

The variety of research results obtained before may be due to differences in the data period used. Therefore, it is necessary to conduct similar research with the latest data and phenomena that are currently happening so that they can provide better results for the study and follow the facts and phenomena that are currently happening in Indonesia.

This study uses monthly research data from January 2014 to May 2022. During this period, the COVID-19 pandemic occurred, which made all economies in the world experience a decline, and Indonesia is no exception. Of course, this indirectly affects inflation in Indonesia. During this period, there was a change in the policy interest rate used by Bank Indonesia from the BI Rate to the BI7DRR starting August 19, 2016. This study develops a model involving inflation, policy interest rates, money supply (M2), and world oil prices through the Autoregressive Distributed Lag (ARDL) model approach. The development of this research will enable it to provide more valid empirical evidence than previous studies involving the time lag of monetary policy and changes in world oil prices on inflation in Indonesia. The ARDL model is applied through estimation in the form of a long-term relationship and error correction to capture the dynamic behavior of inflation. The results obtained are more robust and reliable than those of other alternative models because the problem of differences in data stationarity for each variable can be solved. In addition, the ARDL model can also measure the long- and short-run effects of interest rates, money supply, and world oil prices on inflation.

Inflation theory does not only explain that the causes of current inflation are influenced by variables at the current time. From an econometric perspective, current inflation can also be influenced by influential variables in previous periods (Gujarati & Porter, 2008). The theory of inflation expectations also reveals that inflation is caused by the behavior of people who form expectations about the inflation rate to determine decisions in economic activity. These behaviors are determined based on information from the previous period to create the current decision (Nopirin, 2010).

Policies such as setting interest rates, controlling money supply, and adjusting prices in response to changes in world oil prices affect domestic prices, which in turn affect inflation. Any policies or alterations made by the government or Bank Indonesia may take time for economic activities to respond. The period between policy changes and changes in economic activity is often called the grace or lag period (Nopirin, 2010). Each policy change has a different timeframe from one policy to another. Therefore, it is necessary to analyze how long it takes for economic activity to respond to the policies made.

Like several empirical studies that have been done previously, the results show that interest rates have a positive and significant effect on inflation in Indonesia (Fadilla & Aravik, 2018; Safitri & Ariza, 2021; Silaban et al., 2020). Research conducted by Azizah (2020) stated that money supply has a positive effect on inflation in Indonesia, and research conducted by Doan Van (2020) found that money supply can cause inflation in the long run. Previous empirical studies by Arifin (2016) and Purnomo et al. (2020) state that world oil prices positively affect inflation.

Research Method

Data and Variables

This study uses monthly time series data for January 2014 to May 2022. During this period, the COVID-19 pandemic occurred, which caused all economies in the world to experience a downturn, and Indonesia was no exception. Of course, this also indirectly affects inflation in Indonesia. The reference interest rate used by Bank Indonesia included the BI Rate and the BI7DRR starting August 19, 2016. The independent variables in this study were the benchmark interest rate of Bank Indonesia, money supply, and world oil price, while inflation was the dependent variable.

Model Development

This research uses the ARDL model. This model dynamically analyzes the time-series data. ARDL analysis involves data on current and past explanatory variables. It uses one or more lags from the dependent variable, which also has a position as an explanatory variable (Gujarati, 2022). The ARDL model used in this study is shown in equation (1).

$$\Delta IF_t = \alpha + \sum_{j=1}^p \beta_j \Delta IF_{t-j} + \sum_{j=0}^q \gamma_j \Delta IR_{t-j} + \sum_{j=0}^r \delta_j \Delta MS_{t-j} + \sum_{j=0}^s \lambda_j \Delta WOP_{t-j} + ECT_{t-1} + u_t \dots\dots\dots (1)$$

Where IF inflation rate, IR is the interest rate, MS is the money supply, and WOP is the global oil price. The ARDL model has several advantages compared to other analytical methods, including that the ARDL model can still be used even though each variable is at a different stationary level, both at the level I(0) and at the first difference I(1). The ARDL model can also be used, even though the variables are in a different order of integration. In addition, the ARDL model does not consider a small sample (Gujarati, 2022).

The first step in applying the ArDL model was to perform a unit root test. This test was conducted to ascertain whether the independent variables in the model were stationary at I(0), I(1), or mixed and to test whether the dependent variable was stationary at I(1). This study used the Dickey-Fuller or Augmented Dickey-Fuller (ADF) unit root test to determine whether the data used were stationary. Data testing is carried out separately for each data point and in stages until the appropriate results are obtained.

After conclusions regarding the stationarity of the data were obtained, the ARDL model was estimated using the Akaike Information Criterion (AIC) as the basis for selecting the best model. A bound test was applied to the cointegration test to determine whether the chosen model has a significant long-term relationship.

Classical assumption tests were applied in the next step. Apart from the normality test, these tests also test for heteroscedasticity and autocorrelation. Suppose all the conditions in the classical assumption test have been met. In that case, the model's speed adjusting back to equilibrium can be measured from the expected value of ECT, between -1 and 0.

Result and Discussion

The results of the unit-root test are reported in Table 1. The results show that all variables are stationary at the first difference.

Table 1 Unit Root Test Results

Variables	p-value	Annotation	Conclusion
Inflation (IF)	0.6905*** (0.0000)	<i>Level first difference</i>	I(1)
Interest Rate (IR)	0.3375*** (0.0000)	<i>Level first difference</i>	I(1)
Money Supply (MS)	0.9962*** (0.0000)	<i>Level first difference</i>	I(1)
World Oil Price (WOP)	0.0523*** (0.0000)	<i>Level first difference</i>	I(1)

*indicates significant at *10%, **5%, ***1% level respectively

As presented in Table 2, the best ARDL model is ARDL (4,0,0,1), where inflation has one lag, interest rates have no lag, money supply has no lag, and world oil prices have one lag. The ECT of the model estimate, which is -0.3299, states that a velocity of 32.99 percent of the discrepancy between the short and long run in the inflation equation will be adjusted towards equilibrium.

Table 2 Estimation Results of the ARDL Model

Variables	Coefficient	Std. Error	t-Statistic
Long Run Coefficients			
IR	-0.214604	0.149988	-1.430805
MS	-0.000001	0.000000	-5.694443
WOP	0.022747	0.009132	2.491027
Short Run Coefficients			
D(IR)	-0.070798	0.047147	-1.501668
D(MS)	-0.000000	0.000000	-3.761114
D(WOP)	-0.012414	0.005654	-2.19564
Error Correction Term	-0.329903	0.084785	-3.89106
C	2.750633	0.766538	3.588385

Selected Model: ARDL (4, 0, 0, 1)

Based on the F-Statistic value of 6.9453, which is greater than the critical upper bound value at the 5 percent level, which is only 4.35, inflation is cointegrated and has a long-run relationship with interest rates, money supply, and world oil prices, as presented in Table 3.

Table 3 Result of Bound Test

F-statistic	Critical Value Bounds I(1)
6.945343	5% = 4.35

Table 4, which reports the model estimation results, shows that the p-value in the normality test is 0.9948 and more significant than 0.05. This indicates that the residuals were normally distributed. The p-value for the heteroscedasticity test was 0.1979, which means it exceeded 0.05. This shows that the results of the model estimation passed the heteroscedasticity test. The p-value for the autocorrelation test was 0.4674, which was greater than 0.05. This indicates that the estimation results of the model passed the autocorrelation test.

Table 4 Classic Assumption Tests

Normality	
Jarque-Berra	0.010395
p-value	0.994816
Heteroscedasticity	
Obs*R-squared	11.06675
p-value of χ^2	0.1979
Autocorrelation	
Obs*R-squared	1.521121
p-value of χ^2	0.4674

As presented in Table 5, the t-test in the long-run and short-run estimations of the money supply and world oil price is significant to inflation. At the same time, the interest rate is not substantial in terms of inflation in both the short and long run.

Table 5 Results of t-test in the Long Run and Short Run

Variables	Long Run	Short Run	t-critical ($\alpha = 5\%$)	Conclusion
SB	-1.430805	-1.501668	2,00	Not Significant
JUB	-5.694443	-3.761114	2,00	Significant
POIL	2.491027	-2.19564	2,00	Significant

Based on the model estimation results, the interest rate coefficient in the short run is -0.071, and in the long run, it is -0.215. These results indicate that the interest rate variable has a negative relationship with inflation in Indonesia in the short and long run. However, the partial t-test shows interest rates have no significant long-term or short-term effect. According to Deniz (2016), people in developing countries use their money outside of saving activities. Therefore, policies for setting interest rates in the short and long run may not affect inflation if people's behavior is not as expected. It is also necessary to emphasize policies other than interest rates when controlling inflation. Another policy that could be implemented might be more straightforward bureaucratic policy practices and making investment services easier. Hence, investors are more interested in investing in Indonesia. In addition, because imports meet some of the supply of goods, improvements to the import trading system can also be made more effective so that the prices of goods received by consumers can be more controlled. Controlling inflation originating from volatile foods can be achieved by guaranteeing a safe and sufficient food supply.

In this study, the estimated coefficient for money supply is -0.00000019 in the short run. In the long run, it is -0.000001. These results indicate that money supply negatively and significantly affects inflation in the short and long run. The negative effect shows that inflation will decrease when the money supply increases. This study's results align with the survey conducted by Putri and Rosyetti (2017), where money supply negatively affects inflation. In this study, it is suspected that the percentage of quasi-money is quite large. This quasi-money comprises savings, time deposits, and foreign exchange accounts owned by the domestic private sector. Quasi-money is less liquid, so even though the value is high, it is not enough to affect the increase in inflation in the economy. In addition, in 2020, Indonesia experienced the COVID-19 pandemic, where restrictions on people's activities reduced their purchasing power. The decline in purchasing power causes inflation to decrease while the money supply increases. The inflation during the Covid-19 pandemic tended to be between one and two percent smaller than in previous years when there was no Covid-19 pandemic in the three to eight percent range. The research results of Prayogo and Sukim (2021) also state that people's purchasing power decreased in 2020 due to the COVID-19 pandemic. However, these results are inconsistent with previous studies conducted by Azizah (2020), Doan Van (2020), and Moyo and Mpofu (2019), which state that the money supply has a positive relationship with inflation. This result is also not in line with the monetarist opinion, which states that inflation is a monetary phenomenon that arises due to an excess money supply (Boediono, 2014).

The variable coefficient of world oil prices in the short run is -0.012, which indicates that the world oil price variable has a negative and significant relationship to inflation in the short run. This shows that inflation tends to decrease when world oil prices increase.

Meanwhile, in the long run, the world oil price has a coefficient of 0.023, indicating that world oil prices have a positive and significant relationship to inflation. These results suggest that inflation will also increase if world oil prices rise. The coefficient value of -0.012 in the short run indicates that when the change in world oil prices increases by one USD, the shift in inflation will decrease by 0.012 percent. The coefficient value of 0.023 in the long run indicates that when world oil prices increase by one USD, inflation will increase by 0.023 percent. World oil prices have a negative relationship because when oil prices rise, in the short run, the rising oil prices are less able to affect the prices of other commodities, so inflation decreases. However, in the long run, world oil prices have a positive relationship with inflation because it is suspected that this rise in world oil prices will broadly affect other commodities in the market, thereby increasing inflation. The effect of world oil prices, in the long run, is in line with the results of research conducted by Arifin (2016), Nizar (2012), and Purnomo et al. (2020), which states that world oil prices have a positive effect on inflation, where when oil prices increase, inflation will also increase.

Conclusion

Interest rates do not significantly affect inflation in Indonesia in the short and long run. Therefore, it is necessary to emphasize policies other than interest rates when controlling inflation. Other policies that can be implemented include more straightforward bureaucratic policies and ease of investment. In addition, because imports fulfill some of the supply of goods, improvements to the import trading system can also be made so that consumers' prices are stable and controlled. Likewise, a safe and sufficient food supply can control relatively high food inflation.

Meanwhile, the money supply has a negative relationship to inflation in Indonesia in the short and long run. The negative effect shows that inflation decreases when the money supply increases. This could be because 2020 the COVID-19 pandemic occurred in Indonesia, which limited people's economic activities and weakened domestic demand. For this reason, Bank Indonesia must remain consistent and focus on the principle of prudence when implementing macroeconomic policies.

In the short run, global oil prices have a negative effect on inflation in Indonesia. Meanwhile, in the long run, world oil prices have a positive and significant relationship with inflation in Indonesia. This has forced the government to pay more attention to the timeframe for setting fuel price policies in Indonesia. In the short and long run, oil prices affect inflation differently. When world oil prices rise and fuel prices increase, inflation decreases in the short run and increases in the long run.

References

- Ali, A. K., & Asfaw, D. M. (2023). Nexus between inflation, income inequality, and economic growth in Ethiopia. *PLoS ONE*, 18(11), e0294454. <https://doi.org/10.1371/journal.pone.0294454>
- Andika, R., Rahajuni, D., & Alfarisy, F. (2022). Determinan kemiskinan di Indonesia sebelum dan selama pandemi COVID-19 periode tahun 2015-2020. *MidYear National Conference*, September 2021, 119–127. <http://www.jp.feb.unsoed.ac.id/index.php/myc/article/view/3030>
- Arifin, Y. (2016). Pengaruh harga minyak dunia, nilai tukar, dan inflasi terhadap pertumbuhan ekonomi Indonesia. *Economics Development Analysis Journal*, 5(4), 474–483. <https://doi.org/10.15294/edaj.v5i4.22184>
- Artami, R. J., & Hara, Y. (2018). The asymmetric effects of oil price changes on the economic activities in Indonesia. *Signifikan: Jurnal Ilmu Ekonomi*, 7(1), 59–76. <https://doi.org/10.15408/sjie.v7i1.6052>
- Azizah, L. (2020). Pengaruh nilai tukar rupiah dan jumlah uang beredar luas terhadap inflasi di Indonesia periode 2010-2019. *Ecodunamika*, 3(2). <https://doi.org/10.21107/bep.v2i1.13848>
- Bank Indonesia. (2021, January 1). *Inflasi 2020 rendah* [Press release]. https://www.bi.go.id/id/publikasi/ruang-media/news-release/Pages/sp_230221.aspx
- Boediono. (2014). *Ekonomi makro* (Edisi ke-4). BPFPE.
- Central Bank of Indonesia. (2023). *BI rate*. <https://www.bi.go.id/id/fungsi-utama/moneter/bi-rate/default.aspx>
- Deniz, D. (2016). Sustainable thinking and environmental awareness through design education. *Procedia Environmental Sciences*, 34, 70–79. <https://doi.org/10.1016/j.proenv.2016.04.008>
- Doan Van, D. (2020). Money supply and inflation impact on economic growth. *Journal of Financial Economic Policy*, 12(1), 121–136. <https://doi.org/10.1108/JFEP-10-2018-0152>
- Fadilla, F., & Aravik, H. (2018). Pandangan Islam dan pengaruh kurs, BI rate terhadap inflasi. *Jurnal Ecoment Global*, 3(2), 95–108. <https://doi.org/10.35908/jeg.v3i2.478>
- Gujarati, D. M. (2022). *Basic econometrics*. McGraw-Hill.
- Gujarati, D. N., & Porter, D. C. (2008). *Basic econometrics* (5th ed.). McGraw-Hill Education.
- Moyo, P., & Mpofu, F. Y. S. (2019). An evaluation of the adoption of management accounting practices (MAPs) by small and medium enterprises (SMEs) in Zimbabwe and their impact on firm performance: A case of Lupane SMEs. *The International Journal of Business & Management*, 7(3). <https://doi.org/10.24940/theijbm/2019/v7/i3/BM1903-005>
- Nizar, M. A. (2012). Dampak fluktuasi harga minyak dunia terhadap perekonomian Indonesia. *Buletin Ilmiah Litbang Perdagangan*, 6(2). <https://doi.org/10.30908/bilp.v6i2.131>
- Nopirin. (2010). *Ekonomika makro II* (Edisi ke-4). BPFPE.
- Prayogo, D., & Sukim, S. (2021). Determinan daya beli masyarakat Indonesia selama pandemi COVID-19 tahun 2020. *Seminar Nasional Official Statistics*, 2021(1), 631–640. <https://doi.org/10.34123/semnasoffstat.v2021i1.987>
- Purnomo, S. D., Istiqomah, I., & Badriah, L. S. (2020). Pengaruh harga minyak dunia terhadap pertumbuhan ekonomi, inflasi, dan pengangguran di Indonesia. *Jurnal PROFIT Kajian Pendidikan Ekonomi dan Ilmu Ekonomi*, 7(1), 13–24. <https://doi.org/10.36706/jp.v7i1.11025>
- Putri, V. K., Budiartiningsih, R., & Rosyetti, R. (2017). Analisis Pengaruh Jumlah Uang Beredar, Suku Bunga Sertifikat Bank Indonesia dan Suku Bunga Kredit Investasi Terhadap Inflasi di Indonesia. *Jurnal Online Mahasiswa (JOM) Bidang Ilmu Ekonomi*, 4(1), 26-39. <https://jom.unri.ac.id/index.php/JOMFEKON/article/view/12080>

- Rauf, A., Jin, Z., Roshi, E. E., Naseer, S., Khalid, S., Parveen, S., Abbass, K., Song, H., & Achim, M. V. (2023). COVID-19 outbreak: Impact on global economy. *Frontiers in Public Health*, 5, 1–13.
- Safitri, A., & Ariza, A. (2021). Pengaruh pembayaran non tunai, velocity of money dan suku bunga terhadap inflasi di Indonesia. *Prosiding Seminar Nasional SATIESP*, 94–105.
- Samuelson, P. A., & Nordhaus, W. D. (2010). *Economics* (19th ed.). McGraw-Hill.
- Sasmitasiwi, B., & Cahyadin, M. (2008). The impact of world oil prices to Indonesia's macroeconomy: Crisis and after crisis. *Jurnal Ekonomi dan Bisnis Indonesia*, 23(2), 107–123.
- Silaban, P. S. M. J., Putra, P. D., Dilani, E., & Simbolon, K. P. (2020). Analisis dan strategi uang beredar, tingkat suku bunga dan nilai tukar terhadap inflasi akibat COVID-19 di Indonesia. *Prosiding WEBINAR Fakultas Ekonomi Unimed "Strategi Dunia Usaha Menyikapi Status Indonesia Sebagai Negara Maju: Pra dan Pasca COVID-19"*, 74–85.
- Sutawijaya, A. (2012). Pengaruh Faktor-Faktor Ekonomi Terhadap Inflasi di Indonesia. *Jurnal Organisasi Dan Manajemen*, 8(2), 85–101. <https://doi.org/10.33830/jom.v8i2.237.2012>
- Wollie, G. (2018). The relationship between inflation and economic growth in Ethiopia. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, 1(3), 264–271. <https://doi.org/10.33258/birci.v1i3.73>
- Yodiatmaja, B. (2012). Hubungan antara BI rate dan inflasi periode Juli 2005-Desember 2011: Uji kausalitas Toda-Yamamoto. *Economics Development Analysis Journal*, 1(2).