THE ANALYSIS OF THE DETERMINANTS OF INFLATION IN INDONESIA 1990-2020

Putry Puspa Ningtyas[1], Sitti Retno Faridatussalam[2]

[1,2]Department of Development Economics, Universitas Muhammadiyah Surakarta, Central Java, Indonesia

ARTICLEINFO	ABSTRACT
	Consistent price increases for domestic products and services are indicative of inflation, which is detrimental to economic growth. The purpose of this investigation is to dissect the forces that will have an impact on inflation in Indonesia between the years 1990 and 2020. Ordinary Least Squares (OLS) regression analysis was employed for this study. The study found that while the GDP and the budget deficit both had negative effects on inflation, the Exchange Rate (Exchange), the amount of money in circulation, and the level of bureaucracy all had positive effects
E-mail: putrypuspa@gmail.com[1] srf122@ums.ac.id[2]	

1. INTRODUCTION

Given the far-reaching effects of the recent economic downturn around the world, monetary stability is critical. As a major macroeconomic indicator, inflation helps gauge the health of the economy. The dynamics of economic growth will be affected by changes in this indicator, and oscillations sometimes cause economic unrest. The level of prosperity for most people will decline in a variable inflation environment. In addition, imports will increase, exports will decrease, and productive investment will decline, which will gradually hinder economic growth in a favorable direction.

For economists studying a country's economy, inflation is a key indication. A number of macropolitical objectives, including economic development, income distribution, employment opportunities, and balance of payments, are heavily influenced by inflation. As it directly affects monetary aggregates, inflation also affects financial market activity. According to Boediono (2001) in [8] if inflation is strong, domestic products and services will be more expensive, which will slow down economic activity. Based on the idea that inflation that is too volatile and high can adversely affect the welfare of society, regulating inflation becomes very important. The movement of capital through financial institutions in a country is strongly influenced by inflation [10] .

It is interesting to look into the issue of inflation. The many disagreements between discussion forums around the world, especially those run by the IMF or International Monetary Fund and the World Bank, have not stopped talk of inflation in various forums. Politics-related issues do not go unnoticed when it comes to causing higher inflation. Coupled with people's tendency for consumerism, especially in the field of consumer goods due to the openness of the economy, has boosted the country's economic performance due to inflation [19].

Considering the severe consequences including economic instability, rising prices, higher unemployment, and other problems, inflation is often seen as a significant issue that must be addressed. However, it is not possible to completely eradicate inflation. It can be reduced and controlled with measures. In general, Keynes' macro theory is the foundation for his inflation theory. A civilization will experience inflation when it tries to live above its means economically (disposable income). This is understood in a situation where there is an inflationary gap because consumer demand for goods is greater than supply. Humans are able to transform expectations into functional demands for commodities, which leads to this inflationary gap. Inflation will continue as long as aggregate demand continues to outstrip supply. When the entire effective demand is less than the total output at current prices, inflation will only stop. A high expansion in money supply is often at the root of high inflation rates. The increase in aggregate demand will be caused by the expansion of the money supply. Rising prices will occur if this is not matched by the expansion of the real estate industry [18]. The increase in prices before the holidays is not called inflation if it lasts only for one period because the purpose of this continuous increase requires it to occur over several seasons or periods [15].

According to Sukirno (2000) in [19] states that the excess amount exceeds the needs of society because the economy adheres to the criteria of the law in the sense that the state allows the central bank

to issue and circulate money based on trust. financial problems characterized by general price increases, often known as inflation. Governments are concerned about the need to manage inflation for a number of reasons. Inflation exacerbates existing income inequality. Domestic savings, which are a source of investment capital for developing countries, are reduced by inflation. Inflation causes a decrease in exports and an increase in imports, both of which contribute to an increase in the country's total external debt, and inflation causes political instability [22].

Inflation is not always a detrimental economic phenomenon for an economy, but it can also have a positive effect. On the positive side, inflation can boost domestic production. Increasing prices at a controlled pace will accelerate commodity turnover, which in turn will increase profits so as to increase the level of commodity production [5]. In Indonesia, from year to year the history of inflation varies greatly and remains consistent. Basically, various internal and external factors either directly or indirectly as the reason for the inflation problem in Indonesia. Indonesia's inflation is also signaling more positive things from year to year. Figure 1 illustrates the evolution of Indonesia's inflation from 1990 to 2021.

Figure 1. Chart Inflation in Indonesia 1990-2020 (%)
Source: World Bank

Based on Figure 1, the growth rate of inflation in Indonesia in 1990 was 7.8 percent and was more stable until 1997. Then in 1998 Indonesia experienced a very serious economic crisis, and inflation soared to a high of 58.5 percent from 6.2 percent the previous year. At that time a lot of money flowed through the Bank Indonesia Liquidity Assistance or BLBI, and the impact on the financial system was immediate. The high inflation rate in 1998 was caused by several factors, including the expansion of the money supply that exceeded the limit and was not accompanied by an equitable expansion of production, increased production costs due to the depreciation of the rupiah exchange rate, imported inflation, distribution disruptions due to many outbreaks of violence as a result of the economic crisis, political crisis, and monopoly tactics that exacerbated both. Indonesia's economy is currently fragile due to the current financial crisis.

In 2000, inflation in Indonesia reached 3.7 percent and continued to fluctuate. But in 2006 inflation rose again to 13.1 percent. In 2007, inflation fell to 6.4 percent and rose again in 2008 to 10.2 percent. The increase in the amount of inflation in Indonesia is influenced by several things, including increasing imports, increasing foreign debt that weakens the stability of the Indonesian economy, slowing economic growth, and increasing goods and services in the market [1]. In this case, the inflation rate in Indonesia starting in 2009 was relatively low, but still requires additional handling to keep inflation stable. Inflation is also very vulnerable in the event of disruptions. Inflation becomes uncontrollable with small external pressures, such as rising food and energy prices. Inflation bottomed out at 1.9% in 2020 as a result of weak domestic demand caused by laws restricting people's freedom of movement to stop the spread of Covid-19, plus marginal international impacts on domestic price levels [12].

[16] states that three variables that have no effect on inflation in Indonesia are money supply, interest rates, and exchange rates. Interest rates have a positive but negligible effect on short-term 2015-2020 inflation in Indonesia, but have no effect at all in the long run. From 2015 to 2020, there is a negative and insignificant correlation between variations in money supply and inflation. In the short run, the exchange rate factor has a positive and minor effect on inflation, but in the long run it has no effect on inflation in Indonesia in the long run measured in the period 2015-2020. [14] argues that money supply

has a favorable long-term effect on inflation in Indonesia but no short-term effect at all. Meanwhile, GDP has a large negative effect on inflation in Indonesia in both medium and long time periods. Interest rates have a slightly negative impact on inflation in Indonesia. This study aims to observe the various factors that affect the determinants of inflation in Indonesia in 1990-2020.

2. LITERATURE REVIEW

[4] examines the causes of inflation in Indonesia empirically. In this study, we use the error-correction method, specifically the Error Correction Model, to see how well the hypotheses are retained in the (ECM) test. The empirical significance of () t for the ECT(-1) coefficient, as determined by his study, is found to be ... (<0.05). This verifies the correctness of the ECM model specification used. For the long run, the ECT(-1) coefficient value of -0.192115 indicates that the short-run equilibrium fluctuation will be brought back to around 19.21%. The first month is spent on adjustment, and the remaining time is spent on adjustment in the following months. Based on the model, the interest rate set by Bank Indonesia affects the inflation rate in Indonesia. This means that the interest rate set by Bank Indonesia has a significant (<0.05) effect on inflation. [13] analyzed the relationship between GDP, SBI, Money in Circulation, and Exchange Rate to understand the drivers of inflation in Indonesia between 2000 and 2001. Ordinary Least Squares regression analysis was used to determine the effect of the three factors on inflation in Indonesia from 2000 to 2011, with empirical significance () tsesar ... (<0.01) i.e. GDP, SBI, Money Supply. Meanwhile, the exchange rate was found to have no effect on inflation, with an empirical significance () t of ... (> 0.01).

[11] found empirical evidence of the relationship between Indonesian inflation between 2014 and 2016 with currency exchange rates, interest rates, and money supply. Based on the findings of the analysis, there is a significance value of 0.000 with an effect of 57.9%. The rupiah exchange rate and money supply have an effect on inflation, according to the results of the t test with individual significance values of 0.001 and 0.012 on the other hand interest rates have no effect on inflation, with a significance value of 0.848> 005. [21] analyzed the determinants of inflation in 1989-2018 with the ECM regression analysis tool or Error Correction Model. With empirical significance ( ) t of ... (>0.01), it is known that the exchange rate of the rupiah against the US dollar, the real interest rate and the expansion of the money supply affect the inflation rate in Indonesia. Since the statistical probability value of the t-test (prob) of 0.3274 is greater than the significance level set in this study of = 0.01, the exchange rate individually has no significant effect on the inflation rate. However, in Indonesia, the effect is the positive money supply and the effect of interest rates is negative, these two variables have a large effect on the inflation rate.

[20] in a study entitled "The Determinants of Inflation Rate in Indonesia" with an ECM or Error Correction Model analysis tool that finds the results of the money supply does not have a significant effect on long-term equilibrium but has a significant and positive effect on short-term inflation with a coefficient of 9.684989 and will increase the inflation rate every one point. while the exchange rate, BI rate, GDP have no significant effect on inflation either in the long or short term. While the exchange rate, BI rate, GDP have no significant effect on inflation either in the long or short term. R-squared in the short-term estimation shows that the model can only explain about 76 percent of inflation volatility while the other 24 percent of variability gets the influence of other independent variables that are outside the model.

[3] examined how money supply and the rupiah exchange rate affect inflation in Indonesia from 2010 to 2019; the exchange rate variable has a strong negative impact on inflation. Based on the t test, inflation has an empirical significance () t with a magnitude of ... (0.05) and a regression coefficient value with a magnitude of -2.829E-5. Then, there is a partial relationship between inflation and money supply; the relationship has a regression coefficient of 2.065E-8, which is non-zero. The money supply has a large simultaneous impact on inflation independent of the exchange rate, with a calculated F value of 3.654 > F table 3.07 and a Sig value of 0.019 < 0.05.

[17] conducted an analysis, where statistically there is no significant correlation between budget deficit and inflation because the sample t value (0.366626) < table t value (2.0482). R2 equals 0.561459 in this case. This figure indicates that 56.1% of the variance in price increases can be attributed to shifts in the budget deficit, while 43.9% may be due to other causes. Based on the Error Correction Model test results, the budget deficit has no effect on inflation in the near term. Evidence for this can be found in the fact that inflation does not settle in the near term, as indicated by the fact that the ECT coefficient is not equal to zero. Consistent with the theoretical assumption, the parameters of the constructed model are stable, as the negative regression coefficient of ECT(-1) is significant at =0.05. Budget deficit has been shown to have a long-run effect on inflation. The coefficient of 0.766926 for budget deficit has a sizable influence on the long-run balance sheet estimates, and is positively related to the inflation variable. This suggests that inflation will increase by 0.77% for every percentage point (%) increase in budget deficit.

3. METHOD

To estimate the direction and magnitude of the influence of the rupiah exchange rate, money supply, interest rates, gross domestic product, and government budget deficit on inflation in Indonesia in 1990-2020, a time series regression analysis tool is used, with the following econometric model:

$$INF_t = \beta_0 + \beta_1 log\text{KURS}_t + \beta_2 logMIC_t + \beta_3\text{BIRATE}_t + \beta_4 logGDP_t + \beta_5 logBD_t + \varepsilon_t$$

Where :
INF   = Inflation (%)
KURS   = Rupiah Exchange Rate (Rupiah)
MIC   = Money in circulation M2 (Billion Rupiah)
BIRATE = BI Rate (%)
GDP   = Gross Domestic Product (Billion US Dollars)
BD   = Budget Deficit (Billion Rupiah)
β_0 = constant
…   = Independent variable regression coefficient
E   = Error term
t   = Year t (1990-2020)

The econometric model above is a combination of the econometric models of Harjunata and Oldy (2016), Pratiwi (2013), Suryani and Adithya (2022), Risna (2016) and Teguh Pamuji (2008). The exchange rate, money supply and interest rates have a significant effect on inflation in Indonesia, while the budget deficit has a positive but insignificant effect. The type of data used in this study is time series data with a vulnerable observation time from 1990 to 2020. Data sources obtained from the Central Statistics Agency (CSA) and the World Bank.

4. RESULT AND DISCUSSION
A. Result
Estimation Results

The estimation results of the econometric model above along with all complementary tests are summarized in Table 1.

Table 1. Econometric Model Estimation Results

$INF_t = 33{,}12014 - 41{,}77641\,Log(KURS)_t + 47{,}02356\,Log(MIC)_t + 1{,}138602BIRATE_t$
$(0.0001)\text{*}$ $(0.0000)\text{*}$ $(0{,}0000)\text{*}$
$-34{,}94345Log(GDP)_t - 3{,}867445Log(BD)_t$
$(0{,}0000)\text{*}$ $(0{,}0117)\text{**}$

R^2 = 0,832076; DW-Stat. = 1,410610; F-Stat. = 24,77529; Prob. F-Stat. = 0,000000

Diagnosis Test
(1) Multicollinearity (VIF)
    log($KURS$) = 66,19576; Log(MIC) = 238,7725; BIRATE= 2,876315; Log(GDP) = 53,13553; Log(BD) = 10,26059
(2) Residual Normality
    JB(2) = 0,047327; Prob. JB(2) = 0,976614
(3) Autocorrelation
    $\chi^2(4)$ = 8,589982; Prob. $\chi^2(4)$ = 0,072
(4) Heteroscedasticity
    $\chi^2(19)$ = 26,20090; Prob. $\chi^2(19)$ = 0,1247
(5) Linearity
    F(1,24) = 0,619512; Prob. F(1,14) = 0,5523

Source: World Bank, processed.

Notes: *Significant at α = 0.01; **Significant at α = 0.05; ***Significant at α = 0.10. The number in parentheses is the empirical probability (p value) of the t-statistic.

Based on the diagnosis test in Table 1, it shows that the BIRATE variable does not have a multicollinearity problem while the KURS, MIC , and GDP variables have multicollinearity problems in their respective models with values of 66.19576 (>10); 238.7725 (>10); 53.13553 (>10). Referring to the empiric statistic probability values of the Residual Normality, Autocorrelation, Heteroscedasticity, and Linearity tests which are 0.976614 (> 0.05); 0.072 > (0.05); 0.1247 (> 0.05); 0.5523 (> 0.05), it can be

concluded that the estimated model has a normal distribution, free from autocorrelation and heteroscedasticity problems, with appropriate model specifications (linear).

Table 1. states that the statistical test of goodness of fit shows that the model exists as seen from the Prob. F-Stat value of 0.0000 (<0.01) with or high predictive power, which is 0.832076. This means that 83.20 percent of the increase or decrease in inflation can be explained by the variables of Exchange Rate (KURS), Money Supply (MIC), BI Interest Rate (BIRATE), Gross Domestic Product (GDP), Budget Deficit (BD). Separately, all independent variables in the model are able to influence inflation in Indonesia in 1990-2021 with each prob.empirik t value of 0.0001 (<0.01); 0.0000 (<0.01); 0.0000 (<0.01); 0.0000 (<0.01); 0.0117 (<0.05). The LESS variable has a regression coefficient of -41.77641. Thus, the exchange rate has a negative effect on inflation. The Exchange Rate and Inflation have a lin-log relationship, so that if the Exchange Rate rises by 1 rupiah then Inflation will decrease by 41.77%, conversely, when the Exchange Rate falls by 1 rupiah then Inflation will increase by 41.77%. The Money Supply variable has a regression coefficient of 47.02356. The relationship pattern used by this variable on Inflation is lin-log, so that if the Money Supply increases by 1 billion rupiah, Inflation will increase by 47.02%. Conversely, if the Money Supply decreases by 1 billion rupiah, Inflation will decrease by 47.02%.

The interest rate variable has a regression coefficient of 1.138602. Thus, the interest rate has a positive and significant effect on inflation with a lin-lin relationship pattern so that, when the interest rate rises by 1%, inflation will also increase by 1.13%. Conversely, when the interest rate falls by 1%, inflation will decrease by 1.13%. The Gross Domestic Product variable has a regression coefficient of -34.94345. It can be interpreted that Gross Domestic Product has a negative and significant effect on Inflation with a lin-log relationship pattern so that, if Gross Domestic Product increases by 1 billion, Inflation will decrease by 34.94%. Conversely, when Gross Domestic Product falls by 1 billion, it causes an increase in Inflation by 34.94%. The Budget Deficit variable has a regression coefficient of -3.867445. Thus, the Budget Deficit has a negative and significant effect on Inflation. The Budget Deficit has a lin-log relationship, so that when the Budget Deficit increases by 1 billion rupiah, Inflation will decrease by 3.86%. Vice versa, if the Budget Deficit decreases by 1 billion rupiah then Inflation will increase by 3.86%.

B. Discussion

The results of the regression analysis in this study indicate that the Exchange Rate has a positive effect on Inflation. This is due to the period in this study which in 1998 experienced a global and national monetary crisis in 2008 which affected economic activity in Indonesia. During the period of this study, the exchange rate depreciated against the US dollar every year. This makes the decline in foreign exchange reserves used to carry out import activities and the price of goods has increased, if the price of goods increases consistently so that it can have an impact on the ongoing Inflation. This is in line with [9] research which concluded that the exchange rate has a positive effect on Inflation in Indonesia for the period 2014-2016. Based on the results of the regression analysis carried out, it explains that the Money Supply has a significant and positive influence on Inflation. The determination of the Money Supply is issued by Bank Indonesia, the determination depends on various factors, one of which is the price level. When there is an increase in the price of services and goods, the demand for money supply is even higher, which can lead to Inflation. The results of this study are supported by [7] which states that the Money Supply has a significant and positive effect on Inflation.

Interest rates have a significant and positive effect on Inflation in Indonesia. This is because the Interest Rate itself affects people in terms of saving money in banks, the increase in interest rates encourages people to save in financial institutions in the hope of getting higher returns, it has an effect on the amount of public money used in the transaction process which is generally less money spent by the public and economic growth has weakened. This is in line with [2] concluded that the interest rate has a positive influence on inflation. Gross Domestic Product has a significant and negative effect on Inflation in Indonesia. Gross Domestic Product itself is the total of all business units in a country in a certain period of time. When a country's inflation falls, it will increase Gross Domestic Product (GDP) due to the creation of price stability in the domestic market. Conversely, when inflation in a country consistently rises, it will result in a decline and stagnation of economic growth where the price of goods increases while the demand for these goods is very low. According to [18] research, the Money Supply is neutral and does not affect national income in the long run.

Based on the results of the regression analysis that has been carried out, the Budget Deficit has a significant and negative effect on Inflation. The government during the period 1990-2020 did a lot of subsidies and imports, since 2004 Indonesia has become a fuel importing country and has experienced dependence on it, when the government began to reduce its subsidies on fuel, it was accompanied by an

increase in the prices of services and goods in the community, the increase that occurred endlessly would gradually cause Inflation. This is in line with research conducted by [6] which concluded that the Budget Deficit in 2001-2013 had a significant and negative effect on Inflation in Indonesia.

5. CONCLUSION

In order to achieve the best estimation results, Ordinary Least Square (OLS) was chosen as the estimated model. The results of the validity test of the effect (t test) show that all independent variables namely Exchange Rate (kurs), Money Supply, Birate have a significant and positive influence on inflation. While Budget Deficit and GDP or Gross Domestic Product have a negative effect on inflation.

The result of F test indicates that the utilized model has existence. The test results of the coefficient of determination (R^2) indicate that the amount of the coefficient of determination (R^2) in the estimated equation has an R^2 value of 0.832076, meaning that 83.2% of the variation in the inflation variable can be explained by the Exchange Rate (Exchange Rate), Money Supply, Birate, Gross Domestic Product (GDP), and Budget Deficit variables. The remaining 16.8% is influenced by other factors or variables not included in the model.

REFERENCES

[1] Al Makhrus, M. N., & Priyadi, U. (2022). Determinan faktor-faktor inflasi di Indonesia tahun 1990-2020. *Jurnal Kebijakan Ekonomi Dan Keuangan*, *1*(1), 101–110. https://doi.org/10.20885/jkek.vol1.iss1.art10

[2] Assa, R. H., Rotinsulu, T. O., & Mandeij, D. (2020). Analisis Kebijakan Moneter Terhadap Inflasi di Indonesia Periode : 2006.1 – 2019-2. *Jurnal Berkala Ilmiah Efisiensi*, *20*(01), 23–33.

[3] Azizah, L., Ismanto, B., & Sitorus, D. S. (2020). Pengaruh Nilai Tukar Rupiah Dan Jumlah Uang Beredar Luas Terhadap Inflasi Di Indonesia Periode 2010-2019. *Jurnal Ecodunamika*, *3*(2). https://doi.org/10.4324/9781315121154-17

[4] Basorudin, M. (2019). Analisis Faktor Determinan Yang Mempengaruhi Tingkat Inflasi Di Indonesia Dengan Error Correction Mechanism. *Jurnal Penelitan Ekonomi Dan Bisnis*, *4*(2), 120–131. https://doi.org/10.33633/jpeb.v4i2.2547

[5] Budiman, P. A. (2021). Analisis Ecm Pdb, Kurs Dan Jumlah Uang Beredar Terhadap Inflasi. *Jurnal Kajian Ekonomi Dan Kebijakan Publik*, *6*(2).

[6] Candrono, P., Sarwedi, & Yuliati, L. (2015). *Pengaruh Defisit Anggaran Terhadap Inflasi di Indonesia Tahun 2001.Q1-2013.Q4: Pendekatan Fiscal Theory of Price Level*. 41–52.

[7] Chandra, E. K., & Wahyuningsih, D. (2021). Analisis Pengaruh Suku Bunga, Jumlah Uang Beredar Dan Nilai Tukar Terhadap Inflasi Di Indonesia Periode 2011-2019. *Buletin Ekonomika Pembangunan*, *2*(1), 37–54. https://doi.org/10.21107/bep.v2i1.13848

[8] Luhgede, N., Luwihadi, A., & Arka, S. (2017). *Determinan Jumlah Uang Beredar Dan Tingkat Inflasi Di Indonesia Periode 1984-2014*.

[9] Mahendra, A. (2016). Analisis Pengaruh Jumlah Uang Beredar, Suku Bunga Sbi Dan Nilai Tukar Terhadap Inflasi Di Indonesia. *Jurnal Riset Akuntansi & Keuangan*, 1–12. https://doi.org/10.54367/jrak.v2i1.170

[10] Martanto, B., Tan, S., & Syurya Hidayat, M. (2021). Analisis tingkat inflasi di Indonesia Tahun 1998-2020 (pendekatan error correction model). *Jurnal Paradigma Ekonomika*, *16*(3), 619–632. https://doi.org/10.22437/jpe.v16i3.14360

[11] Ningsih, S., & LMS, K. (2019). Analisis Pengaruh Jumlah Uang Beredar, Suku Bunga, Dan Nilai Tukar Terhadap Inflasi Di Indonesia Periode 2014-2016. *Jurnal Manajemen Daya Saing*, 1–8. https://doi.org/10.54367/jrak.v2i1.170

[12] Nugroho, and M. U. Basuki, "Analisis Faktor-Faktor Yang Mempengaruhi Inflasi Di Indonesia Periode 2000.1-2011.4," *Diponegoro Journal of Economics*, vol. 1, no. 1, pp. 288-297, Oct. 2012.

[13] Nugroho, & Wisda, P. (2012). Analisis Faktor-Faktor Yang Mempengaruhi Inflasi Di Indonesia Periode 2000.1 – 2011.4. *Skripsi*, 1–107.

[14] Prayogi, A. (2022). Analysis Of Factors Affecting Inflation In Indonesia Using OLS Methode. *GROWTH Jurnal Ilmiah Ekonomi Pembangunan*, *1*(2), 1–11.

[15] 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

[16] Putra, N. Y. (2022). *Analysis of Factors Affecting Inflation in Indonesia 2015 - 2020*. *2*(2), 330–344.

[17] Rosyetti, & Eriyati. (2011). Pengaruh Defisit Anggaran Terhadap Inflasi Di Indonesia Tahun 1981-

2010. *Jurnal Ekonomi*, *19*(4).

[18] Santosa, A. B. (2017). Analisis inflasi di indonesia. *Proseeding SENDI_U*, 445–452.

[19] Saputra, K., & Nugroho, S. B. M. (2013). Analisis faktor-faktor yang mempengaruhi inflasi di indonesia 2007-2012. *Fakultas Ekonomi Dan Bisnis UNDIP*.

[20] Setiartiti, L., & Hapsari, Y. (2019). Determinants of Inflation Rate in Indonesia. *Jurnal Ekonomi & Studi Pembangunan*, *20*(1). https://doi.org/10.18196/jesp.20.1.5016

[21] Suryani, C., Fevriera, S., & Adhitya, D. (2018). *Determinan Tingkat Inflasi Indonesia Tahun 1989-2018*. *1*(1), 16–36.

[22] Sutawijaya, A. (2012). Pengaruh Faktor-Faktor Ekonomi Terhadap Inflasi Di Indonesia. *Jurnal Organisasi Dan Manajemen*, *8*(No.2).