

## ANALYSIS OF FACTORS AFFECTING ECONOMIC GROWTH IN INDONESIA 2001-2021

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### ABSTRACT

Economic Growth in a country is often related to policies that have been set by the government to overcome economic problems. This study aims to analyze the effect of Inflation, Rupiah Exchange Rate, Bi Rate, Exports and Imports on Economic Growth in 2001-2021. The type of research data is quantitative data with secondary data obtained from the Central Statistics Agency (BPS), Word Bank and Bank Indonesia (BI). In this study using multiple linear regression method with Ordinary Least Square (OLS) analysis tool. This study found that the Inflation variable has a positive and significant effect on Economic Growth. then the Exchange Rate variable has a negative and significant effect on Economic Growth. Bi Rate, Export and Import variables have no effect on Economic Growth. This needs control in policies regulated by the government for the purpose of increasing growth and the economy in Indonesia.

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### 1. INTRODUCTION

Indonesia is included in one of the growing countries and is stated to have progressed and carried out development in all fields in order to raise the level of public welfare and carry out national development, one of which is Economic Growth. Economic Growth is a problem of the country's economy over a long period of time to create superior conditions at a certain time and is related to an increase in production capacity by realizing an increase in national income, and matters related to the process of producing goods and services and being the cause of increased Economic Growth [15]. Meanwhile, according to [18] Economic Growth must be driven by activities to increase productivity, efficiency and quality human resources so that the industrial sector is able to become a driver in economic problems in order to achieve stable Economic Growth. Economic Growth in a country is often related to policies that have been set by the government in overcoming economic problems. In overcoming economic problems, strategic and structured policies are needed, namely monetary policy [8]. In this case, the purpose of monetary policy is to create and maintain the stability and balance of the rupiah value, especially in cost stability (Inflation) and Exchange Rates [4].

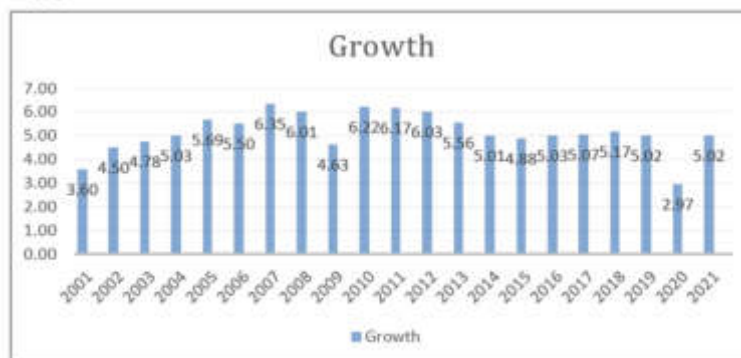


Figure 1. Economic Growth Graph 2001-2021 (%)  
 Source: BPS, Data processed

Based on Figure 1, it can be seen that in 2001-2021 Economic Growth fluctuated. During this period in 2021 Indonesia experienced an increase of 5.02% and the most extreme decline occurred in 2020, which was around 2.97%. This is due to the consequences of post-Covid-19 which caused Economic Growth to

weaken greatly. While in 2001-2018 experienced fluctuations until 2009 at 4.62% where Indonesia again experienced a recession so that the economy weakened and Inflation in Indonesia soared so high that Economic Growth was severely hampered. This condition really requires consistent management of monetary policy so that the process of Economic Growth in Indonesia is getting better and more stable.

The relationship between Inflation and Economic Growth is considered very Important because Inflation is a driving factor in analyzing the economy and is said to be a monetary phenomenon that is very troubling and can have an impact on aggregate Economic Growth [16]. Meanwhile, according to [5] with the presence of Inflation, it can be seen that an increase in the value of Inflation indicates a phenomenon in the process of Economic Growth.

In the context of the relationship between the rupiah Exchange Rate and Economic Growth is the occurrence of international trade and alterations in the real Exchange Rate which will further encourage the value of Exports and other commodities so that it can affect Economic Growth [9]. Exchange Rate appreciation in a country or region can make the price of Export goods at the same time can increase the price of Imported goods for trading partners [1]. Exchange Rate depreciation tends to cause a shift from goods produced abroad to domestic goods [7].

The increase in the level of Bi Rate can reduce the speed of Inflation which can affect Economic Growth [3]. The Bi Rate is an instrument set by Bank Indonesia as a monetary policy (police rate), the increase in interbank interest rates and deposit rates can cause an increase in lending rates and have an impact on Economic Growth [6]. There are other components that can affect Economic Growth, namely Exports and Imports. Export activities over a long period of time show the impact of foreign exchange absorption for the Exporting country to increase the level of Economic Growth of the country as well as for the cost of Importing or developing domestic needs [13]. The increase in Imported goods will increase domestic production goods so that followed by domestic productivity also decreases and has an impact on Economic Growth [12].

[20] Analyzing the effect of Inflation and Exchange Rates on Economic Growth. using the Ordinary Least Square (OLS) method found Inflation has a negative influence and on Economic Growth in Indonesia while the Exchange Rate is negatively correlated and insignificant to Economic Growth. The results of the coefficient of determination test show 49.29% that the Inflation and Exchange Rate variables can describe Economic Growth in Indonesia.

[2] analyzed the effect of Bi Rate and Inflation using the Ordinary Least Square (OLS) method and found that Bi Rate is positively correlated with Economic Growth through a regression coefficient of 0.159 and empirically significant  $0.022 < (0.05)$  while Inflation is negatively correlated with Economic Growth with a regression coefficient of  $-0.063$  and a significant value  $(0.039 < 0.05)$ . [19] This study focuses on analyzing the effect of Exports and Imports on Economic Growth with the research country Sri Lanka. The growth data used is from 1970-2010. The results of this study show that Exports and Imports have a positive and significant influence on each other on Sri Lanka's Economic Growth. Based on the description above, this study aims to see and find out how the influence of Inflation, Rupiah Exchange Rate, Bi Rate, Exports and Imports on Economic Growth in Indonesia in 2001-2021.

## 2. METHOD

This study was conducted with the intention of knowing the effect of independent variables, namely Inflation, rupiah Exchange Rate, birate, Exports and Imports on the dependent variable, namely Economic Growth that occurs in Indonesia. The study uses secondary data and comes from the Central Statistics Agency (BPS), World Bank and Bank Indonesia (BI) using time series data from 2001-2021. The data analysis technique used is a modification of [11] and [14], namely multiple linear regression with the OLS (Ordinary Least Square) method. As explained above, this study uses the Ordinary Least Square (OLS) regression analysis tool with the following econometric model:

$$Growth_t = \beta_0 + \beta_1(INF)_t + \beta_2 Log(Kurs)_t + \beta_3(BIRATE)_t + \beta_4 \log(EKS)_t + \beta_5 \log(IMP)_t + \varepsilon_t$$

Description :

Growth : Economic Growth (%)

INF : Inflation (%)

Kurs : Rupiah Exchange Rate (Rupiah/US\$)

BIRATE : Interest rates (%)

EKS : Exports (Juta US\$)

IMP : Imports (Juta US\$)

$\beta_0$  : Constant

$\beta_1 \dots \beta_5$  : Independent variable regression coefficient  
 $\log$  : Natural logarithmic operator  
 $t$  : Year  $t$

This study used the estimation stage of the econometric model with the classical assumption test, namely the multicollinearity test, residual normality test, autocorrelation test, heteroscedasticity test and model specification test.

### 3. RESULTS AND DISCUSSION

#### A. Results

Table 1. Econometric Model Estimation Results

$$Growth_t = 20,09756 + 0,117880(INF)_t - 3,268660Log(Kurs)_t - 0,089232(BIRATE)_t + 0,928375Log(EKS)_t + 0,391214Log(IMP)_t$$

$(0,0888)^{***}$ 
 $(0,0031)^*$ 
 $(0,3716)$ 
 $(0,6594)$

$(0,7865)$

$$R^2 = 0,631698; DW\text{-Stat.} = 1,906750; F\text{-Stat.} = 5,145484; Prob. F\text{-Stat.} = 0,006025$$

#### Diagnosis Test

- (1) Multicollinearity (VIF)  
INF = 3,891849; Log(Kurs) = 1,926033; BIRATE = 6,396757; Log(EKS) = 47,75213; Log(IMP) = 50,23858
- (2) Normality of Residuals  
JB(2) = 10,13995; Prob. JB(2) = 0,06283
- (3) Autocorrelation
- (4)  $\chi^2(3) = 2,724291$ ; Prob.  $\chi^2(3) = 0,4361$
- (5) Heteroscedasticity  $\chi^2$   
(5) = 3,736696 ; Prob.  $\chi^2(5) = 0,5879$
- (6) Linearity  
F(2,13) = 0,903851; Prob. F(2,13) = 0,4290

Source: BPS, processed.

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

The diagnosis test in Table 1 shows that the Export and Import variables have a value of 47.752 (>10); 50.238 (>10) based on the Multicollinearity test, Export and Import have Multicollinearity problems. Based on the statistical probability value, the Residual Normality Test shows a value of 0.06283 (>0.05) that is normally distributed. Then in testing Autocorrelation, Heteroscedasticity and Linearity obtained results of 0.4361 (> 0.10); 0.5879 (> 0.10); 0.4290 (> 0.10) based on the results obtained indicate that the estimated model has accurate model assumptions (linear) and is free from autocorrelation problems. Then it can be seen from the Empiric F Statistic Probability which is 0.006025 (<0.01) with  $R^2$  0.63 so it can be concluded that Inflation (INF), Rupiah Exchange Rate (Kurs), Interest Rate (Bi Rate), Exports (EKS), and Imports (IMP) contribute 63% to Economic Growth and the remaining 37% is influenced by other variables not included in the econometric model.

Based on Table 1. the Inflation variable obtained a regression coefficient value of 0.117880. Inflation is known to have a positive influence on Economic Growth using a linear-logarithmic pattern relationship. This means that if Inflation increases by 1%, Economic Growth will increase by 0.117880 percent. Vice versa, if Inflation drops by 1%, Economic Growth will decrease by 0.117880 percent. Then the Exchange Rate variable has a regression coefficient of -3.268660. The Exchange Rate has a negative effect on Economic Growth with a linear-logarithmic relationship pattern. And it means that if the Exchange Rate increases by 1%, Economic Growth will decrease by 0.0326866 percent. Conversely, if the Exchange Rate decreases by 1%, Economic Growth will increase by 0.0326866 percent.

#### B. Discussion

##### The Effect of Inflation on Economic Growth

From the results of the above research, the Inflation variable has a positive and significant effect, which means that if Inflation rises, growth will decrease and vice versa, if Inflation falls, Economic Growth will decrease. This is not in line with research [3] which states that Inflation has a negative effect on Economic Growth. However, if Inflation is mild, it has a positive impact on boosting the economy, but if Inflation is severe, it can destabilize the economy and Economic Growth. Because of the high Inflation rate,

people tend not to be able to fulfill their daily needs as usual, causing poverty and the Inflation rate in Indonesia to fluctuate from year to year. This is affected by Economic Growth in the last year, namely 2019 to 2020 caused by Covid-19. Post-pandemic Inflation occurs with symptoms that are core, such as an increase in basic prices.

#### **The Effect of Exchange Rates on Economic Growth**

This study shows that the Exchange Rate has a negative and significant effect, meaning that when the Exchange Rate falls, Economic Growth will also decline, this problem shows an inversely proportional relationship between the Exchange Rate and Economic Growth. This problem is not in accordance with research [10] which states that the Exchange Rate has a positive and significant effect on Economic Growth, which means that an increase in the Exchange Rate or Exchange Rate will result in an increase in Economic Growth. The impact of Covid-19 is something that causes depreciation so that it needs control such as BI must continue to try to maintain and maintain the balance of the rupiah Exchange Rate by providing multiple intervention policies both in the foreign exchange market (forex) and the provision of SBN through the secondary market.

#### **4. CONCLUSION**

Indonesia is classified as a developing country and is stated to have carried out the development process in various fields in order to raise the level of welfare and peace of the Indonesian population. To carry out national development projects, one of them is Economic Growth. Economic Growth is an economic problem in a country in the long term in order to lead to a superior state within a predetermined time. This is related to the increase in the production capacity of an economy and realizing the availability and distribution of the distribution of every type of goods needed to survive, commonly called basic materials, increasing the quality of living standards, and the extension of economic and social information to all people, for the better and become the cause of increased Economic Growth. Based on the results of studies and analyzes that have been carried out, the country of Indonesia during 2001-2021 shows that Inflation has a positive and significant effect on Economic Growth. Exchange Rate has a negative effect on Economic Growth. while Bi Rate, Exports and Imports have no effect on Economic Growth. After the Covid-19 pandemic, Economic Growth has been severely hampered and weakened, thus the government must pay more attention to the policies set so that the economy remains stable and maintained and the community pays more attention to how Important it is to maintain stable Economic Growth.

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