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Research Article

Each of These Factors Affects Economic Growth: Interest Rates Inflation, and Exchange Rates

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ABSTRACT

Macroeconomic recovery and the elimination of several bad economic policies, including eradicating corruption in the investment sector, monopoly by some people in the private sector which creates a sense of injustice, unemployment, poverty and income inequality which hampers economic growth.

Finding out how interest rates, inflation, and currency rates affect Indonesia's economic development is the goal of this study. Quantitative research approach that makes use of regression analysis and secondary data. The results of research indicate that interest rates, inflation, and currency rates all significantly influence economic growth, either partially or concurrently. When an adjusted R2 value is high, it indicates that changes in economic growth factors can be explained by the independent variables.

Keywords: Interest Rates, Inflation, Exchange Rates, Economic Growth.

INTRODUCTION

The economic crisis that occurred in Southeast Asian countries, including Indonesia, had a very heavy impact on recovering the economy. Indonesia was rocked by a financial crisis in Southeast Asia at the end of 1997, which swiftly evolved into an economic and political crisis. Raising domestic interest rates and tightening monetary policy were Indonesia's initial responses to the issue, which was caused by growing inflation and the declining value of the rupiah. An economic reform program was agreed upon by Indonesia and the International Monetary Fund (IMF) with the goal of achieving macroeconomic recovery and getting rid of a number of unfavorable economic policies, such as eliminating private sector monopolies that lead to unfairness, unemployment, poverty, and income inequality that impede economic growth, and corruption in the investment sector. The Rupiah has not been stable for quite a long time. The economic crisis not only occurred in 1997 which hit Asian countries, but at the end of 2008 an economic crisis occurred throughout the world, better known as the Global Crisis. Meanwhile, trade relations between Indonesia and the United States are very large, which of course has a very large effect.

Planning for economic development is the primary strategy for attaining rapid economic growth. A nation's plans for economic growth might include a number of quantitative goals for the economy within a given time frame. A nation may deploy its limited resources through development planning to achieve the best outcomes in a seamless, progressive, and well-balanced way. Theoretically, when a crisis arises in one nation, it will undoubtedly have a significant effect on the economy of the nation that is its trade partner. Since public confidence in government policies and the national economic system was extremely low during the 1997 and 2008 financial crises, it appears that this theory will not be validated if the community as a whole accepts the policies implemented by the government.

The US dollar's supply and demand balances for local and international currencies are reflected in the exchange rate. The drop in the value of the rupiah exchange rate can be attributed to either a decline in the demand for rupiah currency by the international community as a result of the country's economy becoming less important, or an increase in the public's desire for US dollars as foreign currency because of their use as a global form of

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payment (Engel, 2016). The value of the rupiah in relation to the US dollar is used to gauge financial success, particularly in outside markets. The money market's performance is getting better all the time, which is indicated by the rupiah's partial strengthening.

The equities market suffers when the value of indigenous currencies declines relative to other currencies, such as the Rupiah vs the US dollar. This is because the equity market loses appeal. Given that currency exchange rates are crucial in determining the company's profitability, keeping an eye on the value of the currency or exchange rate is essential. Aside from that, economic growth is a critical metric for evaluating an economy's performance, particularly when examining the outcomes of economic development that has been carried out in a nation or area. If the output of goods and services rises over the previous year, the economy is considered to be growing. Economic growth, then, indicates the degree to which economic activity may provide extra revenue or social benefit within a specific time frame. When a country or region's economy grows and keeps getting better, it means that its economy is doing well.

LITERATURE REVIEW

Interest rate

Interest rates are the cost of borrowing money, or they may be thought of as rent for a specific amount of time. or the cost of borrowing money, which is often stated as a percentage (%) and used to determine its buying power. Interest is a cost associated with borrowing money that borrowers must pay in order to use their income before it is received. Interest serves as a compensation to the lender for delaying current spending to the period of receivables. The payment that banks make to customers who buy or sell their products in accordance with standard procedures is known as bank interest. Both consumers who get loans from banks and those who maintain savings accounts are required to pay interest to the banks. This is an alternative interpretation of interest. Customers receive two different kinds of interest in banking activity, namely:

1. Savings interest, which is interest paid to bank clients as a perk or incentive for saving money. The cost that banks have to charge their clients is interest on deposits. For instance, interest on deposits, savings accounts, and current account services.
2. Loan interest, also known as credit interest, which is the interest that borrowers get or the amount they are required to pay the bank.

For banks, the primary components of cost and income variables are these two forms of interest. The cost of money that has to be paid to consumers is known as savings interest, whereas loan interest is money collected from them. Loan interest and deposit interest have an impact on one another. A high savings rate will inevitably impact loan interest rates, and vice versa. The most common interest rate structure in Indonesia is based on the term. Banking interest rates for time deposits are differentiated for terms of one month, three months, six months, twelve months and twenty-four months, for local currency rupiah and foreign currency.

The rise and fall of interest rates is influenced by the supply and demand for money. Interest rates tend to rise or increase if the debtor's or borrower's demand is greater than the amount of money or funds offered by the creditor. On the other hand, interest rates tend to decrease if debtors' demand is smaller than the amount of money or funds offered by creditors, so that interest rates have a negative relationship with economic growth (Angel, 2016; Andries, et.al, 2017; Hatmanu, et.al, 2020).

Inflation

The process of constantly rising general prices is known as inflation. Deflation, on the other hand, is the opposite of inflation and is characterized by a persistent decline in prices that raises people's purchasing power. As a result, goods initially become scarce but subsequently become more plentiful as people's purchasing power declines. There are four categories of inflation: hyperinflation, strong inflation, moderate inflation, and mild inflation. When price rises are less than 10% annually, there is light inflation; when they are between 10% and 30% annually; when they are between 30% and 100% annually; and when they are more than 100% annually, there is hyperinflation, or unchecked inflation.

The calculation of inflation relies on index statistics gathered from several product categories that are purchased and sold at every price point in the market (these commodities are the necessities for society and are, of course, the most plentiful). An index number is generated using the pricing data. The consumer price index is the statistic that accounts for all things that customers have bought at the prices at which they have paid (CPI). The amount that the overall rate of price growth will be over a certain period of time may be determined using the consumer price index.

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When economic players are hesitant to engage in economic speculation, inflation might jeopardize economic stability. In addition, consumers' purchasing power generally declines as a result of increased prices, which can exacerbate inflation's negative effects on people's welfare. In addition, as more people are unable to cope with the inflation that is happening, the distribution of income is becoming more unequal. Depending on how severe the inflation is, there are both advantages and disadvantages to inflation. Moderate inflation can actually be beneficial to the economy since it can boost national income and motivate individuals to labor, save, and invest (Svigir and Miloš, 2017). Conversely, during periods of extreme inflation, specifically unchecked inflation, or hyperinflation, the economy experiences chaos and a sense of sluggishness (Thanh, 2015; Aydın, et.al, 2016; Svigir and Miloš, 2017; Ezako, 2023; Apeti, et.al, 2023; Abdallah, et.al, 2023).

As prices rise quickly, people lose interest in working, saving, investing, and creating. Workers and other people on fixed incomes, such as public officials or private employees, will also be unable to absorb the costs and make up for them, making their lives worse and worse over time. In general, inflation may lead to lower investment in a nation, higher interest rates, more speculative investment, inability to carry out development, economic instability, balance of payments deficits, and a drop in the standard of living and overall well-being of the populace.

Exchange rate

Trade between two nations is more difficult than trade inside a single nation since two currencies must be used. For instance, in order to purchase items from Indonesia, American importers must purchase rupiah. However, in order to finish paying for the commodities they purchase from the United States or other nations, Indonesian importers need to purchase US dollars.

The amount of money in one currency that may be exchanged for one unit in another country's currency is known as the exchange rate. Currency convertibility, or the usage of money that is easily exchanged for other currencies, is a crucial concept in international economics. This type of money is known as international convertible currency. As a tool to promote economic progress and shield a nation's economy from the instability of the global economy, the determination of a country's exchange rate is crucial. In essence, a nation's exchange rate policy serves many key purposes, namely:

1. To keep a stable balance of payments in order to eventually have sufficient foreign exchange reserves.

2. To preserve the stability of the home market.

3. As a unique monetary tool for nations that use exchange and interest rates as operational goals for their monetary policies.

4. As a stop gap measure to rein in inflation.

The subject of exchange rates has grown in significance. It is necessary to have a legal and accepted method of payment for export and import finance. In fact, one may argue that exchange rate swings reveal a nation's present economic standing and capabilities. In addition, there is the possibility of fluctuations or changes in the exchange rate between the currencies of two countries (Angel, 2016; Andries, et al., 2017; Hatmanu, et al., 2020). According to Salvatore (2008), several factors that influence exchange rates are:

1. Relative Prices

Closely related to a country's inflation rate, for countries that have a relatively lower inflation rate than other countries, their country's currency will be relatively stronger, and vice versa.

2. Relative Interest Rates

A country that has a high interest rate, its currency exchange rate will tend to strengthen against other currencies, because the higher the interest rate, the higher the return on investment.

3. Comparative Rates of Economic Growth

The greater a nation's economic development, in relation to its demand for goods and services, the more likely it is that its currency will depreciate. People will spend more money on products and services if their income rises. Naturally, this may lead to a rise in the demand for imported items, which would raise imports and the need for foreign exchange, which would cause the value of the local currency to rise.

4. Current Account Balance

The trade balance can also affect the value of a country's currency. If imports are smaller than exports, it means the demand for currency is greater, because of this need, the local currency will depreciate. Vice versa, if the value of imports is greater than exports, then the amount of foreign currency supplied will increase so that the local currency will appreciate against the foreign currency.

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Because of the strong negative correlation between the two, economic development will slow down as the rupiah exchange rate falls and the dollar appreciates. Conversely, if the value of the dollar falls and the value of the rupiah rises, economic growth will accelerate.

Economic growth

Economic growth is defined as a notable rise in national income over a specific computation period, accompanied by a rise in per capita income. Economic growth is the result of naturally occurring increases in savings rates and population expansion, which raise production (national income). The process of long-term increases in production per capita is known as economic growth. Three components make up this understanding: long term, production per capita, and process. captures the dynamic features of an economy that is growing or evolving throughout time. One way to gauge the success of economic development is by economic growth. In macroeconomic analysis, the real national income growth attained in a given year is used to gauge the desired pace of economic growth for a nation.

The entire amount of money received by the country and all expenses incurred over a specific time period is known as the gross domestic product, or GDP. The GDP may serve as a gauge of a nation's economic performance; the greater the GDP, the better the nation's economic success can be assumed. Given the importance of GDP in an economy, it is vital to examine the determinants that may have an impact on GDP. Numerous direct and indirect determinants exist, including money supply, interest rates, inflation rates, income and price levels, and exchange rates. Certain economists contend that a rise in per capita production is insufficient on its own and that the economy's internal mechanisms are what need to spur output growth.

METHODOLOGY

Quantitative study conducted every semester from 2005 to 2019 using secondary data. Time series data are used in the study. Macro objects are among the secondary data used in the research that was conducted. The Central Statistics Agency, Indonesian Economic and Financial Statistics, Bank Indonesia's Monetary Policy Reports, scholarly publications, and other relevant literature are the sources of the data.

The regression model is.

$$Y = \alpha + \alpha_1 X_1 + \alpha_2 X_2 + \alpha_3 X_3$$

Where :

Y	=	Economic Growth (EG)
α	=	Constant
α1,α2,α3	=	Independent Variable Coefficients
X1	=	Interest Rate (IR)
X2	=	Inflation (Inf)
X3	=	Exchange Rate (ER)

Method of gathering data

The data for this study was gathered through field research as well as library research, which involved taking report documents, books, periodicals, and other data sources.

Test for Normalcy

The goal of the normality test is to ascertain if the residual values, or confounding factors, in the regression model indicated by the t and F tests have a normal distribution.

Test for Multicollinearity

To ascertain if there is a significant link between the independent variables in the model. The multicollinearity test is utilized. A Variance Inflation Factor (VIF) value of less than ten is required for each independent variable in a linear regression model that shows indications of multicollinearity.

Test of Heteroscedasticity

Finding out if the residuals of one observation in the regression model have the same variance as those of another observation is the goal of the heteroscedasticity test. The term homoscedasticity refers to a residual variance that is consistent between observations, where as heteroscedasticity refers to variance that varies. Regression models that are homoscedastic or lack heteroscedasticity are considered to be good.

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Test of Autocorrelation

In a linear regression model, the autocorrelation test is used to determine if confounding errors in period t and mistakes in period t-1 are related. The Durbin Watson (DW) value can be used to examine autocorrelation. In the event that the DW value falls between dU and (4−du), autocorrelation cannot be found. A DW value of less than dL or greater than (4−dl) is indicative of the presence of autocorrelation. The following is the Durbin-Watson table's representation of the dL and dU values: dL = a ; n ; (k-1).

DISCUSSION

Based on data on the influence of interest rates, inflation and exchange rates on economic growth for the period 2005 to 2019, then processed using STATA, the following results were obtained:

Tabel 1. Description

Var	Obs	Mean	SD	Mini	Maxi
Economic Growth (EG)	30	14.61768	.503586	13.65072	15.34201
Interest Rate (IR)	30	1.934777	.2601289	1.446919	2.565531
Inflation (Inf)	30	-2.889717	.4747456	-3.621221	-1.819953
Exchange Rate (ER)	30	9.315445	.1783798	9.103979	9.580593

The Economic Growth Variable of the 30 samples has a minimum value of 13.6507, a maximum value of 15.3420, an average value of 14.6177 and a standard deviation value of .5036 as shown in Table 1 above. This indicates that the data does not vary if the standard deviation value is close to 0 or away from 1, and varies if it is away from 0 or away from 1.

The interest rate variable has the following values 1.4469 for the minimum value, 2.5655 for the maximum value, and 1.9348 for the average value from 30 samples. Its standard deviation value is .2601, which indicates that the data does not vary if the standard deviation value is close to 0 or moves away from number 1.

The inflation variable can have values as low as -3.6212 and as high as -1.8200. Its average value over 30 samples is -2.8897, and its standard deviation is .4747. This indicates that when the standard deviation value is near zero, it indicates that the data is constant; on the other hand, if it diviates from zero or from one, it indicates that the data is subject to variation.

The Exchange Rate variable, based on 30 samples, has an average value of 9.3154 and a standard deviation value of .1784. with a minimum value of 9.10140 and a high value of 9.5806. This indicates that the data fluctuates if the standard deviation number is far from 0 or away from 1, and that the data does not vary if it is near to 0.

Test for Normalcy

The normality data processing can be seen below.

Table 2. Normality Test Result

Variable	Obse	Skewness	Kurtosis	Ad. chi^2	Prob > chi^2
res	30	.8251	.0124	5.90	.0524

Further testing may be conducted to confirm that the data is normally distributed. Based on Table 2 above and the findings of the skewness kurtosis method normality test where Prob > chi^2, a value of .0524 is larger than .05.

Multicollinearity

The Multicollinearity data processing can be seen below.

Table 3. Multicollinearity

Variable	VIF	1/VIF
IR	2.25	.443501
Inf	2.08	.481486
ER	1.36	.736277

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Mean VIF	1.90	

Given table 3 above, which indicates that the variance inflation factor (VIF) value is below 10 and the tolerance value is close to 1, one may assume that there are no indications of multicollinearity, or that there is no connection or link between the independent variables.

Autocorrelation Test

The Autocorrelation data processing can be seen below.

Durbin-Watson d-statistic (4, 30) = 1.6615

du=1,650

du < d < 4 – du; => 1.650 < 1.6615 < 2.35

The Durbin-Watson test score is 1.6615, and the test results with the constraints 1.650 (du) < d (1.6615) < 2.35 are displayed in Table 4 above. The regression model shows no signs of either positive or negative autocorrelation as a result.

Heteroscedasticity Test

The Heteroscedasticity data processing can be seen below.

Ho : Constant variance

Variables: fitted values of EG

chi^2 = .21

Prob > chi^2 = .6449

The Prob value > chi^2 = .6449, larger than .05, is derived from the test results. In summary, the regression model does not exhibit any heteroscedasticity symptoms.

The regression on economic growth data processing can be seen below.

Table 4. Regression on Economics Growth

VARIABLE	Coef	Std. Err.	t	P > | t |
IR	- .7507161	.169107	-4.44	.000
Inf	- .2138823	.0889292	-2.41	.024
ER	1.546271	.1913951	8.08	.000
Cons	1.047885	1.92417	.54	.591
Obs	30			
R2	.9120			
Adj R2	.9019			

Based on the results of the Table 4 above, there is a significant negative influence between interest rates on economic growth of -.751 (Abdelkafi, 2016; Simionescu, et.al, 2017; Shaukat, et.al, 2019; Hatmanu, et.al, 2020). Low interest rates can trigger economic actors to invest, so that economic growth increases. The large number of investors who come in to invest, this condition can absorb labor, reduce poverty, reduce income inequality, strengthen people's purchasing power. To attract investors, the government must be able to create a conducive investment climate through enforcing legal supremacy, improving institutional performance and having investment laws that are in line with market needs.

There is a significant negative effect of inflation on economic growth of -.214, (Abdelkafi, 2016; Ezako, 2023). Low inflation shows that economic activity is increasing and enthusiastic, which ultimately will increase income, increase the competitiveness of economic actors and increase economic growth. It is necessary to pay attention to the inflation rate so that it is not too high and not too low, inflation can be controlled, because inflation will have a direct impact on economic growth.

The exchange rate of 1.546 has a considerable beneficial impact on economic growth. These findings are consistent with studies conducted in 2016 by Abdelkafi and in 2020 by Shaik and Gona, all of whom found that the exchange rate had a considerable and favorable effect on economic development. Conditions show that economic actors who export will gain large profits when the dollar exchange rate increases compared to the rupiah. If this happens for a long time, economic growth will increase along with increasing export activities.

The government and Bank Indonesia are expected to work together in providing policies by paying attention to all existing aspects, both external and internal, fiscal and monetary policies, so that people feel safe and calm in carrying out economic activities.

CONCLUSION

Drawing conclusions from the discussion's findings, it can be said that interest rates will likely have a negative impact on economic growth in the near future (Abdelkafi, 2016; Hatmanu, 2020). According to Abdulkafi (2016) and Ezako (2023), there is a notable inverse relationship between inflation and economic growth in the short run. There is a strong positive correlation between economic growth and exchange rates, as demonstrated by Abdulkafi (2016) and Shaik and Gona (2020). However, Buthelezi (2023) asserts that exchange rate uncertainty and economic growth have a negative short-term association. On the other hand, the long-term effects of inflation, currency rates, and interest rates on economic growth are rarely substantial and extremely variable. Because the internal and external business climates of the economic environment this state exists in are interdependent, it necessitates the implementation of particularly effective monetary and fiscal policies.

Apart from that, raising interest rates is a proactive measure to ensure that inflation stays within the target range of ± 1.5% to 2.5% in 2024, in line with a pro-monetary policy stance, and to reinforce the stability of the Rupiah exchange rate against the impact of escalating global risks.

Bank Indonesia is continuing to reinforce the combination of monetary, macroprudential, and payment system policies in order to preserve stability and foster sustainable economic growth in the face of growing uncertainty in the global financial market. increased Rupiah currency rate stability through spot transaction involvement in the foreign exchange market, domestic non-deliverable forward contracts, and secondary market government securities sales.

Owing to shifts in the course of international monetary policy, the dynamics of the world financial sector are evolving quickly, accompanied by a rise in risks and uncertainties. It is hoped that despite growing uncertainties throughout the world, Indonesia's economy would continue to be robust. The goal of Bank Indonesia's exchange rate strategy is still to protect the Rupiah from the effects of the US dollar's general strengthening. Bank Indonesia is keeping up its pro-market monetary operations plan optimization in order to reinforce the monetary policy response in managing inflation and maintaining the stability of the Rupiah exchange currency.

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CONFLICT OF INTEREST

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