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ANALYSIS OF ECONOMIC GROWTH IN INDONESIA IN THE 2014-2021 PERIOD WITH THE HUMAN DEVELOPMENT INDEX AND INFLATION

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Abstract

High economic growth can indicate an improvement in the populace's well-being due to the increased production that increases public consumption. Several factors, including the Human Development Index (HDI) and inflation, can affect economic growth. This study aims to analyze the effect of the human development index and inflation on Indonesia's economic growth from 2014 to 2021. The development index and inflation both served as independent variables for this investigation. The rate of economic growth serves as the dependent variable. The data analysis method is descriptive quantitative, and there were 96 observations in the sample. According to the findings of this research, the Human Development Index has a favorable and significant effect, whereas inflation has an unfavorable and negligible effect.
Keywords: Human Development Index, Inflation, Economic Growth.

INTRODUCTION

Economic growth is an effort to improve a nation's standard of living, often measured by the high and low real income per capita. The goal of economic development, in addition to increasing real national income, is also to increase productivity (Pebrina, 2019). According to (Ambar, Walengko, & Y., 2021), economic growth means the physical development of production, goods, and services prevailing in a country, such as; an increase in the number of goods and industrial production, infrastructure development, increase in the number of schools, increase in service sector production and increase in capital goods production. The success of a region's development can be seen from its economic growth rate. Indonesia's economic growth from year to year fluctuates, whereas, for the same period in 2014-2022, Indonesia's average economic growth was recorded at 5% per year. The low economic growth rate occurred in 2020 at -2.97% due to the increase in the Covid-19 pandemic that occurred worldwide in March 2020. The Covid-19 pandemic has hampered business in the agriculture, electricity-gas-water, trade-hotel-restaurant, finance-real estate, and service sectors. From the development of overall economic growth, economic growth in Indonesia is up and down (BPS, 2022).

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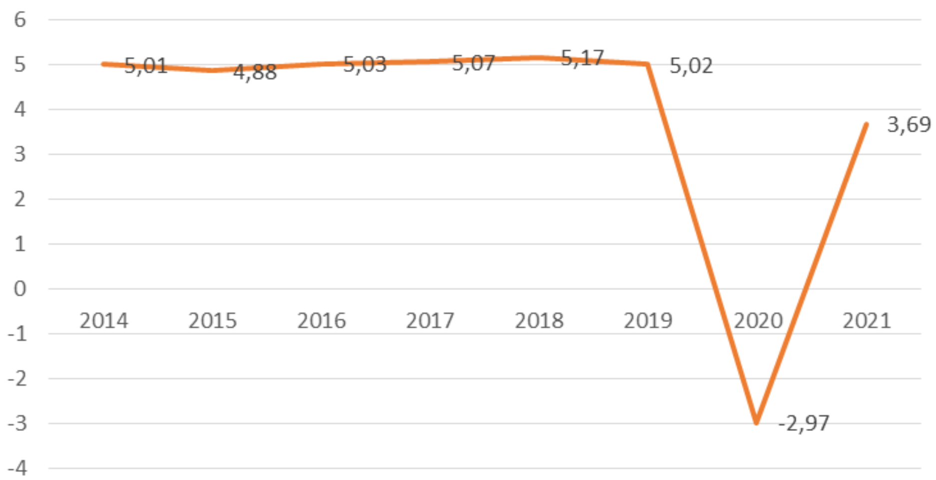
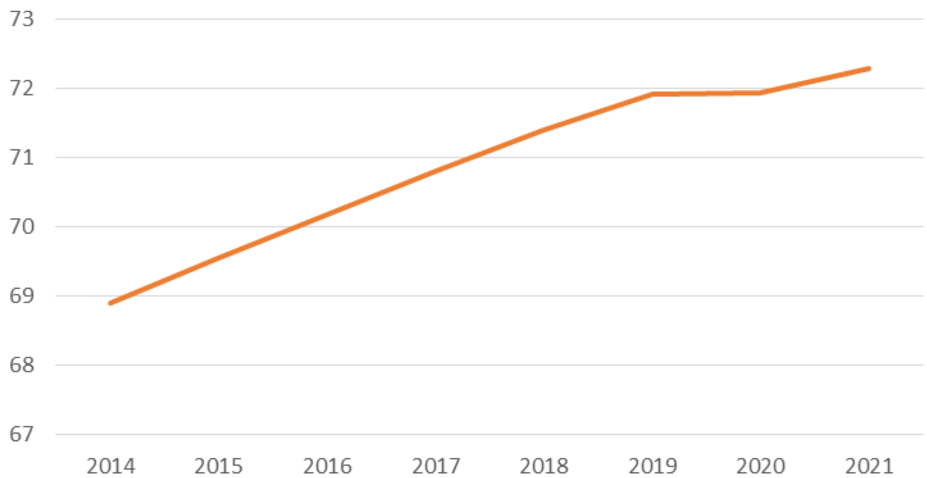
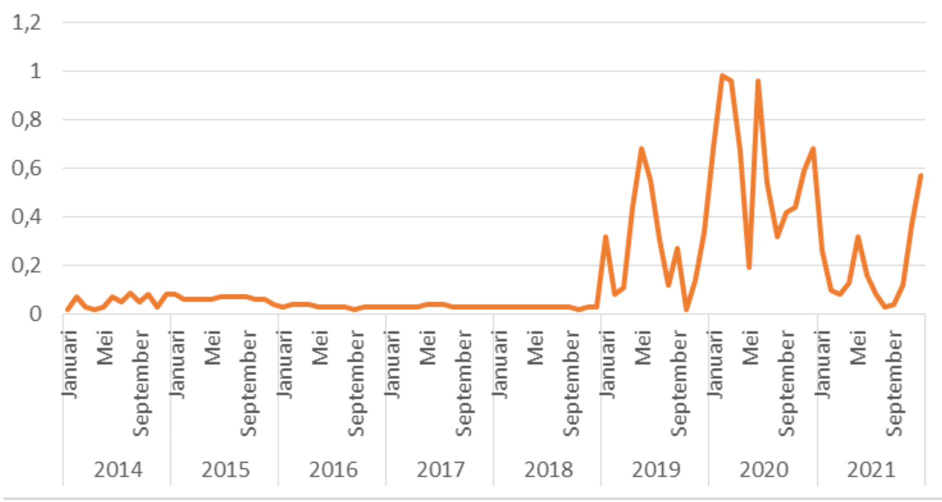


Several factors can affect economic growth, one of which is the Human Development Index (HDI); HDI is one way to measure a country's or region's success or performance in the field of human development. HDI is a composite index that includes three areas of human development considered very basic, as seen from the physical and non-physical qualities of the population. The 3 indicators are health indicators, education levels, and economic indicators. The physical quality is reflected in life expectancy. In contrast, non-physical quality is reflected in the average length of time the population attends school and literacy rates and considers economic capability, namely actual expenditure per capita.



Based on the data above, Indonesia's HDI figure in 2014-2022 continued to increase. An increase in HDI illustrates an increase in human resources quality, followed by an increase in community productivity and reduced income inequality. Another factor that affects economic growth is inflation. Inflation is one of the critical economic indicators; the growth rate is constantly sought to be low and stable so as not to cause macroeconomic disease, which will impact instability in the economy. Inflation has positive and negative economic impacts (Ningsih, 2018). If a country's economy experiences sluggishness, Bank Indonesia can conduct an expansionary monetary policy by lowering interest rates. High and unstable inflation is a reflection of economic instability, which results in a general and continuous increase in the price level of goods and services and results in a higher level of poverty in Indonesia (Salim, 2021); the following is Indonesia's inflation data from 2014 to 2021



Based on inflation data from 2014-2022, it is known that Indonesia's inflation value between 2014-2022 has fluctuated or had ups and downs following the development of the world economy. The highest inflation occurred in 2014 due to rising fuel prices and increased commodity goods due to the import reduction policy. High inflation also occurred in 2022 due to increased global commodity prices, especially energy and food, due to the war in Ukraine. Based on the research results conducted by (Asnidar, 2018) shows that the human development index and inflation variables significantly affect economic growth in East Aceh Regency.

LITERATURE REVIEW

Economic growth

Economic growth is a process where economic conditions in a country continue to change over time towards conditions considered better. The economic development of a region can be seen from the growth and income of the region. The income of a region is in the form of gross domestic, regional income (GRDP). So, the high inequality of economic development between regions can be seen by the difference in GRDP in the region (Azim, Sutjipto, & Ginanjar, 2022). Economic growth is an essential indicator for analyzing a country's economic development. Since economic activity is essentially the process of using factors of production to produce goods and services, economic growth generates additional public income over some time (Tony S. Chendrawan et al., n.d.).

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Human Development Index

The human development index is an important indicator to measure the success of improving people's quality of life and can determine the level of human development in a region. The human development index explains how people access income, health, education, and other development outcomes (BPS, 2022).

The concept of human development was first introduced in 1990 by the United Nations Development (UNDP) in its report "Global Human Development Report," which contains that human development is formulated as an expansion of population choices to have the opportunity to live a long and healthy life, adequate knowledge and skills in creating opportunities to realize their skills in productive activities to improve their standard of living Human resource development is the most important thing. The success of human development is reflected in the Human Development Index (HDI). HDI is an indicator that reflects the performance of human development in a region. Thus, an increase in the human development index is the progress of development in a region (Todaro, 2011).

So it can be concluded that the Human Development Index is a measure of the level of health, education, and decent livelihood of the population in a region that is used as an indicator. It is to assess the quality of a country's development. In addition, it is used as a classification form to see whether a country is a developed or underdeveloped country. Looking at the quality of a region's population, the first thing that becomes the center of attention is the HDI level. If an area has a high HDI, then an area is said to be of high quality. One proof is that when a region has a highly educated population, it will illustrate that the region is included in the prosperous category.

The Human Development Index (HDI) measures the achievement of human development based on several essential components of quality of life. The HDI is constructed through a basic three-dimensional approach to measure the quality of life. These dimensions include longevity and health, knowledge, and a decent life. These three dimensions have a broad meaning as they relate to many factors. To measure the health dimension, life expectancy at birth is used. Furthermore, to measure the knowledge dimension, a combination of indicators of literacy rate and average years of schooling is used. As for measuring the dimension of decent living, the indicator of people's purchasing power for some basic needs is seen from the average amount of per capita expenditure as income, which is close to that of development as an achievement for a decent life.

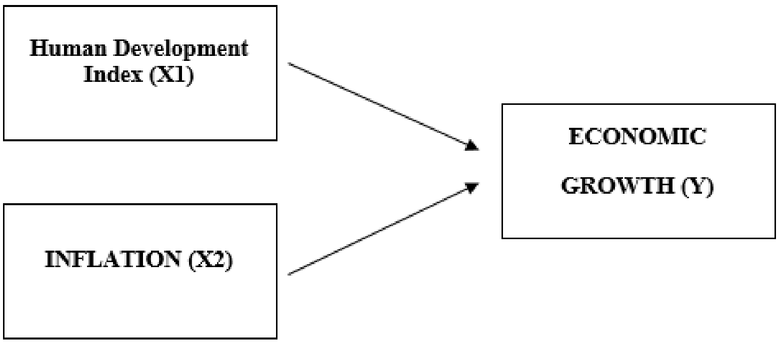
Inflation

Inflation is a general and continuous increase in the price of goods and services within a certain period. Inflation can be measured by looking at changes in the CPI value over time; if it increases, there is inflation in the area or region. Inflation increases when the prices of goods and services rise in the country. The increase in the price of goods and services can reduce the currency's value in the country. (BPS, 2022)

Natsir, (2014) argues that inflation is the desire and continuous price of goods and services in general and continuously. Inflation is an event that shows the price level in a country is general and ongoing. Inflation is the tendency of continuously rising prices of goods and services. If domestic goods and services prices increase, then inflation will increase. The increase in goods and prices leads to a decrease in the value of money. Thus, inflation can also be interpreted as a decrease in the monetary value of general goods and services (BPS, 2022).

Inflation is a gradual increase in the general price level. (Blanchard & Johnson, 2013) says that inflation is an economic phenomenon that continuously increases the general price level. Based on the above definition, inflation is the price increase of goods and services in one period. The increase in the price of goods occurs gradually and extends to the increase of other goods (Indriyani, 2016) is the tendency of prices to rise generally and continuously (Mankiw, 2006). It does not mean that the prices of various goods rise by the same percentage. The increases may not co-occur; what is essential is that there is a continuous increase in the prices of everyday goods over a certain period. Increases that occur only once, albeit in large percentages, are caused by (Bonaraja Purba, 2021)

Advance Research



METHOD

The objective of this kind of research, which is known as quantitative research, is to determine whether or not the Human Development Index (HDI) and Inflation (INF) affect Economic Growth (PE). This research makes use of data samples collected in Indonesia between the years 2014 and 2021. The data obtained comes from BPS. In looking for the effect of the Human Development Index (HDI) and Inflation (INF) on Indonesia's economic growth, researchers must perform time series data regression analysis to get the relationship between variables X_1 and X_2 (Independent) with variable Y (Dependent). This study uses the model: $Y = \beta 0 + \beta_1 X_1 + \beta_2 X_2 + e\text{it}$. Based on this model, where Y is Economic Growth (PE) which is calculated based on the growth rate of GRDP, β is the regression coefficient of the data series equation, $X1$ is the first independent variable, namely the Human Development Index (HDI), and $X2$ is the second independent variable, namely Inflation (INF).

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RESULTS AND DISCUSSION

Heteroskedastisitas Test

The heteroscedasticity test is conducted to determine whether, in the regression model, there is an inequality of variance from the residuals of one observation to another (Ghozali, 2018). An essential assumption of the linear regression model is the disturbance that appears in linear regression, namely homogeneity, where all disturbances have the same variance.

Heteroskedasticity Test: White

F-statistic	0.149589	Prob. F(5,90)	0.9797
Obs*R-squared	0.791230	Prob. Chi-Square(5)	0.9776
Scaled explained SS	34.20679	Prob. Chi-Square(5)	0.0000

From the table, it can be seen that the obs * R-Squared is 0.791230 and the Chi-Square probability is 0.9776> 0.05 (the significance of the prob> 0.05), so it is concluded that this study data does not occur heteroscedasticity.

Autocorrelation Test

The autocorrelation test is conducted to determine whether, in a linear regression model, there is a correlation between confounders in period t and errors in period t-1 (Ghozali, 2018). The technique used is Durbin-Watson testing.

Durbin Watson	2.024638
Durbin Watson lower	1.6254
Durbin Watson upper	1.7103

The table shows the Durbin Watson value of 2.024638 (dl) is 1.6254 and (du) is 1.7103, so it can be seen that the DW value is greater than the dl value, so it can be concluded that the hypothesis is accepted and no autocorrelation symptoms occur.

Multicollinearity Test

This multicollinearity test is intended to test whether there is a high or perfect correlation between independent variables or not in the regression model. The multicollinearity test results are carried out with the VIF value between independent variables (Ghozali, 2018)

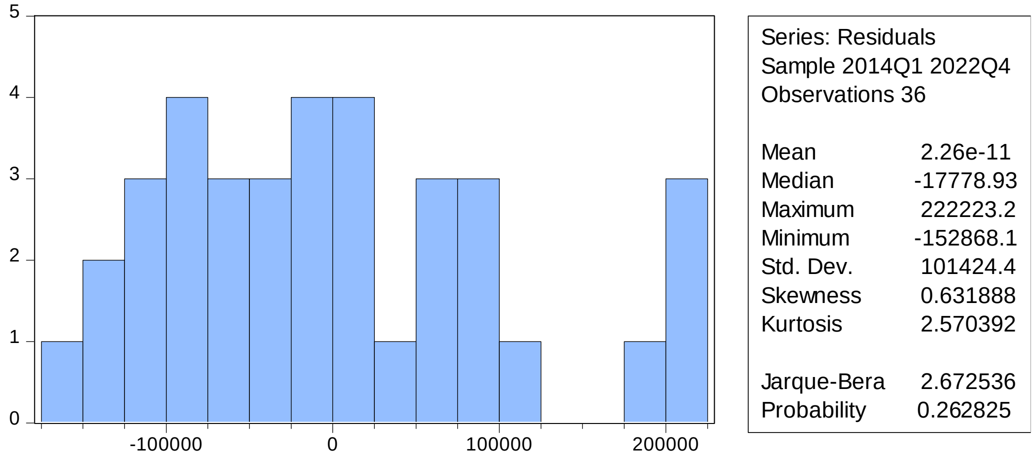
No	r-squared	R2 pada persamaan utama = 0.239148	Kesimpulan
1	indeks pembangunan manusia =	Lebih kecil	Tidak terjadi multikolinieritas

	0.133267		
2	Inflasi = 0.172257	Lebih kecil	Tidak terjadi multikolinieritas

Based on the results of the above analysis, it can be seen that the Adjusted R-squared results between the independent variables do not exceed the adjusted R squared of the main regression form, so the regression model for economic growth does not detect multicollinearity problems according to the results of data analysis.

Normality Test

The normality test aims to find out in the regression model whether the independent variable and the dependent variable have a contribution or not (Ghozali, 2018). A good regression model has a normal data distribution.



Based on the picture above, the probability of the first equation is 0.262825. The value shows > 0.05, so it is concluded that it is usually distributed.

Regression Test

Based on the results of the linear regression test in the table, the regression equation is as follows Economic Growth = $\beta_0 + \beta_1 X_1 - \beta_2 X_2 + eit$

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Economic Growth = 10258.38 + β1 0.633053 - β2 0.217335 + eit

Dependent Variable: D(Y)
Method: Least Squares
Date: 02/26/23 Time: 17:50
Sample (adjusted): 2014Q2 2022Q4
Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10258.38	10149.27	1.010750	0.3197
D(X1)	0.633053	0.201643	3.139482	0.0036
D(X2)	-0.217335	0.138934	-1.564305	0.1276

R-squared	0.239148	Mean dependent var	2946.800
Adjusted R-squared	0.191595	S.D. dependent var	65010.97
S.E. of regression	58452.23	Akaike info criterion	24.87162
Sum squared resid	1.09E+11	Schwarz criterion	25.00494
Log likelihood	432.2534	Hannan-Quinn criter.	24.91764
F-statistic	5.029070	Durbin-Watson stat	2.024638
Prob(F-statistic)	0.012612		

T-test

The t-statistic test determines the effect of the independent variables partially or individually on the dependent variable. The t-statistic test is carried out by comparing the probability value of each variable against the significance level α = 5% and α = 10%; if the probability value < α, then H0 is rejected.

1. The effect of the Human Development Index on Economic Growth After the test is carried out, the human development index's probability of the human development index is 0.0036 because the probability value is <0.05 and the coefficient is positive. Hence, the human development index positively and significantly impacts economic growth.
2. The effect of inflation on economic growth After testing, the test results obtained a probability value of inflation worth 0.1276 because the probability value of inflation> 0.05 and the coefficient is negative. Hence, inflation has a negative and insignificant impact on economic growth.

Simultaneous Significance Test (F Test)

The F-statistic test serves to determine whether all independent variables have a joint or comprehensive influence on the dependent variable. The F-statistical test is carried out by comparing the probability value of the F-statistic against the significance level α = 5%, then if the probability value < α, then H0 is rejected. From the above test, it is found that the prob value (F-statistic) is 0.012612 <0.05, it can be concluded that the Human Development Index and Inflation variables have a significant impact on economic growth.

Test R

The test results obtained the adjusted R^2 test value in the regression test worth 0.239148, which means that the independent variable can explain the dependent variable worth 24%. In comparison, the remaining 76% is explained by other variables. Pengaruh indeks pembangunan manusia terhadap pertumbuhan ekonomi

Effect of the human development index on economic growth

Furthermore, after hypothesis testing and model estimation, the effect of the Human Development Index on economic growth will be reviewed in more depth. Based on the study's results, it is stated that the Human Development Index variable has a significant effect on economic growth because it has a value of 0.0036, where the value is smaller than the significance level of 0.05. It means that the level of the Human Development Index always develops and grows in economic growth. It means that the level of the Human Development Index is constantly developing and growing in economic growth. This research aligns with Dewi & Sutrisna (2014), which state that HDI significantly affects economic growth and the quality of human resources, which is the source of state power. Economic growth allows this to achieve a high level of human development.

On the other hand, an increase in the level of human development impacts increasing opportunities for economic growth. The causal relationship between economic growth and human development affects each other. It can be concluded that a country's human development is related to and influences economic growth, as shown in income per capita (GDP per capita).

The Effect of Inflation on economic growth

By the results of hypothesis testing to test the meaning of regression coefficients using the t-test, the tcount value for inflation is -0.217335 at a significant level of 0.05 d means Ho is rejected and shows that inflation is nominally insignificant and harms economic growth. So the hypothesis is not proven, and the inflation variable partially harms economic growth. A high inflation rate harms the economy because high inflation will disrupt the mobilization of funds and economic stability. In the long term, economic development prospects will worsen if there is high and uncontrolled inflation because it will reduce exports and increase imports of goods, slowing economic growth. High inflation, which causes high prices of goods and services, can reduce people's purchasing power. This results in a reduction in the level of public welfare. In import and export, inflation can cause the price of imported goods to be cheaper than the price of domestically produced goods, making domestic goods less competitive with foreign goods. Imports grow faster than exports. Thus, the flow of capital out of the country will be more than the flow of capital into the country. This situation will result in a balance of payments deficit and a decline in the value of the domestic currency.

CONCLUSION

Based on the study's results, it is stated that the HDI variable has a significant positive effect on Economic Growth because it has a value of 0.0036, where the value is smaller than the significance

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level of 0.05. It means that the level of the Human Development Index is constantly developing and growing in economic growth.

By the results of hypothesis testing to test the meaning of regression coefficients using the t-test, the tcount value for inflation is -0.217335 at a significant level of 0.05 d means Ho is rejected and shows that inflation is nominally insignificant and harms economic growth. So the hypothesis is not proven, and the inflation variable partially harms economic growth. A high inflation rate harms the economy because high inflation will disrupt the mobilization of funds and economic stability. The prospects for long-term economic development will worsen if there is high and uncontrolled inflation because it will reduce exports and increase imports of goods which will slow economic growth.

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