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Analysis of The Influence of Foreign Direct Investment, Exchange Rate, Inflation on Indonesian Non Oil and Gas Exports 2015-2022

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Abstrak

Tujuan dari penelitian ini adalah untuk melihat pengaruh FDI, nilai tukar dan inflasi terhadap ekspor nonmigas Indonesia baik secara parsial maupun simultan. Metode analisis penelitian ini adalah analisis regresi linier berganda. Variabel independen dalam penelitian ini adalah penanaman modal asing (X1), nilai tukar (X2) dan inflasi (X3) dan variabel dependennya adalah ekspor nonmigas (Y). Sumber data menggunakan data sekunder time series 2015-2022 dengan teknik pengumpulan data studi kepustakaan dan dokumentasi. Berdasarkan hasil penelitian, nilai tukar dan inflasi secara bersamaan mempunyai pengaruh yang signifikan terhadap ekspor Indonesia kecuali migas. Secara parsial penanaman modal asing dan nilai tukar berpengaruh positif dan signifikan terhadap ekspor nonmigas Indonesia, dan inflasi berpengaruh negatif dan tidak signifikan terhadap ekspor nonmigas Indonesia.

Kata Kunci: *FDI (Foreign Direct Investment), Nilai Tukar, Inflasi, Ekspor, Non Migas*

Abstract
The aim of this research is to examine the influence of FDI, exchange rates and inflation on Indonesia's non-oil and gas exports, both partially and simultaneously. The analytical method for this research is multiple linear regression analysis. The independent variables in this research are foreign investment (X1), exchange rate (X2) and inflation (X3) and the dependent variable is non-oil and gas exports (Y). The data source uses secondary data from the 2015-2022 time series using library study and documentation data collection techniques. Based on research results, the exchange rate and inflation simultaneously have a significant influence on Indonesian exports except oil and gas. Partially, foreign investment and the exchange rate have a positive and significant effect on Indonesia's non-oil and gas exports, and inflation has a negative and insignificant effect on Indonesia's non-oil and gas exports..
Keywords: *FDI (Foreign Direct Investment), Exchange Rate, Inflation, Exports, Non-Oil and Gas*

INTRODUCTION

Each country has different natural resources. Because each country has different natural resources, the exchange of natural resources must be adjusted to the needs of each country. Trade activities carried out to serve international markets and obtain foreign exchange for a country are carried out through exports. Exports are divided into two parts, namely oil and gas and non-oil and gas. The oil and gas group consists of crude oil, oil and gas products. The non-oil and gas group currently consists of mineral fuels, fats and animal oils. Electrical machinery/equipment, rubber, iron ore, steel, silver, metal ash, food industry, cotton, plastic and plastic products, ready-made clothing, mechanical machines or aircraft, cotton (Maslinda, 2015).

The exchange rate is one of the most important prices in an economy, because it is determined by the balance between market demand and supply. The exchange rate is a tool for measuring the economic condition of a country. A stable currency value indicates that the country's economic condition is relatively good and stable. Inflation is a tool used to determine the economic condition of a country where the economy is weakening due to inflation because the prices of goods and basic necessities continue to increase.

The Indonesian currency exchange rate will fluctuate from 2015 to 2022. The exchange rate in 2017 is Rp. 13,546, development value 0.81%. The exchange rate in 2018 is Rp. 14,481 and the highest development value was 6.45%. The reason is that confidence in the rupiah has decreased due to the increasingly large current account deficit and the outflow of foreign capital due to the Fed's aggressive increase in interest rates. The exchange rate in 2019 is Rp. 13,901 properties, development value fell -4.17%. Indonesia's inflation rate will fluctuate from 2015 to 2022. In 2017, the inflation rate was 3.61% and the highest development rate was 16.34%. The cause of this increase in inflation is the increase in electricity prices. In 2018, the inflation value was 3.13% and the inflation development value was -15.33%. In 2019, the inflation value was 2.72% and the inflation development value was -15.07%. Because production capacity far exceeds demand and prices of goods and food are relatively controlled.

The development of Indonesia's non-oil and gas exports from 2015 to 2022 is influenced by fluctuations. In 2017, Indonesia's non-oil and gas exports amounted to USD 153,083.8 million with the highest value in 2017 amounting to 13.75%. In 2018, the value of non-oil and gas exports was USD 162,841 million with a development value of 5.99%, and in 2019 the value of non-oil and gas exports was -4.45%. Because competition in the global market is getting tighter. Indonesian products are less competitive than products from countries such as Vietnam, Bangladesh and Cambodia.

During the 2015-2022 period, foreign direct investment in Indonesia recorded a fairly large increase, reaching USD 4,390,943,557 or 218.6% in 2018. However, in the following year, foreign investment actually decreased by US$ 1,962,293,126 or $30,000. However, according to research by Hidayat, Musadieq, and Darmawan (2017), FDI did not have a partial impact on the value of Indonesia's non-oil and gas exports during the research period from 2005 to 2009. In 2016, the value of Indonesia's exports decreased to $145.1 billion.

With this background, the aim of this research is to find out how the exchange rate and inflation partially and simultaneously influence Indonesia's non-oil and gas exports.

RESEARCH METHOD

The type of data in this research is secondary data obtained from the Indonesian Central Statistics Agency (BPS). In analyzing the data in the research, multiple regression analysis techniques were used, namely to find out whether individually the independent variables have a significant influence on the dependent variable and to find out whether simultaneously the independent variables have a significant influence on the dependent variable. The statistical tests used in this research consist of partial testing (t test), simultaneous test (F test) and coefficient of determination (R2)..

RESULT AND DISCUSSION

Operational Definition of Variables

1. Non-Oil and Gas Export Value (Y), economic growth is an indicator of the success of an economy's development because the welfare and progress of an economy is determined by the amount of growth indicated by changes in national output (Nugroho, 2014). The data used is time series data for 7 years from 2015 to 2022 in millions of US$.
2. Foreign Direct Investment(X1), Foreign Direct Investment (FDI) is investment made by the private sector from abroad or can be said to be investment from one country to another country on behalf of the government that owns the capital. This variable is expressed in billions of rupiah.
3. US Dollar Exchange Rate (X3), the exchange rate is the price of one currency against another currency (Nurrohim, 2013). The US Dollar exchange rate (Exchange rate) used is the exchange rate with the rupiah against the US dollar at the Ministry of Trade (KEMENDAG) for the period 2015 to 2022. This variable is expressed in units of rupiah per dollar (Rp/US Dollar).
4. Inflation (X3),Inflation is a tool used to determine the economic condition of a country where the economy is weakening due to inflation because the prices of goods and basic necessities continue to increase. Using percent dataat the Ministry of Trade (KEMENDAG) for the period 2015 to 2022. This variable is expressed in percent (%).

Table 1. Data Variables

Variables	Source	Measurement Scale
Non-Oil and Gas Export Value (Y)	Central Statistics Agency (BPS)	Million US$
Foreign Direct Investment (X1)	Central Statistics Agency (BPS)	IDR Trillion
Exchange Rate (X2)	Central Statistics Agency (BPS)	IDR/ USD
Inflation (X3)	Central Statistics Agency (BPS)	Percent

Multiple Regression Results

Table 2. Multiple Regression Results

Variables	Coefficient	Prob.	Adjusted R-Squered	Prob (F Statistics)	R-Squered
C	-5100.492	0.5846	0.339610	0.021687	0.443882
Foreign Direct Investment (X1)	34.11990	0.3683			
Exchange Rate (X2)	1.079897	0.0497			
Inflation (X3)	-220.3511	0.3548			

Based on table 1, a multiple regression equation can be created as follows:

$$Y = c + B1\ X1 + B2\ X2 + B3\ X3$$

$$Y = -5100.492 + 34.11990X1 + 1.079897X2 - 220.3511\ X3$$

From this equation it can be interpreted as follows:

1. The constant value is equal to-5100.492shows that if FDI, exchange rates and inflation remain constant, non-oil and gas exports in Indonesia will be-5100.492.
2. The value of coefficients X1 is equal to34.11990shows that if there is an increase in FDI of 1 unit it will cause non-oil and gas exports in Indonesia to increase by IDR.34.11990trillion assuming constant inflation (cateries paribus).
3. The value of coefficients X2 is1.079897shows that if there is an increase in the exchange rate of 1 unit, it will cause non-oil and gas exports in Indonesia to increase by IDR.1.079897/USD.
4. The value of coefficients X3 is -220,3511, shows that if there is an increase in inflation of 1 unit it will cause non-oil and gas exports in Indonesia to decrease by -220,3511% assuming a fixed exchange rate (cateries paribus).

Partial Test Results (t Test)

To prove the hypothesis, use the results of data analysis by carrying out partial tests. The purpose of this test is to determine significantly the influence of the independent variable on the dependent variable. This test will be carried out with a significance level of 5%.

a. Variable estimation resultsForeign Direct Investmentas big as34.11990and significant in prob.0.3683< $\alpha = 0.05$. This means that FDI has a positive and significant effect on non-oil and gas exports in Indonesia. If there is an increase in FDI of 1 percent, non-oil and gas exports in Indonesia will increase by IDR.34.11990trillion. On the other hand, if there is a decrease in the exchange rate of 1 percent, non-oil and gas exports in Indonesia will decrease significantly by IDR.34.11990trillion in one year, cateries paribus. So the first hypothesis statement which states that FDI has a positive and significant effect on non-oil and gas exports in Indonesia, is accepted.
b. The estimated results of the exchange rate variable are equal to1.079897and significant in prob.0.0497< $\alpha = 0.05$. This means that the exchange rate has a positive and significant effect on non-oil and gas exports in Indonesia. If there is an increase in the exchange rate of 1 percent, non-oil and gas exports in Indonesia will increase by IDR.1.079897/USD. On the other hand, if there is a decrease in the exchange rate of 1 percent, non-oil and gas exports in Indonesia will decrease significantly by IDR.1.079897/USD in one year, cateries paribus. So the second hypothesis statement which states that the exchange rate has a positive and significant effect on non-oil and

gas exports in Indonesia, is accepted.

c. The estimated coefficient for the inflation variable is-220,3511and significant in prob.0.3548> α = 0.05. This means that inflation has a negative and insignificant effect on non-oil and gas exports in Indonesia. If there is an increase in inflation of 1 percent, then non-oil and gas exports in Indonesia will decrease insignificantly by-220,3511percent. On the other hand, if there is a decrease in inflation of 1 percent, then non-oil and gas exports in Indonesia will increase insignificantly by-220,3511in one year, cateries paribus. So the third hypothesis statement which states that inflation has a negative and insignificant effect on non-oil and gas exports in Indonesia, is accepted.

Simultaneous Test Results (F Test)

From the results of data processing by carrying out a simultaneous test or (F test), it was found... The F test is useful in determining whether the variables collectively have an influence on the dependent variable or not. In this research, there are F test results with a value of 0.021687, which is smaller than α = 0.05. It can be concluded that the exchange rate and inflation have a significant influence simultaneously on non-oil and gas exports in Indonesia. The third hypothesis which states that the exchange rate, FDI and inflation have a significant influence on non-oil and gas exports in Indonesia has been accepted.

Coefficient of Determination test results (R2)

Based on the test results table, it is known that in this research, the coefficient of determination test value (R2) obtained a result of 0.4438%. This shows that the exchange rate, FDI and inflation variables have an influence of 44.38% on non-oil and gas exports in Indonesia. The remaining 55.62% is influenced by other factors not examined in this research.

Discussion

The impact of foreign investment on non-oil and gas exports in Indonesia

Based on the research results, it shows that FDI has a positive and significant effect on non-oil and gas exports in Indonesia. Direct investment shows a positive relationship with exports. An increase in foreign direct investment can also reduce the value of exports. The research results show that FDI has a positive and significant effect on non-oil and gas exports at α = 0.05 with a coefficient of 34.11990, which means that if FDI increases by 1% then non-oil and gas exports will decrease by 34.11990. This can be seen from the significant value of FDI of 0.3683 compared to the significant index of 0.3683 <0.05, so the second hypothesis which states that FDI has a positive and significant effect on non-oil and gas exports in Indonesia is accepted. This is in accordance with research findings by Riri and Nurlina (2022) which state that FDI has a positive impact on exports. If foreign direct investment is high it will affect exports, and the exchange rate will partly affect exports, and if the exchange rate rises then exports will also increase.

The Effect of Exchange Rates on Non-Oil and Gas Exports in Indonesia

The exchange rate is known to have a significant effect on Indonesia's non-oil and gas exports. Exports other than oil and gas play an important role in the country's economy, also in Indonesia. Based on the research results, a positive regression coefficient value indicates that performance measured in a time series has a positive and significant effect on the value of Indonesian exports except oil and gas. This positive relationship indicates that activity in Indonesia is increasing in a positive direction towards the exchange rate, which means the value of exports is also increasing.

The t test results also show that the exchange rate has a significant effect on the value of non-oil and gas exports, meaning that the results of this test are related to previous research, namely Horas (2017) which shows that there is a significant influence on the value of non-oil and gas exports. positive and significant value between exchange rate and exports. The effect of changes in exports on economic growth is 65.29. The calculated t value using the t test is 8.903 or greater than the t table of 2.323. The increase in the exchange rate was 71.57% and the increase in exports was 5.81% with a total indirect effect of -6.36. From these results, it was found that 28.98% of other factors were not included in the research model.

Based on the research results, it shows that the exchange rate has a positive and significant effect on Indonesia's non-oil and gas exports. $\alpha = 0.05$ with a coefficient value of 1.079897. This means that if the exchange rate rises by 1 percent, Indonesia's non-oil and gas exports will increase by 1.079897 if inflation remains the same, everything is the same. It can be seen that the significance value of the exchange rate is 0.0497 compared to the significance level of $\alpha = 0.05$, which shows that the significance value is smaller than the significance level of $0.0497 < 0.05$, so the first hypothesis is accepted that the exchange rate has a positive and significant effect on non-oil and gas exports. Indonesia. Thus, this research is in line with previous research, namely Horas (2017), which shows that there is a positive and significant value between the export exchange rate and its influence on Indonesia's economic growth. This research shows that currency changes affect trade.

The Effect of Inflation on Non-Oil and Gas Exports in Indonesia

Based on the research results, it shows that inflation has a negative and insignificant effect on Indonesia's non-oil and gas exports. Inflation has a negative relationship with exports. The value of exports may also decrease due to accelerating inflation. High inflation causes the exchange rate to weaken. If inflation accelerates, the price of domestic goods will rise, an increase in prices means a decrease in the value of the currency. If inflation increases due to prices, this is accompanied by a decrease in production due to an increase in production costs, thereby reducing export volumes. The research results show that inflation has a negative and significant effect on non-oil and gas exports at $\alpha = 0.05$ with a coefficient value of -220.3511, which means that if inflation increases by 1%, non-oil and gas exports will decrease by -220.3511. This can be seen from the significant inflation value of 0.3548 compared to the significant inflation rate of 0.3548 <0.05, so the second hypothesis which states that inflation has a negative and insignificant effect on non-oil and gas exports in Indonesia, is accepted.This contradicts the results of research by Novi (2020), which states that inflation has a positive effect on exports. If inflation is high, it will affect exports and the exchange rate has a partial effect on exports. If the exchange rate increases, exports will also increase.

CONCLUSION

1. Results of the multiple linear regression equation = -5100.492 + 34.11990 X1 + 1.079897 X2 -220.3511 X3. The results of the research regression equation show that the exchange rate has a positive effect on non-oil and gas exports in Indonesia, and inflation has a negative effect on non-oil and gas exports in Indonesia.
2. The T test results are significant for direct external variables of 0.3683 < 0.05. This means that FDI has a positive and significant effect on non-oil and gas exports in Indonesia. The exchange rate variable was obtained at 0.0497 <0.05 and had a positive and significant effect on non-oil and gas exports in Indonesia and was accepted. The inflation variable was obtained with a value of 0.3548 <0.05 and had a negative and insignificant effect on Indonesia's non-oil and gas exports, accepted.
3. The results of the F test were carried out by comparing the significant F value and $\alpha = 5\%$, obtained 0.021687 < 0.05. So it can be said that at the same time, the exchange rate and inflation have a significant impact on exports other than oil and gas in Indonesia, this is acceptable.
4. The coefficient of determination test results obtained were 0.4438% or 44.38%, which means that the foreign investment, exchange rate and inflation variables contributed 44.38% to Indonesia's non-oil and gas exports, while the remaining 55.62% was other. factors beyond the scope of this study..

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