



# THE INFLUENCE OF EXCHANGE RATES AND INFLATION ON EXPORTS IN INDONESIA

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## ABSTRACT

*Exports play a crucial role in a country's economic growth. Exports are influenced by various macroeconomic factors, primarily exchange rates and inflation. Exchange rate depreciation can increase export competitiveness, and conversely, exchange rate appreciation can reduce competitiveness. Inflation affects export performance, where high inflation increases production costs and reduces the competitiveness of export goods. This research is crucial for understanding the impact of exchange rates and inflation on Indonesian exports. Data in the form of a time series period 1993-2023 obtained from World Development Indicators (WDI). The variables used include exchange rates, inflation, and exports of Goods and Services. Using a quantitative approach with econometric analysis, specifically multiple linear regression, to determine the cause-and-effect relationship between variables. The results of the study indicate that simultaneously, exchange rates and inflation have a significant effect on exports. Partially, the results of the study show that inflation has a negative and significant impact on Indonesia's exports. In contrast, the exchange rate does not exhibit a significant influence on exports.*

**Keywords:** Exchange Rate, Inflation, Indonesian Exports, Time Series

## 1. Introduction

Exports are one of the main factors in a country's economic growth. According to Krugman and Obstfeld (2009), strong exports can increase national output, create jobs, and balance the balance of payments (Millia et al., 2021; Sugiharti et al., 2020). For Indonesia, which has a natural resource advantage in the manufacturing industry, exports play a crucial role in supporting economic stability and increasing state revenue. However, export performance is greatly influenced by various macroeconomic factors, mainly exchange rates and inflation. The exchange rate has a crucial role in determining the competitiveness of domestic products in the global market.

Dornbusch, Fischer, and Startz explained that exchange rate depreciation can increase export competitiveness because the price of goods in foreign currencies becomes cheaper, thereby increasing global demand for export products (Li et al., 2020; V. C. Nguyen & Do, 2020). On the contrary, the appreciation of the exchange rate causes the price of export goods to become more expensive, which reduces competitiveness in the international market. In Indonesia, fluctuations in the exchange rate of the Rupiah against foreign currencies, especially the US Dollar, often have a significant impact on national export volumes (Suwarno et al., 2021; Valentika et al., 2020).

In addition to the exchange rate, inflation also affects export performance. The quantity theory of money, as put forward by Irving Fisher, states that high inflation increases the cost of production, including the prices of raw materials and labour, making the price of export goods more expensive (Focacci & Focacci, 2024). Research by Dornbusch also indicates that uncontrolled inflation can reduce the competitiveness of domestic goods in the global market and negatively impact export performance in the long run (Okah Efogo & Epo, 2023).

The latest data shows that Indonesia's exports continue to experience fluctuations influenced by exchange rate dynamics and inflation. In March 2025, Indonesia's exports reached US\$23.35 billion,

up 5.95% compared to February 2025 and up 3.16% from March 2024, driven by an increase in oil and gas and non-oil and gas exports, especially metal ore, fats and plant animals, as well as machinery and electrical equipment (Indonesia. Badan Pusat Statistik, 2025). However, in January 2025, exports were recorded at US\$21.45 billion, up 4.68% compared to January 2024 but down 8.56% compared to December 2024, indicating the presence of seasonal volatility and the influence of external factors. These fluctuations reflect export sensitivity to changes in the rupiah exchange rate and inflationary pressures that affect production costs and export prices. Thus, a deep understanding of the influence of exchange rates and inflation on exports is crucial for Indonesia to formulate effective economic policies that enhance the competitiveness of its export products in the global market.

This research will utilise time series data spanning the past 30 years to analyse these relationships and provide relevant policy recommendations within the context of current global economic dynamics, bringing novelty through measurement approaches and data sources that are more accurate than those used in previous research. Using time series data from the World Development Indicators (WDI) over the long period 1993–2023, this study was able to capture the long-term dynamics between exchange rates, inflation, and exports in Indonesia. Additionally, the analysis was conducted using Stata MP 64 software, which enables more precise and efficient data processing. This differs from previous studies, which have often focused on symmetrical and short-term effects. This approach allows for a more comprehensive understanding of the pattern of relationships and the identification of the structural influence of these variables on national export performance. This study also examined the asymmetric effect of exchange rates (whether depreciation and appreciation of the Rupiah have different impacts on exports).

## **2. Literature**

Research on the impact of exchange rates and inflation on exports has been conducted by various researchers, yielding varying results. According to previous research, Mehtiyev et al. (2021) found that exchange rates have a significant impact on international trade, affecting export volumes. Rosyidi et al (2021) found that exchange rates have a significant negative effect on Indonesia's agricultural exports to India, with inflation being insignificant. Rini Silaban & Nurlina (2022) explain that exchange rate depreciation can encourage non-oil and gas exports. However, the influence of inflation tends to be weak. Sari & Sari (2023) demonstrate that exchange rates have a significant negative impact on Indonesia's exports, whereas inflation is insignificant. Meanwhile, other research discovered (Yuliadi, Sari, et al., 2024) in South Asian countries shows that high inflation consistently negatively impacts exports in the long run, (Chandrarin et al., 2022) with exchange rates and inflation simultaneously have a significant effect on Indonesia's exports, but only the exchange rate has a partial effect. Based on these studies, it can be concluded that exchange rates tend to have a more consistent relationship with exports than with inflation; however, both remain relevant for further analysis in the current context of the Indonesian economy.

In terms of methodology, most studies employ multiple linear regression with time series data; however, there are limitations, including data coverage, short analysis periods, a lack of classical assumption testing, and the absence of up-to-date data integration until 2023. This research gap provides an opportunity for new, more comprehensive research with long-term data, a strong classical assumptions approach, and a simultaneous focus on exchange rates and inflation in relation to national exports.

### **2.1. Export**

Export is the activity of selling goods or services abroad, carried out by exporters, which can be individuals or legal entities. According to the mercantilist view, international trade should ideally emphasise exports to encourage a trade balance surplus (Padhi, 2020). Exports are carried out in two ways: ordinary exports, which are facilitated through letters of credit (L/C), and exports without L/C, which require special permits from the government (Minetti et al., 2021).

David Ricardo's theory of comparative advantage posits that a country will export goods that can be produced at a lower cost than those of another country. In practice, exports are influenced by various factors, such as exchange rates, inflation rates, international commodity prices, domestic productivity,

trade agreements, and demand from trading partner countries. The depreciation of the rupiah exchange rate, for example, can make Indonesian goods cheaper in foreign markets, thereby increasing export volume. On the other hand, high inflation can reduce the competitiveness of export products because prices become less competitive (Philips et al., 2022).

## 2.2. *Exchange rate*

The exchange rate is one of the crucial prices in an economy because it serves as a determinant of the balance between demand and supply. An exchange rate can also be defined as the ratio used for exchange between two foreign currencies of different countries or the unit price of a currency expressed in the domestic currency. An exchange rate is simply the value or price level used to exchange two foreign currencies in a trade (T. T. Nguyen et al., 2024).

In practice, the exchange rate is regulated through the exchange rate system used by a country. This exchange rate system comprises several types, including a fixed exchange rate system, a floating exchange rate system, and a managed floating exchange rate system (Castañeda et al., 2024). In the fixed exchange rate system, the domestic currency exchange rate is set by the government against a specific foreign currency and is maintained at a stable level. Meanwhile, in a floating exchange rate system, the exchange rate is determined by market mechanisms based on demand and supply in the foreign exchange market (Maghfiroh & Anggraeni, 2024). The controlled floating exchange rate system is a combination of both, where the government continues to intervene to maintain exchange rate stability without setting the exchange rate rigidly (Ullah & Nobanee, 2025). Thus, the exchange rate system implemented by a country significantly affects exchange rate fluctuations and overall economic stability.

## 2.3. *Inflation*

Inflation is the general and continuous increase in the prices of goods and services over a period. This condition decreases the purchasing power of money because the same amount of money can only buy fewer goods. Inflation can be caused by high demand (demand-pull inflation), increased production costs (cost-push inflation), or the expectations of economic actors regarding future prices. Moderate inflation can boost economic growth, but high inflation and unbalanced availability of goods can be detrimental to the economy (Ha et al., 2020). The impact includes declining purchasing power, increasing cost of living, and disrupted economic stability. In the context of trade, inflation can also reduce export competitiveness because product prices become less competitive in the international market.

## 2.4. *Inter-Variable Relationships*

The interrelationship between variables in this study illustrates the complex but interrelated relationship between exchange rates, inflation, and exports in Indonesia. Basically, the exchange rate (exchange rate) plays an essential role in determining the competitiveness of Indonesian export products in the international market. When the rupiah exchange rate weakens against foreign currencies (depreciation), the price of Indonesian export products becomes cheaper in the global market, theoretically increasing demand and export volume. On the contrary, the strengthening of the Rupiah (appreciation) can make our export products more expensive and less competitive in the international market.

Exports, as a dependent variable in this study, are influenced by two independent variables: exchange rate and inflation. The relationship between the three is described in the context of open macroeconomics and international trade. The exchange rate plays a crucial role in determining the competitiveness of a country's export products, particularly in influencing export performance (Ratnaningtyas & Huda, 2024). When the rupiah exchange rate depreciates against the US dollar, the price of Indonesian export goods becomes cheaper for foreign buyers. This has the potential to increase export volumes, making them more competitive in the international market (Bhattacharya & Dugar, 2020; Yuliadi, Basuki, et al., 2024). On the other hand, exchange rate appreciation can cause export prices to become more expensive, potentially reducing global demand for Indonesian products.

Inflation affects exports through a relative price mechanism. High inflation tends to increase the price

of domestic goods, which harms product competitiveness in the international market (Auerbach et al., 2024; Olamide et al., 2022). That domestic factors (such as the money supply and exchange rates) and global factors (such as world oil prices) significantly drive inflation and, in turn, impact export performance and macroeconomic stability by affecting price competitiveness and trade balances (Çitçi & Kaya, 2023; Sajid et al., 2024). Thus, uncontrolled inflation can reduce export performance because the prices of Indonesian products become less competitive compared to those of other countries.

The two variables of exchange rate and inflation can also interact with each other. Weakening exchange rates can trigger imported inflation, especially in developing countries such as Indonesia, which still imports a significant amount of raw materials for production. In other words, exchange rate fluctuations not only have a direct impact on exports but can also affect inflation, which in turn affects exports indirectly. Therefore, understanding the interconnectedness of these three variables simultaneously is essential in formulating economic policies that support Indonesia's macro stability and export growth.

## 2.5. Hypothesis

In this study, we will discuss three variables, namely: Exchange rate, inflation, and exports in Indonesia. This study contains several hypotheses that are used as a reference from the research results, including:

- $H_0$ : Exchange rates and inflation have no significant effect on exports in Indonesia.
- $H_a$ : Exchange rates and inflation have a significant effect on exports in Indonesia.

## 3. Research Methods

This study employs a quantitative approach, utilising econometric analysis methods. Econometric analysis research aims to explain the cause-and-effect relationship between research variables through hypothesis testing. The analysis method used was multiple linear regression, utilising time series data spanning 30 years (1993-2023). The design of this study enables the identification and measurement of the influence of exchange rates and inflation on Indonesian exports. The design of this study not only allows the identification of patterns of relationships between variables, but also provides precise estimates of the magnitude of the influence of exchange rate fluctuations and inflation rates on Indonesia's export volume in a long-term perspective.

The time series approach in this study is designed to capture the structural dynamics of the Indonesian economy over the past three decades, including the 1998 monetary crisis, the 2008 global financial crisis, and the COVID-19 pandemic. The use of longitudinal data spanning 30 years offers an advantage in identifying the stability of relationships between variables across various economic phases, as well as detecting the possibility of structural changes through parameter stability tests. The developed econometric model also considers aspects of data stationarity and the possibility of cointegration relationships to avoid spurious regression results, thus ensuring the validity of the empirical findings produced. Through the design of this study, a comprehensive understanding is gained of how exchange rate policies and inflation control can be optimized to encourage national export growth. The analysis model used in this study is multiple linear regression with the following equation:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \mu$$

Information:

|           |                                                         |
|-----------|---------------------------------------------------------|
| $Y$       | = Exports of Goods and Services (Annual % Growth)       |
| $X_1$     | = Official Exchange Rate (LCU per US\$, average period) |
| $X_2$     | = Inflation, Consumer Price (%)                         |
| $\beta_0$ | = Constants                                             |
| $\beta_1$ | = Coefficients of Regression                            |
| $\beta_2$ | = Coefficients of Regression                            |
| $\mu$     | = Standard Error                                        |

Table 1. Research Variables and Data Sources

| Variables | Description                                          | Data Source                        |
|-----------|------------------------------------------------------|------------------------------------|
| Y         | Exports of Goods and Services (% of GDP)             | World Development Indicators (WDI) |
| X1        | Official Exchange Rate (LCU per US\$, average period | World Development Indicators (WDI) |
| X2        | Inflation, Consumer Prices (%)                       | World Development Indicators (WDI) |

Data were obtained from the World Development Indicators in the form of a time series (30 years) from 1993 to 2023. This study uses two variables, namely inflation (X1) and exchange rate (X2), as independent variables against the dependent variable (Y), which is export value.

This study used multiple linear regression data analysis with STATA MP 64. Before conducting regression analysis, a classical assumption test is first carried out to ensure that the data meet the BLUE (Best Linear Unbiased Estimator) requirements, including normality tests, multicollinearity tests, heteroscedasticity tests, and autocorrelation tests. Furthermore, the interpretation of the regression results was carried out by examining the significance of the coefficient ( $p\text{-value} < 0.05$ ) and the adjusted R-squared value to determine the extent to which the independent variable influenced the dependent variable. The results of this study are expected to provide an overview of the extent to which exchange rates and inflation affect Indonesia's export growth, as well as offer policy recommendations for monetary authorities and governments to maintain macroeconomic stability and enhance export performance.

### 3.1. Descriptive Statistical Test

The descriptive statistical test in this study aims to provide an overview of the data characteristics of each of the variables studied, namely exchange rates, inflation, and exports in Indonesia. Through this analysis, the researcher aimed to determine the size of concentration (average), spread (standard deviation), maximum and minimum values, and data distribution of each variable. This information is crucial for understanding the initial patterns of relationships between variables before proceeding with further analysis, such as classical assumption tests or multiple linear regression.

### 3.2. Classical Assumption Test Model

Classical assumption tests to ensure the validity of regression models, which include multicollinearity tests by looking at Variance Inflation Factor (VIF) values, heteroscedasticity tests using the Breusch-Pagan Test, and autocorrelation tests using the Durbin-Watson test.

#### 3.2.1. Multicollinearity Test

The multicollinearity test was used to identify whether there is a high linear relationship between independent variables in the regression model. High multicollinearity can cause the value of the regression coefficient to be unstable and insignificant, even though theoretically the variable has an effect. To detect multicollinearity, the Variance Inflation Factor (VIF) is usually used, where a VIF value above 10 indicates a strong indication of multicollinearity.

#### 3.2.2. Heteroscedasticity Test

The heteroscedasticity test is performed to find out whether the variance of the residual is constant (homoscedasticity) or not. If the residual variance is variable (heteroscedasticity), then the standard error of the estimate can be biased, which will affect the validity of the coefficient significance test. This test is crucial to ensure that the regression model does not suffer from a violation of assumptions that could lead to misleading results. Some of the tests used include the Breusch-Pagan test and White test, as well as residual graph analysis of fitted values.

#### 3.3.3. Autocorrelation Test

The time series autocorrelation test aims to determine whether there is a correlation between the residual value of one observation and that of the previous observation, which is often observed in time series

data. Suppose there is autocorrelation; the residual independence assumption is violated, which can lead to a decrease in model efficiency and result in a suboptimal regression coefficient. Autocorrelation tests are usually performed using the Durbin-Watson test or the Breusch-Godfrey LM test.

#### 4. Research Findings and Discussion

##### 4.1. Descriptive Statistical Test

Table 2. Descriptive Statistical Test

| Variable      | Obs | Mean     | Std. dev | Min    | Max      |
|---------------|-----|----------|----------|--------|----------|
| Export        | 31  | 27.53129 | 7.491224 | 17.33  | 52.97    |
| Exchange rate | 31  | 9684.996 | 3951.707 | 2087.1 | 15236.88 |
| Inflation     | 31  | 8.520645 | 10.06888 | 1.56   | 58.48    |

Based on the results of the descriptive statistical test, the export variable to GDP has an average of 27.53% with a standard deviation of 7.50. This shows a relatively high fluctuation in exports during the observation period, with a minimum value of 17.33 and a maximum of 52.97, indicating the significant role of the export sector in the national economy. The exchange rate has an average of 9,685 and a standard deviation of 3,951.71, reflecting the volatility of the rupiah exchange rate against the US dollar, with an exchange rate range from 2,087.10 to 15,236.88. Meanwhile, the average inflation rate was recorded at 8.52% with a standard deviation of 10.07, indicating a significant variation in inflation, ranging from 1.56% to 58.48%. These three variables exhibit a high degree of variability, suggesting that Indonesia's exports are strongly influenced by exchange rate dynamics and inflation, both directly and indirectly. Therefore, it is essential to analyze them further in this study.

##### 4.2. Classical Assumption Test Model

Table 3. Multiple Linear Regression

| Source   | SS         | df | MS         | Number of obs | = | 31     |
|----------|------------|----|------------|---------------|---|--------|
| Model    | 1062.2846  | 2  | 531.142302 | F(2, 28)      | = | 23.94  |
| Residual | 621.268344 | 28 | 22.1881551 | Prob > F      | = | 0.0000 |
| Total    | 1683.55295 | 30 | 56.1184316 | R-squared     | = | 0.6310 |
|          |            |    |            | Adj R-squared | = | 0.6046 |
|          |            |    |            | Root MSE      | = | 4.7104 |

  

| Ekspor        | Coefficient | Std. err. | t     | P >  t | [95% conf. Interval] |           |
|---------------|-------------|-----------|-------|--------|----------------------|-----------|
| Exchange rate | -0.0003651  | 0.0002208 | -1.65 | 0.109  | -0.0008173           | 0.0000872 |
| Inflation     | 0.5497152   | 0.0866517 | 6.34  | 0.000  | 0.3722172            | 0.7272132 |
| cons          | 26.38311    | 2.522994  | 10.46 | 0.000  | 21.21499             | 31.55123  |

Based on the results of multiple linear regression, it can be concluded that the model formed to analyze the effect of exchange rates and inflation on exports as a whole is statistically significant, as indicated by the Prob value > F = 0.0000. This means that, simultaneously, exchange rates and inflation have a noticeable influence on exports at a significant rate of 5%. An R-squared value of 0.6310 indicates that approximately 63.1% of the variation in exports can be explained by the two independent variables, while the remaining variation is attributed to factors outside the model. According to the estimated results, the inflation variable has a significant negative influence on exports, with a coefficient of -0.5497 and a p-value of 0.000. This indicates that a 1% increase in inflation will decrease exports by 0.55%, ceteris paribus. In contrast, the exchange rate has a negative coefficient of -0.0003651. Still, it is not statistically significant because the p-value is 0.100, indicating insufficient evidence to state that the exchange rate individually affects exports in this model.

#### 4.2.1. Multicollinearity Test

Table 4. Multicollinearity Test Result

| Variable      | VIF  | 1/VIF    |
|---------------|------|----------|
| Inflation     | 1.03 | 0.971591 |
| Exchange rate | 1.03 | 0.971591 |
| Mean VIF      | 1.03 |          |

The test uses the Variance Inflation Factor (VIF) value as an indicator. Based on the calculation results, the VIF value for the inflation variable and the exchange rate is 1.03 each, with a value of 1/VIF of 0.971591. A VIF value close to 1 indicates that there is no multicollinearity between the two variables. Thus, it can be concluded that the regression model used does not suffer from the problem of multicollinearity; therefore, the parameter estimation can be considered stable and unbiased due to the correlation between the independent variables.

#### 4.2.2. Heteroscedasticity Test

The heteroscedasticity test aims to determine whether the regression model exhibits a constant error variance (homoscedasticity).

Table 5. Heteroscedasticity Test Result

|                                                               |             |           |          |
|---------------------------------------------------------------|-------------|-----------|----------|
| <b>Hettest</b>                                                |             |           |          |
| <b>Breush-Pagan/Cook-Weisberg test for heteroskedasticity</b> |             |           |          |
| <b>Assumption: Normal error terms</b>                         |             |           |          |
| <b>Variable: Fitted values of export</b>                      |             |           |          |
| <b>H0: Constant variance</b>                                  |             |           |          |
| Chi2(1) = 0.30                                                |             |           |          |
| Prob > chi2 = 0.5845                                          |             |           |          |
| <b>. imtest</b>                                               |             |           |          |
| <b>Cameron &amp; Trivedi's decomposition of IM-test</b>       |             |           |          |
| <b>Source</b>                                                 | <b>chi2</b> | <b>df</b> | <b>p</b> |
| <b>Heteroskedasticity</b>                                     | 3.04        | 5         | 0.6933   |
| <b>Skewness</b>                                               | 2.78        | 2         | 0.2494   |
| <b>Kurtosis</b>                                               | 1.40        | 1         | 0.2359   |
| <b>Total</b>                                                  | 7.23        | 8         | 0.5125   |

In the Breusch-Pagan/Cook-Weisberg test, the chi2 value is 0.30 with a probability value (p-value) of 0.5845. Since the p-value is greater than 0.05, there is not enough evidence to reject the null ( $H_0$ ) hypothesis that the residual variance is constant (homoscedasticity). Thus, the regression model showed no symptoms of heteroscedasticity according to this test. The results of the second test, namely the IM-test, showed similar results. In total, the chi-squared value is 7.23 with a total degree of freedom (df) of 8 and a total p-value of 0.5125, which indicates a p-value greater than 0.05. This shows that there is no overall indication of heteroscedasticity. In detail, the "Heteroskedasticity" component has a p-value of 0.6933, while the skewness and kurtosis components have p-values of 0.2494 and 0.2359, respectively.

#### 4.2.3. Autocorrelation Test

Table 6. Autocorrelation Test Result

|                                                    |             |           |                       |
|----------------------------------------------------|-------------|-----------|-----------------------|
| <b>Estat bgodfrey</b>                              |             |           |                       |
| <b>Breusch-Godfrey LM test for autocorrelation</b> |             |           |                       |
| <b>Lags (p)</b>                                    | <b>chi2</b> | <b>df</b> | <b>Prob &gt; chi2</b> |
| <b>1</b>                                           | 13.778      | 1         | 0.0002                |
| <b>H0: no serial correlation</b>                   |             |           |                       |
| <b>. estat dwatson</b>                             |             |           |                       |

|                                                      |             |           |                       |
|------------------------------------------------------|-------------|-----------|-----------------------|
| <b>Durbin-Watson d-statistic (3, 31) = 0.6513535</b> |             |           |                       |
| <b>. estat durбина</b>                               |             |           |                       |
| <b>Durbin's alternative test for autocorrelation</b> |             |           |                       |
| <b>Lags (p)</b>                                      | <b>chi2</b> | <b>df</b> | <b>Prob &gt; chi2</b> |
| <b>1</b>                                             | 21.601      | 1         | 0.0000                |
| <b>H0: no serial correlation</b>                     |             |           |                       |

This autocorrelation test aims to compare the probability value with the significance level of 0.05. Based on the Breusch-Godfrey LM test for autocorrelation, the value of chi2 is 13.778 with a df of 1. The probability value (Prob > chi2) is 0.0002. Because the probability value (0.0002) is less than 0.05, the results of the autocorrelation test state that the null hypothesis (H0) is rejected (there is autocorrelation). Based on Durbin's Alternative Test for Autocorrelation, the value of chi2 is 21.601 with a df of 1. The probability value (Prob > chi2) is 0.0000. Because the probability value (0.0000) is less than 0.005, the results of the autocorrelation test state that the null hypothesis (H0) is rejected (there is an autocorrelation).

#### 4.3. Discussion

The results of this study indicate a significant relationship between inflation and exports in Indonesia; however, no significant influence of the partial exchange rate on exports was found during the period 1993–2023. Based on the multiple linear regression test, it was obtained that inflation has a negative and significant coefficient for exports, which is -0.5497 with a p-value of 0.000. This means that a 1% increase in inflation will reduce Indonesia's export volume by approximately 0.55%, *ceteris paribus*. These findings align with classical economic theory and previous studies (Yuliadi, Sari, et al., 2024), which states that high inflation causes an increase in production costs, making the prices of export goods less competitive in the international market.

Meanwhile, the exchange rate has a negative coefficient of -0.0003651 but is not statistically significant (p-value > 0.05). This means that although the depreciation of the rupiah exchange rate can theoretically increase the competitiveness of Indonesia's export prices, in this model, there is no substantial evidence that the exchange rate has a partial effect on exports. This can be caused by a variety of factors, such as export dependence on commodities whose prices are determined by global markets, as well as short-term effects that multiple linear regression models do not capture. Additionally, the pass-through phenomenon from exchange rates to export prices in Indonesia may be relatively small, or fiscal and monetary policy interventions may neutralise its impact.

The results of the descriptive statistical test showed high variability in all research variables. The average export value over 30 years is 27.53% of GDP, with a standard deviation of 7.50. The exchange rate averaged 9,685 LCU/USD, with a range of 2,087 to 15,236, reflecting the exchange rate's volatility during the period. Inflation was recorded to have an average of 8.52% with a standard deviation of 10.07, indicating significant fluctuations in inflation, especially during the 1998 monetary crisis and the COVID-19 pandemic period. This level of variability indicates that Indonesia's exports are highly sensitive to fluctuations in these macroeconomic variables.

Based on the results of the F-test (Prob > F = 0.0000), the constructed regression model proved to be significant simultaneously, indicating that exchange rates and inflation jointly affect Indonesia's exports. The Adjusted R-squared value of 0.6310 indicates that approximately 63.1% of the variation in exports can be explained by these two independent variables. In contrast, the remaining variation is attributed to other factors, such as world commodity prices, global demand, and national trade and fiscal policies.

However, the study also found that the model does not fully meet the assumptions of residual normality. The results of the Shapiro-Wilk test indicate that the residuals are not normally distributed, which can impact the validity of statistical inference in small samples. In addition, there are indications of autocorrelation based on the Durbin-Watson Alternative Test and the Breusch-Godfrey LM test, which

show that the residual values from year to year are correlated with each other. This is a common issue in time series data analysis, and can be addressed in advanced research using an autoregressive approach.

Overall, the findings of this study confirm the importance of controlling inflation in an effort to encourage Indonesia's export growth. Governments and monetary authorities must ensure price stability as part of a comprehensive long-term macroeconomic strategy. Although exchange rate depreciation is often considered an instrument to increase exports, its effectiveness depends on Indonesia's export structure and domestic production capacity. Therefore, increasing the added value of export products, promoting market diversification, and maintaining macroeconomic stability are key to strengthening national export performance.

## **5. Conclusion**

This study succeeded in uncovering the complex dynamics of the relationship between exchange rates, inflation, and Indonesia's export performance during the period 1993-2023. Through multiple linear regression analysis of time series data covering various economic phases including the 1998 monetary crisis, the 2008 global financial crisis, and the COVID-19 pandemic, this study provides an in-depth understanding of the macroeconomic factors that affect the competitiveness of national exports.

The main findings of the study show that inflation is the most significant determinant in influencing Indonesia's export performance. This happens because inflation increases the cost of domestic production, thereby reducing the competitiveness of Indonesian products in the international market. These findings emphasize the importance of price stability as the foundation of effective trade policy.

In contrast, the exchange rate shows results that contrast with theoretical expectations. Despite having a negative coefficient, the exchange rate does not show a statistically significant influence on exports. This phenomenon reflects Indonesia's unique economic structure, where exports are dominated by commodities whose prices are determined by the global market, as well as the relatively weak pass-through effect of exchange rates. These findings show that the depreciation of the rupiah does not automatically increase export competitiveness without being supported by increased productivity and product added value.

Simultaneously, both variables were proven to have a significant effect on exports with the ability to explain 63.1% of export variations. This model shows that although the exchange rate is not partially significant, its combination with inflation has a significant impact on the performance of national exports. This indicates the complexity of the interaction between macroeconomic variables in influencing international trade.

From an economic policy perspective, this study provides a strong empirical foundation for inflation control priorities in export enhancement strategies. The Government and Bank Indonesia need to maintain their commitment to price stability through effective coordination of fiscal and monetary policies. Meanwhile, exchange rate policy should be integrated with a more comprehensive strategy, including increasing the added value of export products, diversifying markets, and strengthening trade infrastructure.

The contribution of this research lies in the use of up-to-date data covering the most recent economic crisis periods, as well as the application of comprehensive classical assumption testing. These findings not only enrich Indonesia's economic literature but also provide practical guidance for policymakers in formulating effective trade strategies in an increasingly complex era of globalization.

Going forward, further research is needed that analyzes the asymmetric effects of exchange rates, heterogeneous sectoral impacts, as well as the integration of external variables such as world commodity prices and trading partner trade policies. This kind of research will provide a more holistic understanding of Indonesia's export determinants and support more targeted policy formulation to improve national economic competitiveness in the international arena.

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