

**Reciprocal Relationship between the Trade Balance and Exchange Rate  
in Sudan**

**(An Econometric Study on the Period 2000–2023)**

**Dr Mutaz Adam Abd Al Raheem Mohammed**

**Associate Professor: University of West Kordofan – Faculty of  
Economic and Social Studies**

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**Abstract**

This study aims to identify the nature and direction of the relationship between the exchange rate and the trade balance, covering both exports and imports and to analyze their behavior in Sudan during the period 2000–2023. An empirical model is presented to explain this relationship and its direction in both the short and long run. The central research problem is framed around two questions: (1) Is there a relationship between the trade balance and the exchange rate in Sudan during the period 2000–2023? and (2) What is the impact of the exchange rate on the trade balance in Sudan during this period? A descriptive-analytical approach is applied to establish the theoretical framework and describe the study variables, while a quantitative approach is employed to develop an empirical model measuring the reciprocal relationship between the trade balance and the exchange rate. The findings indicate the existence of an inverse relationship between the exchange rate and the trade balance. Specifically, a decrease in the exchange rate (i.e., devaluation of the local currency) improves the trade balance deficit, which is consistent with economic theory. Furthermore, the study confirms the existence of a long-term equilibrium relationship between these variables, implying that they do not diverge significantly from one another.

**Key words:** trade balance – exports – imports- exchange rate- reciprocal relationship

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## **First Axis: Methodological Framework and Previous Studies:**

### **First: Introduction**

The exchange rate is a widely recognized topic among economists, particularly economic policymakers, in both developed and developing countries. It serves as an essential tool for protecting domestic economies against instability. Various economic policies, including the devaluation of local currencies, are often employed to correct imbalances in the balance of payments.

Sudan, as a developing country, has experienced prolonged economic deterioration resulting from fluctuations in the exchange rate and other economic variables. Its trade balance has also declined in recent years, recording persistent deficits. Against this backdrop, the present study seeks to examine the reciprocal relationship between the exchange rate and the trade balance in Sudan over the period 2000–2023.

### **Study Problem:**

For a long time, the Sudanese economy has depended on foreign trade, primarily exporting oil and oil derivatives since 2000. After the loss of oil resources in 2011, Sudan shifted to exporting agricultural products and some gold. The trade balance has remained in deficit since 2012, coinciding with a rise in the USD-to-local-currency exchange rate:

1. Was there a relationship between the trade balance and the exchange rate in Sudan between 2000 and 2023?
2. How did the trade balance affect the exchange rate in Sudan between 2000 and 2023?
3. What is the direction of the relationship between the trade balance and the exchange rate in Sudan?

### **Study hypotheses:**

To address the research questions, the following hypotheses are proposed:

1. There is a statistically significant relationship between the trade balance and the exchange rate in Sudan during the period 2000–2023.
2. There exists a long-term integrated relationship between the trade balance and the exchange rate in Sudan during the period 2000–2023.

### **Study Importance:**

This study is significant because it highlights the relationship between the trade balance and the exchange rate in Sudan. These two variables provide key insights into the country's economic performance and indicate the scale of foreign trade, as well as its potential to enhance international competitiveness through achieving a balanced trade, a primary objective of overall economic policy. The study further underscores the relevance of this topic for economic policymakers during the period 2000–2023.

The study aims to identify the nature and direction of the relationship between the trade balance covering both exports and imports and the exchange rate, while documenting the behavior of these two variables over the period 2000–2023. Additionally, it presents an empirical model that explains the relationship and its direction in both the short and long run, in order to provide results and recommendations that may contribute to addressing trade balance deficits and the fluctuations of the Sudanese pound against the US dollar.

**Study variables:**

Trade balance: a primary indicator of economic activity.

Exchange rate: a key variable that both influences and is influenced by the trade balance.

**Study methodology:**

A descriptive-analytical approach is employed to establish the theoretical framework and define the study variables. Secondary sources are also utilized to support the objectives of the study. Additionally, a quantitative approach is applied to develop an empirical model that measures the reciprocal relationship between the trade balance and the exchange rate, based on the Autoregressive Distributed Lag (ARDL) model.

**Study Limits:**

This study focuses on Sudan, with the empirical analysis developed for the period 2000–2023.

**Study Structure:**

The study is organized into three main axes. The first axis presents the theoretical framework and previous studies. The second axis focuses on the theoretical framework of the study, including a discussion of the exchange rate and the trade balance. The third axis comprises the applied study, which details the analysis methodology, presents the results, and provides recommendations.

**Second: Previous Studies:****1. Rida Al-Badawi (2023)**

This study aimed to examine the relationship between Egyptian exports and imports and the effect of their growth on the dollar-to-pound exchange rate during the study period. Using the ARDL model and the bounds test, the study analyzed the long-term cointegration among the variables. Short-term relationships were assessed through the error-correction model. The descriptive analysis covered the period 1971–2020, while the empirical analysis focused on 2001–2020. By applying three empirical models to the study variables, the study found evidence of cointegration between exports and imports (as independent variables) and the exchange rate (as the dependent variable). However, this relationship was deemed unreasonable. Conversely, when the exchange rate was treated as an independent variable and exports and imports as dependent variables, the relationship was reasonable but deteriorated over time, with the exchange rate showing a direct positive relationship with exports in both the short and long run.

## **2. Aboobucker, Kalideen, & Abdul Jawahir (2021):**

This study aimed to examine the Marshall-Lerner condition and the J-Curve effect by applying the ARDL model to test for cointegration. The error-correction model was used to analyze short-term relationships, based on data from the period 1977–2019. The results indicate the presence of both the Marshall-Lerner condition and the J-Curve effect in Sri Lanka.

## **3. Khaled Al-Suwa'i (2014):**

This study aimed to examine the relationships among the trade balance, income, broad money supply, and the real exchange rate in the Jordanian economy over both the short and long term. The model incorporated income and money supply to test the monetary approach and the absorption approach, while the real exchange rate was used to evaluate the traditional approach. The bounds test methodology was applied to assess cointegration, followed by the error-correction model within the ARDL framework to account for distributed time lags. This approach investigated the existence of a long-run equilibrium relationship between the trade balance and its determinants over the period 1976–2013. The study concluded that money supply, income, and the exchange rate all play critical roles in shaping both the long-term relationship and the short-term dynamics of the trade balance in Jordan. Specifically, the exchange rate and income level were found to significantly affect the trade balance.

### **Theoretical Framework:**

#### **First: Definition and types of the trade balance deficit:**

It refers to the foreign trade balance and is composed of a country's exports and imports of goods and services. The trade balance represents the comparison between exports and imports over a given period. A trade balance deficit occurs when a country's net imports exceed its exports, indicating a higher demand for foreign goods than for domestic products. This situation increases the demand for foreign currencies in exchange for the local currency, thereby reducing the value of the national currency and increasing the value of foreign currencies (Sa'eeda Shatabi, 2012, p. 44):

- a. Goods Trade Balance (also called the visible trade balance): Includes all tangible goods that are physically exported or imported and must cross customs.
- b. Services Trade Balance (also called the invisible trade balance): Includes all services exchanged between countries, such as transportation, tourism, work visas, and capital returns (Ahmed Deif & Milod, p. 4).

#### **Second: Concept of exchange rate:**

To understand the term "exchange rate," it is necessary first to clarify the concept of foreign exchange, which can have multiple meanings. It may refer to foreign currency itself or to the process of exchanging foreign currency. In some contexts, it encompasses both meanings, as the term "exchange" can denote either the

currency or the act of exchanging it (Issa, n.d., p. 7). The exchange rate can be defined as the value of a foreign currency expressed in units of the local currency, or equivalently, the price of a given currency in terms of another (Kreatine, 2007, p. 26).

### **The main types of exchange rate**

#### **- Nominal exchange rate:**

The nominal exchange rate is the price of a foreign currency expressed in terms of the local currency, and vice versa (Al-Abbas, 2003, p. 3).

#### **- Real exchange rate:**

The real exchange rate reflects the price that gives the local currency its true value. It indicates the number of units of a particular foreign good required to purchase one unit of the same type of local good (Qaddi, 2003, p. 103).

#### **- Actual exchange rate:**

It serves as an indicator that measures the average change in the exchange rate of a given currency relative to several other currencies over a specific period. In other words, the effective exchange rate represents the average of multiple bilateral exchange rates.

#### **- The actual exchange rate:**

It is a nominal rate representing the average of multiple bilateral exchange rates. To accurately measure a country's international competitiveness, this indicator must be adjusted to eliminate the effects of relative price changes.

#### **- Equilibrium exchange rate:**

The equilibrium exchange rate is the rate determined solely by supply and demand, occurring when the quantity of a currency supplied equals the quantity demanded, independent of speculative activities or abnormal capital movements. It represents the equilibrium price for all types of goods in a perfectly competitive free market and is accompanied by equilibrium in the balance of payments.

### **Exchange rate in Sudan:**

The exchange rate is a key economic and financial indicator of a country's economic performance, as it is linked to all economic activities, including investment, production, exports, imports, and capital flows, particularly under current trends toward economic liberalization. Controlling the exchange rate is a primary function of the central bank, since it directly affects all aspects of economic activity. The central bank may intervene to devalue the domestic currency by lowering the exchange rate or revalue it by increasing the exchange rate.

In Sudan, exchange-rate policy has been a subject of interest for decision makers, as well as academics, researchers, businessmen, and the general public, since it is directly linked to the cost of living. Following the secession of South Sudan in 2011, Sudan experienced a significant dollar gap—the difference between the supply and demand for US dollars. This arose because Sudan lost oil exports

amounting to approximately 6.6 billion dollars, while gold export revenues reached only 1.2 billion dollars, compensating for no more than 18% of the oil-export loss.

As a result, the dollar-to-Sudanese-pound exchange rate increased, leading to dollarization, i.e., the use of the US dollar in place of the national currency. This trend reflected public distrust in the credibility of government financial and monetary policies. A substantial gap also emerged between the official and parallel exchange rates due to sharp increases in the parallel market. For instance, in 2014, the official dollar-to-pound rate was 6.2, while the parallel rate reached 8.8, representing a 42% gap. This gap widened to 85% in 2015 and to 158% by the end of 2016, with parallel rates of 11.45% and 16%, respectively.

These developments exacerbated overall economic imbalances and weakened Sudan's economic performance. Aggregate economic indicators revealed rising inflation rates (though not reaching hyperinflation), an expanded public budget deficit, accelerated monetary expansion, growth in the money supply, and increased unemployment. The deteriorating exchange rate and rising borrowing intensified the debt-servicing burden.

Comparing these findings with indicators prior to 1978, Abdul Wahhab Othman (2001, p. 12) noted a substantial public budget deficit, often financed through borrowing from the banking system or liquidating net assets in foreign currency. Domestic policies were the primary factor driving increased total demand, thereby contributing significantly to inflationary pressures and strain on foreign currency reserves. Othman also highlighted the role of commercial banks in exacerbating these pressures, either by exceeding central-bank-imposed credit ceilings or by liquidating foreign-currency assets to enhance financing capacity, thus surpassing the target liquidity levels (Ibraheem, 2019, p. 4).

#### **Reality of foreign trade in Sudan:**

In periods preceding the adoption of economic liberalization policies, the state monopolized foreign trade to maximize the utilization of production capacities for goods and crops in which Sudan held a competitive advantage in international markets. These included cotton, gum, vegetables, fruits, livestock, meat, leather, sesame, and hibiscus. However, production levels remained very low, with average annual returns never exceeding seven million dollars. Such limited output was attributed to chronic structural issues, including low diversity, poor quality, and high costs, which hindered competitiveness in international markets.

To address these challenges, the Bank of Sudan implemented a set of policies related to the exchange rate and revenue retention, aiming to increase export revenues and ensure their effective utilization for production inputs. In 1992, the state announced the adoption of an economic-liberalization policy after determining that previous policies had severely distorted the production process. Under an agreement with the International Monetary Fund, Sudan committed to measures involving the exchange rate, export taxation, privatization, liberalisation

of commercial transactions, and greater transparency in trade policies. Broader measures were also undertaken to liberalize foreign trade by removing customs restrictions on imports, which led to increased imports of both raw and manufactured goods due to domestic supply deficiencies and rising demand (Thul Noun & Al-Beely, 2018, p. 12).

Analysis of Sudan's export and import structure between 1997 and 2016 indicates that the country's economic future should primarily depend on the expansion of agricultural and animal production, as well as the production of food products derived from these sectors. The next phase should involve investing a portion of oil and gold revenues into actual agricultural, livestock, and manufacturing production. Sudan should also promote scientific research to develop these sectors and strengthen the national economy, especially considering that the World Trade Organization has excluded oil and gas industries from its rules on tariff reductions, indicating that these sectors are no longer subject to international tariff-reduction agreements (Sleiman Al-Munthari, 1999, p. 217).

### **Model description:**

Developing a model involves expressing an economic theory in the form of an equation or a system of equations. This stage constitutes the first and most critical step in constructing an empirical economic model. Model variables are classified into endogenous variables, whose values are determined within the model, and exogenous variables, whose values are independent of the model. The functional form of each equation (linear or nonlinear) is selected in accordance with the economic theory, the distribution of data points, and findings from previous empirical studies. This stage also relies on the expected magnitude of parameters as indicated by economic theory (Ibraheem et al., 2002).

The model development process comprises several steps:

- Determining the model variables.
- Determining the mathematical form of the model.
- Determining the expected signs of the parameters of the model.

#### **1. Determining the model variables**

The model variables are selected based on economic theory, previous empirical studies, and the available data relevant to the phenomenon under study in Sudan. The structure and direction of the relationships among the model's variables are chosen to align with economic theory, as follows:

- a. **Dependent variable:** the trade balance (TB).
- b. **Independent variable:** the exchange rate (EXR).

#### **2. Determining the mathematical form of the model:**

Economic theory does not provide sufficient information regarding the functional form of relationships. Therefore, a trial-and-error approach is applied to determine

the mathematical form, including whether functions are linear or nonlinear and the number of equations in the model. The mathematical form specifies that the trade balance is a function of the exchange rate, expressed as:

$$TB = F(EXR) \tag{1}$$

Where:

TB = trade balance

EXR = exchange rate

Based on previous studies, the following linear model of the function of the trade balance is:

$$TB_t = \beta_0 + \beta_1 EXR_t + U_t \tag{2}$$

Where:

$\beta_0$  = constant representing the minimum of the trade balance.

$\beta_1$  = the exchange rate elasticity, which measures the change in the trade balance resulting from a one-unit change in the exchange rate.

$U_t$  = the coefficient of the Stochastic error term, which is the group of variables that affect the balance of trade and are not included in the model. **Determining**

**the signs of the parameters:**

According to the economic theory, the applied studies, and previous studies, we expect the signs of the model parameters to be as follows:

$\beta_0$  = constant parameter.

$\beta_1$  = exchange rate coefficient is negative because the exchange rate is inversely related to the trade balance.

**Evaluating the study’s empirical model:**

The following are the results of the unit root tests of the data of the empirical model using the Phillips-Perron test at a significance level of 5%.

Results of the Unit Root test:

**Table (1): Results of the Unit Root test using the Phillips-Perron test of the study variables:**

Variable	Critical value 5%	Test value	Test type	Stationarity level
Trade balance	-3.632896	-5.226116	Phillip-Peron	First difference
Exchange rate	-3.644963	-11.12741	Phillip-Peron	2 differences

Source: Prepared by the researcher using E-Views software.

Table 1 presents the results of the Phillips-Perron (PP) test for unit roots in the study’s time series. For the trade balance variable, the first-order integration hypothesis at a 5% significance level was accepted. The absolute test statistic was -5.2261, which exceeds the critical value of -3.6329 at the 5% significance level, indicating that the trade balance is stationary at its first difference. For the exchange rate variable, the second-order integration hypothesis at a 5% significance level was accepted. The absolute test statistic was -11.1274, which is greater than the

critical value of -3.6450 at the 5% significance level, indicating that the exchange rate is stationary at its second difference.

### **Cointegration test:**

Cointegration among two or more variables indicates the presence of a long-term equilibrium relationship between them. This concept is particularly relevant when the long-term relationship influences the current values of the variables under study

### **Johansen-Juselius Cointegration test:**

This approach is notable for its ability to linearly combine non-stationary time series of the same order of integration to produce a cointegrated series. Such a series can then be used in regression analysis to generate reliable and consistent results.

**Table (2): Results of the cointegration test using the trace test and the maximum likelihood test.**

<b>Trace statistic</b>				
<b>Prob**</b>	<b>Critical Value</b>	<b>Trace Statistic</b>	<b>Eigen Value</b>	<b>Null hypothesis</b>
0.0128	15.49471	19.26856	0.556092	<b>None *</b>
0.2365	3.841466	1.401522	0.061719	<b>At most 1 *</b>
<b>Max-Eigen statistic</b>				
<b>Prob**</b>	<b>Critical Value</b>	<b>Max-Eigen Statistic</b>	<b>Eigen Value</b>	<b>Null hypothesis</b>
0.0129	14.26460	17.86704	0.556092	<b>None *</b>
0.2365	3.841466	1.401522	0.061719	<b>At most 1 *</b>

Source: Prepared by the researcher based on analyzing the study model using E-Views software (Appendix 10).

The statistical results in Table 2 indicate the presence of a single cointegration vector among the model variables. The trace test statistic (19.2686) exceeds the critical value (15.4947) at the 5% significance level, leading to the rejection of the null hypothesis of no cointegration and confirming the presence of one cointegration vector for the trade balance function.

Similarly, the maximum eigenvalue test yields a calculated statistic of 17.8670, which is greater than the critical value of 14.2646 at the 5% significance level. This supports the alternative hypothesis that a cointegration vector exists among the variables. These findings confirm the presence of a long-term equilibrium relationship between the trade balance and the exchange rate, indicating that the variables do not diverge significantly from each other. Consequently, the model is cointegrated, stationary, and non-spurious.

**Model Estimation**

**Table (3): Results of model estimation**

Variables	Coefficient	Std. Error	t-Statistic	Prob.*
TB(-1)	0.776097	0.152300	5.095838	0.0001
EX	-0.756480	1.937737	-0.390393	0.7004
C	-756.1355	525.8092	-1.438042	0.1659

Source: Prepared by the researcher based on analyzing the study model using the E-Views software (Appendix 10)

$R^2=0.64 \quad f= 17.83141 \quad F \text{ prob}= 0.000036$

$D.W = 2.1$

**- Evaluation of the trade balance function:**

**Table (4): Evaluation of the results based on the economic criterion:**

Variables	Coefficient	Economic theory
TB(-1)	0.776097	In line with the economic theory
EX	-0.756480	In line with the economic theory
C	-756.1355	

Source: Prepared by the researcher based on the analysis of the study model using E-VIEWS software (Appendix 10).

Table 4 shows that:

The model was estimated using a lag of one period ( $t-1$ ), as follows:

- The value of the exchange rate variable reached (-0.756480). The negative sign indicates an inverse relationship between the exchange rate and the trade balance. This means that lowering the exchange rate (revaluation of the domestic currency) improves the trade balance deficit, which is in line with economic theory.
- The equation constant value reached (-756.1355). The negative sign refers to the value of the trade balance in the absence of an independent variable. This contradicts the economic theory, but is in line with the reality of a constant deficit in the trade balance.

**Evaluation of the results according to the statistical criterion:****Table (5): Evaluation of the results based on the statistical criteria**

Variables	t-Statistic	Prob.*	Result
TB(-1)	5.095838	0.0001	Significant
EX	-0.390393	0.7004	Insignificant
C	-1.438042	0.1659	Insignificant

Source: Prepared by the researcher based on analyzing the study model using the E-VIEWS software (appendix 10).

Table 5 shows that:

- The (t) value of the trade-balance variable was (5.095838) with a probability value of (0.0001). The (t) value was, thus, smaller than (0.05), meaning that the relationship is significant.
- The (t) value of the exchange-rate variable was (-0.390393) with a probability value of (0.7004). The (t) value was, thus, greater than 0.05, meaning that the relationship is insignificant.
- The (t) value of the equation constant was (-1.438042) with a probability value of (0.1659). The (t) value was, thus, greater than 0.05, meaning that the relationship is insignificant. This is a sufficient condition.

**Goodness of Fit of the Model:**

- The value of the coefficient of Determination was ( $R^2 = 0.64$ ), indicating a good explanatory power of the model. It shows that the variations in the exchange rate are at a percentage of 64%, while the remaining percentage (36 %) is attributed to other variables not listed in the model.

**Significance of the Model:**

The significance of the model is clear in the value of ( $F = 17.83141$ ), with a degree of significance of (0.000036). As the value is smaller than 0.05, the model is significant.

**Evaluation of the results based on the empirical criterion:****a. Serial Correlation LM test:****Table (6): Results of the Breusch-Godfrey Serial Correlation LM test**

<b>F-statistic</b>	0.244079	<b>Prob. F(2,14)</b>	0.7860
<b>Obs*R-squared</b>	0.607289	<b>Prob. Chi-Square (2)</b>	0.7381

Source: Prepared by the researcher based on analyzing the study model using the E-VIEWS software (Appendix 10).

Table 6 shows that the Lagrange Multiplier (LM) test indicates no statistical evidence to reject the null hypothesis, which states that the residuals are not independent of each other. The test value was ( $F$ -statistic = 0.244079) with a probability value of (0.7860). As the value is greater than the significance level (5%), the residuals are independent of each other.

**b. Heteroscedasticity test:**

The heteroscedasticity test is applied to check the homoscedasticity of the error terms. The following table shows the test results:

**Table (7): Results of the Heteroscedasticity Test: Breusch -Pagan- Godfrey test**

<b>F-statistic</b>	0.756064	<b>Prob. F(7,16)</b>	0.5933
<b>Obs*R-squared</b>	4.184122	<b>Prob. Chi-Square(7)</b>	0.5232

Source: Prepared by the researcher based on analyzing the study model using the E-VIEWS software (Appendix 10).

The results of the Breusch- Pagan- Godfrey test indicate no evidence of heteroscedasticity in the error terms. The test value was ( $F$ -statistic = 0.756064) with a probability value of (0.5933). As the value is greater than the significance level (5%), heteroscedasticity is present. In case of absence of heteroscedasticity, ( $H_0$ ) is accepted.

**c. Multicollinearity between the independent variables:**

To examine the absence of multicollinearity among the independent variables in the estimated model, the Variance Inflation Factor (VIF) was applied. A higher VIF value indicates stronger collinearity between the independent variables. Generally, VIF values greater than 5 are considered indicative of a potential multicollinearity problem.

**Table (8): Collinearity test**

<b>Independent variables</b>	<b>VIF value</b>
TB(-1)	1.275124
EX	1.275124

Source: Prepared by the researcher based on analyzing the study model using the E-VIEWS software (Appendix 10).

Table 8 shows that all VIF values of the independent variables are below 5, indicating that multicollinearity is not a concern and the condition of independence among the independent variables is satisfied.

**d. Bounds test:**

The bounds test is applied to detect the presence of long-term cointegration among the variables.

**Table (9): Results of the bounds test:**

	<b>Value</b>	<b>I(0)</b>	<b>I(1)</b>	<b>Sig</b>
<b>F-statistic value</b>	6.908280	3.02	3.51	10%
		3.62	4.16	5%
		4.18	4.79	2.5%
		4.94	5.58	1%

Source: Prepared by the researcher based on analyzing the study model using the E-VIEWS software (Appendix 10).

According to Table 9, the test value was ( $F$ -statistic = 6.908280), which is greater than  $I(1)$ . Therefore, ( $H_1$ ) is accepted; the hypothesis stating that there is a long-term integration between the exchange rate and the trade balance is accepted.

### **Results:**

1. There is an inverse relationship between the exchange rate and the trade balance, indicating that lowering the exchange rate (due to revaluation of the domestic currency) improves the trade balance deficit, which is in line with economic theory.
2. The study confirms that there is a long-term equilibrium relationship between the variables, meaning that they are not very divergent from each other.
3. The trade-balance variable is stationary at its first differences. The second-degree integration theory was accepted at a significance level (5%) for the exchange-rate variable. The absolute test value of the variable was (-11.12741). Thus, it is greater than the critical value at the significance level (5%), which is (-3.644963). This means that the exchange-rate variable is stationary at its second difference.
4. The test value ( $F$ -statistic) was found (6.908280), which is greater than  $I(1)$ . Therefore, ( $H_1$ ) is accepted; the hypothesis stating that there is a long-term integration between the exchange rate and the trade balance is accepted.
5. The equation constant value reached (-756.1355). The negative sign refers to the value of the trade balance in the absence of an independent variable. This contradicts the economic theory, but is in line with the reality of a constant deficit in the trade balance.

### **Recommendations:**

1. Develop policies that strengthen key economic sectors, particularly the manufacturing sector, to produce alternatives to imports and thereby reduce reliance on imported goods.

2. Promote increased domestic production aimed at local markets to decrease the volume of imports.
3. Diversify the structure of exports to mitigate the impact of price fluctuations and maintain stability in exchange rates.
4. Formulate economic policies that support and promote foreign trade, including both exports and imports, as this can have a positive effect on foreign currency exchange rates.

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