Print ISSN: 2791-2248
Online ISSN: 2791-2256
مَجلّةُ تَسْنِيمِ الدَولِيّة
للعُلومِ الإنسانيّةِ والاجتمَاعيّةِ والقانونيّةِ

العدد السادس – ايلول – 2023 / September –

# The impact of the exchange rate on economic activity in Iraq

**Lect. Dr . Jabbar Saadoon Darag**[1]

[1]AL-Nahrain University: Baghdad, Iraq.

jabbar.saadon@nahrainuniv.edu.iq

**Abstract.** The aim of the study is to know the exchange rate and the factors influencing it and to identify the gross domestic product and its types as it is considered the basic criterion in Iraqi economic activity, and the nature of the relationship between the two variables, and through an econometric study that shows the extent of the impact of exchange rates on the gross domestic product, through the use of data obtained It was obtained from the Central Bank of Iraq for the period (2004-2022), using the VAR Vector Auto Regression model, which shows the nature of the bilateral relationship between variables, through the Engle Granger Causallicy test known as the co-integration test, it was considered that there is a positive effect through changing the exchange rate on output GDP in the short term, and there is no positive relationship between the two variables in the long term**.** The study recommends the need for the government and the Iraqi monetary authority to formulate a stable and fixed exchange rate that contributes to the stability and growth of the Iraqi economy.

**Keywords:** exchange rate, growth, GDP, unit root and (ARDL).

**ملخص.** هدف الدراسة هو معرفة سعر الصرف والعوامل التي تؤثر فيه وتحديد الناتج المحلي الإجمالي وأنواعه حيث يُعتبر المعيار الأساسي في النشاط الاقتصادي العراقي، وطبيعة العلاقة بين المتغيرين، وذلك من خلال دراسة اقتصائية تظهر مدى تأثير سعر الصرف على الناتج المحلي الإجمالي، من خلال استخدام البيانات التي تم الحصول عليها من البنك المركزي العراقي للفترة (2004-2022)، باستخدام نموذج متجه الانحدار الذاتي

Print ISSN: 2791-2248
Online ISSN: 2791-2256
مَجلّةُ تَسْنِيمِ الدَوليّة
للعُلومِ الإنسانيّةِ والاجتمَاعيّةِ والقانونيّةِ

**VAR**، الذي يظهر طبيعة العلاقة ثنائية الاتجاه بين المتغيرات، من خلال اختبار السببية **Engle Granger** المعروف باسم اختبار التكامل المشترك، وتم اعتبار أن هناك تأثيراً إيجابياً من خلال تغيير سعر الصرف على الناتج المحلي الإجمالي في الأجل القصير، وأنه لا يوجد علاقة إيجابية بين المتغيرين في الأجل الطويل. توصي الدراسة بضرورة منح الحكومة والسلطة النقدية العراقية صياغة سعر صرف مستقر وثابت يسهم في استقرار ونمو الاقتصاد العراقي.

**الكلمات المفتاحية:** سعر الصرف، النمو، الناتج المحلي الإجمالي، الجذر الوحدة، والنموذج البديل للتكامل والتخطيط (**ARDL**).



## 1. Introduction

The exchange rate policy is of great importance in the economic activity in general, and the exchange rate policy has many methods that can be used in the framework of dealing with economic crises and reducing their risks at the level of the daily performance of macroeconomic variables represented by the gross domestic product, as it represents the basic criteria for economic activity, and the price The importance of exchange lies in defining it and knowing its future changes and indicators in the long or short term, and with the multiplicity of exchange rate systems, countries always seek to choose the best types in accordance with their economic reality. There are countries that adhere to the policy of fixing the exchange rate of their currency and linking it to various transactions, while other countries go To follow the policy of floating the exchange rate and leave its determination according to the factors of supply and demand within the market, while for the Iraqi economy, the exchange rate policy, especially after the year 2004, followed a plan commensurate with the rules of transition from the planned central economy to the market economy and floating the currency according to the mechanisms of supply and demand, with Monetary policy measures to intervene through the open market, represented by the window of buying and selling foreign currency to influence its price to achieve the goals of monetary policy announced after 2003, and in this context, this attempt is concerned with highlighting the possible options in managing the exchange rate and what the stage requires and the requirements of the current economic reality.

## 2. Structure of the study

### 2.1. Research problem:

Print ISSN: 2791-2248
Online ISSN: 2791-2256
مَجلّةُ تَسْنِيمِ الدَولِيّة
للعُلومِ الإنسانيّةِ والاجتمَاعيّةِ والقانونيّةِ

The subject of the research faces the problem of the existence of differences and discrepancies in visions and viewpoints about the type of exchange rate system that should be followed in Iraq after more than decades have passed since the transitional phase of the ethnic economy, despite the successes achieved by monetary policy by adopting the central bank's managed exchange rate system, and adopting the means Indirect, represented by the window for buying and selling foreign currency, but there are many options available in managing the exchange rate that can achieve economic stability through the impact of the exchange rate on macroeconomic variables and thus achieve a desirable level of sustainable development.

**2.2. Research hypothesis:**

- The effect of the exchange rate and the gross domestic product in the short run.
- The impact of the exchange rate and GDP in the long run.

**2.3. The goal of the search**

The aim of this research revolves around finding the best appropriate methods and examining the available options in managing the exchange rate policy in order to achieve economic stability for the country.

**2.4. Temporal and spatial limits:**

The spatial framework of the study is the Iraqi economy, while the time frame is represented in the period from 2004 to 2022.

## 3. Previous studies:

- Study, Samia Mohamed Ahmed - The impact of the exchange rate policy on the gross domestic product in Sudan during the period (2000-2010), and the study found that the changes that occur in the exchange rate contribute to changes in the activity of the Sudanese economy.
- Study, Badr Al-Din Tali and Barquqi, Standard modeling of the impact of the exchange rate on macroeconomic variables, (1980-2014), and the study concluded that there is a relationship in the short term between the independent variable and the dependent variables, and there is no effective relationship on the dependent variables.
- Study, Elham Ibrahim Haiba, Econometric analysis of the impact of the effective real exchange rate on economic growth in Egypt, (1993-2013),

the results of the study showed that there is a long-term relationship between the exchange rate and GDP in the short and long term.

## 4. Research Methodology:

The research depends on the use of the analytical descriptive method and the standard method, where the analytical descriptive method is relied upon to review the developments of both the real exchange rate and the economic growth rate represented by the gross domestic product in Iraq during the study period, through reviewing and analyzing the annual reports issued by the Central Bank of Iraq (sparse numbers) Also, the descriptive method was relied upon to present the concept and factors affecting the exchange rate, as well as the concept and factors affecting the gross domestic product.

While the standard method was relied on to analyze and measure the relationship between the exchange rate variables and the gross domestic product in Iraq, by testing the quiescence of the variables and their integration and estimating the model in the event of quiescence and the integration of time series by the method of the autoregressive distributed time gaps model (ARDL).

## 5. The theoretical framework of the study

### 5.1. The evolution of the effective real exchange rate in Iraq during the study period

*5.1.1. Define the exchange rate:*

In the international financial markets, the currency of any country is treated like a commodity that can be bought and sold against any other currency, and the exchange rate between one currency and another is called the exchange rate, meaning that "the exchange rate is the quantity or amount of a specific currency that must be paid to obtain One unit of another currency (Mohamed Bin Al-Bar and Ali Senussi, 2019) and (Josh A, Ostry, J., Goldie, A, and Wolf, 1997).

And if the exchange rates between the local currency on the basis of which the establishment maintains its accounts and prepares its reports and the currencies in which foreign operations are carried out are relatively fixed, then the process of translating and recording these operations will be very accurate, but we find that the currencies of most countries change freely. In the financial markets - with the exception of some government interventions - which leads

Print ISSN: 2791-2248
Online ISSN: 2791-2256
مَجلّةُ تَسْنِيمِ الدَولِيّة
للعُلومِ الإنسانيّةِ والاجتمَاعيّةِ والقانونيّةِ

to a large and continuous fluctuation in exchange rates, and this leads to difficulties in recording foreign operations and preparing financial reports (Gilfason, T. 2000).

*5.1.2. Types of exchange rates:*

It took different forms and types listed as follows:

- The nominal effective exchange rate: It represents a weighted arithmetic average of bilateral exchange rates between the local currency of the country and a number of foreign currencies attributed to a certain period of time. It does not take into account domestic and foreign inflation rates, which makes it unrealistic and does not give convincing indicators in estimating the value of economic transactions between countries, (Ibrahim, M. 2003).
- The actual real exchange rate:It means the ratio of the price of the commodity in the national currency locally to the price of the commodity globally in the same currency, and this expresses, for a type of exchange rate, the inverse relationship with the competitiveness of the local economy and the real exchange rate that is related to that ability and is associated with it in an inverse relationship. For example, any increase in the price of The real exchange rate will lead to a decrease in the competitiveness of the economy, and in return, any decrease in the exchange rate will lead to a rise in the competitiveness of the economy, and thus the real exchange rate expresses the number of units of foreign goods necessary to purchase one unit of local goods and thus measures the ability to compete It facilitates the task of making economic decisions (Ilker, D. and Shabsigh G. 2000).

In light of the foregoing, we single out that there are several types of exchange rates, the most important of which is the nominal exchange rate, which is also divided into two types, the first is official and is controlled by the financial and monetary authorities of the state, and the second is determined according to the forces of supply and demand according to market mechanisms at a specific moment in time. The other exchange rate is the real exchange rate, which is the most common, as this type of exchange rate expresses the purchasing power of money, taking into account the variations in inflation between the countries involved in the framework of international economic relations and the commercial transactions that result from those relations, (E, F Storzenegger, 2002).

Print ISSN: 2791-2248
Online ISSN: 2791-2256
مَجلّةُ تَسْنِيمِ الدَوليّة
للعُلومِ الإنسانيّةِ والاجتمَاعيّةِ والقانونيّةِ



*5.1.3. Classification of currency exchange rate systems:*

Economists have classified it as follows:

- -Flexible exchange rate: It is the exchange rate that can be adjusted on the basis of economic indicators monitored by the monetary authority, such as a change in the rate based on the level of available reserves of foreign currencies and gold, or balance of payments statistics, or by allowing change according to supply and demand factors in order to allow economic policies to be liberated from exchange rate restrictions and to shift their time One of the disadvantages of this system is its inflation and uncontrolled changes in international trade as a result of exchange rate fluctuations (Liu, Venus Khem-Sen, B, Ahmed Zubaidi and Chung, Terrence Tai-Lung, 2004).
- Fixed exchange rate: in which there are two possibilities. The first is that the currency committee determines the exchange rate, but the central bank will not have a monetary policy, as the supply of money will be according to the automatic guidance method. Fixed exchange rate system The monetary base will be determined according to official statistics and balance of payments tabs, which will move in accordance with demand, with changes in foreign currency reserves, and one of the advantages of the fixed exchange rate is that it results in more robust trade and larger investment flows, especially if the country fixes its currency towards the currency of its main trading partner, as well as its contribution to achieving low inflation rates and stabilizing prices from the hard currency country, and within the framework of the main weaknesses of the fixed exchange system, which is represented in the inevitable increase in the real exchange rate that arises due to the delay in declining inflation rates, (Muhyiddin, Kushuk A, 2003).
- Linked exchange rate: This system requires the presence of a central bank that manages both the exchange rate and monetary policy, and the existence of a linked exchange rate and integrated monetary policies that will enable the management of the volume, which requires domestic and external measures that protect the economy from the damages of its unwanted changes (Montell, PJ and, L. Serven 2009).

**5.2. Defining the gross domestic product and the role of the gross domestic product in economic activity**

Print ISSN: 2791-2248
Online ISSN: 2791-2256
مَجلّةُ تَسْنِيمِ الدَولِيّة
للعُلومِ الإنسانيّةِ والاجتمَاعيّةِ والقانونيّةِ



*5.2.1. Definition of Gross Domestic Product*

Gross domestic product, abbreviated as GDP, is the most widely used tool for measuring the size of a country's economy.

Gross Domestic Product is the market value of all final goods and services locally (within a country), i.e. produced within the country during a specific period of time, it can be said that it is also all that is produced by individuals and companies within the country (Thaba, Nora Bahadur, 2002).

*5.2.2. The role of gross domestic product in economic activity*

And it helps to measure an indicator of the individual's standard of living within the country, and in another way the domestic product is considered a measure of the economy's performance. 2010).

Gross domestic product is usually measured on a quarterly or annual basis, and central banks and other concerned institutions raise or lower their growth forecasts based on the factors prevailing in the economy (and Bandari, Radendra, 2004).

The GDP is measured in three ways: the output method, the income method, and the expenditure method.

## 6. Analysis of the results of monetary policy and gross domestic product

### 6.1. Examination of variables: Jarque – Bera test model

Jarque – Bera test: P> 0.05; Normal distribution, P< 0.05; Not Normal distribution

the table 6.1.1 examines the independent variable (exchange rate) and the dependent variable, gross domestic product.

G: Group UNTTLD Workfile Test ER& GDP: Untitled

Jarque – Bera test : P> 0.05; Normal distribution, If or , Jarque – Bera test : P< 0.05; Not Normal distribution, That is, it does not follow the normal That is, it does not follow the normal

| | GDP | ER |
|---|---|---|
| Mean | 1251210. | 1289.085 |
| Median | 175652.0 | 1222.000 |
| Maximum | 20967640 | 1530.150 |
| Minimum | 36613.00 | 1180.000 |
| Std. Dev. | 4774947. | 119.7397 |
| Skewness | 4.005823 | 0.883293 |
| Kurtosis | 17.04995 | 2.176484 |

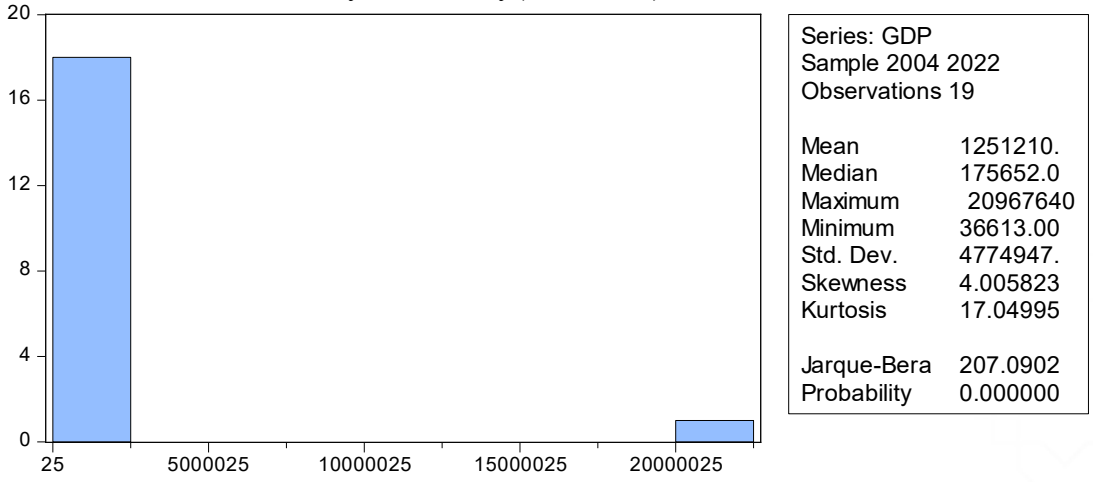
Print ISSN: 2791-2248
Online ISSN: 2791-2256
مَجلّةُ تَسْنِيمِ الدَوليّة
للعُلومِ الإنسانيّةِ والاجتمَاعيّةِ والقانونيّةِ

| | | |
|---|---|---|
| Jarque-Bera | 207.0902 | 3.007544 |
| Probability | 0.000000 | 0.222290 |
| Sum | 23772995 | 24492.62 |
| Sum Sq. Dev. | 4.10E+14 | 258076.7 |
| Observations | 19 | 19 |

Source: search results

Table with Figure 6.1.2. Examination of the dependent variable represented by the gross domestic product

Jarque – Bera test (207.0902): P < 0.05 And <0.01; It is a No normal distribution As indicated by Probability( 0.000000).



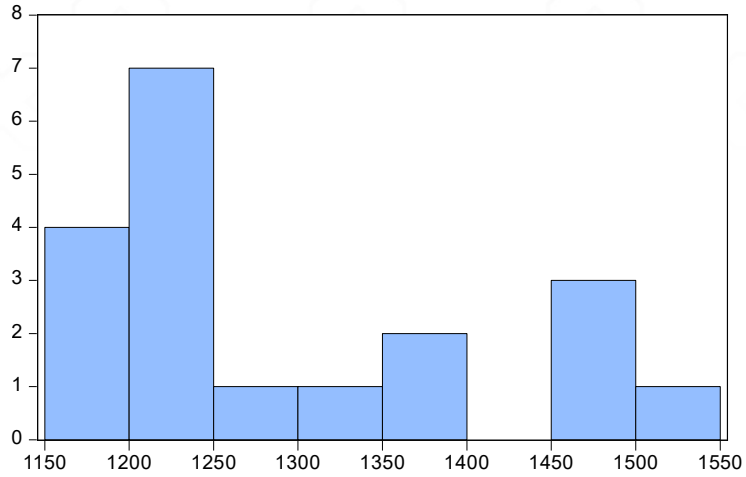

Source: search results

Figure with Table 6.1.3. Examine the independent variable represented by the exchange rate

Jarque – Bera test (3.007544): P > 0.05 And >0.01; It is a normal distribution As indicated by Probability( 0.222290).

Print ISSN: 2791-2248
Online ISSN: 2791-2256
مَجلّةُ تَسْنِيمِ الدَوليّة
للعُلومِ الإنسانيّةِ والاجتمَاعيّةِ والقانونيّةِ

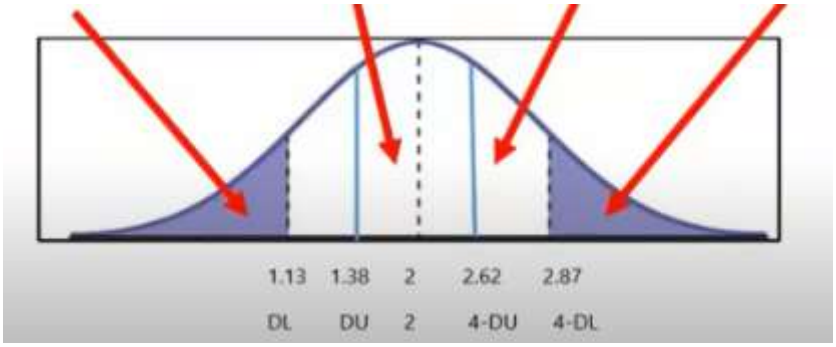





| | |
|---|---|
| Series: ER | |
| Sample 2004 2022 | |
| Observations 19 | |
| Mean | 1289.085 |
| Median | 1222.000 |
| Maximum | 1530.150 |
| Minimum | 1180.000 |
| Std. Dev. | 119.7397 |
| Skewness | 0.883293 |
| Kurtosis | 2.176484 |
| Jarque-Bera | 3.007544 |
| Probability | 0.222290 |

Source: search results

Figure and Table 6.2 Durbin Watson test for errors and random association.




| Dependent Variable: GDP | | | | |
|---|---|---|---|---|
| Method: Least Squares | | | | |
| Date: 07/07/23 Time: 17:25 | | | | |
| Sample: 2004 2022 | | | | |
| Included observations: 19 | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| ER | 1118.673 | 835.8673 | 1.338338 | 0.1974 |
| R-squared | 0.024584 | Mean dependent var | | 1251210. |
| Adjusted R-squared | 0.024584 | S.D. dependent var | | 4774947. |
| S.E. of regression | 4715888. | Akaike info criterion | | 33.62197 |
| Sum squared resid | 4.00E+14 | Schwarz criterion | | 33.67168 |
| Log likelihood | -318.4087 | Hannan-Quinn criter. | | 33.63038 |
| Durbin-Watson stat | 1.070820 | | | |

Source: search results

Print ISSN: 2791-2248
Online ISSN: 2791-2256
مَجلّةُ تَسْنِيمِ الدَولِيّة
للعُلومِ الإنسانيّةِ والاجتمَاعيّةِ والقانونيّةِ



The table6-3 shows the var test between the exchange rate and the GDP

Var test for the relationship between the independent and dependent variable, in which the relationship between the two variables is shown through the results below.

VAR : UNTITLED Worfile UNTITLED::Untitled

Vector Autoregression Estimates

Vector Autoregression Estimates
Date: 07/06/23 Time: 17:05
Sample (adjusted): 2006 2022
Included observations: 17 after adjustments
Standard errors in ( ) & t-statistics in [ ]

| | ER | GDP |
|---|---|---|
| ER(-1) | 1.155061 | 36679.07 |
| | (0.22117) | (15684.3) |
| | [ 5.22240] | [ 2.33859] |
| ER(-2) | -0.464080 | -2934.111 |
| | (0.28176) | (19980.6) |
| | [-1.64708] | [-0.14685] |
| GDP(-1) | -0.000245 | 64.29802 |
| | (0.00059) | (41.9845) |
| | [-0.41357] | [ 1.53147] |
| GDP(-2) | 0.000622 | -28.24796 |
| | (0.00057) | (40.2942) |
| | [ 1.09513] | [-0.70104] |
| C | 338.2829 | -47443636 |
| | (288.517) | (2.0E+07) |
| | [ 1.17249] | [-2.31887] |
| R-squared | 0.774734 | 0.485859 |
| Adj. R-squared | 0.699645 | 0.314479 |
| Sum sq. resids | 41626.27 | 2.09E+14 |
| S.E. equation | 58.89699 | 4176597. |
| F-statistic | 10.31759 | 2.834977 |
| Log likelihood | -90.44978 | -280.3265 |
| Akaike AIC | 11.22939 | 33.56782 |
| Schwarz SC | 11.47445 | 33.81288 |
| Mean dependent | 1267.801 | 1393321. |
| S.D. dependent | 107.4672 | 5044431. |
| Determinant resid covariance (dof adj.) | | 5.36E+16 |
| Determinant resid covariance | | 2.67E+16 |
| Log likelihood | | -369.7481 |
| Akaike information criterion | | 44.67625 |
| Schwarz criterion | | 45.16638 |

Print ISSN: 2791-2248
Online ISSN: 2791-2256
مَجلّةُ تَسْنِيمِ الدَولِيّة
للعُلومِ الإنسانيّةِ والاجتمَاعيّةِ والقانونيّةِ



Source: search results

### 6.2. Unit root test

Unit root test between the two variables, which checks the level of significance at the second level

Group unit root test on D(UNTITLED.2)

**Group unit root test: Summary**

Series: ER, GDP
Date: 07/06/23 Time: 17:39
Sample: 2004 2022
Exogenous variables: None
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

| Method | Statistic | Prob.** | Cross-sections | Obs |
|---|---|---|---|---|
| Null: Unit root (assumes common unit root process) | | | | |
| Levin, Lin & Chu t* | -3.84832 | 0.0001 | 2 | 32 |
| Null: Unit root (assumes individual unit root process) | | | | |
| ADF - Fisher Chi-square | 15.3147 | 0.0041 | 2 | 32 |
| PP - Fisher Chi-square | 38.6955 | 0.0000 | 2 | 32 |

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Source: search results

6-4 Engle – Granger Cointegration Test

Engel-Granger cointegration test, which shows that there is no relationship between the two variables in the long run

Date: 07/06/23 Time: 18:42
Series: ER GDP
Sample: 2004 2022
Included observations: 19
Null hypothesis: Series are not cointegrated
Cointegrating equation deterministics: C
Automatic lags specification based on Schwarz criterion (maxlag=3)

| Dependent | tau-statistic | Prob.* | z-statistic | Prob.* |
|---|---|---|---|---|
| ER | -2.503672 | 0.3147 | -7.678510 | 0.4323 |
| GDP | -3.065699 | 0.1451 | -25.29785 | 0.0001 |

Print ISSN: 2791-2248
Online ISSN: 2791-2256
مَجلّةُ تَسْنِيمِ الدَولِيّة
للعُلومِ الإنسانيّةِ والاجتمَاعيّةِ والقانونيّةِ

*MacKinnon (1996) p-values.
Warning: p-values may not be accurate for fewer than 20 observations.

Intermediate Results:

| | ER | GDP |
|---|---|---|
| Rho - 1 | -0.426584 | -1.624854 |
| Rho S.E. | 0.170383 | 0.530011 |
| Residual variance | 5749.390 | 1.62E+13 |
| Long-run residual variance | 5749.390 | 1.36E+13 |
| Number of lags | 0 | 1 |
| Number of observations | 18 | 17 |

Source: search results

G –Group UNTITLED Workfile :UNTITLED :Untitled

Pairwise Granger Causality Tests
Date: 07/06/23 Time: 17:49
Sample: 2004 2022
Lags: 2

| Null Hypothesis: | Obs | F-Statistic | Prob. |
|---|---|---|---|
| GDP does not Granger Cause ER | 17 | 0.97519 | 0.4051 |
| ER does not Granger Cause GDP | | 5.02020 | 0.0260 |

Source: search results

## 7. Conclusions And Recommendations

### 7.1. Conclusions

1. There is a relationship between the independent variable, the exchange rate, and the dependent variable in the short term through the VAR test.
2. 2 - There is no relationship between the independent variable, the exchange rate, and the dependent variable in the long run through the Engle – Granger Cointegration Test.

### 7.2. Recommendations

Stability and control of the foreign exchange market must be achieved.

Studying all variables and factors affecting the exchange rate, especially those that can be included in causal models, and using these models to study the exchange rate.

Studying all the variables and factors affecting the gross domestic product, especially those that can be included in the causal models, and using these models to study the gross domestic product.

Print ISSN: 2791-2248
Online ISSN: 2791-2256
مَجلّةُ تَسْنِيمِ الدَوليّة
للعُلومِ الإنسانيّةِ والاجتمَاعيّةِ والقانونيّةِ



## References

[1] - The importance of standard models in studying the relationship between economic variables and measuring and determining the mutual effect between them.

[2] Aboudlou, Abd al-Rahman, al-Sadiq Musa Ahmed, Suleiman al-Musaed and Abu al-Qasim Ismail, (2014). The Effect of the Real Effective Exchange Rate on the Economic Growth of ASEAN Countries 5. International Journal of Economics and Administrative Sciences, 3(2): PP 1_11 Berg, A. and Y. Miao (2010) Review of the real exchange rate and growth. The Washington consensus is slipping away. International Monetary Fund, Washington D.C.

[3] Al-Badawi, Ibrahim, b. (2006), The Great Exchange Rate Regimes Debate: Why Should the MENA Region Care? Paper presented at the twelfth annual conference of the Economic Research Forum for Arab Countries, Iran and Turkey. Cairo on the 18th and 22nd of December

[4] Bleaney, M., and Greenaway, D. (2001). The Impact of Terms of Trade and Real Exchange Rate Volatility on Investment and Growth in Sub-Saharan Africa, Journal of Development Economics, 65 (2), pp. 491-500.

[5] Campas, Roberto de Oliveira (1961). Two Views on Inflation in Latin America. Latin American Issues, p. 69 - 79

[6] Chen, Jinzao (2011). Real Exchange Rate and Economic Growth: Evidence from Chinese Provincial Data, University of Paris, Gill Classification, 053, F31, PP 1-33

[7] collection

[8] Collins, S, and Razin, OR. (1997). Real exchange rate imbalances and growth. NBER Working Paper No. W6174.

[9] Commission on Growth and Development, Working Paper 46

[10] deGrowe, b. , and c. Schnabel. 2004. The Exchange Rate Regime and Macroeconomic Performance in Central and Eastern Europe, CESIFO Working Paper 1182.

[11] Detken, C., Dieppe Ttenry, J, Marinc. (2002) Model Uncertainty and The Equilibrium Rate of the Real Effective Euro Exchange Rate, European Central Bank. Working Paper, 160. Ubaidullah Mahjoub Ubaidullah. (2013) The impact of exchange rate volatility on the macroeconomy of each form in Sudan

[12] Di Gregorio, c. (1992). The Effects of Inflation on Economic Growth:

Lessons from Latin America. European Economic Review 36, PP 417-425

[13] Eiche Green, B. (2008) Real Exchange Rate and Economic Growth Commission on Growth and Development Working Paper No. 4

[14] Felix, D.; (1961). An alternative view of the structuralist critical debate. Latin American issues. s. 81-93

[15] Fisher, S.; , R. Sahi, C. Vig (1986). Stability and growth in economies in transition: the early experience. Journal of Economic Perspectives (10). pp. 45-46

[16] Germay, Tim (2004). Financial and economic development

[17] Gilfason, T.; (2000). Fix or Flex? Alternative exchange rate regimes in an era of global capital mobility. North American Journal of Economics and Finance. 11 (2). s. 89 - 173.

[18] Growth in Sub-Saharan African Countries: Evidence from Time Series Analysis. African Development Review, 16(3). pp. 415-432

[19] Hassan, M (2003). Can Monetary Policy Play an Effective Role in Egypt, ECES Working Paper, 84.

[20] Hosni, R.; (2015). Assessing Real Exchange Rate Misalignment in Egypt: An Application of the Behavioral Equilibrium Approach, International Journal of Human Social Sciences. 2, p. 37 - 52.

[21] Ibrahim, M.; (2003). International Turmoil and Domestic Macroeconomic Fluctuations in MalaysiaAsean Economic Bulletin, 20, PP. 1130

[22] Ilker, D. and Shabsigh, G. (2000) The real exchange rate and economic growth: evidence from Egypt, Jordan, Morocco, and Tunisia. ImfWp, PP 99,40.

[23] Jalal, A.; (2003). To float or not to float: that is no longer the question for Egypt. ECES. Policy point of view No. (13

[24] Josh A, Ostry, J. Goldie A and Wolf H. (1997). Is the exchange rate regime important for inflation and growth? IMF Economic Issue, 2, PP. 1-19

[25] Liu, Venus Khem-Sen, B, Ahmed Zubeidi and Chong, Terence Tai-Long. (2004). Are the exchange rates of the Asian riyal fixed? Economics Letters 83 (3), pp. 313-316.

[26] Magda Qandil Nazira (2008). A comparative analysis of exchange rate fluctuations and economic activity: the cases of Egypt and Turkey. International Journal of Development Issues, Vol. 7 Issue: 2, p. 136 - 159

[27] Malcolm McPherson. (2000). Exchange Rates and Economic Growth in Kenya: An Economic Analysis, African Economic Policy.
[28] Martin, Peter Scott, and Arslan Ramsey. (2011) Real Exchange Rate and Economic Growth: Are Developing Countries Different? University of Massachusetts, Amherst, pp. 1-17.
[29] Mohammed. A. Khaled S. Ibrahim. Ya and Muhammad, H. (2013). Econometric analysis of the impact of the real effective exchange rate on the Jordanian economy. European Scientific Journal No. (25).
[30] Montel, PJ and L.Serven. (2009). Real exchange rates, savings, and growth: is there a link?
[31] Muhyiddin, and Kochuk, A (2003). On Exchange Rate Policy: The Case of Egypt 1970 - 2011. Economic Research Forum, Working Paper 3 (12).
[32] Obaidah, Zuhair. (2011). Imbalance of the real exchange rate and economic growth. An Empirical Study of the Maghreb Countries, International Journal of Economics and Finance, 3 (3), pp. 190-201
[33] Phillips, Peter and Bruce Hansen (1990). Statistical Effect in Regression of Instrumental Variables, Review of Economic Studies, 57, p. 99-125.
[34] Roderick D. (2009) Real Exchange Rate and Economic Growth. Paper on Economic Activity (2), p. 365-412.
[35] Salem, h. (2012). Has the exchange rate policy changed in Egypt after the flotation? Middle East Development Journal. 4 (1) p. 1-27.
[36] Salnave, A (2010). Real exchange rate imbalances and the economic performance of the G20 countries. International Economics (1), p. 59-80.
[37] Yeati, E, and Sturzinger F (2002). Float or Flex: Evidence of the effect of exchange rate regimes on growth. American Economic Review. 12 (2), PP. 1-49.