The Double Deficit in Iraq: A Study of its Determinants and Economic and Financial Effects

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Abstract

The research aims to measure and analyze the double deficit (current account deficit and general budget deficit) in Iraq. The research aims to know the extent of the relationship between the budget deficit and the current account deficit, clarify the concept of the double deficit from the point of view of different economic schools, and analyze the structure of the budget deficit and current account deficit for selected countries. Special reference to Iraq, and finally measuring the impact of the relationship between the double deficit (budget deficit and current account deficit), as the world's economies have witnessed continuous economic, social and political fluctuations and imbalances that have left effects on the economic structure, and the potential effects of the double deficit on economic growth are still a subject of discussion and controversy among economists and thinkers. Through various economic theories despite the increased use of modern standard models, the research was based on the hypothesis of determining the nature of the relationship between the budget deficit and the current account deficit for the selected countries.

Keywords: *budget deficit, current account deficit, ARDL model.*

Introduction

Many developing and developed countries, especially Iraq, suffer from long-term economic problems that hinder the process of development and economic growth. The double deficit (the general budget deficit and the current account deficit) is one of the most prominent sources of structural imbalances and an indicator of the effectiveness of the relationship between the fiscal, monetary, and trade policies that these countries adopt to continue achieving their goals to enhance economic growth. These governments often use fiscal policy tools to expand investment and consumer spending, which It leads to a deficit in the state's general budget, which may affect interest rates and exchange rates, which in turn is reflected in economic growth. The issue of addressing economic imbalances is an extremely important issue at the macroeconomic level of any country, which has prompted economists to study the phenomenon of simultaneous double deficits of the two deficits in the economy. The term "double deficit" appeared in the early 1980s to describe the state of transition between the budget deficit and the current account deficit in the United States. It describes the budget deficit and the dual current account deficit. Economic literature has shown that the causal trends between the budget deficit and the current account deficit are not limited to Only the United States. In the 1990s, some European countries such as Germany and Sweden faced similar situations. The

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increase in the budget deficit was accompanied by an increase in the real value of its national currency, which negatively affected the current accounts. However, the budget situation may differ in developed countries from developing economies.

Search goal: The research aims to know the extent of the relationship between the budget deficit and the current account deficit, clarify the concept of the double deficit from the point of view of different economic schools, and measure the impact of the relationship between the double deficit (the budget deficit and the current account deficit).

Research problem : The world's economies have witnessed continuous economic, social, and political fluctuations and imbalances that have left impacts on the economic structure. The potential effects of the double deficit on economic growth are still a subject of discussion and controversy among economists and thinkers through various economic theories, despite the increased use of modern standard models, as the relationship between the two deficits is direct. Or the opposite, which calls for measuring and analyzing the double deficit and the degree of their impact on Iraq for the period (1995-2021).

research importance: Given that the general budget deficit and the current account deficit have become among the basics that governments are working to address, the research helps in determining the relationship between the general budget deficit and the current account deficit and measuring the degree of their impact on Iraq.

Research assumes:

1.Determine the nature of the relationship between the budget deficit and the current account deficit of the selected countries.

2. The existence of a causal relationship between short- and long-term deficits.

Research Methodology: The research relied on the descriptive analytical method within the framework of economic theories, and the standard quantitative method based on economic measurement using the autoregressive distributed lag (ARDL) model to measure and analyze Iraq's double deficit for the period (1995-2021), using statistical and measurement programs (Eviews) in Estimation and extraction of results.

1-1 The theoretical framework of the budget deficit

1-1-1 The concept of budget deficit

One of the familiar concepts in measuring the financial situation in the economy is the state's general budget deficit, as it expresses that it is the situation in which the amounts received from the government are less than its expenditures. Therefore, when the government suffers from a budget deficit (with expenditures higher than revenues), government saving is negative. (Bernanke, 2009, 40), and the budget deficit is the difference between expenditures and revenues during one year, and the opposite of the deficit is the budget surplus, which expresses the increase of public revenues over public expenditures, which is also an annual concept (Brux, 2011, 392). The government deficit is The annual accumulation is simultaneous with other measured variables, as the annual deficit represents the origin of the collection of revenues of twelve months, the security of which is the origin of the collection of all expenses for the same period (Andree, 2008, 40).

1-1-2 Forms of budget deficit

A- Cyclical Deficit: This type of deficit is called the seasonal deficit that occurs during the fiscal year due to fluctuations in the economic cycle resulting from emergency and unexpected circumstances, which lead to a quantitative discrepancy between revenues and expenditures (Al-Shaiji, 2005, 32).

B - Deliberate Deficit: This type of deficit is called a planned deficit, as the state allows a deficit to occur in the general budget under certain conditions according to careful studies in determining it, as the state increases its public expenditures over public revenues during A certain period of time (Al-Shaiji, 2005, 86);

T - Structural Deficit: This type of deficit occurs due to the lack of sources of public revenues, when public revenues are unable to cover public expenditures on an ongoing basis, due to the imbalance of the state's financial system resulting from increasing public spending at a rate that exceeds the financial capacity of the entire national economy, and this is what It indicates a flaw in the economic structure (W.Cashell, 2005, 3).

D- Accumulated deficit: The theory of accumulated deficit is based on the idea of allowing a deficit in the general budget during times of economic depression in order to address the problems that the national economy suffers from and reduce the unemployment rate. This theory assumes the necessity of reducing taxes, increasing public expenditures, and resorting to loans to cover the resulting deficit. Due to increased overhead expenses; This situation will lead to an increase in income for individuals and thus increase their demand for goods and services. (Asfour, 2008, 389-390).

1-1-3 Opinions of economic schools:

First: The Classical View on the Public Budget Deficit:

The classical assumption that the state would not interfere except in traditional functions (security, defense, judiciary) was reflected in the nature of the financial system, as this system was limited to financial purposes only, which represented obtaining the public revenues necessary to cover traditional public expenses. That is, public finances at The Classic was neutral in that it had no other goals other than the financial purpose in bringing about change in the economic and social structure, and that the role of the general budget was to ensure the balance between regular public revenues and regular public expenditures. Therefore, the Classic rejected the deficit in the general budget because it would lead to an increase in borrowing. To cover public expenditures, because this borrowing will be allocated for consumption purposes and thus lead to a decrease in investment and the occurrence of inflation, and the decrease in investment occurs due to a lack of capital that would have been directed to investment. The classics also rejected the surplus in the general budget because that means that the state deducts unnecessary amounts from individuals that could be invested (Al-Mahjoub, 1990, 22-23).

Second: The Keynesian view of the public budget deficit:

The Keynesian point of view is that the rule of balance in the general budget prevents resorting to sound financial policy that leads to achieving economic stability. Keyes emphasized that in a recession, the state must intervene in the economy by increasing public expenditures in order to stimulate effective aggregate demand, which leads to restoring economic balance, and that the state's financing of the increase in public expenditures comes from two sources: borrowing and the issuance of new money. Keynes pointed out There is no fear of using these two means of financing; Borrowing will lead to the establishment of projects that generate returns and thus increase the tax collection and thus the state's public revenues. As for financing through the new monetary issuance, this will lead to an increase in aggregate demand and then production capacity and then an increase in aggregate supply. Therefore, there is no fear of The occurrence of inflation (Radwan, 2009, 10).

Third: Monetary View of the General Budget Deficit:

The deficit from the monetary point of view arises due to the increasing growth in the state's public expenditures, whether on the side of current or investment spending, which can be measured by the ratio of public expenditures to the gross domestic product. The increase in public expenditures is accompanied by many results, including the increased

growth in spending. The year may bring growth in state activity in many areas, which leads to restricting the movement of private capital and keeping it away from some areas. As a result of the increase in spending, the state is forced to increase the amount and rates of taxes on the private sector, which leads to the transfer of these funds to the public sector. Thus, it negatively affects the incentives for investment, saving, and production for the private sector in the national economy. In the event that the state's sovereign revenues are insufficient, it may resort to increasing the size of public debt by issuing public bonds, increasing bank credit granted to the government, and increasing the printing of banknotes. The first case leads to savings being converted into The government uses them to finance current public spending, thus weakening rates of investment and economic growth. However, in the case of using these savings to finance investments, according to the opinion of the monetarists, it has led to the misuse of resources, after the public sector is less efficient than the private sector in allocating resources and managing investment and business. The case of inflationary financing: it has led to an increase in the forces of inflation in the economy, and the money supply has begun to increase at rates greater than the real rate of growth of the gross domestic product, and the accompanying repercussions of the effects of inflation on the balance of payments, thus weakening exports, increasing imports, and capital outflow, and then the emergence of a problem. Deficit in the balance of payments (Zaki, 1992, 138-139).

Fourth: Seeing rational expectations about incapacity:

The proponents of the expectations theory believe that the fiscal deficit will lead to an increase in taxes, but at the same time they reject the principle of increasing taxes to finance the government deficit. In order for individuals to be willing to pay taxes, they will be forced to make a real and clear reduction in consumption, which weakens the effectiveness of the effect of the increase in spending. government, and then the effectiveness of the adopted financial policy. Therefore, the only effective fiscal policy comes from a policy that surprises individuals and is unpredictable (Al-Mamouri, 2007, 150).

1-2 The theoretical framework of the current account deficit

1-2-1 The concept of the current account deficit.

The current account constitutes an important topic in the macroeconomics of an open economy. The current account is defined as an important indicator of a country's economic performance and a component of the balance of payments, which covers all transactions in goods and services, income flows, and current transfers between the domestic economy and the rest of the world. The development of the current account provides information about... The international competitiveness of the economy, as there is a general consensus in the literature that the sustainability of the current account balance is crucial to macroeconomic policy changes and decisions, as the literature indicates that countries use the current account balance as an important macroeconomic indicator to measure the viability of the economy, because it reflects the position of important economic variables. Others, including savings, investment, and the budget balance. Most developing countries are characterized by a persistent current account deficit (Tarawalie & Marah, 2022, 1533). There are many definitions of the current account deficit, some economists have defined it as the increase in the value of imports, income payments on investment, and current transfer payments. , on the value of exports, income receipts on investment, and current transfer receipts, and then the current account balance is debit, and appears with a negative sign (Cosio, Pancaro, 2013, 6).

1-2-2 Forms of current account

Goods and Services Account: Among the most prominent components of the current account, it includes:

A- The trade balance, which includes the flows of visible goods (goods) between the country in question and the rest of the countries of the world. This account includes all items related to exports and imports of physical goods that are visible and counted when they pass through the country's customs borders, and are evaluated using the FOB method, meaning their value does not include transportation expenses. Insurance and related expenses are included in a separate account. We also find within this account the international negotiation item, which includes operations related to the purchase of goods abroad. These goods are not followed by an import process, but rather are resold abroad, as well as operations of selling local goods to foreigners without these goods leaving the national territory (doing not) pass through the customs authority. In general, the goods that are the subject of transactions that take place between residents and non-residents and that do not leave or enter the national territory, as the case may be, are recorded in this item (Awadallah, 1998, 103).

B- The balance of services: which includes flows of invisible goods (services), because they are not actually visible and do not pass through customs agencies, and the most important aspects of service operations are transportation and transportation, the activities of insurance companies, financial and banking institutions, tourism activity, communications, and a group of other miscellaneous activities (Malak, 2001, 19).

 2- Accounting for the incomes of factors of production: This account includes in particular the sum of incomes from labor, capital, and property, as labor incomes represent wage flows between residents of the country and non-residents, and thus they represent wage flows and transfers made by workers to and from within the country. While capital income represents the total interest applied to external debts (received or paid). Ownership income represents the total profits achieved from the investment, whether direct or investment in the portfolio.

3- The one-sided transfer account includes all exchanges that take place between the state and the outside world without compensation. They are non-reciprocal transactions, meaning they are one-sided and do not result in a right or debt. This account includes two items, the first related to gifts and private compensation, and the second related to public gifts and compensation. ; The private includes the transfers of individuals (including the transfers of immigrants to their countries of origin), organizations, whether in cash or in kind, and the public includes the economic, financial, military, and technical donations and subsidies provided by the public sector in its official bodies to foreign countries. The total capital transfers that are recorded in the capital account are excluded from this calculation. The reason for this is that this type of transfer does not affect personal income (Awadallah, 1998, 103).

1-3 The double deficit of economic schools:

Economists began studying the double deficit at the beginning of the eighties of the twentieth century, when the American economy witnessed a deficit in both the general budget and the trade balance. The relationship between them shows the mutual impact between fiscal policy and trade policy, meaning that any change in the outcome of one affects the other in the same direction. Which means that fiscal policy tools represented by public revenues and public spending affect the trade balance with the movement of exports and imports and vice versa. There are many viewpoints that try to explain the existence of a relationship between the general budget deficit and the trade balance deficit. Economists believe that an increase in the general budget deficit leads to an increase in the interest rate, which attracts foreign investment and thus increases the demand for the country's currency. This in turn leads to an increase in the exchange rate, which results in an increase in imports and a decrease in exports, that is, a deficit in the trade balance. Other economists and Supporters of the Ricardo equation hypothesis believe that individuals save more and consume less at the present time, anticipating that the existing deficit will be financed through higher taxes in the future. Therefore,

increased saving will compensate for the general budget deficit, leaving no effect on the interest rate and thus on the trade balance deficit. As for the supporters of the Keynesian school and its supporters, they believe that increasing the general budget deficit by increasing spending and reducing taxes will lead to an increase in income, which will result in, on the one hand, an increase in imports, and on the other hand, a decrease in the quantity that can be exported, and as a result, an increase in the deficit in the trade balance (Miller, 1989, 91-94). Whatever the point of view explaining the relationship between the two deficits, many applied studies have been conducted, most of which concluded that the general budget deficit causes the trade balance deficit. Two explanatory approaches prevail in economic thought for the relationship between the trade account deficit and the budget deficit, namely the Ricardian approach and the Keynesian approach.

1-3-1 The Classical School: Classical economists see that there is no relationship between the general budget deficit and the trade balance. Because the general budget is characterized by balance, and there cannot be a surplus or deficit, for many reasons, including that the role of the state does not exceed the concept of guardian states, and its functions are determined by security, warmth, and justice, meaning that its role should be neutral, and its belief in the principle of Say's law: supply creates demand or equals it ensures the achievement of use. Optimization of resources, as the classical school claimed, based on the principle of automatic balance in the trade balance, and if there is an imbalance or deficit, it must return to a state of balance automatically without the need for government intervention, due to the freedom of international trade and the lack of restrictions on the movement of trade with the aim of obtaining the largest amount of gold. A country's wealth is measured by its gold, as well as its real wealth (Shehayeb et al., 2020, 419-420).

1-3-2 The Ricardian approach Ricardian equivalence shows that there is no relationship between the budget deficit and the trade account deficit. The explanation for this is that the expansion of the budget deficit as a result of the reduction in the volume of taxes has a temporary effect and its effects must disappear when taxes return to their original levels, that is, when the budget deficit increases This year, due to the decrease in the volume of taxes, it will not have any impact on private sector expenditures. What will happen is that the timing of tax collection will be postponed from the current periods to future periods, and the decrease in government savings will be accompanied by a commensurate increase in private savings. Because individuals know that the decrease in tax revenues for the state will be compensated by increasing taxes in the future, and that total domestic savings consist of the sum of private and public sector savings, and that reducing taxes by the state will lead to a reduction in public sector savings, but at the same time it will lead to an increase Private sector savings are in parallel with the decrease in public sector savings, and therefore the volume of domestic saving will not change due to the tax cut, which will be compensated for by the increase in private saving. (Seater, 1993, 142-145), their tax burdens will increase in the future. With the budget deficit, individuals expect the level of tax to rise in the future, and they must anticipate from now by putting some savings aside to confront the expected increase in taxes. This means that the reduction in taxes is only a temporary process and is nothing more than a postponement of the payment of taxes that have been reduced currently to be repaid in a later period of time. Therefore, the amount of local saving will not change as a result of the initial reduction in the tax, which will be compensated by the increase in private saving. Thus, it is clear from Ricardian equivalence that there is no relationship between the budget deficit resulting from the initial decrease in taxes, and therefore the process is nothing more than a postponement of tax payment, a temporary deficit in the state budget, and a decrease in government saving compensated by an increase in private saving, and thus it will have no effect on National savings or on the trade account balance.

1-3-3 The Keynesian Proposition:

The Keynesian approach claims that there is a direct relationship between the trade account deficit and the budget deficit. The direction of this relationship is determined from the budget deficit towards the trade account deficit, and this is called the twin deficit. The trade account deficit is an internal variable, while the budget deficit is an external variable. The explanation for this is that the widening of the budget deficit comes as a result of an increase in government spending, and an increase in The level of government spending will decrease the level of government and national saving. As the level of national saving decreases, savings will decrease and interest rates will rise. As interest rates rise (in a system of flexible exchange rates), foreigners' demand for the local currency will increase, leading to an increase in the exchange rate of the national currency against foreign currencies, and an increase in the exchange rate. The national currency will make imports more attractive to citizens and less expensive, which will increase imports, and exports will become less attractive to foreigners and more expensive, which will reduce exports. As a result of the increase in imports and the decrease in exports, a trade balance deficit will be formed. Since the trade balance is the main determinant of changes in the trade account balance, a deficit The trade account will increase, and thus the budget deficit leads to the trade account deficit and is accompanied by it, and the economy suffers from the twin deficits of the budget deficit and the trade account deficit. Therefore, Keynesian ideas confirm the existence of a direct relationship between the trade account deficits and the state budget (Al-Kiswani, 2001, 29).

1-3-4 The twin deficits in oil economies (Shehayeb, 2020, 420-421):

A- The general budget deficit does not result from reducing taxes, but rather results from an increase in government spending. As for public revenues, oil revenues form the backbone of financing public expenditures and are determined by the conditions of demand and supply in the global oil market. As for the relationship between the general budget deficit and the trade balance, there is a strong relationship between Government revenues and oil exports.

B: Increasing government spending leads to an increase in non-oil income, which then increases domestic income and increases demand, which leads to an increase in imports, and then the current account deficit increases.

C: Oil countries depend on workers coming from abroad, and these workers send cash transfers abroad, which leads to an exacerbation of the current account deficit.

D. Most oil-producing countries are developing countries with closed economies. Monetary variables of interest, such as the price and exchange rate, do not play their role in influencing the supply of and demand for points, and therefore do not play a role in influencing fluctuations in exports and imports.

E - The lack of national savings leads to the internal debt being insufficient to cover the deficit in the general budget, which leads to the use of external borrowing to fill that deficit and then leads to an exacerbation of the deficit in the general budget.

2-1 Iraq's double deficit for the period (1995-2021)

2-1-1 Building the standard model for the study and describing the methodology used

In this section, the standard model for the study will be built and its basic variables will be identified, as well as a description of the standard methodology used in estimating and analyzing the model's parameters, as follows:

$Y1 = f(x1, x2, x3, x4, x5) + Ui$ ......(1)

Since:

$Y1$: Current account deficit (% of GDP).

x1: General budget deficit (% of GDP).

  x2: Inflation (prices paid by consumers%)

x3: Foreign direct investment (% of GDP).

x4: Total taxes (% of GDP).

x5: Economic growth (growth in per capita GDP % annually)

  : Ui is a random variable.

Y2=f (x1 ,x2,x3,x4,x5)+Ui ……(2)

Since:

Y2: General budget deficit (% of GDP).

x1: Current account deficit (% of GDP).

  x2: Inflation (prices paid by consumers%)

x3: Public revenues (% of GDP).

x4: Public expenditures (% of GDP).

x5: Total public debt (% of GDP).

  : Ui is a random variable.

As for the limitations of the study, they are as follows:

spatial boundaries; Iraq.

temporal boundaries; The study covered annual data for time series over a period of (27) years extending from (1995-2021), and was divided into annual text data.

As for the data sources for the model variables: It was based on official data issued by the World Bank, the International Monetary Fund, and data from the Iraqi Ministry of Planning and the Central Bank of Iraq.

2-2 Estimating the model in Iraq for the period (1995-2021)

2-2-1 Estimating the impact of the budget deficit on Iraq's current account deficit for the period (1995-2021).

First: Unit root test: To ensure the stability of the time series and that it is free of unit roots, the Phillips-Perron (PP) test was used, and the results were as follows: As it was shown from the results of the unit root test for the dependent variable and the independent variables, it was found that the variables are stable at the first difference in both the test (Unit Root Test Table (PP)) and that they are stable at the first difference whether there is a secant (With Constant) or a secant and a general trend with Constant. & Trend) and this is based on a Prob value of less than (5%) which indicates the stationarity of the variables, and this indicates the possibility of applying the ARDL model.

Table (1) Results of the Phillips-Perron unit root test for the study variables

UNIT ROOT TEST TABLE (PP)							
Null Hypothes is: the variable has a unit root At Level							
		Y1	X1	X2	X3	X4	X5
With Constant	t-Statistic	-3.6820	-3.0782	-11.1629	-1.9181	-2.4443	-4.1597
	Prob.	**0.0072**	**0.0343**	**0.0000**	0.3217	0.1349	**0.0018**
		***	**	***	n0	n0	***
With Constant & Trend	t-Statistic	-3.6346	-3.0230	-16.8937	-2.3392	-3.7139	-4.2437
	Prob.	**0.0363**	0.1358	**0.0000**	0.4062	**0.0300**	**0.0076**
		**	n0	***	n0	**	***
Without	t-Statistic	-3.7606	-3.1543	-9.1766	-1.8922	-0.4587	-4.1092

Constant	Prob.	**0.0003**	**0.0022**	**0.0000**	**0.0564**	**0.5117**	**0.0001**
& Trend		***	***	***	*	n0	***
		At First Difference					
		d(Y)	d(X1)	d(X2)	d(X3)	d(X4)	d(X5)
With Constant	t-Statistic	-9.9578	-7.1342	-7.1927	-7.0874	-10.6533	-14.2766
	Prob.	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*
		***	***	***	***	***	***
With Constant & Trend	t-Statistic	-9.9756	-7.3050	-7.4758	-7.0137	-10.4416	-14.3432
	Prob.	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*
		***	***	***	***	***	***
Without Constant & Trend	t-Statistic	-10.0425	-7.1414	-7.1440	-7.1588	-8.7981	-14.6067
	Prob.	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*	*0.0000*
		***	***	***	***	***	***
Notes:(*) Significant at the 10%; (**) Significant at the 5%; (***)Significant at the 1% and (no) Not Significant.							

Source: Prepared by the researchers based on the statistical program (12EViews)

Based on the results of the above test regarding the unit root of the study variables, it becomes clear to us the following:

The time series for the variables (X5,

The time series of variables (X5,

The time series for all variables is stable at the level of no constant and the trend is at the level of significance (1% and 5%), except for the variable (X4(

After taking the first difference, all variables stabilized and were integrated with a constant, a constant, and a trend, and without a constant and a general trend, at a significance level (1%). This stability indicates the possibility of applying the (ARDL) model.

Third: Determine the optimal slowdown periods:

There are several criteria used to determine the optimal deceleration time for a model: It is used for models that eliminate problems of autocorrelation between residues, and relying on the Schwarz criterion, which is the model that will be chosen when applying the ARDL method is (2,1,0,0,0,0), which provides the lowest value for this. The criterion when determining the length of delay. The following figure shows the deceleration durations:
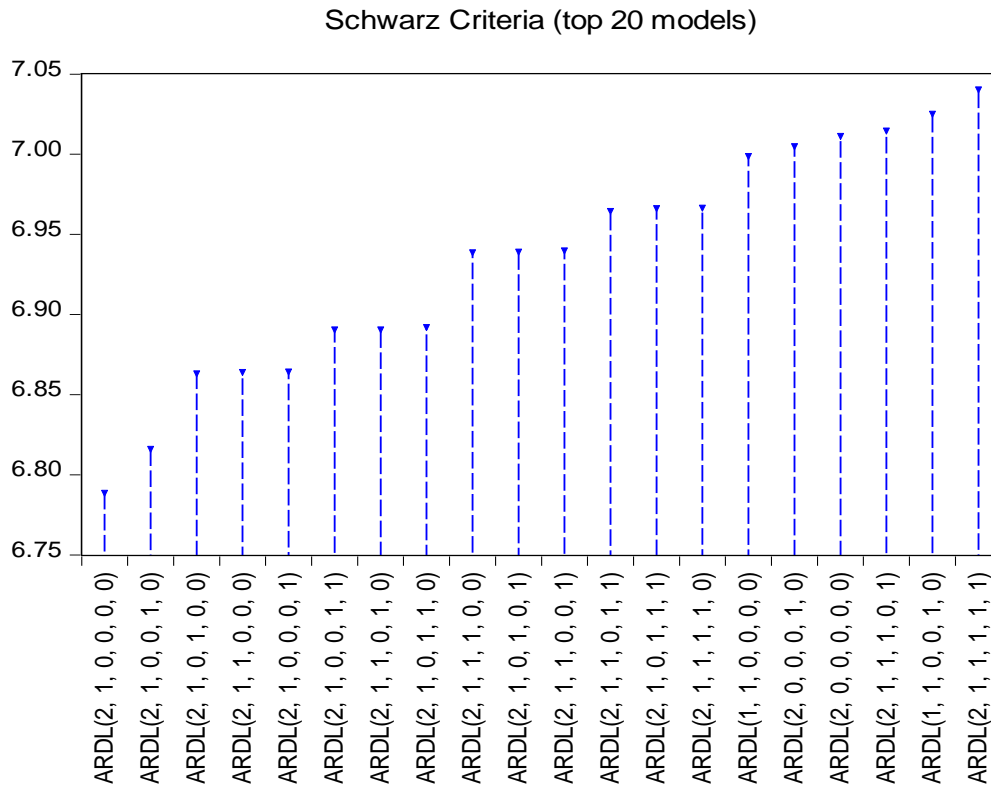
Figure (1) Results of deceleration durations according to the Schwarz criterion method for the model in Iraq

Source: Prepared by the researchers based on the 12.EViews software.

Fourth: Results of the joint integration test in Iraq:

Table (2) shows the Bound Test Approach used to detect cointegration relationships between model variables in Argentina. We notice from the test results that the calculated (F) value reached (5.698), which is greater than the tabulated (F) value, at the lower and upper limits, and at a level of significance (5%). This indicates rejection of the null hypothesis and acceptance of the alternative hypothesis. Which stipulates the existence of cointegration relationships (a long-term relationship between the variables of the dependent variable model and the independent variables) in Iraq.

Table (2) Co-integration test for Iraq model variables

(Bound Test Approach)				
Test Stat	Value	Sign.	I(0)	I(1)
F-stat	6.469	10%	2.08	3
K	5	5%	2.39	3.38
		2.5%	2.7	3.73
		1%	3.06	4.15

Source: Prepared by the researchers based on 12.EViews.

Fifth: Test results for the estimated parameters of the short- and long-term relationship and error correction (ECM) for Iraq variables.

Table 3: Results of estimating the ARDL model for Iraq

Dependent Variable: d(Y)
Method: ARDL
Sample : 199 5S1 2021 S2
Included observations: 52
Selected Model: ARDL (2,1,0,0,0,0)
Short Run Coeffcients

Variable	Coefficient	Std. Error	t- Statistic	Prob.
C	3.519152	2.292731	1.534917	0.1321
Y1(-1)*	-0.959508	0.161112	-5.955520	0.0000
X1(-1)	-0.032044	0.121003	-0.264817	0.7924
X2**	-0.169745	0.081287	-2.088216	0.0427
X3**	0.422035	0.480922	0.877554	0.3851
X4**	-1.879543	1.456486	-1.290465	0.2038
X5**	-0.060019	0.056397	-1.064222	0.2932
D(Y1(-1))	0.560736	0.148556	3.774568	0.0005
D(X1)	-0.678179	0.199056	-3.406980	0.0014
C	3.519152	2.292731	1.534917	0.1321
Y1(-1)*	-0.959508	0.161112	-5.955520	0.0000
	EC = Y1 - (-0.0334*X1 -0.1769*X2 + 0.4398*X3 -1.9589*X4 -0.0626*X5 + 3.6677)			
Long Run Coeffcients				
Variable	Coefficient	Std. Error	t- Statistic	Prob.
X1	-0.033396	0.127833	-0.261247	0.7951
X2	-0.176908	0.080224	-2.205171	0.0328
X3	0.439845	0.463113	0.949756	0.3475
X4	-1.958861	1.331438	-1.471237	0.1485
X5	-0.062552	0.037136	-1.684388	0.0994
C	3.667662	1.896212	1.934204	0.0597
ECM	-0.9595	0.142322	-6.741794	0.0000
R^2	0.53	*Adj R^2*		0.44
F-statistic	6.18	Prob . (F - statistic)		0.00000

Notes:(*) Significant at the 10%; (**) Significant at the 5%; (***)Significant at the 1% and (no) Not Significant.

Source: Prepared by the researchers based on the outputs 12.EViews.

Table (3) shows the results of estimation in the short and long terms and the error correction parameter as follows:

1- Results of the short-term relationship: The error correction coefficient test was used, which predicts the model's return to equilibrium, as its value reached (-0.9595) with a significance level of less than (1%), meaning that the current account deficit will take approximately one year to return to its equilibrium value in The long run after the effects of shocks on the budget deficit1/0.9595=1.04 ≅1 year

General budget deficit: There is an inverse relationship between the general budget deficit and the current account deficit. This means that an increase in the general budget deficit by (1%) leads to a decrease in the current account deficit by (-0.678%) at a significance level of (1%).

The value of R2 was (53%), meaning that the changes that occur in the model in Argentina are explained by the independent variables included in the model, and the remaining (47%) are explained by other variables outside the model or may be due to the random variable.

The calculated value of (F) was approximately (6.18) and at a significance level of less than (1%), which indicates the significance of the entire model.

2- Long-term relationship results:

General budget deficit: There is no significant relationship between the general budget deficit and the current account deficit at a significant level (5%).

B- Inflation: It has an inverse and significant effect on the current account deficit. This means that an increase in inflation by (1%) leads to a decrease in the current account deficit by (-0.176%) at a significance level of (5%).

D- Foreign direct investment: There is no significant relationship between foreign direct investment and the current account deficit at a significant level (5%).

C- Total taxes: There is no significant relationship between total taxes and the current account deficit at a significant level (5%).

H- Economic growth: It has an inverse and significant effect on the current account. This means that an increase in economic growth by (1%) leads to a decrease in the current account deficit by (-0.06%) at a significance level of (10%).

Sixth: Post-estimation tests of the model:

1- Testing the normal distribution of random errors

It is clear from Figure (2) that the statistical value of the (JB) test reached (0.558) with a level of significance greater than (5%). Accordingly, we accept the null hypothesis which indicates that the random errors are distributed normally in the model estimated in Iraq, with an average equal to (-9.9). With a standard deviation of (5.17).

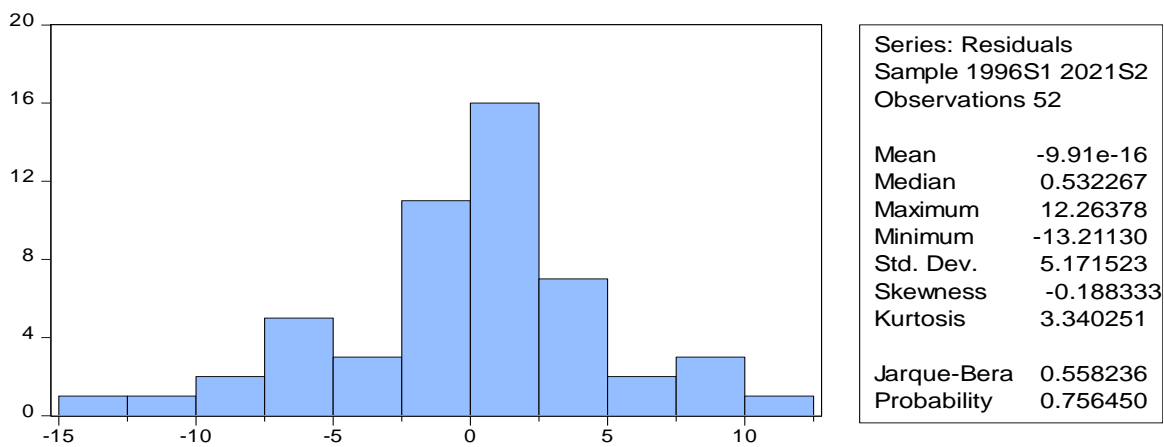| Series: Residuals	
Sample 1996S1 2021S2	
Observations 52	
Mean	-9.91e-16
Median	0.532267
Maximum	12.26378
Minimum	-13.21130
Std. Dev.	5.171523
Skewness	-0.188333
Kurtosis	3.340251
Jarque-Bera	0.558236
Probability	0.756450

Figure (2) Testing the normal distribution of random errors of the model in Iraq

Source: Prepared by the researchers based on the outputs 12.EViews.

2- Testing the problem of autocorrelation between the residuals

It is clear from Table (4) that the value of the Breusch-Godfrey test statistic reached (2.64915) with a level of significance greater than (5%). Therefore, we accept the null hypothesis which indicates that there is no problem of autocorrelation among the residuals in the model estimated in Iraq.

Table (4) Results of testing the autocorrelation problem between the residuals for Iraq variables

Breusch-Godfrey Serial Correlation LM Test			
F-statistic	2.649153	Prob . F(1,42)	0.1111
Obs* R-squared	3.085298	Prob. Chi-Square	0.0790

Source: Prepared by the researchers based on the outputs 12.EViews.

-3Testing the problem of non-constancy of variance:

It is clear from Table (5) that the statistical value of the (Breusch-Pagan-Godfrey) test reached (1.26) with a level of significance greater than (5%). Therefore, we accept the null hypothesis which indicates that there is no problem of consistency of variance in the estimated model in Iraq.

Table (5) Results of testing the problem of non-stationarity of variance for Iraq variables

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	1.267003	Prob . F(8,43)	0.2857
Obs* R-squared	9.919322	Prob. Chi-Square	0.2707

Source: Prepared by the researchers based on the outputs 12.EViews.

2-2-3 Estimating the impact of the current account deficit on Iraq's budget deficit for the period (1995-2021).

First: Unit root test: To ensure the stability of the time series and that it is free of unit roots, the Phillips-Perron (PP) test was used, and the results were as follows: As it was shown from the results of the unit root test for the dependent variable and the independent variables, it was found that the variables are stable at the first difference in both the test (Unit Root Test Table (PP)) and that they are stable at the first difference whether there is a secant (With Constant) or a secant and a general trend With Constant. & Trend) and this is based on a Prob value of less than (5%) which indicates the stationarity of the variables, and this indicates the possibility of applying the ARDL model.

Table (6): Results of the Phillips-Perron unit root test for the study variables

UNIT ROOT TEST TABLE (PP)							
Null Hypotheis is: the variable has a unit root At Level							
		Y2	X1	X2	X3	X4	X5
With Constant	t-Statistic	-3.0782	-3.6820	-11.1629	-1.7738	-1.9044	-14.9393
	Prob.	**0.0343**	**0.0072**	**0.0000**	**0.3892**	**0.3279**	**0.0000**
		**	***	***	n0	n0	***
With Constant & Trend	t-Statistic	-3.0230	-3.6346	-16.8937	-1.7988	-2.9663	-15.2621
	Prob.	**0.1358**	**0.0363**	**0.0000**	**0.6913**	**0.1512**	**0.0000**
		n0	**	***	n0	n0	***
Without Constant & Trend	t-Statistic	-3.1543	-3.7606	-9.1766	-0.5467	-0.6982	-9.7427
	Prob.	**0.0022**	**0.0003**	**0.0000**	**0.4756**	**0.4097**	**0.0000**
		***	***	***	n0	n0	***
At First Difference							
		d(Y2)	d(X1)	d(X2)	d(X3)	d(X4)	d(X5)
With Constant	t-Statistic	-7.1342	-9.9578	-7.1927	-7.1077	-7.4466	-7.5777
	Prob.	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
		***	***	***	***	***	***
With Constant & Trend	t-Statistic	-7.3050	-9.9756	-7.4758	-7.0927	-7.3350	-8.3245
	Prob.	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
		***	***	***	***	***	***
Without Constant & Trend	t-Statistic	-7.1414	-10.0425	-7.1440	-7.1426	-7.5201	-7.3205
	Prob.	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**
		***	***	***	***	***	***
Notes:(*) Significant at the 10%; (**) Significant at the 5%; (***)Significant at the 1% and (no) Not Significant.							

Source: Prepared by the researchers based on the statistical program (12EViews)

Based on the results of the above test regarding the unit root of the study variables, it becomes clear to us the following:

The time series of variables are stable at the constant level with a significance level of (1% and 5%), respectively, except for (X4, X3), which are not stable at the level.

The time series of variables is stable at a constant level and trend at a significance level (10% and 5%), respectively, except for the variables that were unstable (X4, X3, Y2).

The time series for all variables is stable at the level with no constant and trend at the level of significance (1% and 5%), except for the variables (X4, X3) which were unstable at the level.

After taking the first difference, all variables stabilized and were integrated with a constant, a constant, and a trend, and without a constant and a general trend, at a significance level (1%). This stability indicates the possibility of applying the (ARDL) model.

Third: Determine the optimal slowdown periods:

There are several criteria used to determine the optimal deceleration time for a model: It is used for models that eliminate problems of autocorrelation between residues, and relying on the Schwarz criterion, which is the model that will be chosen when applying the ARDL method is (1,1,0,1,1,0), which provides the lowest value for this. The criterion when determining the length of delay. The following figure shows the deceleration durations:
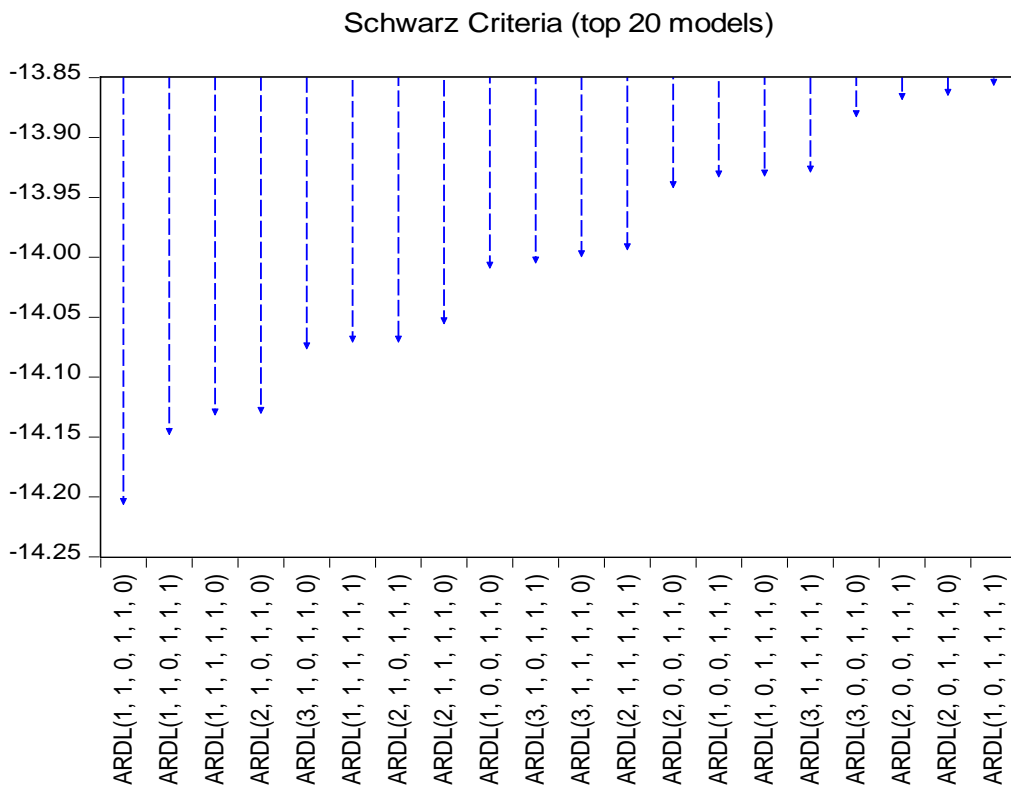
Schwarz Criteria (top 20 models)

Figure (3) Results of deceleration durations according to the Schwarz criterion method for the model in Iraq

Source: Prepared by the researchers based on the 12.EViews software.

Fourth: Results of the joint integration test in Iraq:

Table (7) shows the Bound Test Approach used to detect cointegration relationships between model variables in Argentina. We note from the test results that the calculated (F) value reached (4.97), which is greater than the tabulated (F) value, at the lower and upper limits, and at a level of significance (5%). This indicates rejection of the null hypothesis and acceptance of the alternative hypothesis. Which stipulates the existence of cointegration relationships (a long-term relationship between the variables of the dependent variable model and the independent variables) in Iraq.

Table (7) Co-integration test for Iraq model variables

(Bound Test Approach)				
Test Stat	Value	Sign.	I(0)	I(1)
F-stat	6.469	10%	2.75	3.79
K	5	5%	3.12	4.25
		2.5%	3.49	4.67
		1%	3.93	5.23

Source: Prepared by the researchers based on 12.EViews

Fifth: Test results for the estimated parameters of the short- and long-term relationship and error correction (ECM) for Iraq variables.

Table (8): Results of estimating the ARDL model for Iraq

Dependent Variable: d(Y)				
Method: ARDL				
Sample : 199 5S1 2021 S2				
Included observations: 53				
Selected Model: ARDL (1,1,0,1,1,0)				
Short Run Coeffcients				
Variable	Coefficient	Std. Error	t- Statistic	Prob.
C	8.01E-05	6.91E-05	1.159002	0.2530
@TREND	-5.54E-06	3.06E-06	-1.808031	0.0778
Y2(-1)*	-0.376573	0.115228	-3.268069	0.0022
X1(-1)	-3.11E-06	3.41E-06	-0.912384	0.3668
X2**	-1.20E-07	5.15E-07	-0.232508	0.8173
X3(-1)	0.376568	0.115228	3.268035	0.0022
X4(-1)	-0.376565	0.115228	-3.268011	0.0022
X5**	-5.08E-08	5.52E-08	-0.920519	0.3626
D(X1)	-1.560522	3.55E-06	-4.392314	0.0001
D(X3)	0.999980	6.19E-06	161471.4	0.0000
D(X4)	-0.999981	5.80E-06	-172423.9	0.0000
EC = Y2 - (-0.0000*X1 -0.0000*X2 + 1.0000*X3 -1.0000*X4 -0.0000*X5)				
Long Run Coeffcients				
Variable	Coefficient	Std. Error	t- Statistic	Prob.
X1	-8.27E-06	9.09E-06	-0.909787	0.3681
X2	-3.18E-07	1.37E-06	-0.231822	0.8178
X3	0.999988	1.10E-05	91197.74	0.0000
X4	-0.999979	1.50E-05	-66470.46	0.0000
X5	-1.35E-07	1.48E-07	-0.908810	0.3686
C	-8.27E-06	9.09E-06	-0.909787	0.3681
ECM	-0.376	0.099469	-3.785935	0.00005
R^2	0.93	*Adj R^2*		0.90
F-statistic	1.83	Prob . (F - statistic)		0.00000
Notes:(*) Significant at the 10%; (**) Significant at the 5%; (***)Significant at the 1% and (no) Not Significant.				

Source: Prepared by the researchers based on the outputs 12.EViews.

Table (8) shows the results of estimation in the short and long terms and the error correction parameter as follows:

1- Results of the short-term relationship: The error correction coefficient test was used, which predicts the model's return to a state of equilibrium, as its value reached (-0.3765) with a significance level of less than (1%), meaning that the current account deficit will take approximately two years and seven months to return to its value. Long-run equilibrium after the effects of shocks on the budget deficit1/0.3765=2.65 ≅2.7 year

A- Current account deficit: There is an inverse and significant relationship between the current account deficit and the general budget deficit. This means that an increase in the current account deficit by (1%) leads to a decrease in the general budget deficit by (-1.65%) at a significance level of (1%). .

B- Public revenues: There is a direct and significant relationship between public revenues and the general budget deficit. This means that an increase in public revenues by (1%) leads to an increase in the general budget deficit by (0.99%) at a significance level of (1%).

T- Public expenditures: There is an inverse and significant relationship between public expenditures and the public budget deficit. This means that an increase in public expenditures by (1%) leads to an increase in the public budget deficit by (-0.99%) at a significance level of (1%).

The value of R2 was (93%), meaning that the changes that occur in the model in Argentina are explained by the independent variables included in the model, and the remaining (7%) are explained by other variables outside the model or may be due to the random variable.

The calculated value of (F) was approximately (1.83) and at a significance level of less than (1%), which indicates the significance of the model as a whole.

2- Long-term relationship results:

Current account deficit: There is no significant relationship between the current account deficit and the general budget deficit at a significant level (5%).

Inflation: There is no significant relationship between inflation and the general budget deficit at a significant level (5%).

Public revenues: There is a direct and significant relationship between public revenues and the general budget deficit. This means that an increase in public revenues by (1%) leads to an increase in the general budget deficit by (0.99%) at a significance level of (1%).

Public expenditures: There is an inverse and significant relationship between public expenditures and the public budget deficit. This means that an increase in public expenditures by (1%) leads to an increase in the public budget deficit by (-0.99%) at a significance level of (1%).

Total public debt: There is no significant relationship between the total public debt and the general budget deficit at a significant level (5%)

Sixth: Post-estimation tests of the model:

1- Testing the normal distribution of random errors:

It is clear from Figure (4) that the statistical value of the (JB) test reached (4.34) with a level of significance greater than (5%). Accordingly, we accept the null hypothesis which indicates that the random errors are distributed normally in the model estimated in Iraq, with an average equal to (-1.57). With a standard deviation of (1.49).
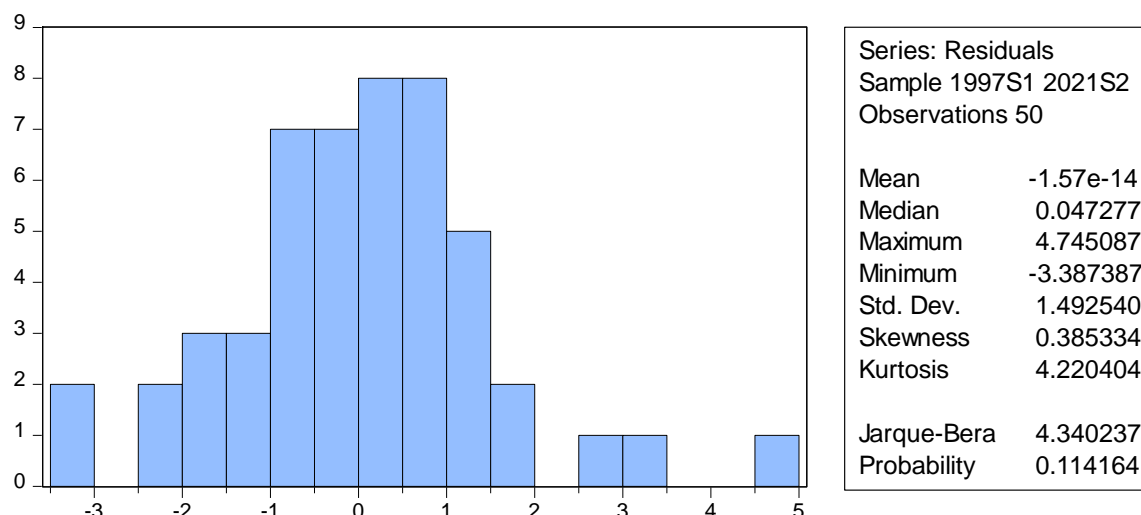
| Series: Residuals |
| Sample 1997S1 2021S2 |
| Observations 50 |

Mean	-1.57e-14
Median	0.047277
Maximum	4.745087
Minimum	-3.387387
Std. Dev.	1.492540
Skewness	0.385334
Kurtosis	4.220404
Jarque-Bera	4.340237
Probability	0.114164

Figure (4) Testing the normal distribution of random errors of the model in Iraq

Source: Prepared by the researcher based on the outputs 12.EViews.

2- Testing the problem of autocorrelation between the residuals:

It is clear from Table (9) that the value of the Breusch-Godfrey test statistic reached (1.819) with a level of significance greater than (5%). Accordingly, we accept the null hypothesis which indicates that there is no problem of autocorrelation among the residuals in the model estimated in Iraq.

Table (9) Results of testing the autocorrelation problem between the residuals for Iraq variables

Breusch-Godfrey Serial Correlation LM Test			
F-statistic	1.819003	Prob . F(2,40)	0.1753
Obs* R-squared	4.418494	Prob. Chi-Square	0.1098

Source: Prepared by the researchers based on the outputs 12.EViews.

3- Testing the problem of non-constancy of variance:

It is clear from Table (10) that the statistical value of the (Breusch-Pagan-Godfrey) test reached (1.170) with a level of significance greater than (5%). Therefore, we accept the null hypothesis which indicates that there is no problem of consistency of variance in the estimated model in Iraq.

Table (10) Results of testing the problem of non-stationarity of variance for Iraq variables

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	1.170472	Prob . F(9,43)	0.3377
Obs* R-squared	10.42912	Prob. Chi-Square	0.3169

Source: Prepared by the researchers based on the outputs 12.EViews.

Conclusions and suggestions

First: Conclusions:

-1A high percentage of public debt means directing available economic resources to fill the public debt service, which negatively affects the course of the economic development process and the implementation of investment programs.Resorting to public debt as a means of financing the budget deficit would create additional financial burdens on the general budget as a result of increased debt service burdens, as well as a growing budget deficit as a result of increased public spending.

-2There is an inverse relationship between the general budget deficit and the current account deficit in the short term. This means that an increase in the general budget deficit by (1%) leads to a decrease in the current account deficit by (-0.678%) at a significance level of (1%).

-3The value of R2 was (53%), meaning that the changes that occur in the model in Argentina are explained by the independent variables included in the model, and the remaining (47%) are explained by other variables outside the model or may be due to the random variable.

-4It inversely and significantly affects the current account deficit, which means that an increase in inflation by (1%) leads to a decrease in the current account deficit by (0.176%) at a significant level (5% .(.

Second: Proposals:

-1Diversifying sources of public revenues, reducing dependence on oil exports as a main source of revenues, and addressing high rates of public budget and current account deficits, in addition to diversifying exports and supporting the gross domestic product by encouraging productive sectors and obligating the banking sector to support productive activities, local production capabilities, and export-oriented industries.

  -2 The necessity of adopting a clear and precise policy for public expenditures that leads to working on the optimal exploitation of financial resources in order to avoid the occurrence of a deficit in the general budget, as well as the necessity of paying attention to improving public revenues, by working to diversify sources of income and focusing on productivity, efficient use of capital, and work. To diversify the production base in order to reduce the Iraqi economy's dependence on imports from the outside world.

-3 Reducing unnecessary imports to reduce the current account deficit, working to develop and diversify exports that can contribute to increasing economic growth, and working for the government to adopt a strategic partnership decision between the public and private sectors to offer stalled factories for local investment.

-4 Working to diversify the structure of the Iraqi economy by developing the productive economic sectors that make up the Iraqi economy, such as the agricultural and industrial sectors, in order to avoid the deficit in the trade balance on the one hand and the deficit in the general budget on the other hand, and to increase economic growth and avoid the effects of shocks that it may be exposed to, whether as a result of its dependence on oil revenues. Or is it affected by international economic and political problems?

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