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# THE IMPACT OF ECONOMIC REFORM POLICIES ON IRAQ'S OVERALL BALANCE SHEET

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**Abstract**
The role of the government in formulating economic reform policies is to achieve macroeconomic balance, which is reflected in economic diversification, increasing non-oil exports, rationalizing government expenditures, and modernizing the investment climate. This study aims to analyze the impact of economic reform policies on Iraq's overall balance from 2000 to 2023 by determining the effect of government consumption, total investment, government expenditure, and net exports. An inductive analysis method was used to test its impact on the overall weight, and the study's results showed a lack of significance. Government consumption affects the overall equilibrium, while total investment, government expenditure, and net exports significantly affect the overall equilibrium. This study provides an analytical vision of the success of Iraq's economic reforms in achieving overall balance. It can help formulate more effective and sustainable economic reform policies suitable for Iraq's economic challenges.

**Keywords**: Economic reform policies, fiscal policies, monetary policies, macro equilibrium.

## Introduction

The overall equilibrium of any economy is an essential pillar for achieving stable and sustainable growth. The overall equilibrium of the economy refers to the stable state in which total demand equals total supply through economic reform policy tools, thereby achieving price stability and reducing unemployment. Despite the efforts made, Iraq's economic reform policies still need to make further efforts to achieve balance by promoting economic diversification, improving efficiency, increasing non-oil exports, improving government spending and developing an investment environment. Due to growing fiscal pressures, fiscal deficit challenges and oil price volatility, the Iraqi government has begun implementing economic reforms to improve resource management, diversify revenue sources and increase investment in non-oil sectors. These reforms include fiscal and monetary policies aimed at reducing dependence on oil exports, increasing non-oil revenues and stimulating the role of the private sector in promoting development.

**First: The problem of the study:**

The Iraqi economy faces many challenges in achieving macroeconomic balance due to its heavy reliance on oil exports and exposure to global price fluctuations. Despite efforts to implement reform policies to improve economic stability and achieve macroeconomic balance, many factors hinder the achievement of this goal, such as B. Wasteful government spending, increased consumption, weak non-oil exports, increased imports, and weak foreign investment. The main issue of this study is to analyze the impact of economic reform policies on Iraq's achievement of macroeconomic balance.

**Second: The importance of research:**

The importance of this study lies in determining the impact of economic reform policies on the overall balance sheet. The following points illustrate the importance of this study:

1. To determine the impact of economic reform policies on achieving macroeconomic balance in Iraq and its effectiveness in eliminating economic imbalances.
2. To determine the impact of factors that affect the overall balance sheet, such as B. Total government expenditure, foreign investment, total consumption, total exports and imports.
3. To make recommendations to promote macroeconomic balance and ensure sustainable economic development.

**Third: Research Objectives**

The purpose of this study is to examine the economic situation during the period (2000-2022):

1. Identifying the main factors of Iraq's economic reform policy.
2. Analysis of Iraq's economic reform policy from 2000 to 2022.
3. Evaluating the impact of the main factors on the overall balance sheet.

**Research Form:**

The model uses the general equilibrium variable represented by GDP as the dependent variable and the economic reform policy variables as the independent variables (total consumption, total investment, government expenditure, exports, imports), as shown in equation (1):

GDP=TCG+ TINV+ EXP_G+ (EXPO-IMPO) (1)

GDP=GDP
TCG = Total Government Consumption
TINV=Total Investment
EXP_G = (oil and non-oil) government spending
EXPO=Total Exports
IMPO=Total Imports
Net Exports = (EXPO-IMPO)

**Fourth: Research hypotheses:**

**Hypothesis one**: Total consumption significantly impacts GDP at a significance level 0.05.
**Hypothesis II**: Total investment significantly impacts GDP at a significance level 0.05.
**Hypothesis three**: Government spending has a significant impact on GDP at 0.05.
**Fourth hypothesis**: Total exports significantly impact GDP at a significance level 0.05.
**Hypothesis five**: The total imports significantly impact GDP at 0.05.

**Fifth: Research Methodology**

This study used an inductive analysis to collect and analyze data by examining literature, government reports, and existing economic indicators. In addition, an economic model was used to analyze the data presented in the ARDL time-lag model and estimate the impact of financial reform policies on Iraq's overall balance.

**The first topic: the theoretical side**

1. **The concept of economic reform policies:**

Economic reform policies include economic liberalization, deregulation and improving the investment climate (by simplifying procedures, stabilizing laws, improving the exchange rate and introducing supply and demand mechanisms to determine prices). (Capson, Chehayeb, 2024).

**1.1. Total government consumption**

It is a subset of government consumption that includes all levels of government within a broad definition that includes goods and services provided by the government (Makid, Amoush, 2014).

**1.2. Total government investment**

It is considered an essential source of capital inflow and increase in foreign exchange reserves, playing a role in economic development and exchange rate stability (Ismail et al.,2022.).

**1.3 Total government expenditure**

Public expenditure reflects the size of governments in different countries. The significant differences in this indicator highlight the diversity of approaches to providing public goods and services and ensuring social protection, not necessarily differences in the resources spent (Ortiz, Rose, 2016).

**4.1.Net exports**

Countercyclical net exports are a key feature of international data. This property suggests that countries borrow from international capital markets during booms and repay during recessions, contradicting the expectations of homogeneity theory (Raffo, 2008).

**2. Total balance**

The market for goods and services is in equilibrium with the money market. Therefore, macroeconomic equilibrium is achieved when both sectors are in orderly equilibrium.

**The second topic: Presentation and analysis of results: Analyze the relationships between study variables**

**First: Testing the stability of variables**

The stability of the studied variables was tested using the Eviews.12 program. The Augmented Dickey-Fuller test (ADF) was performed to determine the stability. The results are shown in Table (1).

Table 1: Dickie-Fuller's Extended Root Test

| Variable | Level | | | The first difference | | |
|---|---|---|---|---|---|---|
| | Non | A | B | Non | A | B |
| GDP (GDP) | 0.691 | -0.8896 | -2.389 | -4.215* | -4.815* | -4.707* |
| Total government consumption (TCG) | 1.965 | 1.7897 | -2.495 | -2.459* | -3.148* | -3.317 |
| Total Investment (TINV) | 0.0813 | -1.404 | -3.566 | -4.096* | -4.188* | -4.069* |
| Government Spending (EXP_G) | 1.062 | -0.927 | -2.499 | -4.585* | -5.203* | -5.036* |
| Total Exports (EXPO) | -0.0295 | -2.047 | -1.738 | -3.458* | -3.397* | -3.499 |
| Total Imports (IMPO) | 0.528 | -2.855 | -3.542 | -4.920 | -5.021* | -4.886* |
| Net Exports (EXPO-IMPO) | 0.316 | -3.650* | -4.693* | - | - | - |

=A means the regression contains only a second line.
=B means the regression includes a second line and a general direction.
=None means the gradient has no second line and no general direction.
* Means the morale level is 5%.

Table (1) shows that the net export chain is stable at the origin, both for the tangent and the general trend. At the same time, the rest of the time series are unstable at this level. They contain a unity root at the 5% significance level, while the time series remains stable after the first difference. The study found that the original chain is stable at the 5% significance level, both for the tangent and the general trend, except for the total exports, which are unstable with the trend and the classification trend.

1. **Determination of rank**

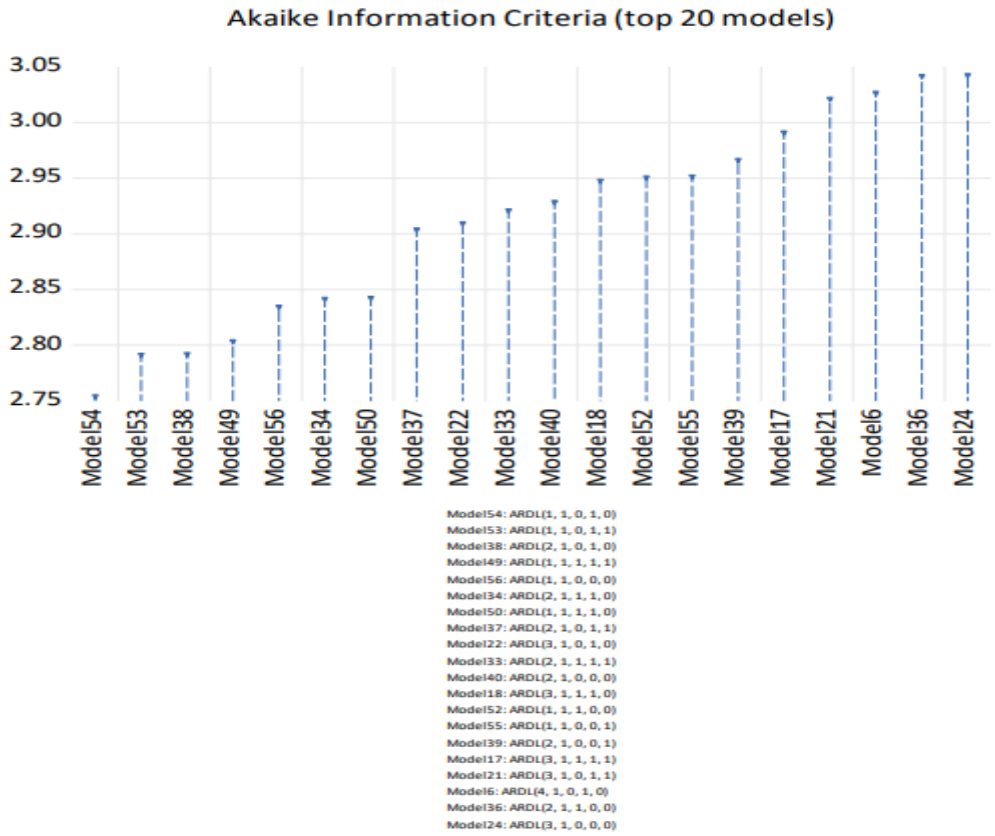


**Figure 1: Model Grade Selection Criteria**

2. **Correlation Test (Co-integration):**

Table 2 shows the results of the limit of integration test to determine the long-run relationship between the variables. The test was conducted using a threshold test and different significance scales of 1%, 2.5%, and 10%. This was done by comparing the statistical values (F-statistic). The F-statistic test value for the base hypothesis was 26.674, above the upper limit. The null hypothesis was rejected, and the alternative hypothesis was accepted. This means a long-run relationship exists between the variables included in the model.

**Table 2: F Bound Test**

| Test Statistic | Value | Significant | I(1) | I(0) |
|---|---|---|---|---|
| F-statistic | 26.674 | 10% | 3.09 | 2.2 |
| k | 4 | 5% | 3.49 | 2.56 |
| | | 2.50% | 3.87 | 2.88 |
| | | 1% | 4.37 | 3.29 |

**3. Long-term relationship coefficient estimation test:**

Whether there is a long-term relationship between the independent and dependent variables must be determined based on the general integration model (ARDL). Please refer to Tables

(3) and (4), which show the coefficients of the long-term relationship. In addition, the commissioning model (ECM) takes the form of cointegration. Let's compare the coefficient values of the independent variables with those of the dependent variable and the corresponding statistical significance values. We will find that they all have a long-term relationship that is strong and ethical in the depicted relationship. In the long run, changes in the independent variables have a lasting impact on the dependent variable, which is logically straightforward and economical.

**Table 3：Long-run relationship Equilibrium model： ARDL (1,1,0,1,0) Dependent variable Macroeconomic equilibrium**

| Long run coefficients (ARDL) | | | | |
|---|---|---|---|---|
| **Prob.** | **t-Statistic** | **Std. Error** | **Coefficient** | **Variable** |
| 0.0069 | 3.486885 | 0.668742 | 2.331825 | TC |
| 0.8985 | 0.131168 | 0.427786 | 0.056112 | TINV |
| 0.0003 | 5.707228 | 2.458485 | 14.03113 | EXP_G |
| 0.0038 | 3.876017 | 4.76E-05 | 0.000185 | IMPO_EXPO |
| 0.0002 | -6.153484 | 14.48634 | -89.14144 | C |
| EC = GDP - (2.3318*LLTC + 0.0561*LTINV + 14.0311*LEXP_G + 0.0002*IMPO_EXPO - 89.1414) | | | | |

Table (3) shows that estimating the comprehensive long-term relationship in the ARDL model (1,1,0,1,0) with macroeconomic equilibrium as the dependent variable is not significant. For the variables in the model, total investment has no significant effect, with a statistical value of 0.131 and a p-value of (p = 0.8985), which is above the significance level (0.05). In contrast, total government consumption positively impacts macroeconomic equilibrium, with a t-value of 3.487 and a p-value of (p = 0.0069).

This value is lower than the moral level (0.05). The table also shows that the coefficient related to government expenditure is significantly positively correlated with the overall balance, with a numerical coefficient of 14.031, a statistical value of t of (5.707), and a p-value of (0.0003), which is lower than the significance level (0.05). On the other hand, the coefficient of net exports (0.000185) indicates that an increase in net exports related to the overall balance will have a positive impact on the overall balance in the long run, as the statistical significance level is equal to (0.0038), which is lower than the significance level (0.05).

**Table 4: Identification of the Combined Debugging Model (ECM)**

| **Prob.** | **t-Statistic** | **Std. Error** | **Coefficient** | **Variable** |
|---|---|---|---|---|
| 0.1107 | 1.825165 | 0.237011 | 0.432584 | D(TC) |
| 0.0610 | 2.230083 | 0.281162 | 0.627014 | D(TINV) |
| 0.0003 | 6.725895 | 1.136022 | 7.640761 | D(EXP_G) |
| 0.0000 | 13.13514 | 9.90E-06 | 0.000130 | D(IMPO_EXPO) |
| 0.0000 | -9.929049 | 0.094781 | -0.941086 | CointEq(-1)* |
| EC = GDP - (2.3318*LLTC + 0.0561*LTINV + 14.0311*LEXP_G + 0.0002*IMPO_EXPO - 89.1414) | | | | |

Cointegration equation:

D(GDP) = -0.941085595615*(GDP (-1) - (2.16204176*LTC (-1) + 0.16824351*TINV (-1) + 15.52426612*EXP_G (-1) + 0.00017623*IMPO_EXPO (-1) - 99.97137275))

The results of Table (4) show the short-term effects of the variables in the modified model, indicating that total consumption has no significant impact on macroeconomic balance (p = 0.1107 > 0.05). In contrast, government expenditure has a significant effect on the macroeconomic balance (p = 0.0610 < 0.1), and total government expenditure has a significant impact on the macroeconomic balance (p = 0.0003 < 0.05). Net exports have a positive and significant impact on macroeconomic equilibrium (p = 0.0000 <, and the coefficient CointEq(-1) is negative and significant (p = 0.0000 < 0.05), indicating that there are substantial long-term effects between the variables, thus promoting standard complementarity between the variables.

**Table 5: Test of normal residual distribution**

| audition | Standard | Value | Probability |
|---|---|---|---|
| Nature of the residues | Jarque-Bera | 0.615 | 0.736 |

The results show that the residuals are normally distributed according to the Jarque-Bera test.

**Table 6: Serial automatic correlation tests of residues using Broich's method**

| Value | Test |
|---|---|
| 0.0391 | F-statistic |
| 0.262 | Obs*R-squared |
| 0.962 | Prob. F(2,5) |
| 0.877 | Prob. Chi-Square (2) |

Table (6) shows the results of the auto-relay test using the Bruich method. This test detects whether there is an auto sequence in the model. From the table, it can be seen that if we assume the test probability value of Prob. F(2, 5) is 0.962 and is more significant than (5%), meaning the residues have no auto sequence.

**Table 7: Variance Variation Test Using Arch Method**

| Test | Value |
|---|---|
| F-statistic | 0.098 |
| Obs*R-squared | 0.111 |
| Prob. F (1,14) | 0.7588 |
| Prob. Chi-Square (1) | 0.7386 |

Table (7) shows the performance of the variance variation test using the ARCH method. This test is used to test the variance change over time, where the value of F equals (0.098), the value of Prob. F is equal to (0.7588) and is more significant than (5%), so there is no problem of variance homogeneity at the significance level (0.05). In addition, the results of the coefficient of R square Obs and the probability coefficient are also shown in the table. Kai Square: These results are used to evaluate the model quality used in the test. Since the p-value of the chi-square coefficient is (0.7386) and is greater than the significance level (5%), the model does not have the problem of variance instability.

**Model stability test**

Use CUMSUM to accumulate the values to ensure that the dependent variables and the entire model do not change structurally.

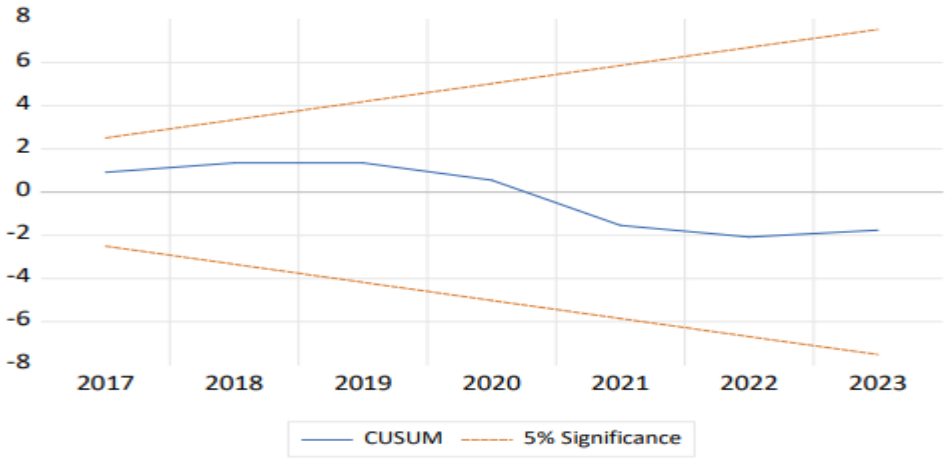


**Figure 2 CUMSUM test results**

As can be seen from Figure (2), the cumulative sum test of the residuals shows a linear mean within the critical region, indicating that the model is stable at the 5% significance level.

**Conclusions:**

1. Total government consumption has no significant effect on the overall balance at a morale level of 5%.
2. Total investment has a more significant impact on the overall economic balance at 5%.
3. Total government expenditure significantly impacts the overall economic balance at 5%.
4. Net exports have a more significant impact on the overall balance at 5%.

**Recommendations:**

The study made important recommendations, including:

1. Reassess government spending policies: Total government consumption does not significantly impact the balance sheet.
2. Stimulate investment and improve the overall balance sheet. Given the critical impact of total investment on the overall balance sheet, improving the investment environment by incentivizing investors, simplifying administrative procedures, and ensuring the stability of economic legislation to attract local and foreign investment is necessary.
3. Improve the efficiency of government spending: Since total government spending significantly impacts the overall balance sheet, a more stringent fiscal policy is necessary to ensure that spending is targeted at sectors with higher economic returns, such as education, health, and infrastructure, thereby improving productivity and economic growth.
4. Strengthen the role of foreign trade: Since net exports significantly affect the overall balance, it is recommended to support non-oil exports through the development of the industrial and

agricultural sectors, improve the competitiveness of domestic products, and reduce dependence on imports, thereby helping to reduce the trade deficit.

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