

The Effect of Private and Public Consumption on Economic Exposure in Iraq during the Period (2004-2018) by Using (ARDL) Model

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After 2003, Iraq began facing a new challenge in resuming the export of crude oil to international markets after stopping it for more than a decade. It was possible to use the proceeds of oil exports to rebuild Iraq's economy, which was destroyed by economic sanctions, however Iraq has failed to manage these huge revenues and directed them towards reviving various productive activities and address imbalances in the production structure. Iraq has taken expansionary economic measures that have led to increased income levels and consequently increased consumption at the expense of saving. These expansionary measures were not accompanied by supportive measures to increase the gross domestic product, which was further affected as a result of deteriorating security and the armed conflict witnessed by Iraq witnessed during the period of this study. This, in turn, has led to the decline of most industries and the closure of many local enterprises and companies, which has caused an increase in the volume of imports meeting the surplus of domestic demand, that is, increasing economic exposure. This study aims to shed light on the relationship between private and public consumption on the one hand and Iraq's economic exposure on the other. According to the hypothesis, there is a positive relationship between private and public consumption and economic exposure. In order to determine the factors affecting this phenomenon, a number of macroeconomic indicators were used in addition to using econometric methods to estimate the magnitude of impact through (ARDL) model. The study concludes that the effect of public consumption is greater than private consumption on economic exposure. The study recommends that the imbalance in gross domestic

product should be addressed in order to address the imbalance in the structure of exports and imports.

Keywords: *Private consumption, public consumption. Economic Exposure, Co-integration, (ARDL) Model.*

Introduction

The areas of aggregate domestic spending clearly affect numerous macroeconomic variables as well as other international economic variables. The rise in aggregate spending will increase consumption, which in turn will stimulate the income and product cycle. However, when increasing total spending does not stimulate the income and product cycle, this will be reflected in the increase of imports and resulting imbalances in the structure of production and imports, weakening the structure of the local economy and a decline in the effectiveness of monetary and financial markets in conducting commercial transactions of local economic entities.

After the tear of 2004, Iraq pursued expansionary economic policies with the aim of supporting the per capita share of national income, which led to an increase in total domestic spending through higher private and public consumption due to the weak elasticity of the production system, imports increased in order to compensate for the shortfall in aggregate supply, which led to a series of imbalances in products, exports and imports.

The study problem is embodied in the major impact of private and public consumption on the economic exposure indicator in a way that led to the fragility and weakness of the structure of the local economy in the face of local and international crises and shocks.

The importance of the study lies in the positive relationship between private and public consumption and economic exposure in a way that causes the local economy to face multiple risks due to weak management resources with regards to directing economic and financial resources, and as a result a decline in most indicators of the Iraqi economy.

The study aims to shed light on the relationship between private and public consumption and economic exposure in Iraq.

According to the study hypothesis, there is a positive relationship between private and public consumption and economic exposure, and this positive relationship reflects the imbalance in the Iraqi economy after 2004.

Literature Review

The study of (Herman-Josef Hansen, 1996), which examined the relationship between interest rate and consumption, concluded that (60%) of private consumption directly affects GDP and there is a weak relationship between interest rate and consumption in Germany.

In order to determine the factors that pushed for increasing household debt in developed economies and led to reduced saving, a study by (Angel Estrada et. al. , 2014) found that total consumption enhanced by the accumulation of household debt and precautionary savings has resulted due to the prevalence of uncertainty in the labour markets, which has had a negative effect on household decisions, especially during the period (2007-2009). Robert-Paul Berben and Teunis Brosens' study (2005) used data from an OECD country between 1983 and 2003 to identify the impact of government debt on private consumption. The study concluded that countries with high government debt, the effect of displacement abroad on private consumption is limited, while private consumption is inflexible regarding changes in government debt in countries with low government debt. This results in low effectiveness of fiscal policy in achieving economic stability. A study by (Jose Alves and Antonio Afonso, 2019) sought to assess the relationship between tax and income inequality and consumption in OECD countries during 1980-2015. The study concluded that social security affects gross domestic product by (9.5%-11.8%) with regards to long-term consumption, while social security contributes (15.51%) to gross domestic product to reduce inequality in incomes. A research paper by (Leo Michelis and George K. Zestos, 2004) examined the causal relationship between exports, imports and the GDP of six countries in the European Union. The paper concluded that there is a strong causal relation between the foreign sector to the GDP of all sample countries, while there is also a bi-directional causal relationship between GDP to exports and imports with the exception of the Netherlands. Wong and Chan, 2003), examined the sources of growth in China using multiple regression analysis to estimate the elasticity of growth for various components of income (consumption, investment, and exports). The study found that domestic consumption is the main driving force for economic growth in China, while domestic investment provides an additional boost to further growth.

In this study, the knowledge gap lies in the relationship between private and public consumption in economic exposure, as developing economies are characterised by a weakness in the structures of productive activities, which is reflected in weak trade and output. Hence with increasing consumption rates and lower savings rates, the economic exposure index directly pressures decline from the values of this indicator, which creates a direct relationship between consumption and economic exposure while working to deepen the imbalance in local production structures.

Private and Public Consumption and Economic Exposure- A Conceptual Approach

Aggregate Consumption

Consumption represents a stream of cash spending to obtain goods and services that provide a certain level of satisfaction at certain levels of income.

Individuals, households, and economic entities of public or private ownership seek to deduct a portion of their cash income to meet their requirements for goods and services offered in the markets (William H. Branson, 1998, p:183-212).

According to Keynes, individuals have a psychological motivation that motivates them to deduct a portion of their income to meet these daily transactions (marginal propensity to consume) (Jesu's FernándeZ-Villaverde and Dirk Krueger, 2007, p.552). Likewise, the marginal propensity to consume causes many consumers to postpone consumption to maximise future benefits, which has an impact on immediate consumption (Christiana Osei Bonsu and Paul-Francois Muzindutsi, 2017, p.741).

Consumption is divided according to economic entities or units into private and public segments (government purchases) (Lenka V. Půlpánová, 2013, p:16). According to Keynes, private and public consumption are determined by subjective (internal) and objective (external) factors as follows: (M. Maria John Kennedy, 2013, p:125-127).

Subjective Factors (Psychological)

These factors clearly affect the determination of the function of consumption, the marginal propensity to consume and average consumption. Keynes has made it clear that there are factors that limit consumer spending such as hedging, investing, independence, bragging and greed.

The level of spending for Government, Institutions and Companies and their savings are mainly due to motives related to investment, liquidity and financial wisdom.

Objective Factors

Profit and loss, interest rate, fiscal policy, real income, expectations, income distribution, liquid assets, tastes, credit terms, impact of stock market, social security and demographic factors are amongst those issues that fundamentally affect consumption.

Economic Exposure

All world economies influence each other through the exchange of production factors. Capital is the most important factor in this exchange due to multiple effects as a monetary stream flowing into or out of the country (Tamim Bayoumi et. al. , 2014, P:1-44).

The extent of the domestic market's stability for a particular country can be demonstrated by the extent of its ability to absorb these multiple effects of capital, making the local economy more robust and financially stable, thus becoming flexible in facing the effects of internal and external shocks.

Economic exposure indicator (the ratio of trade to product) (Nancy Birdsall & Amar Hamoudi, 2007, p:3-32) is one of the indicators that provides an idea of the economy's strength and stability. Therefore, when exports (goods and services) are high, diversified and have a competitive advantage, the value of economic exposure decreases. Likewise, the economic exposure indicator reveals the extent of distortions in the production of goods and services both locally and abroad through exports and imports, as well as the degree of economic dependence, especially in developing countries. (Hajir Adnan Zaki Amin, 2008, p.21).

The Relationship between Aggregate Consumption and Economic Exposure

Aggregate consumption is one of the most important items of aggregate spending, as it stimulates increased income through the income and product cycle, and largely determines the quantities that can be exported (goods and services) in excess of domestic aggregate consumption.

The failure of the economy to produce goods and services to meet the needs of citizens means that imports become the alternative option for the shortfall in domestic production as a result of unjustified rise in the marginal propensity to consume and consequent imbalances in the local economy which are reflected in the high value of the economic exposure indicator.

The Evolution and Role of Consumption Trends in Export and Import Activities

Aggregate Consumption

After 2004, aggregate spending in Iraq became consumption-driven due to increased oil revenue and higher income. The general consumption trend of spending without interest in investment, financial and administrative corruption and external crises have caused a decline in public and private investments, weakening the local economy and economic activities, as well as deepening structural imbalances in all sectors of the national economy. Also, the major

neglect of factories and public facilities and lack of support for the private sector have led to huge losses in the Iraqi economy in the context of what is known as opportunity cost.

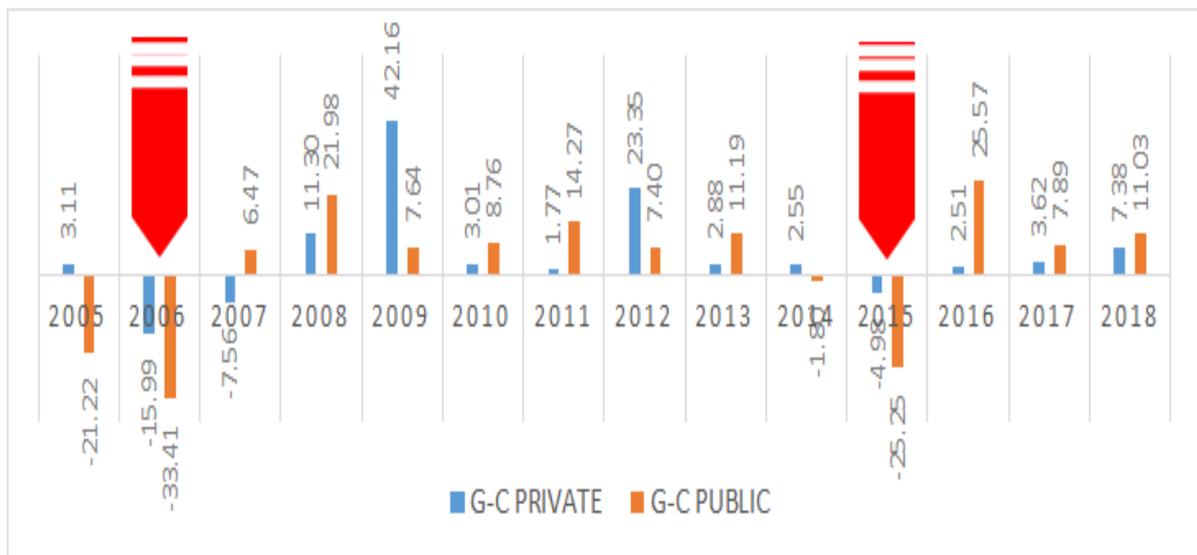
The compound growth rate of private consumption amounted to (4.5%) and public consumption (1.3%), which means that consumption during the study period has grown significantly as a result of expansionary economic policies pursued by successive governments in order to influence the level of income.

Likewise, within the framework of government policies to redistribute income in favour of poorer groups of society, many individuals have unlawfully obtained additional incomes.

On the other hand, the ruling political class has exploited public and private institutions and projects for its own interests and benefits so that it obtained huge fortunes through corruption and blackmail.

All these influencing factors have led to exaggerated luxury and unjustified consumption, which has resulted in increased pressure towards raising imports in light of the decline in domestic production and failure to respond to aggregate spending. Average private consumption has reached (753730.3) million dinars, and average public consumption (338724.6) million dinars.

Figure 1. Growth in Private and Public Consumption in Iraq during the period (2005-2018) (%)



Source: Ministry of Planning and Development Cooperation, National Accounts Department, [date unknown].

Both private and public consumption have witnessed a positive growth rate during most study years, ranging between (42.1%) in 2009 and (1.7%) in 2011 for private consumption and (6.4%) in 2007 and (25.5%) in 2016 for public consumption. However, due to external shocks to the local economy, the annual growth rate of private consumption witnessed negative growth rates during the years (2006), (2007), and (2015), while public consumption witnessed negative growth rates for (2005), (2006), and (2015), as shown in figure (1) above.

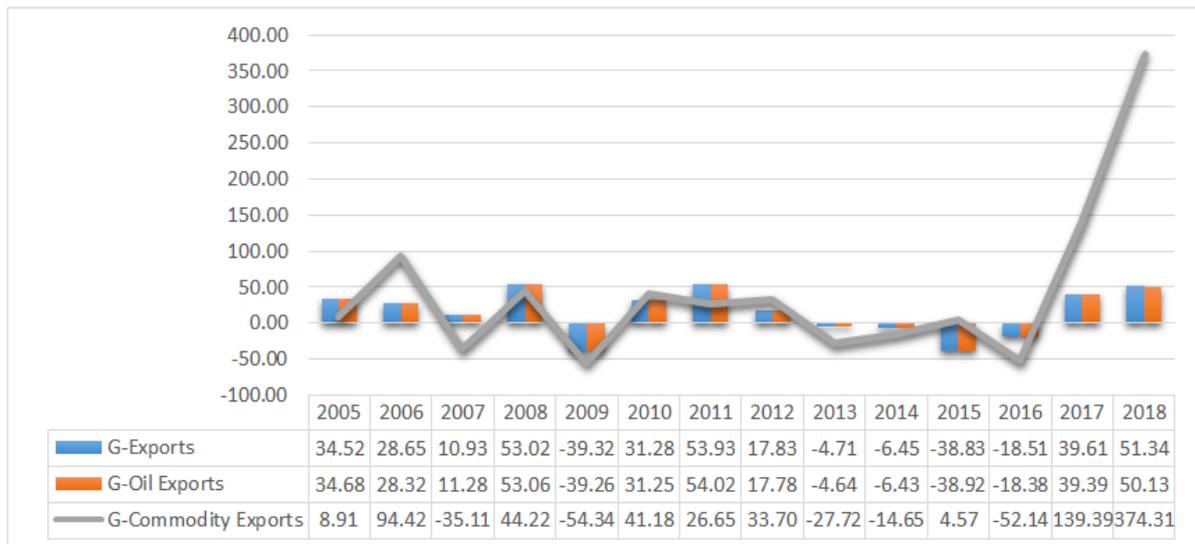
Trade Balance

Trade balance indicates the movement of exports and imports of goods and services between the local and world economy. The increase in exports over imports is counted in favour of the country because it strengthens the production base, achieves financial surpluses for production factors, which means the expansion of employment and economy, and attracting foreign capital that will enter the income and output cycle. Increase in imports over exports means a leak of capital and an indicator of the weakness of domestic production factors, which necessitates foreign production.

Exports

The ability of domestic productive base to reach external markets results in stimulating and increasing the efficiency of productive capacities and continued competition in global markets, which results in expansion of investment and production. The combined growth rate of Iraqi exports has reached (10.3%), oil exports (10.3%), and commodity exports (15.5%).

Figure 2. Growth of Exports in Iraq during period (2005-2018) (%)



Source: Ministry of Planning and Development Cooperation, National Accounts Department, [date unknown].

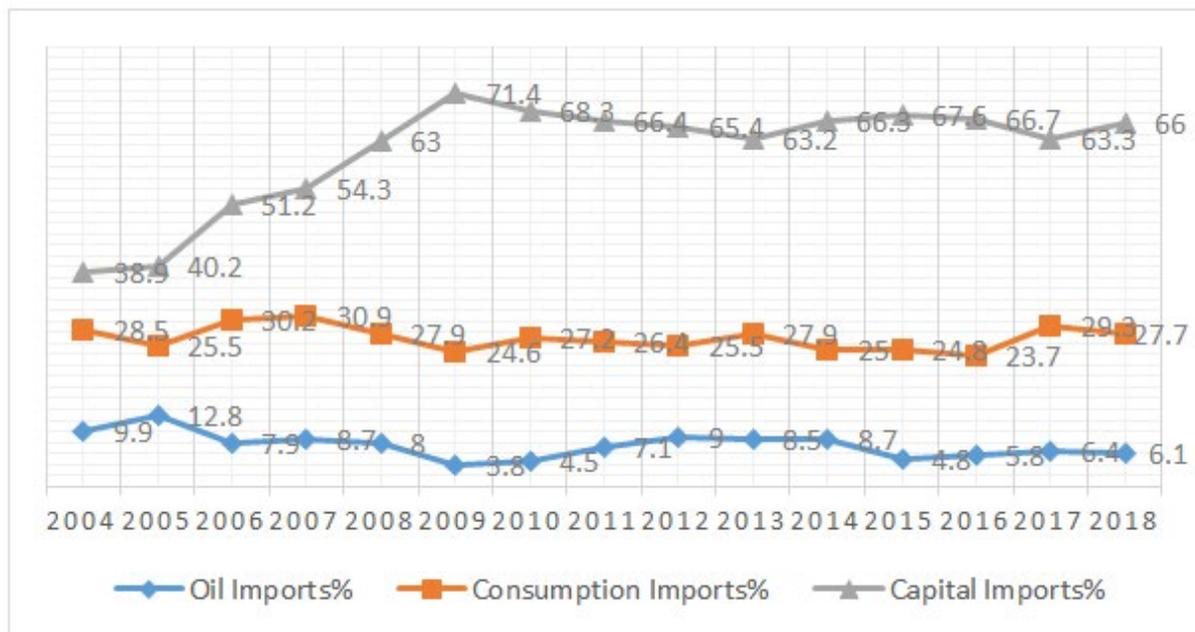
According to Figure (2), the annual growth rates of total exports ranged between (10.9%) during 2007 and (53.02%) 2008, which are close to the annual growth rates of oil exports, while the annual growth rates for commodity exports ranged between (8.9%) in 2005 and (374.3%) 2018. However, despite noticeable increases in annual growth rates of commodity exports, they are still weak compared to oil exports.

The weakness of commodity exports is derived from lack of development of total domestic production, the deterioration of local industries and a lack of necessary requirements and information. This had a negative impact on the free market's ability to create and accumulate financial surpluses, which made the Iraqi economy more characterised by being an exchange than a production economy. This critical economic situation has caused a leak in foreign currency, a deterioration of production methods and a complete distortion of market mechanisms.

Imports

Imports have been the main pillar on which the Iraqi economy relied to compensate for shortfall in aggregate supply and face the surplus of domestic aggregate demand. The compound growth rate for commodity imports has reached (2.6%) and (15.7%) for capital imports, while the compound annual growth rate for commodity imports has reached (2.8%) and for oil imports (oil derivatives) (-0.6%).

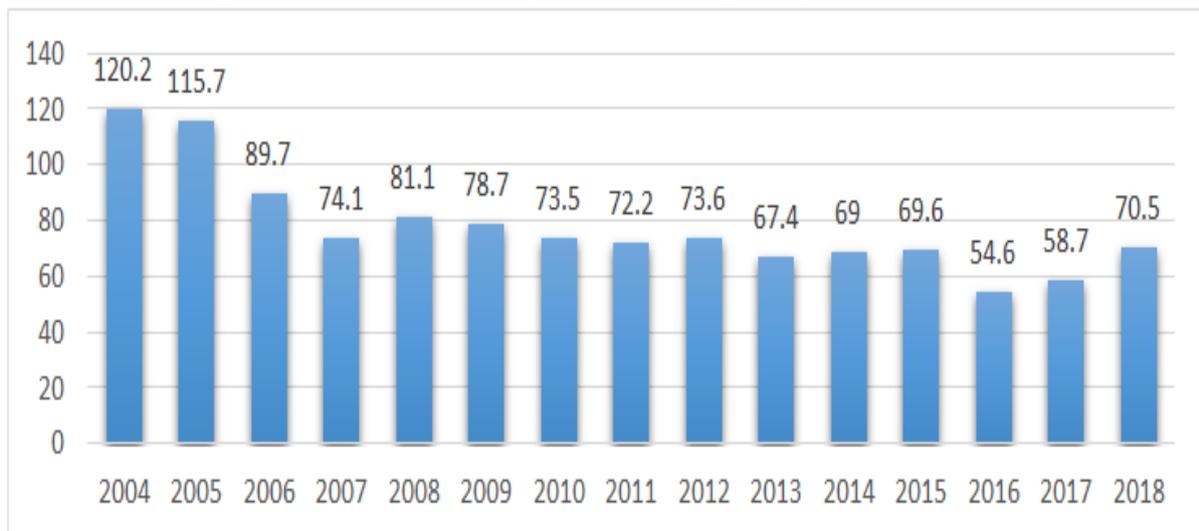
Figure 3. Growth of the Structure of Imports in Iraq during (2004-2018) (%)



Source: Ministry of Planning and Development Cooperation, National Accounts Department, [date unknown].

The annual growth rate of capital imports ranged between (39%) in 2004, which is the lowest rate importing started in 2004, after the period of economic sanctions , and (71%) in 2009, which is the highest rate to reflect efforts to support national production. The annual growth rate of commodity imports ranged between (30.9%) in 2006 and (24.6%) in 2009, while the annual growth rate of oil imports ranged between (12.8%) in 2005 and (3.8%) in 2009. Trade balance suffered from deficit in 2004 and 2005 as a result of the decrease in oil exports, the largest proportion of exports, due to the effects of economic sanctions that were imposed on Iraq, as well as a result of the marked increase in domestic aggregate demand after the lifting of those sanctions on Iraq after 2003 against low domestic production. In 2015, the deficit in trade balance was due to the effects of the global oil crisis and the terrorist attacks that deprived Iraq of many oil fields. Oil revenues increased during subsequent years as a result of increased oil exports, which led to increased government spending and aggregate demand in exchange for continued weakness and instability of domestic production.

Figure 4. Economic Exposure in Iraq during the period (2005-2018)



Source: Ministry of Planning and Development Cooperation, National Accounts Department, [date unknown]

The indicator of economic exposure in Iraq ranged between (120.2%) in 2004 and (54.6%) in 2016. These percentages resulted from higher imports versus low GDP due to weak production base.

Result of Econometric Test

Test of Stationarity

The tests of stationarity were conducted for the time series that relate to the study models (the effect of private consumption on economic exposure) and (the effect of public consumption on economic exposure). According to Appendix (1), the results of (ADF) test and (P.P) test indicate that the time series of economic exposure (Y) was non-stationary at the level according to the three formulas available in the test, that is, accepting the null hypothesis and rejecting the alternative hypothesis. Therefore, the first difference was made to that time series as it stabilised at the formula (below the constant level). Explanatory variables of the two models are private (X1) and public consumption (X2), and stable according to the two tests, where the time series of private consumption and public consumption settled at the level in the formulas (constant, and trend), therefore, we reject the null hypothesis and accept the alternative hypothesis according to which the time series of study models are stable.

The Results of Johansen co-integration Test

The results of Appendix (2) indicate that there is a co-integration relationship between economic exposure and private consumption according to the trace and the maximum eigenvalue test, as the statistical test values were higher than critical values. The results of the second model indicate that there is a co-integration relationship between economic exposure and public consumption according to the trace and the maximum eigenvalue test, as the statistical test values were higher than critical values.

The Results of First Model Test

The ARDL model was tested on study variables, private consumption (X1) and economic exposure (Y), and the results were as follows:

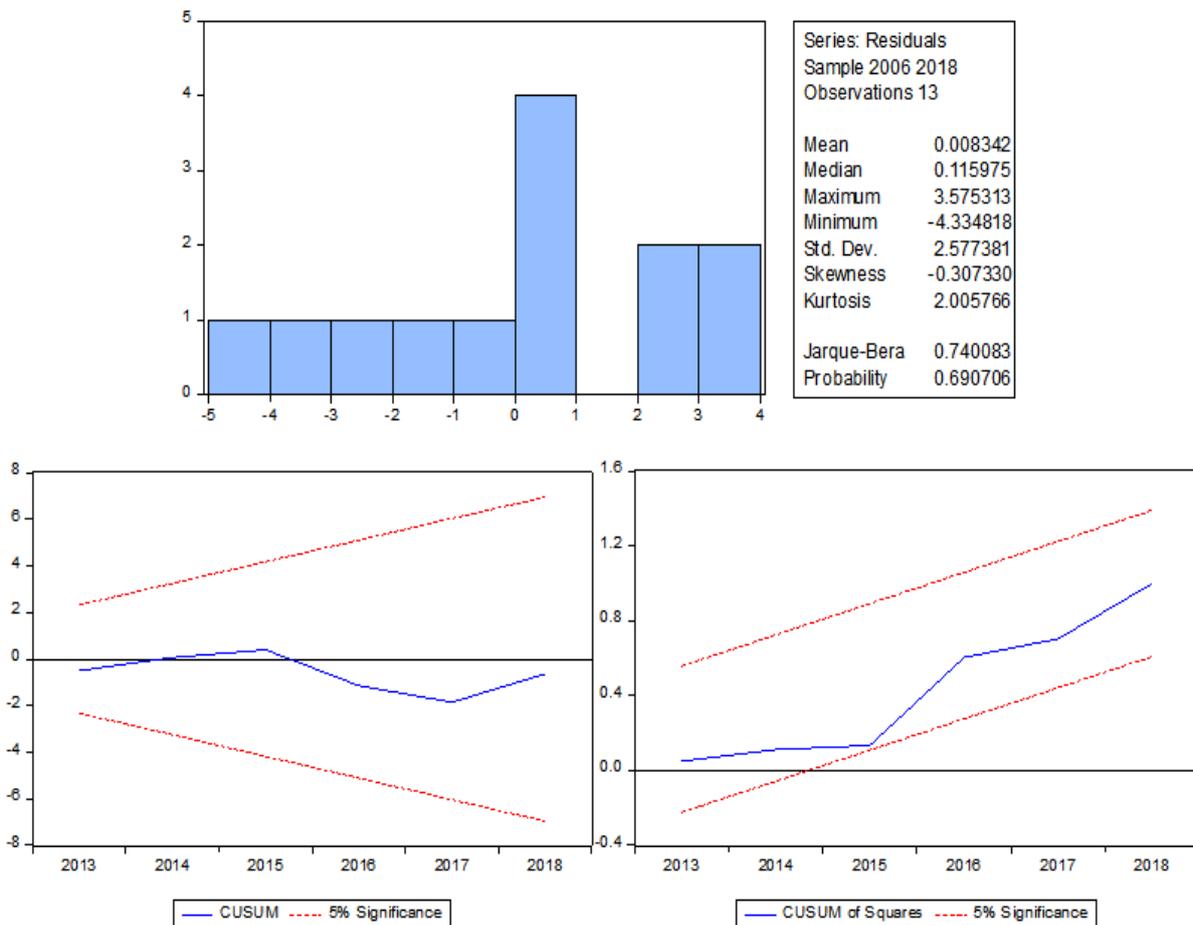
Table 1: Results of the effect of private consumption ratio in economic exposure ARDL Test

| ARDL Long Run Form - Conditional Error Correction Regression | | | | |
|---|--------------------|-------------------|--------------------|---------------|
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| Y(-1)* | -0.661719 | 0.095242 | -6.94779 | 0.0004 |
| X1(-1) | 0.671498 | 0.102711 | 6.537716 | 0.0006 |
| DU(-1) | -18.46676 | 5.891541 | -3.134454 | 0.0202 |
| D(Y(-1)) | -0.686254 | 0.200104 | -3.42949 | 0.014 |
| D(X1) | 2.43427 | 0.525276 | 4.634268 | 0.0036 |
| D(DU) | -9.63632 | 2.659366 | -3.62354 | 0.0111 |
| D(DU(-1)) | -4.72087 | 2.935584 | -1.608153 | 0.1589 |

| ECM Regression | | | | |
|---|--------------------|-----------------------|--------------------|--------------|
| Case 1: No Constant and No Trend | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| D(Y(-1)) | -0.686254 | 0.164638 | -4.168268 | 0.0059 |
| D(X1) | 2.43427 | 0.447862 | 5.435317 | 0.0016 |
| D(DU) | -9.63632 | 1.84537 | -5.221892 | 0.002 |
| D(DU(-1)) | -4.72087 | 2.056595 | -2.295478 | 0.0615 |
| Coint Eq(-1)* | -0.661719 | 0.078177 | -8.464387 | 0.0001 |
| R-squared | 0.937235 | Mean dependent var | | - |
| | | | | 3.476923 |
| Adjusted R-squared | 0.905852 | S.D. dependent var | | 10.28779 |
| S.E. of regression | 3.156652 | Akaike info criterion | | 5.420624 |
| Sum squared resid | 79.71563 | Schwarz criterion | | 5.637912 |
| Log likelihood | -30.23406 | Hannan-Quinn criter. | | 5.375962 |
| Durbin-Watson stat | 2.195441 | | | |
| F-Bounds Test | | | | |
| Test Statistic | Value | Signif. | I(0) | I(1) |
| F-statistic | 17.91146 | 10% | 2.17 | 3.19 |
| K | 2 | 5% | 2.72 | 3.83 |
| | | 2.50% | 3.22 | 4.5 |
| | | 1% | 3.88 | 5.3 |
| t-Bounds Test | | | | |
| Test Statistic | Value | Signif. | I(0) | I(1) |
| t-statistic | -8.464387 | 10% | -1.62 | -2.68 |
| | | 5% | -1.95 | -3.02 |
| | | 2.50% | -2.24 | -3.31 |
| | | 1% | -2.58 | -3.66 |
| Breusch-Godfrey Serial Correlation LM Test: | | | | |
| F-statistic | 4.785534 | Prob. F(2,4) | | 0.0869 |
| Obs*R-squared | 9.168319 | Prob. Chi-Square(2) | | 0.0102 |
| Heteroskedasticity Test: Breusch-Pagan-Godfrey | | | | |
| F-statistic | 0.751232 | Prob. F(7,5) | | 0.6481 |
| Obs*R-squared | 6.66387 | Prob. Chi-Square(7) | | 0.4647 |
| Scaled explained SS | 0.71093 | Prob. Chi-Square(7) | | 0.9983 |

Source: Eviews 10. (X1) private consumption ratio from total consumption, (Y) economic exposure, (Du) dummy variable (2006, 2014, 2016).

Figure 5. Normal Distribution, CUSUM and CUSUM Squares Test



The long term coefficients in the ARDL test indicate that private consumption exerts its influence on economic exposure after a one-time lag period (one year) and the magnitude of the effect is (0.67) with a positive trend. This means that the increase in private consumption led to an increase in economic exposure due to the weakness of the macroeconomic structure, inability of the production system to keep pace with consumer spending and meet the needs of individuals, as well as expansionary economic policies that had a major impact on increasing private consumption without being matched by an increase in GDP, and consequently, increased economic exposure.

In the short-term, error correction coefficient indicates the ability of private consumption to correct the deviation in economic exposure and with a speed of adjustment of (0.66) per year in order to reach balance in the long term. The values of the test (F) and test (t) of limits were higher than minimum and maximum values. The model explains (93%) fluctuations in economic exposure and the remaining are explained by the random variable.

The test (Breusch-Godfrey) indicates that the model is free from the problem of (Auto-correlation), where the probability of value of (F) (0.0869) is higher than (0.05). The test (Breusch-Godfrey-Pagan) indicates that the model is free from the problem of (Heteroskedasticity), where the probability value of (F) (0.6481) is higher than (0.05). The probability value of the (Jarque-Bera) test (0.69), indicated that the residuals are naturally distributed, and that the model is completely stable according to two tests (CUSUM & CUSUM Squares).

The Results of the Second Model Test

The ARDL model test was performed on study variables, public consumption (X2) and economic exposure (Y), and the results were as follows:

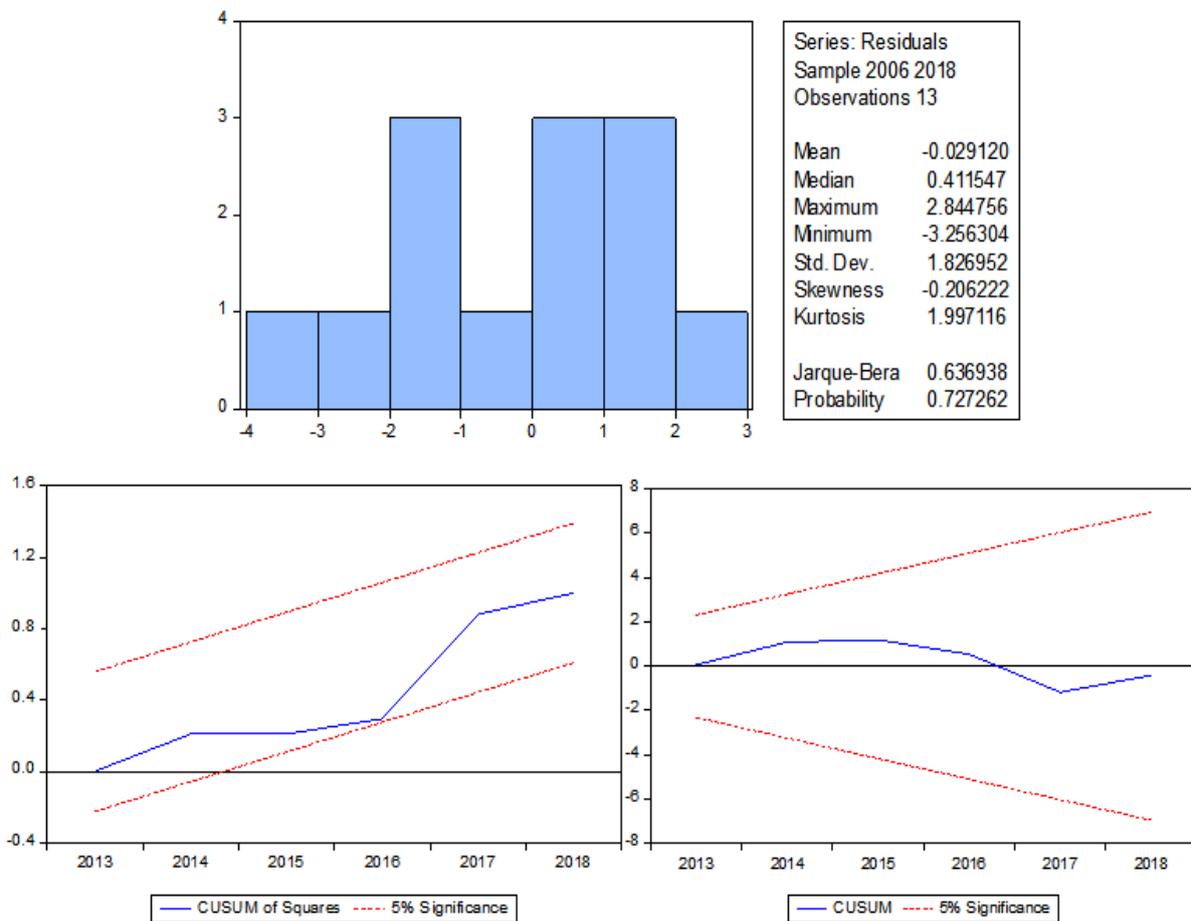
Table 2: Results of the effect of public consumption ratio in economic exposure ARDL Test

| Conditional Error Correction Regression | | | | |
|--|--------------------|--|--------------------|------------------|
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| Y(-1)* | -0.818681 | 0.067976 | -12.04365 | 0 |
| X2(-1) | 1.647236 | 0.194032 | 8.48951 | 0.0001 |
| DU(-1) | 20.0879 | 8.224646 | 2.442403 | 0.0503 |
| D(Y(-1)) | -0.518261 | 0.162416 | -3.190948 | 0.0188 |
| D(X2) | -2.043333 | 0.592189 | -3.450476 | 0.0136 |
| D(DU) | 10.2652 | 3.583762 | 2.864366 | 0.0286 |
| D(DU(-1)) | -12.13274 | 3.721784 | -3.259926 | 0.0173 |
| ECM Regression | | | | |
| Case 1: No Constant and No Trend | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| D(Y(-1)) | -0.518261 | 0.09492 | -5.46 | 0.0016 |
| D(X2) | -2.043333 | 0.352594 | -5.795136 | 0.0012 |
| D(DU) | 10.2652 | 1.552263 | 6.613057 | 0.0006 |
| D(DU(-1)) | -12.13274 | 1.47277 | -8.238043 | 0.0002 |
| CointEq(-1)* | -0.818681 | 0.054948 | -14.89915 | 0 |
| R-squared | 0.968455 | Mean dependent var | | -3.476923 |
| Adjusted R-squared | 0.952683 | S.D. dependent var | | 10.28779 |
| S.E. of regression | 2.237858 | Akaike info criterion | | 4.732639 |
| Sum squared resid | 40.06408 | Schwarz criterion | | 4.949927 |
| Log likelihood | -25.76215 | Hannan-Quinn criter. | | 4.687976 |
| Durbin-Watson stat | 2.066344 | | | |
| F-Bounds Test | | Null Hypothesis: No levels relationship | | |
| Test Statistic | Value | Signif. | I(0) | I(1) |

| | | | | |
|---|------------------|--|--------------|---------------|
| F-statistic | 55.4962 | 10% | 2.17 | 3.19 |
| K | 2 | 5% | 2.72 | 3.83 |
| | | 2.50% | 3.22 | 4.5 |
| | | 1% | 3.88 | 5.3 |
| t-Bounds Test | | Null Hypothesis: No levels relationship | | |
| Test Statistic | Value | Signif. | I(0) | I(1) |
| t-statistic | -14.89915 | 10% | -1.62 | -2.68 |
| | | 5% | -1.95 | -3.02 |
| | | 2.50% | -2.24 | -3.31 |
| | | 1% | -2.58 | -3.66 |
| Breusch-Godfrey Serial Correlation LM Test: | | | | |
| F-statistic | 0.195642 | Prob. F(2,4) | | 0.8297 |
| Obs*R-squared | 1.158363 | Prob. Chi-Square(2) | | 0.5604 |
| Heteroskedasticity Test: Breusch-Pagan-Godfrey | | | | |
| F-statistic | 1.015582 | Prob. F(7,5) | | 0.5116 |
| Obs*R-squared | 7.632123 | Prob. Chi-Square(7) | | 0.3661 |
| Scaled explained SS | 0.822111 | Prob. Chi-Square(7) | | 0.9972 |

Source: Eviews 10. (X2) public consumption ratio from total consumption, (Y) economic exposure, (Du) dummy variable (2008, 2011, 2016).

Figure 6. Normal Distribution, CUSUM and CUSUM Squares Test



Source: Eviews 10.

Long-term coefficients in ARDL indicate that public consumption exerts its influence on economic exposure after a one-time lag period (one year) and the magnitude of the effect is (1.6) with a positive trend. This means that the increase in public consumption led to a huge increase in economic exposure which developed as a result of the fact that most government purchases from local markets were of poor quality (mostly of Chinese origin and not in conformity with international standards), forcing government institutions to continue to buy new imported goods due to their rapid depreciation. Likewise, dependence of government purchases on imported goods led to a lack of stimulation and development of local productive capacities and their negative effects on the deterioration of economic activities thus reflecting on the rise in government debt due to weak public revenue from economic activities other than oil.

In the short-term, error correction coefficient indicates the ability of public consumption to correct any deviation in economic exposure with a speed of adjustment of (0.81) per year in order to reach the balance in the long term. The values of the test (F) and test (t) of the limits

were higher than the minimum and maximum values. The model explains (96%) of fluctuations in economic exposure and the remaining are explained by the random variable.

The test (Breusch-Godfrey) indicates that the model is free from the problem of (Auto-Correlation), where the probability value of (F) (0.8297) is higher than (0.05). The test (Breusch-Godfrey-Pagan) indicates that the model is free from the problem of (Heteroskedasticity), where the probability value of (F) (0.5116) is higher than (0.05). The probability value of the (Jarque-Bera) test was (0.72), indicating that the residuals are naturally distributed and that the model is completely stable according to two tests (CUSUM & CUSUM Squares).

Conclusions

- 1-There is an upward trend in private and public consumption despite the variation in growth rates due to the crises that the Iraqi economy has been subjected to.
- 2-The domination of oil exports on the structure of Iraqi exports.
- 3-The predominance of capital imports on the structure of Iraqi imports without being accompanied by an increase in GDP.
- 4-The trade balance shows that exports are higher than imports due to the increase in crude oil sales without utilising their revenues to develop local production methods and without seeking to correct imbalances in the structure of exports and imports.
- 5-The clear evidence of the weakness of Iraq's economy is its vulnerability to numerous problems, and its inability to cope with domestic and external crises and shocks as represented by the high rate of economic exposure.
- 6-There is a relationship of co-integration between economic exposure and both private and public consumption.
- 7- There is a positive effect for both private and public consumption on economic exposure, which means that they cause a high rate of economic exposure.
- 8- The magnitude of the effect of public consumption on economic exposure is greater compared to private consumption, that is, the government is causing Iraq's economy to lose the ability to reform its production structure in order to recover again.

Recommendation

- 1- Control excessive private and public consumption and encourage savings.
- 2- Address the imbalance in export structure by supporting domestic production, which will also contribute to addressing the imbalance in the imports structure.
- 3- Shift government purchases towards local products to encourage and enhance local production.



4- Support and increase the contribution of domestic productive activities in the local and international markets.



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Appendix (1)

Table 3: Results Unit Root Tests

| Unit Root Test (ADF) | | | | | | | |
|----------------------|----------|---------------------------|-------|---------------|--------------------|--------|-------|
| variables | Level | | | 1 differences | | | |
| | Constant | Constant, Linear Trend | Non | Constant | Constant, Trend | Linear | Non |
| | Prob. | Prob. | Prob. | Prob. | Prob. | Prob. | Prob. |
| Y | 0.06 | 0.56 | 0.51 | 0.1 | 0.1 | | 0.01* |
| X1 | 0.006* | 0.01* | 0.8 | | | | |
| X2 | 0.006* | 0.01* | 0.3 | | | | |
| Unit Root Test (P.P) | | | | | | | |
| variables | Level | | | 1 differences | | | |
| | Constant | Constant, Linear Trend | Non | Constant | Constant, Trend | Linear | Non |
| | Prob. | Prob. | Prob. | Prob. | Prob. | Prob. | Prob. |
| Y | 0.067 | 0.5 | 0.051 | 0.1 | 0.1 | | 0.01* |
| X1 | 0.000* | 0.000* | 0.9 | | | | |
| X2 | 0.002* | 0.008* | 0.1 | | | | |

Source: Eviews 10. Where: (*) Stationary Variable.

Appendix (2)

Table 4: Results Johansen Test

| (Y), (X1) Model | | | | |
|---|-------------------|------------------|-----------------------|----------------|
| Unrestricted Co-integration Rank Test (Trace) | | | | |
| Hypothesized | | Trace | 0.05 | |
| No. of CE(s) | Eigenvalue | Statistic | Critical Value | Prob.** |
| None * | 0.746337 | 31.28367 | 15.49471 | 0.0001 |
| At most 1 * | 0.644662 | 13.45092 | 3.841466 | 0.0002 |
| Unrestricted Co-integration Rank Test (Maximum Eigenvalue) | | | | |
| Hypothesized | | Max-Eigen | 0.05 | |
| No. of CE(s) | Eigenvalue | Statistic | Critical Value | Prob.** |
| None * | 0.746337 | 17.83275 | 14.2646 | 0.0131 |
| At most 1 * | 0.644662 | 13.45092 | 3.841466 | 0.0002 |
| (Y), (X2) Model | | | | |
| Unrestricted Co-integration Rank Test (Trace) | | | | |
| Hypothesized | | Trace | 0.05 | |
| No. of CE(s) | Eigenvalue | Statistic | Critical Value | Prob.** |
| None * | 0.746337 | 31.28367 | 15.49471 | 0.0001 |
| At most 1 * | 0.644662 | 13.45092 | 3.841466 | 0.0002 |
| Unrestricted Co-integration Rank Test (Maximum Eigenvalue) | | | | |
| Hypothesized | | Max-Eigen | 0.05 | |
| No. of CE(s) | Eigenvalue | Statistic | Critical Value | Prob.** |
| None * | 0.746337 | 17.83275 | 14.2646 | 0.0131 |
| At most 1 * | 0.644662 | 13.45092 | 3.841466 | 0.0002 |

Source: Eviews 10.