

# MEASURING THE IMPACT OF GOVERNMENT SPENDING ON PUBLIC DEBT IN IRAQ FOR THE PERIOD (2004-2019)

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## ABSTRACT

*Increasing consumption over investment overheads leads to debt. When this problem emerged, industrial countries tried to solve this dilemma. Experts in these countries strived to find sources of increasing internal debt. Even investigating welfare, as a factor that may contribute to increase debt. Those industrial countries put a huge effort investigating this problem because they didn't experience debt before. However they did in the period of World War 1 and 2.*

*This study aims to know the characteristics in which the volume and trends of public spending are determined. In addition, this paper tried to analyze and measure the relationship between governmental expenditure and debt on all over Iraqi economy between (2004-2019). Finally, this paper proposed a future perspective for governmental expenditure that can lower debt magnitude.*

*This paper also got some conclusions such as; explanatory variables showed positive statistically significant. In other words, governmental expenditure recorded a significant effect on debt in Iraq. This is consistent with the hypothesis of the study.*

*In terms on recommendation, activating non-oil sectors in supporting governmental budget sections such as agriculture, industry, trade, and infrastructure is very recommended. This is important due to its role in increasing indications of financial sustainability.*

**Keywords:** Government Spending, Public Debt, Investment, Public Spending.

## INTRODUCTION

Circumstances that Iraq went through are abnormal. These abnormalities can be pictured as financial, economic and political and the wars that Iraq experienced at this stage. Another example of these circumstances is the almost dependence on oil. These abnormalities direct scholars to study governmental expenditure. This is because, and based on the vision of governments, expenditure is the way to make goals come true. Example of these goals would be nourishing economics and reach a stage of a stable economic.

Governmental debt, either internal or external, can put a huge pressure on the any country's economic. Increasing expenditure in the last decades in Iraq caused a lot of economic problems. Due to these problems, the Iraqi governments reached a stage where it can't pay back its debt and this debt increased day after day. In economies suffered from debt, this happened because excessive expenditure duo to abnormal circumstances. Unfortunately, this debt was not directed toward investment but toward expenditure. This

had been exhausting the Iraqi economy causing economic, social, and political problems even though Iraq had a tremendous amount of natural resources. These resulted from unplanned governmental plans causing escalation in debt and sever expenditure. Based on that, if governmental expenditure increased, debt is going to increase also. This would be resulted from the superiority expenditure and debt comparing to governmental revenues. As a result, loans will be the last resort and the more we are in debt, the more we are hurting our economy.

### **Significance of the Study**

The importance of this paper lies in the direct and indirect role of public spending and its impact on most economic sectors. Therefore, the relationship between the volume of public spending and public debt has received great attention from all the economies of developed and developing countries. This is due to its direct impact on economic stability in these Countries, especially developing countries. This is more related to the burden that is going to be put on the livelihood of individuals and the future generations. This increase in public debt will affect the financial resources of any country and result in economic, social, and political consequences. This is going to took place if the borrowed funds are not invested successfully.

### **Problem Statement**

During the financial crises that developing countries are suffering from, including Iraq, which results from imbalance in the economic structure, superiority in public spending and debt is realized over public revenue.

### **Hypothesis of the Study**

One of the characteristics of the Iraqi economy is dependence on one source, which is oil. This can be seen through its contribution in GDP. Based on that there is a positive relationship between public spending and debt size if spending increased over revenue.

### **Goal of the Paper**

The aim of the research is to know the characteristics on how the volume of public spending and its trends are determined. Another aim is analyze the relationship between public spending and debt in the Iraqi economy for the period (2004-2019). Also, measuring the relationship between the debt and public spending with proposing future perspective for government spending that would reduce the amount of debt.

### **Spatial and Temporal Boundaries**

Spatial boundaries fall within Iraqi economy, while temporal ones are between 2004 and 2019. Inductive method was followed to understand the relationship between public spending and public debt.

## SECTION 1

### Conceptual Framework of Spending and Public Debt

**First: Public spending concept:** Public spending has many definitions. These definitions do not differ in concept; they differ in viewpoints. Based on that, public spending can be defined as a sum of money spent by a public entity for the purpose of satisfying unspecified public needs (Allam, 2012).

Others defined it as how much money is ordered by a legit person to satisfy a public need (Nazar et al., 2003). Public expenditure is also defined as cash approved by the legislative authority of public person to spend in providing public goods and services and achieving economic and social goals (Khalil & Al-Lawzi, 1990).

The concept of public spending has one general idea regardless of the historical progress of economic thought for economic schools. Based on that, public expenditures are defined as a sum of money provided by the state or any public legal person for the purpose of achieving a public benefit (Al-Khatib & Shamiya, 2007). It can also be defined as a sum of money that comes out of the state's financial control or one of its representatives in order to satisfy the general needs of society (Abu Ghaba et al., 2011). It is clear from the previous definitions that it has three pillars, which are:

The first is that the public expenditure is a sum of money the government needs to carry out its duties. The government, when it performs its role in providing services and construction, pays money as a consideration for those who perform these works and services. Secondly, the public expenditure was issued by the government or some organizations. Third, achieving the public benefit of society represents one of the pillars of public expenditure. Expenditure that aims to achieve a private benefit is not considered a public expenditure, even if it is spent by the government (El-Gamal, no printing year).

Public expenditures are viewed from the researchers' point of view as the money provided by the state or a person for the purpose of satisfying public needs or satisfying public desires and the purpose of which is to provide a public benefit to individuals within the vicinity of the country.

**Second: Public debt concept:** In the literature of economic and financial thought, many definitions of public debt have emerged, where public debt has been defined as the amounts that the national economy borrows, in which the loan period exceeds one year or more, and are payable to the lender by way of payment or through the national government. This debt was mainly borrowed to ensure the obligations of individuals and private institutions (Draz & Othman, 2002).

The public debt outstanding in a specific period represents the amount borrowed prior to that period and which has not yet been paid. Public debt arises because it is financing the state's general budget. Governments borrow locally from commercial banks, the central bank, or from financial and non-financial institutions, as well as the public.

Governments also borrow from abroad through international markets from private, public, regional or international institutions. Borrowing, whether from local or external sources, entails a cost whose amount is determined by the interest rate and the

size of the borrowing. Amount of borrowing is usually as the amount that the budget needs to cover the deficit.

This deficit is accompanied by the expansion of public expenditures by more than the increase in public revenues. The government went to monetary methods, which are represented mainly by issuing cash to cover public loans (Aib, 2010).

The economist Samuelson defines debt as an accounting term that means an increase in assets and a decrease in liabilities. External debt is what a government is owed towards foreign parties, which may be governments, international organizations, or foreign institutions. As for internal debt, it is what the state owes to its citizens, i.e. when the state borrows internally and displays the loan bonds internally in its national currency, and it is written in it by the state's nationals and residents, whether they are individuals or other economic units (Al-Sadiq & Wahhab, 1996).

From the researcher's point of view, public debt represents the money that the government borrows from financial institutions as well as from individuals to meet any deficit that occurs in its obligations towards individuals and governments, as well as to face crises and emergency situations to cover spending for these cases.

In the case of economic depression, transfer payments rise and taxes fall. This will lead to a deficit in the public budget. When the government tries to achieve balance by reducing spending and raising taxes, this behavior will negatively affect the economic activity of the current era. Based on that, investment will decrease and the impact of investment will be reflected on future generations (Juman, 1999).

The total public debt represents the sum of the amounts owed by the government to the owners of the securities. These securities represent the securities issued by the government to borrow the funds necessary to finance the expenditures that exceed the revenues. These securities consist of several types: 1- Short term. 2. Medium term. 3. Long term (McConnell & Brue, 2008).

Thus, the public debt or the national debt is the total aggregate of the deficit minus the increases borne by the government over time, both internal and external (Case et. al, 2012). This deficit may arise as a result of financing wars, stagnation, expansionary fiscal policy, and the lack of political will to reduce the volume of debts (McConnell & Brue, 2008).

## SECTION 2

### Analyzing Public Spending and Public Debt in Iraq between 2004 and 2019

**First: Analyzing public expenditure in Iraq between 2004 and 2019:** Public spending continued to rise during this period in developing countries, as well as in Iraq. Where these countries and Iraq have excelled in the percentage of operational spending over investment spending throughout this period. In Iraq, the reason for this was that what happened after 2003. It showed an existence of new economic problems represented by collapsing both structure of most economic sectors and investments.

Another reason is the dominance of oil sector over most of the activities forming gross domestic product. In addition, the continuity of non-productive methods in the economic policy. This was the reason for the deterioration in industry, agriculture and the manufacturing sectors. Another problem is the continued rise in unproductive spending on security and defense, which opened the door to the spread of manifestations of

financial and administrative corruption in most of the government's administrative, economic, and security. This trend was coupled with the weak power of the production apparatus, which led to an increase in import rates. This, in turn, led to an increase in the country's economic problems and the growth of spending on a continuous basis, as well as the absence of solutions to the problem of increased spending, especially the operational one (Al-Rubaie).

<b>Years</b>	<b>Public Spending</b>	<b>Investment Spending</b>	<b>Ratio of public spending to investment spending %</b>	<b>Operational Spending</b>	<b>Ratio of operational spending public spending %</b>
2004	32117491	3014733	9.4	29102758	90.6
2005	26375175	4572018	17.3	21803157	82.7
2006	38806679	6027680	15.5	32778999	84.5
2007	39031232	7723043.7	19.8	31308188.3	80.2
2008	59403375	11880675	20.0	47522700	80.0
2009	52567025	10513405	20.0	42053620	80.0
2010	70134200.2	16130866	23.0	54003334.2	77.0
2011	78757667	17832113	22.6	60925554	77.4
2012	105139575	29350952	27.9	75788623	72.1
2013	119127556	40380750	33.9	78746806	66.1
2014	112192126	35450453	31.6	76741673	68.4
2015	70417515	18584676	26.4	51832839	73.6
2016	67067437	15894009	23.7	51173428	76.3
2017	75490120	16464411	21.8	59025709	78.2
2018	80873000	13820300	17.1	67052700	82.9
2019	101723523	14422590	14.2	87300933	85.8

Source: Iraqi Central Bank, Census and Research Unit, Annual Census Flyer (2004-2019)

From Table 1, after 2003 witnessed an increase in government spending in Iraq. This was done after the lifting of economic sanctions, a significant increase in revenues, and the expansion of government's administrative apparatus and the government's establishment of a new structure for economic reform.

Public expenditure in (2004) reached (32117491) million Iraqi dinars, where the ratio of investment was (9.4%). While the ratio of operational expenditure reached (90.6%). This was due to including an increase in the salary scale and release of balances that were frozen internationally (Al-Qadi & Al-Ammar, 2003).

In (2005), expenditures decreased reaching (26375175) million dinars, where the percentage of contribution of investment expenditures reached (17.3%), and the percentage of contribution of operating expenses (82.7%). In the period from (2006-2008) public expenditures increased. Public expenditure reached (38806679) million dinars in 2006, and the percentage of investment expenditures out of public expenditure was (15.5%).

Operational expenditures are the largest, reaching (84.5%) of public spending. Expenditures continued to rise, as expenditures reached (59403375) million dinars in (2008) and the percentage of investment spending was (20%), while operational expenditures were (80%) of public expenditures.

In (2009), public spending decreased, reaching (52567025) million dinars, due to the decline in revenues, which was reflected by the drop in international oil prices, which decreased by (38%) (Central Bank of Iraq, 2019).

Between (2010-2013), expenditures during this period increased. In 2010, public expenditures reached (70134200.2) million dinars, and the percentage of investment expenditures in this year was (23%), while operating expenses reached (77%), while in (2012) public expenditure reached (105139575) million dinars and the percentage of investment spending was (27.9%), while the operational expenditure amounted to (72.1%) and the reason for this was the rise in oil prices from (75 dollars) in (2010) to (107) dollars (Central Bank of Iraq, 2019).

However, the volume of public spending began to decline during the period from (2014-2016), where expenditure amounted to (105139575) million dollars in (2014), where the percentage of investment expenditures was (31.6%), while operational expenditures amounted to (68.4%). The reason for this is due to the crisis from which the ISIS war occurred, the expenses of sheltering the displaced and the delay in approving the budget (2014), and the drop in oil prices in global markets to below (\$50) (Central Bank of Iraq, 2019).

As for the year (2016), public spending reached (67067437) million dinars, and the percentage of investment spending was (23.7%). The previous one reflects the Iraqi government's orientation towards meeting temporary consumer needs and neglecting the most important aspect, which is the development aspect. This is represented by investment expenditures, whose percentages remained low (Al-Birman, 2017).

In the extended period (2017-2019), public expenditures began to rise gradually, as the public expenditure for the year (2017) reached (75490120) million dinars, and the percentage of investment spending was (21.8%) of public expenditure, while operational expenditure reached (78.2%). In (2019), public spending amounted to (101723523) million dinars, and the percentage of investment spending out of public spending was (14.2%), while operational spending amounted to (85.8%) of public spending. The reason for the increase in spending this year is an increase in the volume of revenues, which was reflected in the amount of public spending and was caused by an improvement in oil prices on the one hand and an increase in oil production on the other (Central Bank of Iraq, 2019).

We conclude during the study period that the amount of spending is accompanied by a high flexibility in increasing consumer expenditures, and this method has led to inflationary effects in the Iraqi economy due to the inability of the production system to respond with investment expenditures, if consumer spending dominates leads to lower rates of economic growth and this is all the reason in the backwardness of the Iraqi economy and its inability to keep pace with global economies.

**Second: Analyzing Public Debt in Iraq for the period (2004-2019):** Public debt in countries represents a means of linking financial and monetary policies. This is because there is overlap between the tasks occurs and the arrangement. On the side of public debt, it must be at its highest level. The regulation between the Ministry of Finance and the Central Bank is limited to internal debt only. Economists have pointed out that the internal debt has negative effects on the economy in general, as it leads to an unfair division of income between remittance holders and taxpayers, as well as widening the gap between groups of society, and also competes with the private sector to earn

money to acquire investment projects, and may also raise the Inflation levels in the economy, but this theoretical approach will not apply to Iraq because of the low effects of internal debt (Ahmed & Hussein, 2016).

The public debt embodies at a specific moment the amount of past borrowing for that moment that has not yet been paid. It consists of external and internal debt, and this is the outcome of financing the weakness of the public budget. The government borrows from financial and non-financial institutions and from the local market, or the central bank and commercial banks in addition to the public. It is possible to borrow from abroad from international markets or from public and private institutions, international or regional. The borrowing is at a cost whose amount is determined by the interest rate and in most cases, the borrowing is equal to the deficit in the budget (Ministry of Planning, 2009-2013).

The public debt also arises as a result of the increase in government expenditures over its revenues for a certain period, when the government borrows in order to finance these expenditures. The government finances this deficit through borrowing (Ministry of Planning, 2009-2013).

Therefore, the trends of indebtedness in Iraq represent a lot of economic indicators and statistics in the formation of indebtedness. Iraq was not one of the indebted countries until the eighties of the last century. After Iraq's involvement in the Iran-Iraq war, it possessed a foreign reserve currency estimated at about (37) million dollars (Abuhat, 2005).

<b>Years</b>	<b>Public Debt</b>	<b>Rate of change in Public Debt %</b>
2004	90791885	—
2005	58726789	-35.32
2006	37669028	-35.86
2007	36077214	-4.23
2008	36406495	0.91
2009	28380209	-22.05
2010	28922216	1.91
2011	27958129	-3.33
2012	25391245	-9.18
2013	21007471	-17.26
2014	28132415	33.92
2015	52038415	84.98
2016	62622811	20.34
2017	77900036	24.40
2018	72990208	-6.30
2019	68664558	-5.93

Source: Iraqi Central Bank, Census and Research Unit, Annual Census Flyer (2004-2019)

Based on Table 2, there is a state of instability witnessed by the public Iraqi. As it is noted that the period between 2004 and 2008, the public debt decreased throughout this period. In 2004, the volume of the public debt was (90791885) million dinars. The reason for the rise of debt to this level is the accumulation of debts before (2003). After that, the public debt began to decline in this period to the year (2008) when the public debt

reached (36406495) million dinars with a negative annual change rate of (0.91%). The reason for the decline in the public debt in this period is due to many factors. First, the improvement in the level of economic activity after the end of the period of economic sanctions. Second, the change in the system of government and allowing Iraq to export oil to global markets as well as the extinguishment of some countries from the accumulated debts on behalf of Iraq.

As for the years between 2009 and 2010, the public debt witnessed a state of instability, as the public debt in (2009) reached (28380,209) million dinars, with a negative annual change rate of (-22.05%), and in 2010 the public debt started to increase where the public debt reached (28922216) million dinars, with a positive annual change rate of (1.91%). The reason for the increase in the magnitude of public debt in general is a result of Iraq's commitments towards developing and reviving the Iraqi economy and supporting the economic sectors. In return, a decline in world oil prices put another burden on Iraq Economy.

Between 2011 and 2013, public debt decreased in 2011 reaching (27958129) million ID with a negative growth rate recorded as (-3.33%). In 2013, public debt decreased also reaching (21007471) million ID with (-17.26%) as a negative growth rate. Reason for the decreasing is the nourishment that the Iraqi economy experienced.

In the period between (2014-2017), it witnessed leaps in the level of the public debt in Iraq. In (2015), the public debt reached (520,38415) million dinars, with a positive annual change rate of (84.98%). In (2017) the public debt reached (77900036) million dinars, with a positive annual change rate of (24.40%). This is because the drop in oil prices, fighting ISIS, increasing military expenditure, reallocation of many people from fighting zones. All of these had put a huge pressure on the public budget.

As for the end of the study period in (2018, 2019), this period witnessed a change in the level of public debt. In (2018) the public debt reached (72990208) million dinars, with a negative annual change rate of (-6.30%), while in (2019) it reached Public debt (68664558) million dinars with a negative annual change rate of (-5.93 percent). In this period, the reason for the decline in the volume of public debt and in general was the result of high oil prices and the recovery of the Iraqi economy. In other words, that the majority of Iraqi debts are debts to external parties and this is due to the ease of borrowing from external financial institutions. The difficulty of internal borrowing is caused by the inability to sell treasury transfers abroad for the absence of a credit rating, as well as a lack of confidence in the finances of the federal government (Al-Zarkani, 2019).

### **Third: Measuring the relationship between governmental expenditure and public debt for the period between 2004-2019**

Econometric specification model:

First Equation

$$PD=a +\beta cs$$

Where:

A represents the intercept, B is the parameter, PD is the public debt and CS is the consumption spending.

1. Determining the relationship between model's variables  
This model was trying to build a prediction model, making the goal of the paper, and providing hypothesis of the paper. Direction of the relationship between PD and CS was determined based on economic theory.
2. Estimating and analyzing the model based on ARDIL methodology  
Before the cointegration test and estimating the ARDIL, it is very important to perform a stationary test. This is very significant before estimating using ARDIL. The model will not perform well if there are some variables stationary in the second level.
3. Dickey–Fuller test

To ensure the stability of the time series used, Augmented Dickey-Fuller (ADF) test is employed. Along with Philips-Perron test or (PP). This was done to test the unit root of time series. Results in both Tables 3 & 4 for ADF and PP showed that time series employed here is not stationary or stable in all the three cases (Only a fixed term or a fixed term and a general direction, or without a fixed term and a general direction). When the first differences calculated, all independent variables were stationary with the first difference and the time series does not have the problem of unit root at 0.05 level of significance.

variables	test	Stationary	Stationary +general trend	Regular	Stationary Status
PD fixed	ADF	-1.9655	2.9559-	0.9299	Non stationary
	probability	0.2965	0.1743	0.8951	
PD first difference	ADF	-2.9039	2.8402-	2.6465-	stationary
	probability	0.2165	0.2165	0.0126	
CS fixed	ADF	0.8478-	-3.2174	0.9476	Non stationary
	probability	0.7753	0.1241	0.8994	
CS first difference	ADF	-3.1794	-3.039605	-2.8211	stationary
	probability	0.0435	0.1569	0.0084	
IS fixed	ADF	2.1044-	1.911-	0.4318-	Non stationary
	probability	0.2456	0.5962	0.5097	
IS first difference	ADF	3.4228-	2.9139-	2.5037-	stationary
	probability	0.0534	0.1383	0.0166	
PE fixed	ADF	91.284-	-2.1575	0.5112	Non stationary
	probability	0.6075	0.4739	0.814	
PE first difference	ADF	-2.849	-2.7707	-2.702	stationary
	probability	0.0465	0.2285	0.01086	

Source: Made by authors based on Eviews, 12

variables	test	Stationary	Stationary +general trend	Regular	Stationary Status
PD fixed	ADF	0.3793	1.5317-	0.4525-	Non stationary
	probability	0.7807	0.7707	0.8756	
PD first difference	ADF	1.9126-	1.7745-	1.96429	stationary
	probability	0.0548	0.662	0.297	
CS fixed	ADF	0.90818	-1.8706	0.8718-	Non stationary
	probability	0.8932	0.6342	0.7678	
CS first difference	ADF	-2.94	-3.0528	-3.1949	stationary
	probability	0.0065	0.1528	0.0423	
IS fixed	ADF	0.4318-	1.0703-	1.5608-	Non stationary
	probability	0.5097	0.8998	0.4768	
IS first difference	ADF	2.4056-	2.2325-	2.3119-	stationary
	probability	0.0204	0.1383	0.1816	
PE fixed	ADF	0.3973	-1.7132	91.284-	Non stationary
	probability	0.7854	0.6941	0.6075	
PE first difference	ADF	-2.712	-2.7707	-2.8499	stationary
	probability	0.0106	0.2285	0.0765	

Source: Made by authors based on Eviews, 12

### Estimating ARDIL Model

**First equation: Relation between public spending and public debt:** A lot of attempt was performed at different level of significance trying to estimate the regression equation. Estimated linear equation in table was selected due to its consistency with economic theory. It is also has no statistical problems.

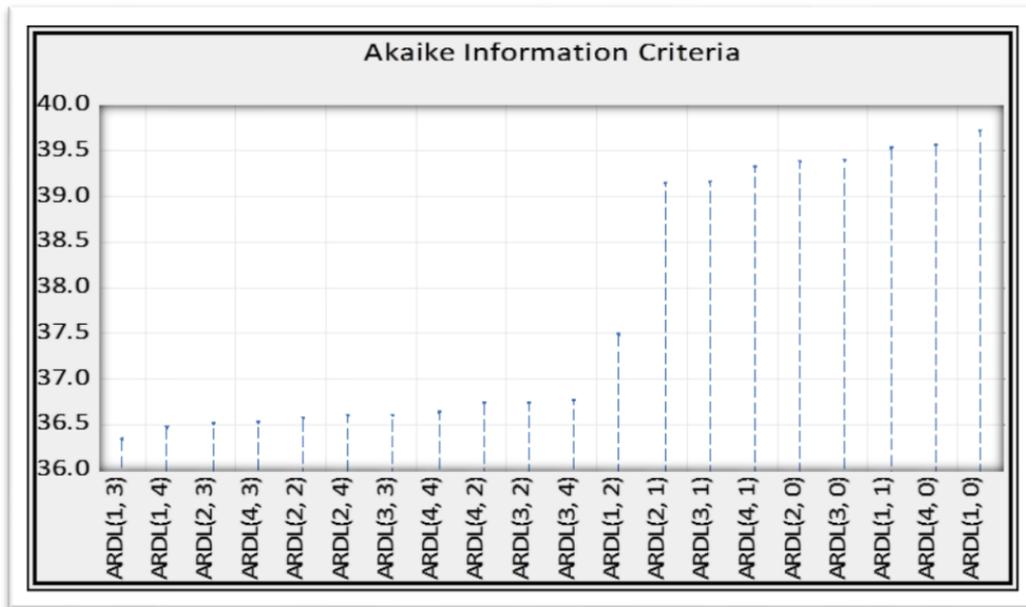
Selected Model: ARDL(1, 3)

Note: final equation sample is larger than selection sample

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
PD(-1)	0.865034	0.029498	29.32561	0.0000
PE	-1.254329	0.320923	-3.908503	0.0058
PE(-1)	-2.229085	0.417379	-5.340675	0.0011
PE(-2)	2.858884	0.421268	6.786371	0.0003
PE(-3)	1.457693	0.344057	4.236782	0.0039
C	29283572	16447588	1.780417	0.1182
R-squared	0.997039	Mean dependent var		2.53E+08
Adjusted R-squared	0.994923	S.D. dependent var		2.14E+08
S.E. of regression	15230696	Akaike info criterion		36.21956
Sum squared resid	1.62E+15	Schwarz criterion		36.48031
Log likelihood	-229.4272	Hannan-Quinn criter.		36.16597
F-statistic	471.3535	Durbin-Watson stat		2.391160
Prob(F-statistic)	0.000000			

Source: Made by authors based on Eviews, 12

**Figure 1  
ESTIMATING ECONOMETRIC MODEL**



Source: Made by authors based on Eviews, 12

**Figure 2**  
**AKAIKE INFORMATION CRITERIA**

The results of Figure 1 showed that the model with a time lag period of (1,3) based on the values of the AIC criterion (Akaike). It is among the best descriptions of the model as it gives the lowest value. This criterion is determined automatically by the statistical program, as the value (1) means a time lag for one period, and (0) means no time lag, and so on. Lag time periods are set by the program for each of the variables.

Statistical tests of the model refer to the goodness of fit of the model estimated by modified coefficient of determination ( $R^2$ ) of (0.99) as well as the F-statistic value of (471.1) at a level of significance (0.00). Econometric tests approved that the model does not suffer multicollinearity. This was approved by DW value which was (2.39).

In order to verify the existence of joint integration between the variables in the model, the bounds test methodology is used for co-integration shown in Figure 3. As it appears that the calculated F-stat value reached (67.49) which are greater than the highest tabulated value (4.16) and the lowest (3.62) at a significance level of 5%. This means rejecting the null hypothesis which says that there is no joint integration and acknowledging the existence of a joint integration relationship between the model variables.

Test Statistic	Value	Signif.	I(0)	I(1)
Asymptotic: n=1000				
F-statistic	67.49863	10%	3.02	3.51
k	1	5%	3.62	4.16
		2.5%	4.18	4.79
		1%	4.94	5.58

Source: Made by authors based on Eviews, 12

**FIGURE 3**  
**BOUND TEST RESULTS**

Since there is a co-integration between variables within the model, this means that there is a long run relationship between these variables. Based on Error Correcting Model (ECM) within the methodology of (1,3) based on AIC, Short run coefficients were obtained as shown in Figure 4.

ECM Regression				
Case 2: Restricted Constant and No Trend				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(PE)	-1.254329	0.217117	-5.777217	0.0007
D(PE(-1))	-4.316577	0.237742	-18.15652	0.0000
D(PE(-2))	-1.457693	0.245776	-5.930977	0.0006
CoIntEq(-1)*	-0.134966	0.008365	-16.13542	0.0000

Source: Made by authors based on Eviews, 12

**Figure 4**  
**ERROR CORRECTING MODEL BASED ON ARDL METHODOLOGY**

It seems like that (conit eq 1), which is used to detect distortions within the short run toward re-balance in the long run. Its value was negative and significant reaching (0.1349-) with 0.01% level of significance.

To elaborate more, this means that when the indicator of expenditure within short run in the lagged period (t-1) deviates from the equilibrium value in the long run, a 134% of the deviation can be corrected in period t. This is relatively a high adoption average until it reached equilibrium in the long run after approximately one year.

Levels Equation				
Case 2: Restricted Constant and No Trend				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
PE	6.173119	1.695598	3.640673	0.0083
C	2.17E+08	1.31E+08	1.657852	0.1413
EC = PD - (6.1731*PE + 216969509.8672)				

Source: Made by authors based on Eviews, 12

**Figure 5**  
**ESTIMATING LONG RUN RELATIONSHIP**

Figure 5 is showing coefficients in the long run based on ARDL approach. Independent variables were statistically significant. In other words, Public spending has a clear significant effect on public debt in Iraq.

This means that results are consistent with economic theory. Keynesians saw that expenditure usually has a positive impact regardless of its sort. If the expenditure targeting capital expenditure, its effectiveness will be higher comparing the consumption expenditure flow. In addition, economists realize that if a big share governmental public expenditure was devoted toward investment, average economic growth is going to escalate in the future. Or this share can be targeted into making structural reforms in economics to raise efficiency. Future generations will suffer a lot if the debt increased. The cost of paying back this debt is going to escalate if nothing was done to lower it in the future.

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

1. The parameters of the explanatory variables showed a positive and statistically significant effect, or in other words, public spending recorded a clear impact on the public debt in Iraq, and this consistent with the hypothesis of the study.
2. The problem of public indebtedness is one of the complex problems faced by developing countries, and perhaps the reason for this is due to the low growth rates, the deterioration of foreign trade conditions, the increasing deficit in the balance of payments of these countries, and the improper economic policy that they were following. All of which led to the increasing indebtedness over time.
3. The lack of efficient use of public expenditures and the absence of the impact of investment spending in achieving additional productive capacities for the Iraqi economy and the weakness of capital and infrastructure accumulation made public spending grow at the expense of the investment expenditure. This resulted in a deficit in the public budget and this matter does not increase the efficiency of Economic activities.

## Recommendations

1. The necessity of activating the role of other non-oil sectors in supplying the government's general budget (agriculture, industry, trade, and services) for the purpose of increasing the rates of financial sustainability indicators.
2. Work to beat corruption in most parts of the government through the control of all Iraq's ports. Ports and airports from southern to northern Iraq.
3. The necessity of enhancing the role of other revenues in the structure of the general budget due to their significant in in enhancing the resources of the general budget.
4. Work to reduce financial waste and unjustified spending, especially on the consumer spending side, and work to use investment spending efficiently in order to stimulate economic sectors and increase the accumulation of fixed capital, whether in infrastructure or increase the productive capacities in the economy in a way that provides high rates of GDP growth, in particular within the commodity sectors.

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