

## PalArch's Journal of Archaeology of Egypt / Egyptology

### STUDY EFFECTIVENESS OF MANY ECONOMICAL VARIABLES IN EXPLANATION TOTAL EXPENDITURE IN IRAQI ECONOMY FOR CONSUMPTION PERIOD 2003-2018

<sup>1</sup>DR. 1- Mahdi Khaleel Shadeed AL-Mamoori <sup>2</sup>Abduljasem Abbas Alaallah <sup>3</sup>Hussein Abbas  
AL-Shammari

<sup>1,2,3</sup>Department of Environment Management , college of Administration & Economics,  
university of Babylon , Iraq.

[bus.mahdi.khaleel@uobabylon.edu.iq](mailto:bus.mahdi.khaleel@uobabylon.edu.iq)

**Dr. - Mahdi Khaleel Shadeed Al-Mamoori ,Abduljasem Abbas Alaallah Hussein Abbas  
Al-Shammari. Study Effectiveness Of Many Economical Variables In Explanation  
Total Expenditure In Iraqi Economy For Period 2003-2018 Consumption--Palarch's  
Journal Of Archaeology Of Egypt/Egyptology 17(10), 2086-2098. ISSN 1567-214x**

**Keywords: Effectiveness, Many Economical, Variables, Explanation, Total  
Expenditure.**

#### **ABSTRACT:**

This research examine the relationship causality between total consumption expenditure , Governmental investment, Average personal income and capitalism composition by using The VAR Granger Causality Testes .The results of this research found stability relationship between there are variables so that will be make Granger Causality Testes .The Iraqi economy worked to increase rate of growth and economic , social development by using increasing total consumption expenditure ,But failed in that aim because for many reasons .

**Key words:** Effectiveness, many Economical, variables, Explanation, Total Expenditure.

A theoretical review of the determining factors of spending:

Perhaps what the US economy had reached during the crisis of 1929-1932 at the lowest point of the recession of the business cycle was an important reason to summon Lord John Maynard Keynes, G.M. Keynes to the United States of America to study the Great Depression crisis, and Keynes explained that the lack of effective aggregate demand resulting from the excess of aggregate

supply over aggregate demand is what led to the emergence of that crisis, which implies the need to increase aggregate demand by stimulating the national economy through the mechanism of government spending Consumer and investment to raise it to the point of equilibrium with the overall supply . Changes in the quantity and quality of production factors, in the degree of efficiency of their use, and in the technical level of production lead to the transmission of the aggregate supply function, noting that the determinants of supply are affected by the private choice, the general choice, the nature of the current and future expenditure, as well as the nature of the prevailing conditions. On the increase in fixed assets, capital assets, technological development and multiple uses of resources, and thus increased production capacity (aggregate supply) .In general, if the effective aggregate demand is greater than the total supply, then the deficit will be paid from the commodity stock and thus the volume of the commodity stock will decrease to a level less than what businessmen desire, and this will push to increase production in the future to meet the increase in demand and compensate for the shortage of stock and thus the expansion of economic activity, either The effective aggregate demand was less than the aggregate supply, then there will be an increase in the commodity stock by a greater amount than what was targeted by businessmen, which leads as a result to a reduction in production in the coming period, and thus a shortage

1- More information on this source text The source text must be entered to obtain additional information on the translation. Total application. Accordingly, the aggregate supply creates income for the elements of production that are spent in order to achieve the aggregate demand, and therefore if aggregate demand is able to absorb the aggregate supply then the balance will be achieved within the national economy and vice versa. The Iraqi economy does not go out of this framework after 2003, as it has suffered from economic stagnation in most sectors that make up the output structure. The gross domestic product and an indicator of this is high unemployment rates, low employment and lack of investment demand with a shift in the nature of total spending towards consumerism and simulation of some consumption patterns, which reduced the incentive to increase the total supply to meet the increasing demand resulting from the increase in oil revenues on the one hand and directing the general budget of the Iraqi state to current spending A high percentage of total total spending.

2. Evolution of consumer spending and determining factors:

Consumption represents the directional sum of the expenditures of individuals and families on essential and unnecessary goods and on spending on goods and services to achieve specific satisfaction. It also represents spending by individuals and groups on food, clothing and entertainment goods with the aim of achieving benefit. Aggregate spending is related to aggregate supply via the consumption function which represents the relationship of total consumption expenditure in the automatic consumption line and marginal propensity to consume as well as disposable income. By following Table (1), we find that family consumption spending is larger compared to government consumption spending in the composition of total consumption spending, and this explains the rise in total wages and salaries for individuals working in the government

and private sectors, especially after 2003. Because of liberalizing some commodity prices, raising fuel prices, and reducing subsidies, which leads to an increase in family spending on these goods to maintain their consumption of them, and this imposes a restriction on the Iraqi public budget in directing economic resources to cover private consumption as well as another restriction placed on planners to direct Economic resources, among their various uses, should direct the bulk of them to consumer spending and at the expense of investment spending, reduce the chances of growth and development. As for the other component of total consumer spending, it is government consumption spending, which is an important and sensitive topic in macroeconomic policy due to its impact on the rest of the macroeconomic variables within the general budget items on the financial and monetary economic policies, and in a country like Iraq, we find that total consumer spending in Iraq is moving in an increasing direction for the period. 2003-2018, in line with the outcome of the war and the destruction of the infrastructure of the Iraqi economy and the policy of unplanned employment in the public sector and the fight against terrorism after 2003, which necessarily means more spending to trade these items?

Table 1

Evolution of total consumer spending for the period 2003-2018

the year	Family consumer spending	Government consumer spending	Total consumer spending
2003	13616500.9	3631594.9	17248095.8
2004	19538773	13608947.3	33147720.3
2005	27593239.7	14683390.3	42276630
2006	35526339.7	14984454.1	50510793.8
2007	42963013.3	20871484	63834497.3
2008	49091355.7	26139166	75230521.7
2009	68256193.2	27517759.7	95773952.9
2010	72026324	30660743.7	102687067.7
2011	77412593.7	36999562.9	114412156.6
2012	84231927.5	49129244.3	133361171.8
2013	105696745.4	47755792.7	153452538.1
2014	112036294.4	47946900.1	159983194.5
2015	108396534.9	36399342.1	144795877
2016	110296533.7	36299824.2	146596533.7
2017	114058380.8	36143151.8	150201532.6
2018	1116386663	41702945.3	153341611.6

Source: Ministry of Planning - Central Statistical Organization - National Accounts Directorate. National Accounts, Miscellaneous Years

It is illogical and reasonable to stabilize the functional distribution of income in the long-run, so it is natural that consumption expenditure changes from income according to the change of income according to a hypothesis such as the role in income and consumption, the tendency to consume from wages and other forms of income generated from work exceeds the tendency of profits

and forms. Other than income from property, and in the Iraqi economy the need for education has emerged at all levels, as the acceptance of all levels (government, private) has expanded, as well as education outside Iraq, which means raising the expenditure function to the top as well. Most of the economic activity in Iraq takes place in the public sector despite the text of the 2005 Constitution on the transformation of the Iraqi economy towards a market economy and the consequent reduction in the size of government intervention in economic activity. As it is known, Iraq before 2003 had suffered greatly from a decrease in the volume of consumption of goods and services due to the nature of the economic sanctions imposed and the results of the wars that Iraq went through, which generated a shortage in Iraqi food security that reflected negatively on the growth rates of most of the real economic variables, including consumption and demand. Weakness and negative growth at times, which gave a strong impetus to increase consumption later, as it is considered a catalyst for growth in the long term. The high rates of population growth for most developing countries, including Iraq, and the distortion of population policies, both geographically and naturally, also led to an increase in the total total consumption expenditure for the period 2003-2018.

1Since Iraq depends for most of its consumption on wages from the source of work, and the decrease in the volume of income from profits due to the decrease in the contribution of ownership returns in the first place, and with the successive increases of wages after 2003 resulting from many factors, including the increase in the size of oil revenues and the existence of general budgets with trillions of Iraqi dinars called The need to raise consumer spending. 4. Evolution of gross domestic product (GDP) and gross capital formation

2Following up on my tables (1,2), we find that the successive increases of total consumer spending for the period 2003-2018 have formed the main pillar for increasing the gross domestic product and total capital formation, especially the increase in oil sector production after the licensing rounds that Iraq concluded with major international oil companies, which led to a transfer Investment spending in the above period to capital assets that contributed, directly or indirectly, to increasing the overall demand in the Iraqi economy and thus increasing the overall supply and demand.

3The increase in the size of the gross domestic product, which is approximately 400 trillion Iraqi dinars in 2012, with the increase of the monetary mass to 30 trillion Iraqi dinars for the year above, after it was around 5 trillion dinars before 2003, and if we consider that money is a form of wealth, according to According to Milton M. Friedman, all this will be an important factor for increasing the relative contribution of the different economic sectors that make up the structure of the GDP, and if the output is calculated using the value-added method of those sectors, this means an increase in the capital formation of the national economy as a whole and an increase in the nation's wealth and thus a higher level of spending. Total consumption: After the year 2015, the decline in the gross domestic product appeared, and the year 2018 reached what it reached in 2012, affected by the decline in oil prices and the nature of the political and economic conditions in

Iraq after the entry of terrorist gangs into Iraqi lands and the occupation of large parts of them, especially on the western borders of the country This was reflected in the decrease in the total capital formation, and the average per capita income was not affected by that. On the one hand, the public government on the one hand and the continuation of internal and external borrowing to maintain the level of consumption of the Iraqi individual supported by those politicians internationally and at the level of the International Monetary Fund and the World Bank due to the international support for the Iraqi government in facing the gangs coming from outside and within the borders

Table (2)

Development of GDP and capital formation

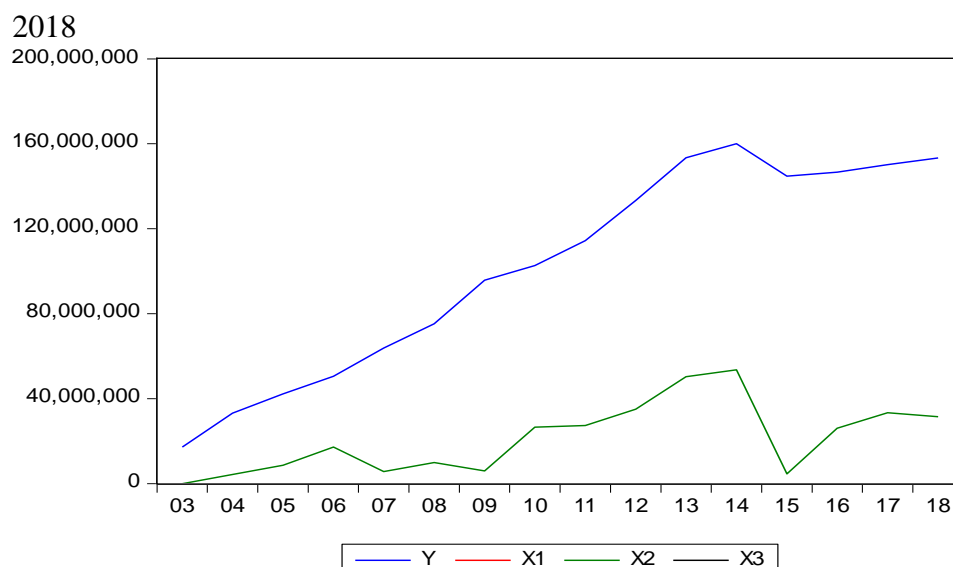
For the period 2003-2018

the year	Average per capita income	Gross domestic product	Total capital formation
2003	1024.6	29585788.6	0
2004	3756	53235358.7	4327981.3
2005	3712.1	73533598.6	8650594.6
2006	3797.5	95587954.8	17212470.6
2007	3752.7	111455813.4	5657259
2008	3864.6	157026061.6	9948694.64
2009	4021.3	130643200	5919810.24
2010	4147.8	162064566	26558090.2
2011	4285.3	217327107	27379586.9
2012	4645.4	254225491	35033925.9
2013	4813.1	273587529	50285093.8
2014	4870.4	266332655	53562706.4
2015	4933.6	194680972	4552686.0
2016	5236.2	196924142	26112656.0
2017	5446.7	225722367	33330384.2
2018	5446.4	251064480	31449571.6

Source: Central Bank of Iraq, General Directorate of Statistics and Research, .Economic Report, various issues

Figure 1

Timeline of variables (total consumption spending, investment spending, capital formation, average per capita income) for the period 2003-



By following Figure 1, we find the escalating time path of the variables of total consumption spending, average per capita income, the volatility of the investment split and total capital formation, and this explains the high degree of risk in the Iraqi economy resulting from the nature of the conditions surrounding it internally and externally and the disruption of economic policies in it.

#### Development of investment spending in the general budget

Investment represents one of the main components of aggregate demand in any economy and thus constitutes one of the items of total spending in the national economy and is more sensitive to economic fluctuations, which confirms the importance of controlling it to avoid negative effects on employment, growth and inflation. Investment spending is a major pillar of overall spending, especially spending related to new capital goods, because it changes with income change and thus will be a decisive factor in determining investment demand trends later. After 2003, Iraq's exports increased as a result of the lifting of economic sanctions and its exit from Chapter Seven, which led to an increase in its imports of goods (consumer and investment), and Iraq, after the massive destruction of its infrastructure and economic situation, the need for import became great, especially in the field of importing capital and durable goods, which It implies raising the investment function to the top in the medium and long term. From a follow-up to Table 3 of the development of the general budget in Iraq for the period 2003-2018 to follow the development of investment spending in the general budget, we find that the years following the year 2003 witnessed a clear swing for the above period with a decrease in its value as an absolute value or as a percentage of the total general budget and in favor of current expenditures except for the year 2011 was It is high as a percentage of total public expenditures or compared to total current expenditures, and this fluctuation reflects the nature of unorganized public spending in Iraq and it reflects political and economic fluctuations and the nature of the economic philosophy based on relying on the public sector in moving economic activity and facing various economic fluctuations and the nature of employment policy in the public sector.

Table 3

## The development of the general budget in the Iraqi economy

For the period 2003-2018

Source - :The Central Bank of Iraq, the General Directorate of Statistics and

Year	Total expenses	Current expenses	Investment expenses	The percentage of deficit or surplus /GDP	Deficit / surplus	Investment expenditure / total expenditure %	Current / Current Expenditures Total Expenditures %
2003	9232.2	7362.3	1869.9	(0.17 )	(4636.2)	21	79
2004	32117.5	29102.8	3014.7	0.86	871.4	9.4	90.6
2005	26375.2	21803.2	4572	13.5	140603	17.3	82.7
2006	38806.7	32779	6027	9.3	10248.8	15.5	84.5
2007	39031.2	31308.2	7723	14.3	15933.7	19.8	80.2
2008	59403.4	47522.7	11880.7	17.7	21237.6	20	80
2009	52567	42053.6	10513.4	2.1	2676.5	20	80
2010	70134.3	54580.9	15553.3	0.03	44	22.2	77.8
2011	78757.7	60925.6	17832.1	21.06	30049.7	32.6	77.4
2012	105139.6	75788.6	29351	9.03	14677.6	27.9	72.1
2013	119127.6	78746.8	40380.8	( 30.5)	( 5287.5)	33.9	66.1
2014	113473.5	76741.1	36731.8	( 4.48)	( 7863.7)	32.4	67.6
2015	70397.5	51832.8	18564.7	(2.16)	(3972.2)	26.4	73.6
2016	67067.4	51173.4	15864	(6.3)	(12658)	23.7	76.3
2017	75490.1	59025.7	16464.4	0.92	1845.8	21.8	78.2
2018	80873.2	67052.9	13820.3	26.7	25696.6	18	82

report, various issues.

To follow a schedule

On the whole, the aggregate analysis of the total variables determined for total consumption expenditure can be adopted as follows:

The attempts of monetary policy since 2003 to target inflation through the exchange to achieve economic stability, making the real values of wealth and income appear greater than before, as the Iraqi dinar has become an important savings tool, a place to save, and a form of wealth preservation and development, which implies the possibility of causally increasing total consumer spending. Thus raising the total spending function of the Iraqi economy on the other hand, there are multiple factors that contribute to the fluctuation of overall consumer spending in the ethnic economy, represented in the most important of which is the price changes of oil due to the technical, technical and political nature of the raw material before and after the approval

of the general budget, which greatly affects the budget deficit, which is an important indicator of spending. The reinter revenues of oil led to the predominance of the consumer side of spending over the investment side with a very large difference, and thus this contributed, directly or indirectly, to raising unemployment rates, the low level of employment, and the high rates of those below the poverty line, so that the real growth of some real sectors has sometimes become negative if We excluded the growth of the oil sector.

Likewise, expectations about the relationship between current income and future income played an important role in determining the form of consumer spending in Iraq resulting from the nature of the circumstances that it experienced on the one hand and surrounding it and expected to occur in the future on the other hand, as future expectations are nothing but the present product and past implications of the dimension Indeed, the total total consumption expenditure (for the studied period) is a reflection of the total expenditure before 2003 represented by the periods of wars and economic sanctions and the results of the current reality after 2003 and the aspiration for better growth in the medium and long term. In the period 2003-2018 the subjective factors played an important role no less important than the role played by the objective factors, the desire to create precautions for emergency conditions, especially since Iraq is going through exceptional circumstances necessitating the formation of these precautions, as well as the natural increase and diversity in the needs of the Iraqi individual in harmony With the nature of economic and social development at the local or regional level (the Iraqi did not know set light group, internet --- etc), the distortion of the financial policy in its revenue and spending sides (consumption and investment), and the poor distribution of wealth and income resulted from the absence of spending policies governed by appropriate tax policies to lead to Personal and government income turned into easily disposable income, and all this led to price inflation without responding to the domestic supply of goods and services to those increases, whether in prices or overall demand, which was directly reflected in the increase in consumer spending. When resorting to economic measurement to test the nature of the relationship between total consumption spending (the dependent variable Y) and investment spending, total capital formation, and average per capita income (independent variables) of the research variables, the following functional relationships can be formulated:

Equation of investment spending Government (x1)  $Y = \alpha_1 + B_1x_1 + e_1$

-1Capital formation equation (X2)  $Y = \alpha_2 + B_2x_2 + e_2$

-2The formula for average per capita income (X3)  $Y = \alpha_3 + B_3x_3 + e_3$

And by using the least squares method ((OLS to estimate the relationship) between the four variables in the model (total consumption spending, government investment spending, total capital formation, average per capita income), we find the significance of the independent variables except for the government investment spending variable and the reason for this is its decrease in Iraqi public budgets. As well as not implementing a large part of it even with its approval in the Iraqi general budget with a high explanatory capacity for the model through the coefficient of determination and the



corrected determination coefficient (R- squared, R- Adjusted) as well as the whole model's Significance through the F-statistic test As in

Table4  
OLS method tests

Dependent Variable: Y				
Method: Least Squares				
Date: 08/21/20 Time: 10:08				
Sample: 2003 2018				
Included observations: 16				
Prob.	t-Statistic	Std. Error	Coefficient	Variable
0.0622	-2.055853	22295580	-45836425	C
0.0411	2.287985	903.6293	2067.491	X1
0.9432	-0.072712	0.639546	-0.046503	X2
0.0007	4.527501	6092.280	27582.80	X3
1.02E+08	Mean dependent var	0.872142	R-squared	
49179400	S.D. dependent var	0.840178	Adjusted R-squared	
36.63847	Akaike info criterion	19660824	S.E. of regression	
36.83162	Schwarz criterion	4.64E+15	Sum squared resid	
36.64836	Hannan-Quinn criter.	-289.1078	Log likelihood	
1.122006	Durbin-Watson stat	27.28477	F-statistic	
		0.000012	Prob(F-statistic)	

Source: Prepared by researchers based on E views 9

To further examine the nature of the relationship between the independent variables influencing the dependent variable, we resort to the VAR Granger Causality Testes for the causality of the VAR model.

#### VAR table 5 test results

Vector Autoregression Estimates

Date: 08/21/20 Time: 17:17

Sample (adjusted): 2005 2018

Included observations: 14 after adjustments

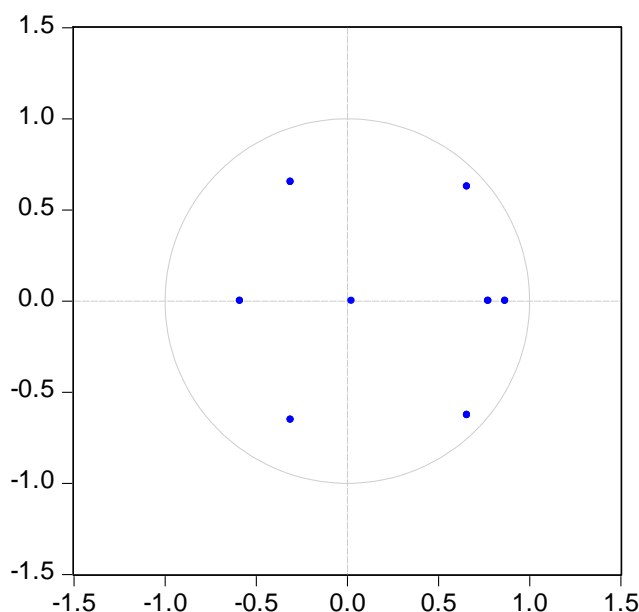
Standard errors in ( ) & t-statistics in [ ]

X3	X2	X1	Y	
4.38E-07	0.211519	0.000224	0.637098	Y(-1)
(7.3E-06)	(0.90333)	(0.00041)	(0.38640)	
[ 0.05970]	[ 0.23415]	[ 0.54812]	[ 1.64879]	
7.83E-06	0.113936	0.000134	0.700250	Y(-2)
(7.5E-06)	(0.91986)	(0.00042)	(0.39347)	
[ 1.04842]	[ 0.12386]	[ 0.32139]	[ 1.77966]	
0.002711	2450.632	1.413701	1643.687	X1(-1)
(0.01337)	(1647.60)	(0.74669)	(704.767)	
[ 0.20273]	[ 1.48740]	[ 1.89328]	[ 2.33224]	

-0.010339 (0.01166) [-0.88649]	-2221.891 (1436.91) [-1.54630]	-1.455801 (0.65121) [-2.23553]	-2330.366 (614.645) [-3.79140]	X1(-2)
-4.44E-06 (4.9E-06) [-0.90510]	-0.908804 (0.60449) [-1.50343]	-0.000315 (0.00027) [-1.15012]	-0.518169 (0.25857) [-2.00397]	X2(-1)
6.89E-07 (4.4E-06) [ 0.15669]	0.111549 (0.54202) [ 0.20580]	0.000267 (0.00025) [ 1.08741]	0.231735 (0.23185) [ 0.99950]	X2(-2)
0.636509 (0.19414) [ 3.27866]	9525.570 (23919.4) [ 0.39824]	-9.557097 (10.8403) [-0.88163]	-12919.61 (10231.6) [-1.26271]	X3(-1)
-0.027429 (0.06240) [-0.43955]	-1288.023 (7688.72) [-0.16752]	-2.349381 (3.48454) [-0.67423]	-2469.508 (3288.88) [-0.75087]	X3(-2)
1233.261 (694.959) [ 1.77458]	-33805704 (8.6E+07) [-0.39481]	33515.33 (38805.4) [ 0.86368]	62422505 (3.7E+07) [ 1.70430]	C
0.988577 0.970301 60014.62 109.5579 54.09092 -78.40814 12.48688 12.89770 4498.079 635.7315	0.729839 0.297582 9.11E+14 13498501 1.688436 -242.5111 35.93015 36.34097 23975252 16105998	0.877770 0.682202 1.87E+08 6117.543 4.488312 -134.7226 20.53180 20.94263 17519.89 10851.79	0.992612 0.980791 1.67E+14 5774041. 83.97293 -230.6222 34.23174 34.64256 1.13E+08 41661321	R-squared Adj. R-squared Sum sq. resids S.E. equation F-statistic Log likelihood Akaike AIC Schwarz SC Mean dependent S.D. dependent
				Determinant resid covariance (dof adj.) 4.02E+36 Determinant resid covariance -669.4483 Log likelihood 100.7783 Akaike information criterion 102.4216 Schwarz criterion

Source: Prepared by researchers based on E views 9  
The stability of the time series will be confirmed by the unit root test

Figure 2  
Inverse Roots of AR Characteristic Polynomial



Source: Prepared by researchers based on E views 9

From the results of Table 5 and Fig. 2 it is clear that the roots are located within the boundaries of the unit circle. This means that the pattern estimated in VAR is stable and good. Therefore, the model will be estimated according to Cranger's causation.

Thus, we find that the model variables fall within the unit circle and that the estimated model is stable and fulfills the conditions of stability, and that there is a common complementarity between the model variables and most of the necessary tests can be performed to analyze the nature of the relationship between the model variables.

Table 6  
Granger Causality Tests

VAR Granger Causality/Block Exogeneity Wald  
Tests

Date: 08/21/20 Time: 17:53

Sample: 2003 2018

Included observations: 14

Dependent variable: Y			
Prob.	df	Chi-sq	Excluded
0.0007	2	14.66715	X1
0.0526	2	5.889586	X2
0.4360	2	1.660206	X3
0.0044	6	18.84686	All

Dependent variable: X1			
Prob.	df	Chi-sq	Excluded
0.2917	2	2.463760	Y
0.2196	2	3.031891	X2
0.6392	2	0.895205	X3
0.3738	6	6.458451	All

Dependent variable: X2			
Prob.	df	Chi-sq	Excluded
0.8111	2	0.418626	Y
0.2133	2	3.089949	X1
0.8651	2	0.289843	X3
0.1373	6	9.713214	All

Dependent variable: X3			
Prob.	df	Chi-sq	Excluded
0.1198	2	4.243698	Y
0.6515	2	0.857031	X1
0.6310	2	0.920927	X2
0.2667	6	7.627042	All

Source: Prepared by researchers based on E views 9

Thus, it was found that there is a causal relationship between the total total consumer spending and government investment spending, as one affects the other because the increase in private and government consumption spending in the Iraqi economy will increase the overall demand and thus will increase consumer spending and this will lead to the creation of new incomes that create jobs and thus provide an environment conducive to growth This development is in line with the logic of economic theory. However, this philosophy has been worked on by the United States of America since the eighties of the last century and has achieved a steady growth that is still evident until now.

We also note the existence of a causal relationship between total consumer spending and total capital formation and not vice versa, while the direction of the relationship is supposed to be opposite to the above result, and this situation in Iraq is special because most of the investments are made by the

government. In the absence of a weak tax policy, it is possible to convert that spending into easily disposable income and thus increase private and public consumption spending and increase aggregate demand.

## CONCLUSIONS

1The economic analogy proved that the nominative series is stable without time delay.

2The existence of a causal relationship between total total consumer spending and government investment spending, as one affects the other.

3The existence of a causal relationship between total consumption expenditure and total capital formation.

4Increasing private and government consumption spending in the Iraqi economy will increase the overall demand.

5The weakness of the infrastructure related to electric power and transportation, as well as the nature of the political conditions that the Iraqi economy went through for the period 2003-2018 prevented it from benefiting from accelerating growth and increasing capital formation by increasing consumer and investment spending.

## REFERENCES

- James Guartini - Richard Strobe, *Macroeconomics (Public and Private Choice)*, translated and Arabized by Dr. Abdel-Fattah Abdel-Rahman - Dr. Abdul Azim Muhammad, Mars Publishing House, Saudi Arabia, 1999.
- Dr. Abdel Salam Al-Idrissi, *Macroeconomics*, World University Book Library, Lebanon, 1986.
- Fayez Bin Ibrahim Al-Habib, *The Principle of Macroeconomics*, Fourth Edition, Riyadh, 2000
- Central Bank of Iraq, General Directorate of Statistics and Research, *Economic Report*
- Consumption in Iraq, unpublished study No. 835, Baghdad, 1990.
- Iraq, unpublished study No. 835, Baghdad, 1990.
- S.I. Slavin ,*Macroeconomics*,Mc Graw –Hill,IRWIN ,8 th edition ,2008.
- R. H . Frank . B.S. Bernate ,*Prnciples of Economics*,5 th edition , Mc Graw –Hill , Irwin , 2007 .
- 7J.B.Delong M.L . Olnely , *Macroeconomics*, Mc Graw –Hill , Irwin ,2 nd edition , 2006 .