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ANALYSIS THE RELATION BETWEEN THE GOVERNMENTAL CONSUMPTION EXPENDITURE AND THE ECONOMIC GROWTH IN IRAQ FOR THE PERIOD 1981-2006

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ABSTRACT

The research aim is to determine the relation between governmental consumption expenditure (GCE) & GDP in Iraq for the period 1981-2006.

The researches has determined the scale of optimization for GCE and try to know the extent productivity of this expenditure and using the long run & short run model to test. The results clarify the following:

- 1-The marginal productivity for the GCE is positive so it is productive.
- 2-The GCE in Iraq is too high because the marginal productivity for the expenditure less than 1.
- 3- The GCE percentage to GNP is 32% is up to national optimal scale which is 23%.

Keywords: Gross Domestic Product (GDP), Governmental Consumption Expenditure, Fixed Capital.

INTRODUCTION

Governments use spending for the development of economy, state is largest buyer in the domestic market, especially in the oil states, including Iraq, which is characterized by concentration of revenues oil wealth national in the state and this wealth is usually the source of main income in these countries, so the state is the richest and most spending than any other party.

The role of the state in the economy is different from age to age and from one system to another, depending on the economic system applied, as well as by stage of development reached by the economy, it is certain that there is a role for the state stems from submitting its goods impossible for the market system provided, as is the situation in the case of developing countries.

The question is whether there are limits to government intervention in the economy through the budget; the state can increase the size of spending to generate positive or negative effects on the economy, or specifically, economic growth?

Although government spending is not the only factor that affects economic growth but is a strong factor influencing, that the results of studies that tried to

explain the role of government spending in the economic growth did not reach the result of limited in this regard.

The role of government spending in the economy is the statement of the ideal size for this spending as well as the productivity of this spending.

The aim of research is to find out the nature of the relationship between the final consumption expenditure of government and GDP in Iraq during the period from 1981 to 2006, and we'll try to see how productive this spending by econometric analysis method and compared with the ideal size for this spending estimated by previous studies.

The researcher is studying the effect of consumer spending on state economic growth represented gross domestic product in the Iraqi economy for a long period of approximately 25 years to reach a clear vision about the role of government consumer spending in the Iraqi economy despite the vary of the economic policies that have been followed and the different circumstances and their effects.

The hypothesis of the research is: governmental consumption expenditure in Iraq is bigger than should be within the period 1981-2006.

To achieve the target, research was divided into detective following:

First: the impact of government spending on economic

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growth,

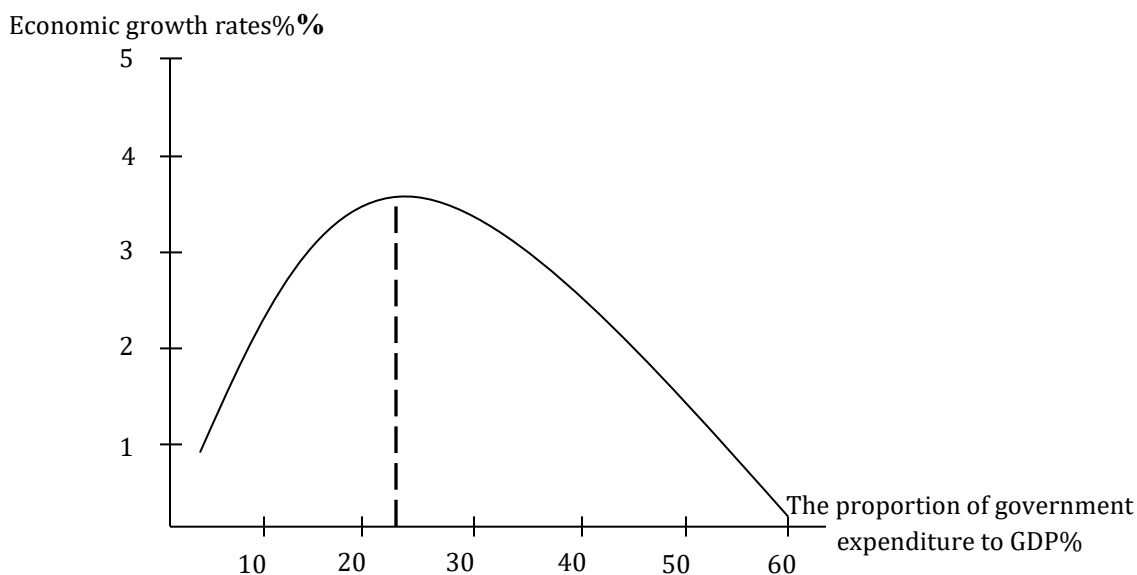
Second: the evolution of consumer spending, the government consumption and GDP in Iraq during the period 1981-2006,

Third: the econometrics model used and the results obtained.

First: The impact of government spending on economic growth: Policy makers split on whether to expand government spending helps or hinders economic growth. Government consumption expenditure

programmers provide public goods such as education, infrastructure, defense and security, some claim that the increase in government spending could enhance economic growth to a certain extent, because the surge in government spending would undermine the economic growth that starts gradually decline after more government spending by shifting additional resources from the productive sector of the economy is consumer spending. ⁽¹⁾

The following figure illustrates the levels and economic growth with the GDP proportion of government spending.



Source: Daniel Mitchell, the impact of government spending on economic growth, Institute for economic policy studies Thomas, Washington, 2005, p. 3.

Some government spending is necessary, so that the figure shows that the lower levels of government spending will hamper economic growth, Economic growth begins to rise when the State finances basic functions up to the size that best achieves the highest rate of economic growth, because when the benefits exceed the costs ⁽²⁾.

If the proportion of government expenditure to GDP economic growth rate curve will roll down for a number of reasons:

1. Because government spending will burden, the Government becomes too large and leads to misallocation of expenditures and misallocation of resources to the various uses and lower relative efficiency.
2. Government consumption expenditure increased often reduces the incentive to increase productivity and indirectly supports employment.

3. In such cases, the costs would exceed the benefits and claims this curve (the curve ran) (Rahn Curve).

Second: The evolution of Government consumption expenditure and gross domestic product (GDP) in Iraq:

Iraq is one of the States where the public sector was and still, for a long period of time, and we can follow several stages of government spending in Iraq during the period 1981-2006, through the table (1).

Government final consumption expenditure relative to GDP in the 1980s achieved an average 51% between 1981-1990 ⁽³⁾.

After 1990, started draw back to the imposition of the economic embargo and falling oil revenues, which is important for budget revenues so earned the Government final consumption expenditure to GDP average 23% between 1991- 2002. After the 2003 percentage to 19% for the period 2003-2007 for the unstable conditions that accompanied the period.

Table 1. GDP and Government consumption in Iraq for the period 1981-2006, with current prices and fixed prices (1988=100) (millions I.D).

(6) G/Y%= 5/4 *100	(5) Government consumption 1988=100	(4) GDP 1988 =100	(3) Public expenditure Consumption + investment	(2) Government consumption current price	(1) GDP current price	years
57	10953,4	19198,6	8911	5411	11346,9	1981
61,8	12379,9	20026,8	11547	7886	12714,7	1982
55,3	9791,4	17677,4	10749	7138	12621	1983
45,3	8005,8	17656	10718	6861	1455,9	1984
47,6	8424,4	17685	10457,3	7363	15011,8	1985
52,2	9771	18695,5	10030,5	7426	14652	1986
49,6	10164	20460,2	11846	9229	17600	1987
51,7	10630	20555,6	13363	10630	19432,2	1988
49,8	10048	20155,1	13934	10872	20407,9	1989
46,5	14285,5	30673,4	14179	11357	22848,3	1990
33,9	3765,4	11087,2	17497	15653	21313,3	1991
43,4	6292,8	14492,8	32883	25876	59348	1992
34,4	6423,7	18633,7	68954	50060	122997,2	1993
24	4618,9	19239,6	199442	171742	630006,1	1994
26,5	5199,8	19619,3	690783	605840	2252263,8	1995
19,7	4321,4	21837,7	542541	506102	2556307	1996
15,8	4216,7	26555,7	605802	534092	15093144	1997
17,4	6219,6	35683,2	920501	824705	17125847	1998
12,3	5159,6	41737	*	831592	34464012,6	1999
15,3	6502	42478	1498700	1151663	50213699	2000
15,7	6806,3	43335	2069727	1490866	41314568	2001
19,3	7789	40344	2518285	1762683	41022927	2002
12,2	3313	26990	4901961	36311594	29585788	2003
28,3	9416,9	33185	31521427	13608947	47958546	2004
22,9	7861,9	34267	30831142	14683390	64000066	2005
15,6	12272,2	78286	40323400	14984454	73533598	2006

Source: Ministry of planning, the Central Organization for statistics and information technology, the annual preparation of statistical aggregates.

*Values not available

If we looked at the importance of consumer spending to overall government spending we found it was high during the period 1981-1990, It had achieved an average 68, 36% to meet the expenses of the war with Iran despite falling oil revenues, which have been translated into resolutions and directives of the need for austerity for not drained financial reserves of foreign currency. In the period 1991-2002 ratio of government consumption expenditure 85% due to lower total government expenditure during the period 1991-2002, a higher proportion of low government consumption expenditure due to the embargo of Iraq during that

period. Government consumption expenditure maintained a close until 2007.

The change of gross fixed capital formation constant of 1988 from 3636 million in 1981 to 8641.4 million I.D in 1990.

In 1991 fell gross fixed capital formation to 1713.4 million and raised to 2162.7 million dinars in 2002 to 21177.3 million dinars in 2007 to increase GDP because of high oil prices source.

The movements of fixed capital formation correspond to the movement of Iraqi economy dependent on oil wealth that affected the macroeconomic variables.

Third: The econometrics model used and the results obtained:

The conceptual model used in the research is modern classical production function (new classic) which takes shape: ⁽⁴⁾.

$$Y = F(K, L, G)$$

Where:-

$$Y = \text{GDP}$$

K: Gross Fixed Capital Formation

G: Government consumption expenditure

L: workforce

The research will depend on the value of government consumption expenditure as a proportion of GDP (G/Y) = g which measures the impact of government consumption expenditure on GDP in the long term.

Also it will determine the value of government spending that the rate of growth in government spending ($\Delta G/G$) which measures the impact in the short term.

So we will study the impact of both scales of government consumption expenditure in Iraq to determine the impact of this expenditure on GDP.

Therefore the long-term equation will be:

$$Y = a + b_1k + b_2G/Y + b_3L + U$$

And the short-term equation is:

$$(\Delta y/y) = a + b(\Delta L/L) + MPK(\Delta K/Y) + MPG(\Delta g/g) + U$$

b: flexible output relationship to work

MPK: The marginal productivity of capita

MPG: Marginal productivity of government consumption expenditure

g :G/Y

U: Random variable

The appreciation of the previous equation we will answer the following questions:-

1. Does government consumption expenditure in Iraq Product or non-product?

In this regard, the focus will be on the following test the two hypotheses

a- Null hypothesis: that government consumption expenditure in Iraq is non- product if the value of the product $MPG = 0$

b- Alternative hypothesis: that government consumption expenditure in Iraq is productive if the value of the product $MPG < 0$.

2. Does the size of government consumption expenditure in Iraq suitable or greater or less in this regard will focus on testing hypotheses:

a- Null hypothesis: $MPG = 1$, which means that the volume of government consumption expenditure in Iraq is suitable.

b- Alternative hypothesis 1: $0 > MPG < 1$ which means that the volume of Government consumption expenditure in Iraq greater than it should be because Government sector become more productive when it reduces the size of the sector where the marginal productivity of Government consumption expenditure reduces whenever the larger spending.

c- Alternative hypothesis 2: $MPG > 1$ which means that consumer spending in Iraq too low.

These recent hypotheses based on the so-called "law of Barro" which States that the size of government consumption expenditure is appropriate when the value of marginal productivity of spending equal one ⁽⁵⁾.

The results obtained it is:-

1. Long-term models results: These findings indicate a strong relationship between GDP and the variables involved in the study are the government consumption expenditure and manpower and gross fixed capital formation.

$$Y = 20952.093 + 3.301K - 49763.5 G/Y + 0.001L$$

$$t : (1.24) \quad (5.977) \quad (-2.503) \quad (0.964)$$

$$R^2 = 79\%, F = 32.376$$

	y	k	G/Y	L
t		5.977	-2.503	0.964
$R^2 = 79\%$				
$F = 32.376$				

Where the values in parentheses are the statistics (t) R^2 is corrector Coefficient of determination, f is for good models.

That all results accompanying is significant ⁽⁶⁾ except variable workforce L the result was non-significant and very weak which indicates there is no relationship between the numbers of workers and the size of the GDP. This result is in line with the economic reality in Iraq for the oil sector, which contributes a high percentage in the GDP and does not creating employment opportunities only a small proportion of the workforce, While other sectors, such as services, commerce and agriculture which contributes high percentage in the workforce and a lower percentage in the GDP.

The negative sign indicates government consumption expenditure to GDP, G/Y, The G/Y were reduced during a research after having formed in 1981 decreased from 57% to 46.5% in 1990 to 12% in 2003 to 15.6% in 2006

and by 27% drop length despite the rise in GDP during the same period as described in table (1) in the research. Then there's the long-term relationship between GDP and fixed capital formation, and with the G/Y.

2. Short-term model results:

$$(\Delta y/y) = a + b(\Delta L/L) + MPK(\Delta k/y) + MPG(\Delta g/g)$$

$$(\Delta y/y) = 0.205 - 4.581(\Delta L/L) + 3.201(\Delta K/Y) + 0.070(\Delta g/g)$$

t: (1.067) (- 0.917) (8.933) (0.503)

R²=77% F=27.85 DW=2.184

(Δy/y)	(ΔL/L)	(Δk/y)	(Δg/g)
T	- 0.917	8.933	0.503
R ² = 77%			
F = 27.85			
DW = 2.184			

And to make sure there is no autocorrelation test DW was used as the test results to reject the hypothesis of the presence of autocorrelation of the residuals in this equation.⁷

The results were in favour of the existence of the interrelationship between government consumption expenditure and GDP, finding the relationship between two variables were significant and positive, and that was a little weak.

Estimated marginal productivity of Government consumption expenditure in a positive value greater than zero and less than the one true (0.070), according to the hypotheses mentioned above, government consumption expenditure product, It is too much over the duration of the research, This is natural and expected as this type of expenditure contains expenditure for security and defense sectors which generate consumer demand which contributes to waves to generate national income.

The results were not significant to the relationship between GDP and fixed capital formation and labor force according statistics (t).

Actually statistics show that the ratio of government consumption expenditure to GDP in Iraq during the period of study was in average 33% is high, and higher than the optimal size of government expenditure to GDP reached by the Studies by 23% as above, this result reinforces the argument that Government spending in Iraq higher than expected depending on the value of the marginal product of government consumption expenditure MPG obtained in the equation.

CONCLUSIONS

- i. The long-term model explained that there is a strong relationship between GDP and variables within the

model G, L, k, and the results of the L and GNP is non-significant for the extractive sector is a key determinant in the GDP and a small contribution to the operation of the labor force.

- ii. The short-term model explained that the marginal productivity of government consumption expenditure less than one , Therefore, Government consumption expenditure value is too much which should be during a research.
- iii. Government consumption expenditure reached in Iraq to the GDP 33.5 % for the average duration of research it is high and higher than the optimal size of government expenditure to GDP estimated by 23%.

RECOMMENDATIONS

- i. Rationalization of government consumption expenditure, It must be the policy of the State spending based on increased investment expenditures and decreased government consumption expenditure that leads to the expansion of production capacities raise rates of economic growth.
- ii. Diversification of income sources of local development of economic sectors such as industry, agriculture, transport and communications, and activating the role of tax revenue as a source of national income.
- iii. The Iraqi economy needs to processors by the State as the natural wealth and the controlling owner, is obligated to manage the economy and adjusting spending to a level commensurate with the size of GDP.

RESEARCH MARGINS

- (1) Daniel Mitchell, the impact of government spending on economic growth, Mohammad Thomas for economic policy studies, Washington, 2005, p. 3.
- (2) As far as Karris (Karris1996) in his study of the relationship between public spending and economic growth in developed and developing countries 118 divided by continents using statistics for the period 1960-1985, the optimal size of government spending on average as a percentage of GDP is 23%.
See: Karris, Georgios "The Optimal Government size: Further International Evidence on the Productivity of Government Services ", Economic Inquiry, vol.34, 1996 pp.193-203.
- (3) Was calculated for the period 1981-1990 and 1991-2002 period and what further 2003 from the

- (4) data in table 1 can also refer to the following message regarding the first period: Wael Salem Jameel, "relationship between public spending and the overall sectoral growth rates in Iraq 1981-2000", unpublished thesis, Baghdad University (2006), p. 52.
- (5) Ministry of planning, the Central Organization for statistics and information technology, the annual preparation of statistical aggregates.
- (6) Michael abegman, *Macroeconomic Theory and Policy translation*: Mohammad Ibrahim Mansour (Jeddah: Dar Mars publishing, 1999), p. 525.
- (7) The study of Barrow (Barro1990) "Government spending in simplified form " is pilot studies in this area was rated to reach conclusions regarding the size of government spending, and how productive this expenditure, and became known as "Parro law" relative to the criteria established by Robert Barro in his study which States that the appropriate size of government expenditure becomes Individual optimization when the value of the marginal product of spending equal one.
See: Barro, Robert, Government spending in simple Model of Endogenous Growth, *Journal of political Economy*, 1990 vol 98 NO.5 PP.103-124.

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