Revista de Antropología, Ciencias de la Comunicación y de la Información, Filosofía, Lingüística y Semiótica, Problemas del Desarrollo, la Ciencia y la Tecnología

Año 36, 2020, Especial Nº

Revista de Ciencias Humanas y Sociales ISSN 1012-1587/ ISSNe: 2477-9385 Depósito Legal pp 198402ZU45



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The Effect Of Changing Government Spending On Narrow Cash Supply In Iraq For The Period 2006-2018

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Abstract

The research aims to analyze the effect of the change in government spending on the narrow money supply in oil countries, in which the narrow money supply is dependent on the size of government spending. There is an effect that the change in government spending in oil countries will have on the narrow money supply. The most important objective of monetary policy is to stabilize prices through managing the money supply, because an increase in the money supply leads to an increase in inflation rates. One of the conclusions is that there is a short and long-term balance relationship between public spending and money supply. One of the recommendations is the necessity for coordination between the monetary and fiscal policies in order to unify the goals.

Recibido: 20-12-2019 • Aceptado: 20-02-2020

El Efecto De Los Cambios En El Gasto Público Sobre La Escasez De Efectivo En Irak Para El Período 2006-2018

Resumen

La investigación tiene como objetivo analizar el efecto del cambio en el gasto público sobre la oferta monetaria limitada en los países petroleros, en los que la oferta monetaria limitada depende del tamaño del gasto público. Existe un efecto que el cambio en el gasto público en los países petroleros tendrá sobre la oferta monetaria reducida. El objetivo más importante de la política monetaria es estabilizar los precios mediante la gestión de la oferta monetaria, porque un aumento de la oferta monetaria conduce a un aumento de las tasas de inflación. Una de las conclusiones es que existe una relación de equilibrio a corto y largo plazo entre el gasto público y la oferta monetaria. Una de las recomendaciones es la necesidad de coordinar las políticas monetaria y fiscal para unificar las metas.

First - Introduction

1-1- Introduction to the research

Oil revenues in Iraq constitute a large percentage of budget revenues and in hard currency, which necessitates monetizing these revenues to the local currency in order to carry out their traditional duties towards society. The process of replacing foreign currency to the local currency which is carried out by the Central Bank of Iraq through the so-called currency window has resulted in an increase Continues in the money supply growth rates, especially in the narrow money supply, because what is bought from the local currency from the central bank is greater than the central bank buying the local currency against the foreign currency, which made the central bank's ability to control liquidity levels in The Iraqi economy and a continuous increase in the money supply, especially the currency in circulation.

1-2- The importance of research

The importance of the research lies in the importance of the studied variables and their impact on the Iraqi economy, as government spending is the main control in increasing and decreasing the money supply. When oil revenues increase, government spending increases, which leads to an increase in the narrow supply of cash and vice versa. When government expenditures decrease, the money supply decreases with it. Changes in the effects on the Iraqi economy.

1-3- Research problem

One of the most important goals that monetary policy is working to achieve is price stability through managing and controlling the money supply because increasing the monetary block ultimately leads to an increase in inflation rates, since Iraq is an oil country and the largest proportion of its expenditures is due to oil revenues, which are in the hard currency. The process of exchanging the local currency for foreign means that the central bank is unable to control the money supply and the negative economic effects that this has on the Iraqi economy.

1-4- Research hypothesis

There is an effect of the change in the volume of government spending in oil countries on the size of the narrow money supply, by increasing or decreasing, so the relationship is direct.

1-5- Research objective

The research aims to analyze the effect of the change in government spending on narrow money supply in Iraq, in which the narrow money supply is dependent on the size of government spending as a result of monetization operations of oil revenues, which are often in hard currencies, and measure the size of this effect on the monetary unit.

Second / theoretical framework Second / theoretical and conceptual framework for government spending

2-1- The concept and importance of government spending

The term direct government spending refers to the goods and services that various government units buy, and this spending is like that for consumption and investment in the private sector, one of the ways that leads to the use and depletion of available resources as resources constitute the goods and services that the government sector buys from the sector Private ((inputs)) necessary to produce social goods or services of public benefit, and government spending on these resources of goods and services is the measure by which the economic value of these social goods is measured, given that these resources are not Retail injury and therefore are not sold on the basis of an individual market by device (Dabbagh and Jawmrd, 2003).

Public expenditure is also defined as the amount of cash that is released from a public person in order to achieve a public benefit (Muhammad, 2018, 30).

From the previous concepts, the elements of public expenditures can be

identified in the following:

1- Public expenditure is an amount of money

The state usually spends cash to obtain the necessary goods and services, and spending the cash amounts is the usual way for the state to obtain its needs and pay the interest and installments of its public debt (Taqah and Azawi, 2007).

2- Public expenditure is issued by the state or one of its agencies

It means the necessity of issuing alimony from a public body (the state and its public institutions) in order to take the official and public character, and a public expense is not considered all amounts spent by individuals or groups in general in order to avoid the requirement of publicity (Al-Hiti and Al-Khashali 34)

3- Achieving public benefit

It is necessary to use public expenditures in order to satisfy a general need, and this pillar finds justification in two things. First, the only justification for public expenditures is the existence of public needs, so the state or public bodies and institutions assume their satisfaction on behalf of individuals, so the goal of public expense must be to achieve A public benefit is to satisfy a general need. The second is that if the spending aims to achieve a special benefit for some groups or some individuals, then it falls outside the framework of public expenditures because it contradicts the principle of equality between citizens in bearing public burdens, because equality of individuals in bearing the tax burden is not sufficient to achieve a principle equality (Al-Khatib and Shamia, 2012: 58).

2-2- Evolution of public spending and Wagner's law

A simple review of the financial history of different countries brings to a clear and unquestionable fact that public expenditures are subject to the phenomenon of increase in quantity and quality, as this phenomenon has become a feature that is characteristic of most governments, if public expenditures decrease in a year or these expenses are also fixed However, the general trend of this phenomenon remains the increase.

Welfare theories have failed to provide sound analysis tools for studying public spending, foremost of which is the difference in the nature of individual contractual activity, as the tools of value theory and utilitarian and marginal analysis in the field of government activity did not achieve success in the area of private activity, and theories of economic growth

were not more Conciliation in explaining the historical development of public expenditures, and its relationship to the components of the national economy and its growth. In most theories of economic growth, it neglected public spending, and omitted it entirely from its account, either by merging it with private consumption spending or as an external variable that is not subject to the rules of analysis and interpretation The Economist (Al-Khatib & Shamia, 2012: 75).

The phenomenon of increased expenditures is one of the phenomena that attracted the attention of economists that were associated with the increase in national income. The first to draw attention to this phenomenon is the German economist Wagner after he conducted a study related to public expenditures in European countries during the ninth century. It ended with a general trend towards increasing state activity, and hence leads to an increase in public expenditures at a rate greater than the rate of increase in per capita GDP (Noureddine, 2017: 571).

Wagner explained that public expenditures are a natural reflection of a specific historical situation necessitated by economic and social realities. Hence, the development of public expenditures is a natural result of the changing economic structure shown by the facts of economic and social history, such as the growth of the need for transportation and transportation, the complexity of economic life and technical progress and the accompanying expansion In the field of division of labor, social specialization etc., which prompted the economist Wagner to study economic and financial history in a number of countries to learn about the relationship between the growth of national income on the one hand, and the growth of public expenditures on the other hand, and issued his law on increasing Activity th Economic for the state, and about the growth of public spending in 1892, and this law is summed up in the fact that ((if a society achieves a certain rate of economic growth, this leads to the expansion of state activity, and this works to increase state expenditures, at a rate greater than the rate of increasing the per capita share of National product)) In other words, the proportion of public expenditures in the national product tends to increase in the national product (Al-Khatib and Shamiya, 2012: 76).

2-3-The effect and effectiveness of public spending

The state usually performs its known functions to achieve the goals it works to achieve and to perform these jobs it must be spent on these jobs to achieve those goals, so there must be economic and social effects of that government spending and these effects can be mainly divided into

two types are direct effects and indirect effects , That the effect of public spending is in the beginning a preliminary and immediate in its impact on economic variables in the first stage, and this can be classified as the direct effect of public expenditures and after a certain period of time these effects interact to generate an indirect effect due to the interaction of the multiplier effect and the accelerated effect of that Less investment (Hiti, 61), and (Figure 1 (shows the division of public expenditure and as follows:

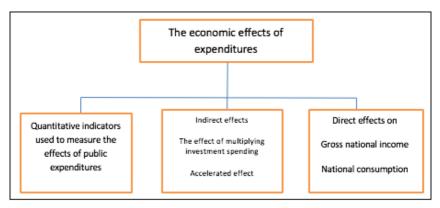


Figure (1) dividing the public expenditures into direct and indirect effects.

Source:

1-2-3- Direct effects of public spending

There are effects that are directly on the economic variables of public spending and can be summarized as follows:

1- The effect of public spending on national production

Expenditures for investment purposes, that is, the formation of fixed capital or the creation of new capital is one of the forces directly affecting the productive capacity of the national economy. Increasing investment or productivity expenditures leads to an increase in the amount of capital assets such as (equipment, buildings, bridges, roads, machines, networks Puncture and irrigation) that contribute to increasing the capacity of the economy to produce, and there is no argument that the more a country increases its financial resources allocated to increase the production of capital assets, the greater the rate of formation of fixed capital, and thus its productivity increases and that a greater portion of the financial resources are spent to develop the Physical investment or investment in capital goods helps make national production respond more quickly to an increase in aggregate demand (Ismail, 2002: 364), because the expenditures that

the state executes are an important part of this demand thatIts importance increases as the size of the state's intervention in economic and social activity increases (Taqa and Al-Azzawi, 2006: 62).

2- The effect of public spending on national consumption

The increase in public expenditures leads to an increase in the total demand for goods and services and then an increase in national consumption, but this effect on consumption varies according to the type of expenditure and its purpose, so we find, for example (Al-Qadi, 2014: 79):

- The state's purchase of consumer services such as education, health, defense and security leads directly to increased consumption.
- The state distributes an income, part of which is allocated to consumption, such as wages and salaries, which leads to an increase in consumption.
- The state's purchase of goods provided to some members of society, such as clothing, food, and medical materials, and the deduction of the value of these goods from their wages, does not affect the volume of consumption because the state was bought on behalf of individuals.
- 3- The direct effect of government spending on the distribution of national income

Government spending plays an important role in redistributing national income among members of society through two phases (Al-Qadi, 2014: 79): The first stage: the first distribution of income

Here, the state distributes the income to the factors of production that work in the state, such as the wages and salaries that the state pays for workers in the public sector, and as a result of political, social and economic factors, a disruption occurs in this initial distribution of income, so the income of individuals increases and the income of individuals decreases, which requires the state to restore Income distribution again.

The second stage: the role of the state in redistributing national income

The state works here to redistribute income using public expenditures, the impact of which varies with the type of alimony:

- Transfer expenditures in general: lead to the redistribution of national income, if they differ according to their type.
- Social transfer expenditures: lead to redistribution of income in favor of the poor classes.
- Economic transfer expenditures: it works to redistribute the income in kind in the form of goods and services, and the income is redistributed horizontally.

Financial transfer expenditures: such as the interest of debts work to redis-

tribute income in favor of the wealthy classes that lend the state, and get the benefits, originally deducted from taxes paid by the poor.

2-3-2-indirect effects of government spending

Government spending is one of the tools of financial policy, which is often used to influence economic activity. In the event of an economic recession, countries often increase government spending to increase total demand. In the case of waves of inflation, the state works to reduce government spending in order to reduce total demand and thus reduce High inflation rates.

An initial increase in government spending will lead to a greater increase in income due to what is known as the multiplier, but the changes in income will lead to other changes in investment, i.e. the Accelerator mechanism began, i.e. an increase in investor demand for productive and investment goods.

Government spending and multiplier effect

That any increase in government purchases of goods and service (ΔG) It leads to an increase in the level of national income and a new balance of income, since:

$$y = \frac{C + I + G}{1 - h}$$

If there is a change in government spending, then

$$-y + \Delta y = \frac{C + I + G}{1 - b}$$

The equation can be written as:

$$y + \Delta y = \frac{C + I + G}{1 - b} + \frac{\Delta G}{1 - b}$$

And compensation
$$\frac{C + I + G}{1 - b}$$
 Equal to it (y) $y + \Delta y = y + \frac{\Delta G}{1 - b}$

So, then:

$$\Delta y = y - y + \frac{\Delta G}{1-b}$$
 \Rightarrow $\Delta y = \frac{\Delta G}{1-b}$ \Rightarrow $\Delta y = \frac{1}{1-b} * \Delta G$

By dividing the equation side by ΔG Then

$$\frac{\Delta y}{\Delta G} = \frac{1}{1-b} \cdot \frac{\Delta G}{\Delta G}$$
 \rightarrow $\frac{\Delta y}{\Delta G} = \frac{1}{1-b}$ \rightarrow $K_g = \frac{1}{1-b}$

From the previous analysis, we find that any increase in investment resulting from the increase in public spending generates an increase in national income by the value of the multiplier and the multiplier depends on the marginal propensity to consume. The bulk of public spending is directed to people with low incomes with marginal propensity for high consumption in the form of wages, salaries, and benefits, the indirect impact of which will be significant and vice versa (Judge 2014: 83).

2- The effect of the accelerator

The direct effects of public expenditures on national production are not limited to the successive increase of generated consumption, but other indirect effects occur in national production through the increase caused by public expenditures in the demand for investment, which is called investment generated or dependent, that is, investment Which is derived from the demand for consumer goods, which is known as the accelerated effect (Al-Khatib and Shamia, 2012: 102).

J.M.Clark is the first to introduce the concept of accelerated, as it showed that there is a specific and technical relationship between the demand for the final product and the demand for investment, which is more volatile than the first demand (known, 2005: 121).

The technical relationship between the size of the final output of goods and the capital used in its production is called the ratio of capital to output, i.e. (Al-Idrisi, 1986: 274):

Since (A) represents the ratio, (K) the capital used in the production of goods and services and (Y) the size of the output of final goods and services, if we assume that no change has occurred in the technical situation, and that the productive capacity of capital is fully used, any increase in demand On the final goods and services and consequently the increase of the product from them necessarily requires an increase in the demand for capital according to the ratio (A) in relationship (1) that is:

 (ΔK) And it is natural that the increase in capital

The net investment in the economy (In) represents the relationship (2) as follows:

Opcion, Año 36, Especial Nº 26 (2020): 1099-1021

Then:

That is, the net investment in the economy equals the increase in the national product multiplied by the ratio of capital to output.

Third / Narrow money supply and its relationship to public spending Before examining the effect of public spending on the money supply, and how can public spending affect the increase or decrease of the money supply, we turn first to the concept of narrow money supply.

3-1-1- The concept of narrow money supply (M1)

It includes ready-made financing assets directly for the tunnels, and is the narrowest and most liquid measurement in the total money supply and therefore it is the traditional function of money (as a method of exchange) and it focuses on banknotes, coins, travel checks, Demand Deposits and other deposits with Sukuk (Maarouf, 2005: 246).

This part of the money supply depends on the amount of the obligatory reserve held by the existing banks, the requirement to reserve current account deposits, and the amount of currency held outside the banking system, i.e. (Maarouf, 2005: 246):

$$M1 = m1M$$

Note that (M) is the monetary basis or sum of currency outside the banking system and reserves held by banks and that m1 is determined as follows:

$$m1 = \frac{1+a}{R+a} = \frac{M1}{M}$$

As a ratio of currency outside the banks (A) to current account deposits (D) means that:

$$a=\frac{A}{D}$$

The ratio of the obligatory reserve of banks to the group of bank deposits, and so on:

M1=m1M=A+D (M. Feld stein and Stock) indicated that the US Federal Reserve found that there is a better possibility to control the money supply in the narrow sense (M1) than the money supply in the broad sense (M2) because the legal reserve requirements are imposed on all components of the money supply in the narrow sense, in While the elements included in (M2) with the exception of (M1) some of them are not subject to the requirements of legal cash reserves (Al-Janabi 2009: 60).

The amount of money in a narrow sense depends on the role of the central bank in issuing cash and on the choice made by economic units between cash and current deposits and on the ratio between bank reserves and deposits with banks. To invest these reserves in granting loans and creating new deposits, to increase the money supply in the narrow sense, and this means that the money supply is affected by the central bank, the public, and central banks (Al-Janabi 2009: 61).

3-2-2-Monetary effects of financial policy

As a result of the continuous increase in government spending, governments resort to financing that spending by borrowing to finance budget deficits. Therefore, as a result of this financing, there are clear effects on the money supply, which can be summed up as follows:

1- Borrowing from the central bank

If the government borrowed from the central bank to finance its budget deficit on the assumption that the central bank does not enjoy independence from the government and then spent these funds, part of this spending will go to individuals, part of it will be allocated to consumer spending and another part will go as deposits in banks, which increases the ability Banks grant credit compared to the period before borrowing from the central bank.

The expansion of commercial banks in granting credit will lead to an increase in the money supply. Here it is worth noting that there is no fundamental difference between the government borrowing from the central bank to finance its annual budget deficit or its funding of the deficit through the new monetary issuance that the central bank undertakes, given that the economic and monetary results The implication of both methods is one that ultimately appears in the form of an increase in the total domestic liquidity distributed among individuals and banks, which leads to an increase in the volume of aggregate demand in its consumer and investment side (Al-Shammari, 1988: 227).

The increase in government spending on the amount of revenue collected will be reflected either in the money supply through the increase in the new

cash issuance or through the issuance of new government bonds (Ismail, 2002: 479) i.e.:

$$G + TP + IP - TX = \Delta M + \frac{\Delta B}{i}$$

As:

G = government spending.

TP = Transfer payments.

IP = interest payments on public debt.

TX = total tax returns.

= Change in the monetary base.

 $\Delta B =$ The amount of change in the additional interest paid on new bond issues.

i = market interest rate.

The left side of the equation indicates the size of government spending (G + TP + IP) minus tax revenue (TX). If the government spending volume is greater than tax revenue, then the government budget entry shows that there is a deficit resulting from the inequality between revenue and expenditures and therefore must Fund this deficit by either increasing the money supply or by issuing bonds.

This results in an increase in the money supply intended for borrowing and investment, but the successive cash issuance to finance the budget deficit with the widening of the domestic demand gap will increase the price level, through the direct expansionary effect of the public budget deficit on the total demand, and this is evident when the economy is at the level of full employment And the rate of money growth exceeds the rate of real output growth (Conditions, 2005: 54)

2- Borrowing from commercial banks

If the government is unable to borrow from the central bank due to the existence of laws and instructions that do not allow the central bank to lend to the government, that is, the central bank has a high independence, then it may resort to commercial banks to finance the budget deficit. These banks enjoy financial surpluses so that government lending does not affect

the ability of these banks to lend to the private sector.

If the government borrows from commercial banks and these banks enjoy financial surpluses so that these banks can finance the deficit in the government budget without affecting this ability of these banks to give credit to the private sector, in this case the private investment in government borrowing will not be affected and the money supply will increase as a result Because of the expansion of bank credit and the increase in individual incomes as a result of the government increasing its spending (Conditions, 2005: 52), in this case, borrowing from commercial banks includes an expansionary cash effect on the money supply.

3- Borrowing from the public

When the government is unable to borrow from previous exporters, or the government is willing to finance its non-inflationary budget deficit, the government will borrow from individuals by offering government bonds.

The source of this borrowing is individuals and non-monetary financial institutions that do not have the ability to create credit, so the government issues bonds to individuals and non-monetary financial institutions provided that the interest rate is positive, the important point here is that whatever the method of determining the value of government bonds purchased Through the use of cash balances held by the public or the withdrawal from their bank accounts, government borrowing from non-banking agencies does not result in any direct increase in the money supply, because these entities are subscribed from their cash savings that await investment and these savings Cash is cash previously created or present in the economy and therefore does not represent a new monetary creation (Ismail, 2002: 499). In other words, individuals 'deposits with banks will decrease as a result of individuals withdrawing their deposits to finance the purchase of bonds while government deposits with these banks will Increased by the same amount.

Fourth: The evolution of government spending and money supply (1M) in Iraq for the period 2006-2018.

Expenditures for the year 2006 reached (38806) billion dinars, and an increase over 2005 expenditures by (22%), (FBS 2009: 5), and there was an increase in the gross domestic product, which in turn led to an increase in the money supply to (15460) billion dinars, And its percentage to the gross domestic product (14%), (CBI 2006: 12).

As for the year 2007, the actual expenditures for the current and investment budgets increased to (39031) billion dinars (Diwan of Financial Su-

pervision, 2007: 7). As for the narrow money supply, it reached (21,721) billion dinars, (CBI 2007: 12).

While expenditures in 2008 increased from expenditures in 2007 by a rate of (71%), reaching (59403) billion dinars, and the reason is due to the increase in allocations under the supplementary budget (FBS, 2010: 6-9), which led to an increase in gross domestic product To (120,627) billion dinars, and the M1 money supply increased to (28,189) billion dinars, and the M1 percentage of the gross domestic product has reached (23%), (Central Bank of Iraq, 2008: 12).

In 2009, the total actual actual expenditures (current and investment) amounted to (52567) billion dinars, while the gross domestic product amounted to (124703) billion dinars, and the money supply reached (37,300) billion dinars, at a rate of (29.9%) of GDP, (Central Bank of Iraq, 2009: 63,12).

The actual public expenditures of the current and investment budgets for the year 2010 amounted to (64,351) billion dinars, at a rate of (72%) for the current budget and (28%) for the investment budget, while the gross domestic product for the same year was (132687) billion dinars, and 1M rose to (51743) billion dinars, and the rate of money supply from the GDP has reached (39%), (Central Bank of Iraq, 2010, 62,12).

An amount of (96662) billion dinars was allocated to expenditures in 2011, while actual expenditures for the current and investment budgets for 2011 amounted to (69639) billion dinars, while the gross domestic product for 2011 reached (142700) billion dinars, and the M1 money supply increased to (62473) billion dinars, while the M1 percentage of GDP was (43.7%). (Central Bank of Iraq, 2011, 62,12).

In 2012 the actual government spending reached (90374) billion dinars, and the gross domestic product exceeded (162,000) billion dinars, while the money supply for the year 2012 reached (67622) billion dinars, at a rate of (39%) of the gross domestic product, (the bank Iraqi Central, 2012, 62,12).

Actual government spending in 2013 reached (106873) billion dinars, while the GDP had reached (173277) billion dinars, and the M1 money supply rose to (78318) billion dinars, and it has achieved (42.6%) of the GDP, (CBI), 2013, 62,12).

In 2014 the state budget was not approved, but according to estimates, actual public expenditures have reached (83556) billion dinars, and the gross domestic product has reached approximately (173377) billion dinars, and the cash supply in the narrow framework (77593) billion dinars,

and the M1 ratio has reached Of the GDP (41.9%), (Central Bank of Iraq, 2014. 62.12).

In 2015, actual government spending decreased to (70397) billion dinars, due to the political, financial and economic crises that the country went through, and low oil prices, and M1 decreased to (69,613) billion dinars, while the gross domestic product achieved an increase from the previous year, reaching (178613) billion dinars, (Central Bank of Iraq, 2015, 62,12).

Government spending continued to decline until in 2016 it reached (67067) billion dinars, while the gross domestic product reached (199500) billion dinars, and the M1 amounted to (75523) billion dinars, at a rate of (35.4%) of the gross domestic product, (Central Bank) Iraqi, 2016, 62,12).

In 2017, actual government spending increased to (75490) billion dinars due to improved oil prices and increased military spending, and the GDP has increased to (202608) billion dinars, while M1 rose to (76986) billion dinars, achieving a ratio of (35%) of GDP, (Central Bank of Iraq, 2017, 62,12). In 2018, actual government spending also increased, reaching 80873 billion dinars, while GDP decreased to (199129) billion dinars, and M1 increased to (77828) billion dinars (Central Bank of Iraq, 2018, 62,12), and the table (1) Shows government spending and M1 money supply for the period 2006-2018

Table (1)

Government spending and narrow cash offer for the period 2006-2018
(Billion dinars)

Annual rate of change	M1 cash offer	Annual rate of change	Governme spending	the year
-	15460	-	38806	2006
6261	21721	225	39031	2007
6468	28189	20372	59403	2008
9111	37300	6836-	52567	2009
14443	51743	11784	64351	2010
10730	62473	32311	96662	2011
5149	67622	6288-	90374	2012
10696	78318	16499	106873	2013
725-	77593	23317-	83556	2014
7980-	69613	13159-	70397	2015
5910	75523	3330-	67067	2016
1463	76986	8423	75490	2017
842	77828	5383	80873	2018

Table of researchers prepared by relying on:

- Financial Supervision Bureau data for the years (2004-2018).
- Central Bank of Iraq Annual Bulletins (2006-2018) Baghdad: General Directorate of Statistics and Research.

Figure (2) shows government spending and narrow M1 money supply for the years (2006-2018).

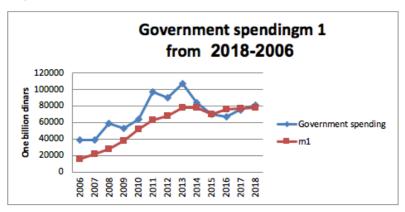


Figure (2) Government spending and money supply in the narrow sense of the years (2006-2018).

Source: Preparing researchers based on data from Table (1).

We can clarify the currency window in Iraq for the period 2006-2018 according to the following schedule:

Table (2)

The currency window in Iraq for the period 2006-2018 billion dollars

The difference between purchases and sales	Central bank sales of foreign currency at the auction	Central Bank purchases of foreign currency (Ministry of Finance)	the year
5225	11175	16400	2006
10720	15980	26700	2007
19631	25869	45500	2008
10992-	33992	23000	2009
4829	36171	41000	2010
11202	39798	51000	2011
8301	48699	57000	2012
8769	53231	62000	2013
6948-	54463	47515	2014
11854-	44304	32450	2015
7872-	33525	25653	2016
1846-	42201	40355	2017
		Not published	2018

Table prepared by researchers: relying on

Annual bulletins of the Central Bank of Iraq for the period 2006-2018(

Fifth: Measuring the impact of government spending on narrow money supply

To measure the effect of government spending on narrow money supply, we will apply the ARDL self-regression model (ARDL), as this will be done using the EVIEWS9 program for the time series of the variables included in the model.

1-3 Description of the variables used in the model:

The search variables can be described according to the following table (3): Table (3)

Characterization of study variables

Duration	code	Variables
2006-2018	GS	public expenditure
2000-2018	M1	Money supply

Source: From the work of the researchers.

2-3 Nature of the study data: The annual data has been converted into quarterly data for the purpose of applying econometric methods that will give more accurate and objective results if the time series is long, as the annual data has been converted into quarterly data through the econometric program Avenues Ninth Edition.

3-3 Unit root test

The stability (sleep) stability of the time series of the variables under study was tested according to the Phillips-Byron test (p-p), and the improved Dickey-Fuller test (ADF), as in Table 4 and Table 5.

Table (4)
Unit root test results according to the Philips-Byron test (p-p) at the level and first difference

UNIT ROOT TEST TABLE (PP)				
	At Level			
		GS	M1	
	t-Statistic	-1.7843	-2.6443	
With Constant	Prob.	0.384	0.091	
With Constant		n0	*	
	t-Statistic	-1.6428	-0.7882	
With Constant & Trend	Prob.	0.7617	0.9599	
with Constant & Frend		n0	n0	
	t-Statistic	0.2863	1.4579	
Without Constant & Trend	Prob.	0.765	0.9624	

		n0	n0			
At First Difference						
	d(GS) d(M1)					
	t-Statistic	-7.018	-7.7842			
With Constant	Prob.	0	0			
With Constant		***	***			
	t-Statistic	-7.0378	-9.2036			
With Constant & Trend	Prob.	0	0			
with Constant & Frend		***	***			
	t-Statistic	-7	-7			
Without Constant & Trand	Prob.	0	0			
Without Constant & Trend		***	***			

Source: The work of the researchers, based on Eviews9 outputs

We notice from Tables (4) and (5) that the variables (SH, SE, GDP, PD) are unstable at the original level of data, and that these variables become stable after taking the first difference for both tests.

Table (5)

Unit root test results according to the ADF-Level Dickie-Foller test at the level and first difference

UNIT ROOT TEST TABLE (ADF)						
	At Level					
		GS	M1			
	t-Statistic	-1.7843	-1.922			
With Constant	Prob.	0.384	0.3197			
With Constant		n0	n0			
	t-Statistic	-1.6268	-1.1881			
With Constant & Trend	Prob.	0.7684	0.9014			
with Constant & Frend		n0	n0			
	t-Statistic	0.2863	0.3918			
With and Countries & Torond	Prob.	0.765	0.793			
Without Constant & Trend		n0	n0			
	At First Differen	ce				
		d(GS)	d(M1)			
	t-Statistic	-7.018	-1.9825			
With Constant	Prob.	0	0.2933			
with Constant		***	n0			
	t-Statistic	-7.0376	-2.5239			
With Countries & Town	Prob.	0	0.3158			
With Constant & Trend		***	n0			
	t-Statistic	-7	-1.6457			
Without Constant & Torrid	Prob.	0	0.0937			
Without Constant & Trend		***	*			

Source: The work of the researchers, based on Eviews9 outputs.

- 3-4 Results of joint integration tests of the relationship between public spending and money supply
- 3-4-1 Results of the first test

Table (6) shows the results of the ARDL model estimation of the relationship between public spending and money supply.

Table (6)

Results of the preliminary assessment according to the ARDL model

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
M1(-1)	0.641504	0.128178	5.004782	0.0000
M1(-2)	-1.47E-14	0.14293	-1.03E-13	1.000
M1(-3)	-7.18E-15	0.14293	-5.03E-14	1.000
M1(-4)	0.245254	0.114257	2.146512	0.0378
GS	0.27743	0.054473	5.092962	0.000
GS(-1)	-0.19123	0.059663	-3.20514	0.0026
C	2412.287	1657.836	1.455082	0.1533
R-squared	0.98375	Mean dependent var		60409.08
Adjusted R-squared	0.981372	S.D. dependent var		20016.35
S.E. of regression	2731.943	Akaike ir	nfo criterion	18.79745
Sum squared resid	3.06E+08	Schwarz criterion		19.07034
Log likelihood	-444.139	Hannan-Quinn criter.		18.90057
F-statistic	413.6737	Durbin-Watson stat		1.694372
Prob(F-statistic)	0.0000			

Source: The work of the researchers, based on Eviews9 outputs.

The results of the preliminary estimate in Table (6) indicate that the determination factor reached (98%), which gives an explanatory force for the model, and that the corrected determination factor reached (98%). This is a natural result, as the number of independent variables decreases, the value of the corrected determination factor increases and vice versa.

-3-4-2 Test the optimal slowdown period

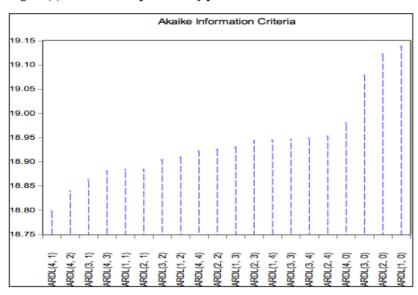
It is noted from Table (7) and Figure (3) that the model chosen according to the methodology (ARDL) is of the rank (1.4), as the optimal delay period is chosen that gives the lowest value for the criteria used.

Table (7)
Results of the optimal slowdown test period

Model	LogL	AIC*	BIC	HQ	Adj. R-sq	Specification
4	-444.139	18.79745	19.07034	18.90058	0.981372	ARDL(4, 1)
3	-444.13	18.83876	19.15063	18.95662	0.980913	ARDL(4, 2)
9	-446.695	18.86229	19.09619	18.95068	0.979772	ARDL(3, 1)
2	-444.12	18.88002	19.23087	19.0126	0.980431	ARDL(4, 3)
19	-449.203	18.88346	19.03939	18.94238	0.978564	ARDL(1, 1)
14	-448.204	18.88352	19.07844	18.95718	0.978959	ARDL(2, 1)
8	-446.689	18.90372	19.17661	19.00685	0.979283	ARDL(3, 2)
18	-448.815	18.90896	19.10387	18.98262	0.978417	ARDL(1, 2)
1	-444.109	18.9212	19.31103	19.06852	0.979926	ARDL(4, 4)
13	-448.2	18.92502	19.15892	19.01341	0.978462	ARDL(2, 2)
17	-448.317	18.92987	19.16377	19.01826	0.978357	ARDL(1, 3)
12	-447.627	18.94277	19.21566	19.0459	0.978458	ARDL(2, 3)
16	-447.654	18.9439	19.21679	19.04703	0.978434	ARDL(1, 4)
7	-446.683	18.94512	19.25699	19.06298	0.978771	ARDL(3, 3)
6	-445.748	18.94783	19.29868	19.08042	0.979058	ARDL(3, 4)
11	-446.855	18.95229	19.26416	19.07015	0.978618	ARDL(2, 4)
5	-449.505	18.97938	19.21328	19.06777	0.977259	ARDL(4, 0)
10	-452.877	19.07819	19.27311	19.15185	0.974437	ARDL(3, 0)
15	-454.926	19.12192	19.27785	19.18084	0.972792	ARDL(2, 0)
20	-456.308	19.13784	19.25479	19.18203	0.971819	ARDL(1, 0)

Source: The work of the researchers, based on Eviews9 outputs.

Figure (3) results of the optimal delay period test



3-4-3 Boundary test for the relationship between public spending and money supply

In order to test the extent of a common integration relationship between the variables, a statistic (F) is calculated. If the calculated value of (F) is greater than the upper limit of the critical values, we reject the null hypothesis that there is no long-term equilibrium relationship and accept the alternative hypothesis, but if the value Calculated less than the minimum critical values, we accept the null hypothesis and reject the alternative hypothesis, and Table (7) shows the results of the boundary test for the ARDL model.

Table (7)	Boundary	test results
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Test Statistic	Value	K
F-statistic	5.795247	1
C	ritical Value Bounds	
Significance	I0 Bound	I1 Bound
10%	4.04	4.78
5%	4.94	5.73
2.50%	5.77	6.68
1%	6.84	7.84

Source: The work of the researchers, based on the outputs of the Eviews9 program.

The results show that the calculated value of a statistic (F) equals (5.795247) which is greater than the critical value (F) at its highest level at (5%) and is equal to (6.68), which means rejecting the null hypothesis and accepting the alternative hypothesis, that is, there is an integration relationship Common among the variables during the search period.

3-4-3 Results of estimating long-term and short-term parameters and error correction parameter

After confirming that there is a common integration relationship between the variables, the long and short term capabilities of the estimated model parameters and the error correction parameter should now be obtained, and Table (8) shows that.

Table (8)

Results of estimating the long-term and short-term parameters and the error correction parameter

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(M1(-1))	-0.24525	0.114257	-2.14651	0.0378
D(M1(-2))	-0.24525	0.114257	-2.14651	0.0378
D(M1(-3))	-0.24525	0.114257	-2.14651	0.0378
D(GS)	0.27743	0.054473	5.092962	0.0000
CointEq(-1)	-0.11324	0.033696	-3.36066	0.0017
	Lo	ng Run Coefficie	ents	
Variable	Coefficient	Std. Error	t-Statistic	Prob.
GS	0.761214	0.193426	3.935429	0.0003
С	21302.07	15981.8	1.332896	0.1899

Source: The work of the researchers, based on the outputs of the Eviews9 program.

The results of Table (8) indicate that there is a short-term relationship between the variables, as well as a long-term balance relationship, because the error correction parameter is negative and statistically significant at the level (5%), as the error correction factor expresses the speed of adjustment between the short-term to the long-term, Which requires it to be negative and moral in order to provide evidence of a long-term relationship between the variables of the study, and through the results the error correction value appears to be significant and take the negative value, that is, the short-term deviations are corrected in the long term to put the balance, which means that the imbalance The balance is corrected during (11%) of the time, as indicated by parameters The long term to the existence of a direct effect from public spending to money supply at the probability level (1%), which applies with the logic of economic theory, as increasing public spending by one unit leads to an increase in the money supply by (7%).

Through the foregoing, it becomes clear to us the positive relationship between government spending and money supply in the narrow sense (m1). When government spending increases, there is also an increase in the narrow money supply (m1).

Fifth: Conclusions and recommendations

5-1 Conclusions

1- By analyzing the course of both public spending and the presentation of narrow criticism in Iraq for the period under study, it was found that there is a direct relationship between the change in public spending and the presentation of narrow criticism, whether by increasing or decreasing.

- 2- The analytical aspect of public spending growth rates in Iraq has proven that the phenomenon of increased public expenditures is a feature of public expenditures.
- 3- The results of the analysis of the Standard Model (ARDL) proved that there is a positive direct relationship between government spending and money supply in a narrow sense (M1), when increasing government spendingThere is a corresponding increase in the narrow money supply (M1), and when government spending is reduced there is a decrease in the money supply in the narrow sense (M1).

5-2 Recommendations

- 1-The government must diversify the sources of income so that government spending is not governed by fluctuations in oil revenues and thus on money supply, which leads to a breach of economic stability.
- 2 The monetary authority must strive through the role of monetary policy, quantity and quality to absorb the surplus of the local currency, and that the narrow rate of money supply growth be close to the rates of GDP.
- 3-The necessity of high coordination between the monetary and financial policies in order to unify the goals of the two policies. The fiscal policy increases public spending to absorb unemployment and adopts an expansionary policy, while monetary policy stabilizes prices and seeks a deflationary policy.

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Año 36, Especial N° 26 (2020)

Esta revista fue editada en formato digital por el personal de la Oficina de Publicaciones Científicas de la Facultad Experimental de Ciencias, Universidad del Zulia.

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