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Research Article

Public Expenditure And Its Impact On Some Macroeconomic Variables In Iraq - A Standard Study For The Period (2004-2022)

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ABSTRACT

The research aims at the impact of public expenditures on certain macroeconomic variables in Iraq for the period 2004-2022, by building a standard model showing the impact of public expenditures on certain macroeconomic variables in Iraq for the period 2004-2022.

One of the main findings of the research is that public expenditures are among the most important and effective instruments of fiscal policy in achieving economic growth, especially investment expenditures. Public expenditures have fluctuated considerably during the period of research and investment expenditures have not received the intended percentage. As well as remaining high unemployment, especially disguised unemployment, and thus the low role of public expenditures in addressing structural imbalances in the Iraqi economy and hence the desired economic instability. This is what the research hypothesis has been, and in case public expenditures are squeezed, as was the impact of the global financial crisis in 2009. As well as the twin crises of 2014, 2020), the trade-off between current and investment expenditures usually goes to sacrifice investment expenditures at the expense of current expenditures. The latter relates to wages and salaries, a paragraph that is difficult to prejudice. Therefore, investment expenditures are often sacrificed, through which some of the Government's programmers can be abandoned impacts on members of society are indirect and intangible, other than the reduction of current expenditures directly affecting individuals, which is usually avoided by Governments, However, it was easier in cases of popularity, revenue growth and the resulting escalation of expenditures, in such cases the increase included general expenditures (Consumption and investment), as well as slower growth of public revenues and unmatched growth of public expenditures, as a result of the heavy reliance on oil revenues, which account for more than one percentage (95%) of the total public revenues, due to the volatility of its prices in the global markets and the reflection of those fluctuations on the public revenues positively and negatively, and then intuitively the impact of those revenues on the amount of the general budget, This raises concerns about the future of Iraq's economy unless the Government makes urgent and politically and economically effective decisions, and the general budget has suffered a continuing deficit in a number of years. The deficit is due to the expansionist approach of the Convention's policy in the Iraqi economy, the volatility of revenue growth and its incompatibility with public expenditures. The instability of Iraq's political reality, coupled with the decline in oil prices, Due to the decline in global demand, which coincided with the coronavirus pandemic, creating a deficit in the public budget and an economic crisis that may continue and worsen and will be the biggest losing citizen. The coronavirus pandemic and its repercussions on the Iraqi government, especially the oil sector, and its subsequent economic and financial impacts are the stop of reviewing economic reality and changing fiscal policies during the previous period. The Iraqi economy has the potential to be exploited in order to improve Iraq's economy and confront deficits and financial

risks.
The study recommended: the need to diversify public revenue sources and not rely on a single source of oil, that is, to create more than one source of public revenue financing by adopting innovative financing methods. In order to avoid the associated effects on fluctuations in oil prices, as well as the need to rationalize public expenditures and avoid waste of expenditures by activating the role of financial control, fighting financial corruption and eliminating unnecessary expenditures, as well as the need to restructure public expenditures and adopt policies that prioritize the expansion of investment spending and reduce current expenditures (Consumer) for its important role in expanding the productive capacities of the Iraqi economy and addressing the problems of the Iraqi economy, particularly unemployment, and the need to support non-oil productive sectors (Industrial and agricultural) through optimal use of resources, which contribute to the provision of goods and services in order to enhance the local economy's ability to cope with volatility and external crises. As well as operating available labor force components, thus achieving economic stability, as well as working to alleviate the general budget deficit by pursuing a comprehensive reform policy in accordance with a comprehensive and integrated plan or programmer to rebuild Iraq's economy. Reduce financial and administrative corruption and the public sector's engagement with the private sector in the preparation of short- and long-term plans and programmers to eliminate unemployment in Iraq because of its negative effects on social and security realities by increasing investment in core projects that result in reduced unemployment rates and the further development and rehabilitation of human capital, as well as its active contribution to the development and growth of the economy.
Keywords: Public expenditures - macroeconomic variables Chapter One: General Framework of the Study

Introduction:

Despite being a tool used by the state to manage public administrations and satisfy public needs, public expenditures are considered one of the most important financial policy tools for any country. Through them, the state intervenes in the economic and social life, translating the objectives of economic policy into real projects and work programs. Therefore, it is possible to evaluate the government's performance by studying and analyzing the evolution and structure of the general budget. Despite the increase in the volume of public expenditures in Iraq during the research period, the state has not been able to achieve the economic and social goals, represented by achieving high rates of growth, economic and social balance. There was an imbalance in the structure of the general budget, which was also reflected in the imbalance of current and investment expenditure structure, reinforcing the deepening of the country's economic structure imbalance. Public expenditures in Iraq include all government spending on public services, infrastructure, salaries, pensions, education, health, security, and defense, aiming to develop the country and improve the quality of life for Iraqi citizens. The general budget for Iraq is determined annually, and expenditures are distributed based on the needs of different sectors and government priorities. Although public expenditures in Iraq face various challenges due to the economic, political, and security challenges facing the country, the Iraqi government is working to improve the management of public expenditures and achieve transparency in distribution, and optimal utilization of available financial resources. (Jafar,2019).

Research Problem:

The Iraqi economy has faced many crises and internal wars, negatively impacting the Iraqi economy. Many key challenges and obstacles continue to threaten human security in Iraq. It is difficult for the state to direct its agreement towards civilian investment and neglect the military aspect, which will ultimately result in enhancing public expenditures if these expenditures are invested wisely. Therefore, based on the above, the research problem will focus on answering the following question: "What is the impact of public expenditures on some macroeconomic variables in Iraq for the period (2004-2022)?

Importance of the Research:

The significance of this research lies in studying the impact of public expenditures on some macroeconomic variables in Iraq for the period (2004-2022), which has been facing a series of continuous crises including; a financial crisis resulting from the mismanagement of the economic file, the security and political crisis since (2003), and the terrorism that has become a threat to its institutional and societal structure. Therefore, this research gains importance through clarifying the mentioned relationship through quantitative analysis and standard models.

Research Objectives:

The research aims to study the impact of public expenditures on some macroeconomic variables in Iraq for the period (2004-2022), by constructing a standard model that illustrates the impact of public expenditures on some macroeconomic variables in Iraq for the period (2004-2022).

Research Methodology:

The researcher relied primarily on the process of induction, which is based on monitoring the impact of public expenditures on some macroeconomic variables in Iraq for the period (2004-2022). Additionally, another scientific approach may be utilized in our discussion of the issue, namely the analytical method, along with following some standard procedures to understand the nature of the data and variables affecting the crisis.

Research Parameters:

- Geographical Scope of the Study: The geographical scope of the research has been defined as Iraq.
- Temporal Scope of the Study (Research Period): The temporal scope of the study is defined from 2004 AD until 2022 AD.
- Subject Scope of the Study (Research Topic): The impact of public expenditures on some macroeconomic variables in Iraq for the period (2004-2022).

Chapter Two: The Theoretical Framework of the Study

First: Public Expenditure

Concept and Elements:

- Financial thought encompasses numerous definitions of public expenditure. However, all these definitions revolve around the same elements or pillars that constitute the framework of public expenditure. Some define it as "a cash amount paid by a public person to satisfy a public need." (Al-Banna, 2009)
- Alternatively, it is described as "amounts spent by public authorities to achieve a public benefit." (Al-Janabi, 2010)
- Al-Obaidi defines it as "a cash amount disbursed from the state treasury to achieve a public benefit."
- It is also defined as "a cash amount disbursed from the financial liability of a public legal entity (the state or one of its organizations) to achieve a public benefit." (Al-Obaidi, 2011).
- Or it is described as "cash amounts approved by the legislative authority for a public person to spend on providing public goods and services, to achieve economic and social objectives." (Al-Ali, 2002)
- Therefore, it can be said that public expenditures are the financial allocations approved by the legislative authority within the framework of the state's general budget, implemented by the federal government or local governments, regions, and other public institutions and entities affiliated with the state to satisfy public needs. From the aforementioned definitions of public expenditures, it can be said that public expenditures consist of three fundamental elements or pillars, namely that public expenditures are a cash amount, issued by a public legal entity, in addition to being aimed at achieving a public benefit, as follows: -

1.The cash form of public expenditure: For the state to obtain the goods and services necessary to carry out its activities, it must spend cash amounts. Therefore, everything spent by the state, whether to obtain the goods and services necessary to operate public facilities, or to purchase the capital goods necessary for production operations, or grants, aids, and assistance in various forms, to be classified as public expenditures, it must have a cash nature. The cash nature of public expenditures is based on several considerations, including that modern economies are cash economies and not barter economies, overcoming the problems of in-kind spending, achieving the principle of justice and equality in benefiting from public expenditures, and bearing public burdens, in addition to the difficulty of controlling in-kind spending and defining it.

2. Issuance of Public Expenditure by a Public Entity or Public Legal Personality: The second element in public expenditures is that they must be issued by a public legal and administrative entity. Public entities refer to "the state, including public bodies and legal personalities." Therefore, expenditures carried out by private, natural, or artificial persons are not considered public expenditure, even if they aim to achieve a public benefit.

3. Public Expenditure Achieves Public Benefit: The objective of public expenditure must be to satisfy public needs. Consequently, achieving public benefit or public interest is the primary justification for public expenditures. This element is rooted in the principle of fairness among all individuals. If individuals are equal in bearing public burdens such as taxes, it is natural, or rather obligatory, that they should equally benefit from public expenditure. (Al-Obaidi, 2011)

Second: Forms and Types of Public Expenditure:

Public expenditures take several forms or types that can be identified as follows:-

1. Wages, Salaries, and Pension Payments: These are cash amounts provided by the state to individuals working in its various entities in return for the services they provide, or to individuals who have previously worked in its various entities and have reached the legal age that makes their continued service in the public sector difficult, so the state refers them to retirement
2. .State Purchases and Public Works Implementation: Representing the prices of tools, equipment, and machinery that the state purchases or allocates to satisfy public needs, in addition to the amounts paid for the implementation of public works.
3. Grants, Aid, and Assistance: Grants, aid, and assistance constitute a stream of spending that the state decides to pay to specific social groups, public and private entities, whether internal or external, without a corresponding stream of goods and services, in order to achieve economic, social, political, or humanitarian goals.
4. Public Debt Installments and Interest: Public loans are a heavy burden on the general budget of the indebted state, due to the requirement to bear the annual interest and repay the principal amount borrowed at the end of the specified period in the terms of issuing the public loan. Therefore, the state must work to alleviate as much as possible the burden of its public debts by allocating a portion of its financial resources to service them." (Al-Janabi, 2010)

ثالثاً Public Expenditure Rules:

There are three main rules that the state must consider in public expenditures, as follows:

1.Rule of Benefit: The rule of benefit means that public expenditures aim to achieve the greatest benefit at the lowest possible cost, or to achieve the highest welfare for the largest possible number of members of society. Achieving this rule requires studying the requirements of the economy and society, the extent of the need for various projects, prioritizing them according to a priority schedule, and taking into account the needs of different geographical regions and areas. There are two main directions in economic and financial thought regarding this rule as follows:

a. Personal Direction: Based on this direction, the measurement of benefit is made by comparing the social output of public spending with the benefit that could have been achieved for individuals if the state had retained the value of the obligations imposed on them.
b. Objective Direction: Its idea is summarized in measuring the benefit resulting from public spending based on the increase in national income resulting from it, on the basis that collective benefit rises with the increase in national income and decreases with its decrease. This direction depends on the direct and indirect increase that occurs in income.

2. Basis of Economy: The purpose of this principle is to avoid extravagance and wastefulness in public spending without justification. This principle is linked to the first principle (the principle of utility). In this regard, it requires distinguishing between the state of extravagance and the state of frugality and economy. Extravagance means financial negligence that leads, when it occurs, to the misuse of state funds, meaning that spending may be unnecessary and does not serve the public interest, or it may be necessary and serve the public interest but at very high costs. Frugality, on the other hand, is the reduction in spending and the reluctance to spend, even in matters and aspects of spending where the spending is for the realization of public benefits or to satisfy public needs. As for economy in spending, it is the spending of necessary funds, and therefore it occupies a middle ground between the concepts of frugality and extravagance.
3. Principle of Authorization: This principle means that public spending must be disbursed by public authorities in the state and with public funds. This requires these authorities to obtain authorization from the competent authorities. Since the legislative authority in the state (parliament) is responsible for issuing laws and decisions related to public spending as part of the state budget, which is discussed by parliament, and which decides on the expenditure on aspects of spending that ensure that public expenditure on each aspect represents an utmost necessity or essential need for society, and it is necessary to achieve the greatest possible social benefit. (Basswid, 2017, pp. 24-26)

Fourth: Division of Public Expenditures:

As a result of the evolution of the state's role and its intervention in economic and social life, public expenditures have evolved and diversified accordingly. In order to organize these expenditures, include them within the framework of public budgets, and facilitate their monitoring and control, it is necessary to divide and classify these expenditures in terms of their composition, content, and nature. In this context, the Public Finance Code has established several divisions of public expenditures, which can be summarized as follows:

1. Ordinary Expenditures and Extraordinary Expenditures: Which are divided into the following:

A. Ordinary Expenditures: These are expenditures that recur annually and in a regular manner, such as employee salaries, expenses necessary for the administration of state affairs like road maintenance

expenses, administration and justice expenses, public debt interest and installments, security and defense expenses, etc.

B. Extraordinary Expenditures: These are expenditures that are not characterized by regularity and periodicity, meaning they do not recur annually, such as war expenses, construction of dams, bridges, airports, or compensations for those affected by natural disasters.

2. Actual Expenditures and Transfer Expenditures: Which are divided into the following:

A. Actual Expenditures: These are the expenditures incurred by the state to obtain the goods and services necessary for the operation of public administrations, such as employee salaries, expenses for purchasing equipment, supplies, and others. These expenditures directly contribute to increasing national income.

B. Transfer Expenditures (Redistribution): These are the expenditures incurred by the state without compensation, that is, without receiving any goods or services. The state's aim in incurring these expenditures is to redistribute income and wealth among members of the society, i.e., to maintain social balance and reduce class disparities among members of the society by taking money from some to distribute it to others without compensation. These expenditures include various types of subsidies, as they indirectly contribute to the increase of the national income.

1. Administrative Expenditures and Capital Expenditures: These are divided as follows:

A. Administrative Expenditures (Ongoing): These are the necessary expenditures for the various functions of the state's agencies, such as employee salaries, maintenance costs, and procurement of supplies for the operation of those agencies.

B. Capital Expenditures (Investment): These are the expenditures through which the state aims to increase national production and accumulate capital, such as construction, development, equipment, and various infrastructure projects. (Bash, 2018)

Article II: Public Expenditure and Its Impact on Some Macroeconomic Variables in Iraq during the Period (2004-2022)

Public expenditure is considered one of the most important indicators used to assess the extent of the state's intervention in the economic and social life, considering public expenditure as an essential part of the state's financial policies. In Iraq, despite the significant shift in governance philosophy since 2003 and the transition from the interventionist socialist system to openness to the free market, adopting the philosophy of economic freedom and market economy, it is noted that government expenditures have been on the rise. This is due to the continuity and persistence of the state's efforts to improve the living conditions of citizens through spending on providing items of the ration card, supporting fuel, the social welfare network, and providing job opportunities for citizens by opening up appointments in state institutions, especially in the ranks of the police, army, and other security agencies. This is clearly evident in the wages and salaries paragraph, which receives the largest contribution percentage from the state's current expenditure.

Upon reviewing Table (1), it is evident that public expenditures started at a low point in the year 2003, amounting to (4917.2) billion dinars, which is the lowest level of public expenditures during the research period. This was due to the particularity of that year as it marked a change in the governing system in Iraq, leading to the collapse and disruption of most state institutions from the 9th of April in that year. This had a direct impact on the volume and reduction of public expenditures. Subsequently, public expenditures began to rise, reaching a volume of (31521.4) billion dinars with an annual growth rate of (541%), the highest annual growth rate during the research period. This elevated growth rate of public expenditures coincided with a similarly high annual growth in Iraq's general revenues, which also recorded the highest annual growth rate during the research period, amounting to (106%) and totaling (32988) billion dinars.

Public expenditures continued to rise until the year 2008, with the exception of the year 2005, which recorded a negative growth rate as public expenditures decreased slightly. The remaining years witnessed a significant increase, with public expenditures in the year 2008 recording the second-highest annual growth rate at (71.2%), reaching public expenditures of (67277.2) billion dinars. It is noteworthy that this increase in the volume of public expenditures also coincided with an increase in Iraq's public revenues resulting from the rise in oil revenues. The government's revenues from oil exports in foreign currency increased from (23.7 billion dollars in 2005) to (58.8 billion dollars in 2008) due to the rise in oil prices in the international oil market on one hand, and the increase in Iraq's oil exports on the other hand. The price of oil rose from (50.64 dollars per barrel in 2005) to (94.45 dollars per barrel in 2008), and Iraq's oil exports increased from (1400 thousand barrels per day in 2005) to (1855 thousand barrels per day in 2008). (Ministry of Planning, Annual Statistical Report 2003-2022)

Table (1) illustrates the evolution of public expenditures within the framework of the general budget for the period (2003-2022).

Percentage of contribution of other revenues to total revenues (7%)	Other revenues (6)	Percentage of contribution of tax revenues to total revenues %(5)	Tax revenues	Contribution percentage of oil revenues to total revenues (3) Tax revenues) %3(	Oil revenues)2(	public revenues)1(	Year
14.2	304	0.01	349	85.7	4096.0	16016	2003
0.7	236.2	0.5	159.6	98.8	32593	32988.9	2004
1.2	491.9	1.2	495.3	97.6	39448.5	40435.5	2005
3.7	180.9	0.8	381.2	95.6	46873.2	49055.5	2006
3.3	1787.3	2.2	1228.3	94.5	51949.3	54964.9	2007
4.2	3358.2	1.2	985.8	94.6	76297	80641	2008
5.4	3002.8	3.7	2050.5	90.9	50190.2	55243.5	2009
7.2	5080.5	2.1	1503.5	90.6	63594.2	70178.2	2010
7.5	8157.6	2.2	2408.2	90.3	98241.6	08807.4	2011
5.2	6179.9	1.9	2311.1	92.9	111326	19817.2	2012
5.2	5870.7	2.2	2518.7	92.6	105451	113840.1	2013
2	2132.8	2.6	2699	95.4	100778	105509.8	2014
18.9	12534.7	3.9	2623	77.2	51312.6	66470.25	2015
10.3	5611.2	8.3	4531	81.4	44267.1	54409.27	2016
9.1	7065.6	8.7	5201	84.2	65155.57	77422.17	2017
10.3	110508	0.57	612.635	90.1	9606293	106569	2018
605.7	651637	6.98	751.231	88.7	9374111	107567	2019
8.7	8606	6.7	5010	83.4	64152.5	76256.1	2020
9.2	9102	7.7	6102	85.2	6512. 7	77856.9	2021
9.5	9503	8.2	7120	91.3	6789. 4	78597.3	2022

Source: Ministry of Finance, Accounting Department, for different years. Observing the ratios in field (3-4-7) is the work of the researcher

• Generally, the average annual growth rate in public expenditures in Iraq during the research period has reached a level where it can be said that the general budget cycle in Iraq follows the external economic cycle and the resulting fluctuations. Therefore, government spending is highly sensitive to fluctuations in oil prices in the international oil market, as the Iraqi economy is a mono-sector rentier economy that relies on oil revenues for its general revenues. The economy grows when it achieves external resources generated by positive external supply shocks. When oil prices increase, government spending increases and the economy revitalizes, or vice versa, which is referred to as the "bathtub theory" by Kenneth Boulding, a British economist. This theory states that rentier economies relying on external resources are highly exposed to the external world, and therefore their economies are highly sensitive to these resources, where they thrive when these resources flow and contract as they decline. Consequently, these fluctuations are reflected in the economic growth of the country.

First: Analysis of the Impact of the Evolution of Public Expenditure on the Gross Domestic Product (GDP) for the Period (2004-2022)

Public expenditures, especially investment expenditures, contribute to enhancing economic growth (GDP). The indicator of expenditures as a percentage of GDP reflects the amount allocated from GDP for public expenditures purposes, and it reflects the extent of the state's intervention in the economic and social life in general. Thus, it reflects the role of the state and its political philosophy, as the higher this percentage, the more it indicates intervention in broad areas, and vice versa. The contribution of public expenditures, both current and investment, to GDP at current prices will be clarified in the following Table (2):

Table (2) illustrates the contribution of components of public expenditures to the Gross Domestic Product (GDP) for the period (2004-2022).

Contribution percentage (3) of (1)	Growth rate of investment expenditures %	Investment expenses (3)	rate Input (2) of (1)	growth rate% For expenses The current one	Current expenditures (2)	Total public expenditures at current prices (1)	YEARS
0.3	-	2.15	99.7	-	4902.0	4917.2	2003
12.4	-	3924.3	87.6	4.9	27597.2	31521.4	2004
12.2	4.1)(	3765	87.8	1.9)(	27066.1	30831.1	2005
6.9	31.6)(	2576.9	93.1	29	34917.6	37494.5	2006
16.8	155.7	6588.5	83.1	6.3)(	32719.8	39308.3	2007
22.3	127.3	14976	77.7	59.9	52301.2	67277.2	2008
17.4	35.6)(	9648.7	82.6	12.2)(	45941.1	55589.7	2009

22.2	61.2	15553.3	77.8	18.8	54580.9	70134.2	2010
22.6	14.7	17832.1	77.4	11.6	60925.9	78757.7	2011
27.9	64.6	29351	72.1	24.4	75788.6	105139.6	2012
33.9	37.6	40380.7	66.1	3.9	78746.8	119127.6	2013
31.3	12.1)(	35487.3	68.7	0.9)(	77986.2	113473.5	2014
26.4	47.7)(	18564.67	73.6	33.5)(	51832.84	70397.5	2015
23.7	14.4)(	15894	76.3	1.3)(	51173.43	67067.43	2016
21.8	3.6	164644.5	76.3	15.3	59025.65	70397.5	2017
17.1	16.06)(	13820.3	82.9	13.6	67052.9	80873.2	2018
24	139.1	33048506	75	49.1	100005911	133107616	2019
16.7	34.2)(	9658.3	81.2	11.2)(	45895.1	55236.7	2020
17.2	35.1)(	9758.2	84.3	12.3)(	45994.3	55368.2	2021
19.4	37.4)(	9856.5	85.2	13.4)(	46125.5	55458.8	2022

Source: Data from the Central Bank of Iraq, General Directorate of Statistics and Research, for several different years.

• In light of the above, it is noted that after the changes witnessed in Iraq in 2003, successive governments inherited a heavy legacy of destruction and backwardness in the infrastructure due to wars and international sanctions. This prompted swift action to rebuild and revitalize all economic sectors and improve living conditions. However, there was a clear stumbling block in the investment plans at the macroeconomic level during the implementation stage, attributed to the lack of coordination and weakness between the state's financial policies and investment policies. This led to a significant growth in government consumption expenditure, creating a crowding-out effect on investment expenditure that contributes to accelerating economic development. This will inevitably lead to a decrease in the economic growth rate, reflecting the fragility of the developmental reality in Iraq, due to the absolute reliance on oil revenue and the allocation of the majority of it towards consumer spending.

Second: Analysis of the Impact of the Evolution of Public Expenditure on the General Budget in Iraq for the Period (2004-2022)

The general budget of the state is the main tool for achieving economic and social development. Therefore, the budget issue is of great importance for implementing the directions of financial and economic policy. The first general budget issued in Iraq was in 1921, which included the constitution at that time. It is the parliament's right to discuss and approve the budget. The Ministry of Finance is responsible for preparing the detailed foundations for preparing the current general budget, discussing it with ministries and departments not affiliated with a ministry, and presenting it to the Council of Ministers for final discussion every year.

Table (3) illustrates the deficit and surplus in the general budget in Iraq during the period (2004-2022).

Ratio 3/GDP	gross domestic product	Ratio 1/3	Ratio 2/3	General budget deficit or surplus 3))	Total public revenue 2))	Total public spending 1))	YEARS
37.5	29585.8	69.2	225.7	11099	16016	4917.2	2003
2.8	53295.4	4.44	4.6	1467.4	32988.9	31521.4	2004
1.3	73533.6	23.7	31.1	9604.6	40435.5	30831.1	2005
12.1	95588	23.5	30.8	11561.1	49055.5	37494.5	2006
1.4	111455.8	28.4	39.8	15656.5	54964.9	39308.3	2007
8.5	157026.1	25.5	1.9	13363.8	52301.2	67277.2	2008
(0.3)	130643.2	0.7	0.6	346.2)(	45941.1	55589.7	2009
0.03	162064.6	0.08	0.06	44	54580.9	70134.2	2010
13.8	217327.1	49.3	38.15	30049.7	60925.6	78757.7	2011
5.8	254225.5	19.3	13.9	14677.6	75788.6	105139.6	2012
(1.9)	273587.5	6.71	4.43	5287.5)(	78746.8	119127.6	2013
(3)	266420.4	10.0	7	7863.7)(	77986.0	113473.5	2014
(1.9)	207876.2	0.07	5.57	3927.25)(	51832.84	70397.5	2015
(6.4)	196536.4	24.7	18.8	12658.2)(	51173.43	67097.43	2016
0.9	225722.4	3.27	2.55	1932	59025.65	75490.11	2017
21.3	258035.2	214.7	68.2	55177)(	25696	80873	2018
(1.9)	266190.6	3.86	3.7	4156)(	107567	111723	2019
(1.5)	273587.5	6.71	4.43	5541.1)(	73142.4	119234.1	2020
(2.6)	287687.6	7.34	5.52	5354.4)(	74676.7	123244.3	2021
(2.8)	273423.3	7.56	6.45	5453.7)(	75655.4	123455.1	2022

Source: Ministry of Planning, Central Bureau of Statistics, Directorate of National Accounts from (2004-2022 AD)

• Through Table (3), it is evident that the percentage of the total planned public revenues in the general budget is insufficient to cover the total planned public expenditures expected to be incurred during the coming year, leading to a planned deficit over the years. This deficit is covered as stipulated in the General Budget Law for the years by empowering the Minister of Finance to borrow from the International Monetary Fund and the World Bank. This action legitimizes foreign organizations to dominate the Iraqi economy and dictate their conditions in exchange for obtaining loans to cover the deficit. Furthermore, this action will add a new burden to the general budget for the coming years through its commitment to repay the loans with the accrued interest, as a result of following the traditional approach in preparing the general budget by adopting itemized budgeting based on the previous year's expenses, adding a certain percentage to meet the expected increase due to rising prices or expanding activity, without carefully considering the actual need for these expenses.

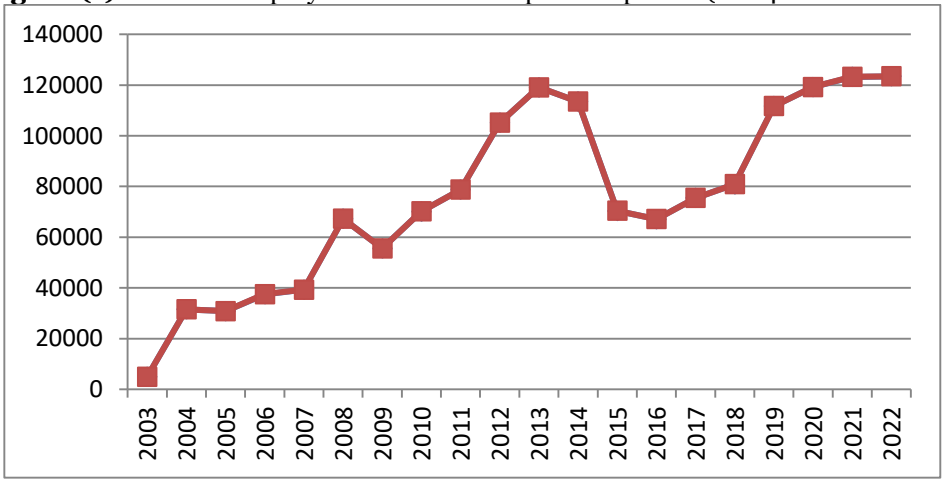
Third: Analysis of the impact of the development of public expenditures on unemployment rates in Iraq for the period (2004 AD - 2022 AD)

Unemployment is a serious problem with social and economic dimensions facing most countries, whether developing or developed. However, the phenomenon of unemployment is an inherent feature of developing or less developed economies, including the Arab countries in general and Iraq in particular. This is due to the structural imbalances in the Iraqi economy, as this phenomenon clearly emerged after... The fall of the regime in 2003 AD after the Coalition Authority dissolved the military institution, dismissed members of the army, police, and internal security forces, and stopped implementing the compulsory service law, in addition to the population increase, the deterioration of the productive sectors (industrial, agricultural, and service), and the failure to take realistic measures to rehabilitate idle industries and provide infrastructure. What is required for investment, and as a result of failures and the accumulation of errors, unemployment has worsened and its rates have increased. This unemployment is considered structural, resulting from the backwardness of the production sectors and service activities. What makes the matter more complicated is that a significant percentage of the unemployed are graduates, and at different levels, and some of them hold degrees (master's and doctorate).), and this is a loss for the individual and society, since society provided them with free education and training opportunities in addition to the opportunity costs of not exploiting the outcomes of education and benefiting from their productive energies.

Therefore, the problem of unemployment in Iraq was linked to several interconnected and interconnected factors and causes as a result of the political and economic conditions, and among these reasons are the following: -

a. Unstable political and economic conditions.
B. Rampant corruption in most state institutions, both financially and administratively.
T. Increased military expenditures due to the security conditions that Iraq went through.
Th. Relying on revenues from crude oil sales and neglecting other productive sectors.
C. Most production projects suffered losses, which led to the layoff of workers from these sectors as a result of openness to the outside world to provide consumer goods.
H. The absence of the private sector as a result of the lack of capital accumulation and the exit of hard currency outside the country.
Kh. Reliance on foreign countries to meet domestic demand as a result of the dumping policy followed by neighboring countries. (Ghassan et al., 2022, p. 155)

Figure (1) shows unemployment rates in Iraq for the period (2004 AD - 2022 AD)



- Source: Ministry of Planning, Central Bureau of Statistics, Directorate of National Accounts from (2004-2022 AD)

It is noted from the data in Table (4) that during the research period, Iraq went through major exceptional circumstances of war and security and political instability, in addition to the rapid shift towards a market economy, which led to a significant deterioration in the local demand for production elements, the flooding of the local market with imported goods, and the absence of coordination between the outputs. Education and the Iraqi labor market, as poor planning made some specializations suffer from an oversupply of labor while others suffer from a significant shortage of labor, in addition to administrative and financial corruption and nepotism. All of these reasons led to the exacerbation of the unemployment problem, not to mention the health and financial crises that occurred in 2020 AD. There was a wide exposure of financial and monetary gaps, following the spread of the Corona virus pandemic, and the imposition of closures and curfews to limit the spread of the virus, and the repercussions of the global economic downturn were harsh on Iraq, after the deterioration of oil prices, which were affected by the decline in global demand by a large percentage on the one hand, and what raises concerns. More, indicators show that unemployment rates continue to rise, with thousands of Iraqis losing their jobs due to the curfew, and as a result of the financial challenges faced by the economic sectors in Iraq, while the country faces a deep economic crisis, with a decline in oil revenues, which contributes to destabilizing economic stability in Iraq. It should be noted that if the rest of the types of disguised, hidden and incomplete unemployment are taken into account, the actual unemployment rates can reach more than (40%), due to the reluctance of local and foreign investment to undertake large projects to employ a large number of workers permanently, and the private sector projects are limited to Implementing short-term contracting in projects that are useless in creating added value, in addition to the failure of the Iraqi negotiator in drafting contracts for oil investment projects (licensing rounds) to absorb a large portion of these unemployed workers in those projects, and what has reinforced this unemployment is the decline The rate of spending on qualifying workers for education in the use of modern technologies, due to lack of experience and lack of knowledge, which increases the phenomenon of poverty and unemployment, and then worsens the number of the unemployed. (Ghassan et al., 2022, pp. 160-167)

Fourth: Analysis of the impact of the development of public expenditures on inflation in Iraq for the period (2004 AD - 2022 AD)

The decline in the value of money has become a manifestation of economic life in the modern era, and no country has escaped it, which has led economists to say that inflation has become a phenomenon closely linked to economic life. Most studies have emphasized the positive relationship between spending and inflation rates if they are a device. Production capacity is able to respond to increased demand, and the following table shows inflation rates in Iraq during the following years (2004 AD - 2022 AD)

Figure (2) shows the impact of the development of public expenditures on inflation in Iraq for the period (2004 AD - 2022 AD)

Table (4) shows the impact of the development of public expenditures on inflation in Iraq for the period (2004 AD - 2022 AD)

Annual growth rate of inflation	Inflation rate	Annual growth rate of public spending	Total public spending 1))	YEARS
-42.3	53.2	-	4917.2	2003
-44.1	55.2	4.9	31521.4	2004
-42.2	53.2	1.9)(	30831.1	2005
-91.20	30.7	29	37494.5	2006
-203.7	2.7	6.3)(	39308.3	2007
-185.7	-2.8	59.9	67277.2	2008
133.3	2.4	12.2)(	55589.7	2009
8.9	5.6	18.8	70134.2	2010
-68.8	6.1	11.6	78757.7	2011
15.7	1.9	24.4	105139.6	2012
-36.3	2.2	3.9	119127.6	2013
64.2	1.4	0.9)(	113473.5	2014
-60.0	0.5	33.5)(	70397.5	2015
-63.0	0.2	1.3)(	67097.43	2016
-62.1	1.3	15.3	75490.11	2017
-63.2	1.3	13.6	80873	2018
-63.5	1.5	49.1	111723	2019
-64.2	1.6	11.2)(	119234.1	2020
-66.1	1.7	12.3)(	123244.3	2021
-67.2	1.8	13.4)(	123455.1	2022

- Source: Ministry of Planning, Central Bureau of Statistics, Directorate of National Accounts from (2004-2022 AD)

Chapter Three (The applied framework of the research)

In this chapter, the theoretical framework and the statistical and measurement results obtained to estimate the study model are reviewed, through the use of the modern method in studying the relationship between the economic variables under study. This study uses the multivariate cointegration method by Johansen (1991), as well as the use of the Johansen (1991) test. (Cranger) for causality and analysis of models estimated using the vector autoregressive estimation (VAR) method.

First: Description of standard methods

The researcher relied on a modern method of economic measurement used to analyze the relationship between time series (vector) of the variables under study. An autoregression vector estimation model was used to analyze the relationship between the study variables. The estimation model, Autoregression Estimates (VAR), consists of a system of equations dealing with Symmetrically, such that the unconstrained vector autoregressive (UVAR) represents each variable in the system as a function of the variable itself and of other variables in the system with different lag periods, and there are no exogenous variables in this type of model, which is described as a reduced form of a structural model that explains the relationships And interactions between variables over time. This method includes:

$$\Delta Y_t = \alpha_o + \sum_{i=1}^{L} \alpha_{1i}\ \Delta X_{t-i} + \sum_{j=1}^{K} \alpha_{2j}\, \Delta Y_{t-j} + \lambda_1 u_{t-1} + V_t$$

$$\Delta X_t = \beta_o + \sum_{j=1}^{K} \beta_{1j}\, \Delta Y_{t-j} \sum_{i=1}^{L} \beta_{2i}\, \Delta X_{t-i} + \lambda_2 u_{t-1} + V_t$$

a. Stability test: This test is used to determine whether these variables are stable or not, because the nature of time series is non-stationary, which leads to the phenomenon of spurious regression for the variables. Time series data are said to be stable when this data is stable. Horizontally on the Determining the stability of data is unit root tests, through the following equation: Root Tests-

$$y_t = py_{t-1} + v_t$$

أ. ☐ If (yt) represents the variable of duration (t), and (vt) the limit of disturbance, which is characterized by an arithmetic mean equal to zero (0 = μ), and a variance (1 = 2ð) that is statistically acceptable, then this indicates instability and that the data suffers. From the unit root. (Enders,1999,P258)

ب. a. Cointegration test: In order for the economic interpretation of the hypothesis that states the existence of a causal relationship (regardless of its direction between two variables) to be acceptable, the data for these variables must be integrated of one degree, and this means that the long-term relationship between the two variables (yt,xt) is significant in the case where the estimated error term (Error term) is stable at zero degree (ut~(Io)), and does not suffer from the unit root, and after it is verified that the time series data for the basic variables are stable. After determining the degree of integration, and using the expanded Dickey-Fuller (ADF) test, this characterization of the long-term relationship requires a cointegration test for the basic variables involved in growth.

T. Granger Causality Test: The Granger model is used to determine the direction of the causal relationship in most time series studies, that is, to test the causal relationship between economic variables, according to what Granger stated, which is that a change in the current and past values of a variable causes... A change in another variable, so the variable (Y) is caused by the variable (X), if the predicted values of the variable (Y) through the past knowledge of (Y, X) together are better than the past values of (Y) only. (Enders) ,1999,P259)

Th. Estimating the vector autoregressive (VAR) model: according to the following formulation:

Second: Description of the study variables

The factors affecting both the general budget deficit and the production structure in the Iraqi economy, which were previously explained, are important topics, the analysis of which cannot be limited to the descriptive aspect only. Rather, their impact and the percentage of their contribution to the changes that occur in each of these two variables must be determined and measured. During the period of the study (2004-2022), this is done through the use of economic measurement, which is one of the distinguished quantitative methods in this field, as it is characterized by ease and high potential in determining the nature of the variables that are entered or excluded from the models. The study includes a set of economic measurements. Which variables can be described as follows:

First, analyze revenue trends:

Table (5) shows an analysis of revenue trends in Iraq for the period (2004-2022)

Growth rate (Δ%)	Growth rate (Δ))	Revenues at current prices	Revenues at constant prices	YEARS
1.7	57494.5	32905.7	90400.2	2004
1.0	46174.2	45989.4	92163.6	2005
0.3	15325.6	49612.8	64938.4	2006
-0.1	16325.8	53110.6	53110.6	2007
-0.1	-950703	84363.7	74856.4	2008
-0.2	-9616.0	53126.2	43510.1	2009
-0.2	-12705.7	63324.9	50619.2	2010
-0.3	-22519	92671.4	70152.4	2011
-0.2	-31373.1	109607.1	78234	2012
-0.2	-30933.2	103377.9	72444.7	2013
-0.3	-31272	99402.2	68130.2	2014
-0.3	-22111.3	68176.6	46065.3	2015
-0.02	-2276.2	57797.7	55521.4	2016
-0.04	-3188	77335.9	74147.9	2017
-0.03	-4784.5	106569.8	101785.3	2018
-0.04	-4632.8	107567	102934.2	2019
0.4	30459.9	63199.7	93659.6	2020
0.5	33950.8	67238.8	101189.6	2021
-0.8	-58055.7	68421.3	10365.6	2022

Source: Prepared by the researcher based on the (Eviews) program.

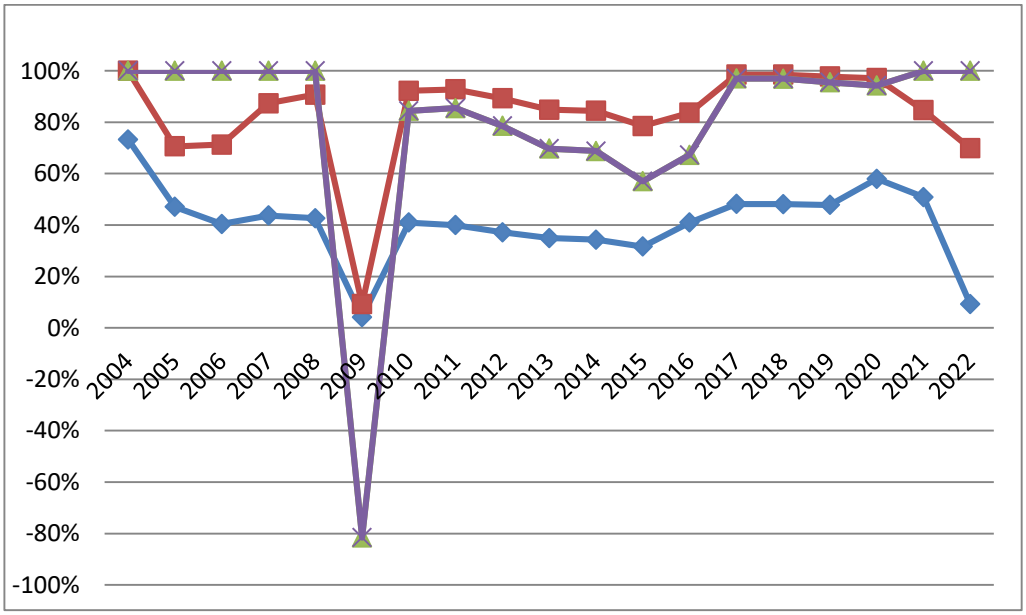


Figure (3) shows an analysis of revenue trends in Iraq for the period (2004-2022)

To analyze revenue trends in Iraq, several analytical steps can be followed, including the following statistical measures:

1.The mean and median: The average for revenues at constant prices is slightly lower than for revenues at current prices (70748.88 compared to 73884.14), which indicates that revenues at current prices were generally higher during the period studied. The median for revenues at constant prices is higher than revenues at current prices (72444.70 versus 68176.60), indicating that the distribution of revenues at constant prices is less uneven than revenues at current prices.

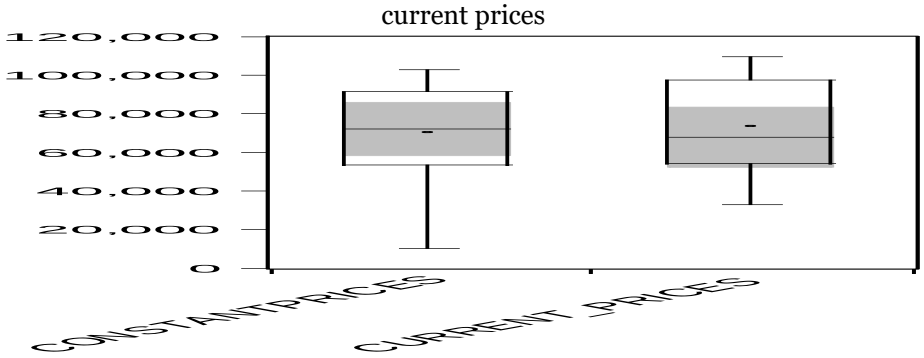
2. Maximum and minimum: Revenues at constant prices have a much lower minimum than revenues at current prices (10365.60 vs. 32905.70), and this indicates greater fluctuations in revenues at constant prices compared to current prices.

3. Standard deviation: The standard deviation is close between the two types of revenues (24001.53 for fixed prices versus 23540.34 for current prices), which indicates a similar level of volatility in both sets of data.

4. Skewness and Kurtosis: Revenues at constant prices have a negative skewness (-0.624962), which means a distribution skewed towards larger values, while revenues at current prices have a positive skewness (0.170164), which indicates a relatively balanced distribution. The kurtosis of constant prices is higher than

that of current prices (3.186042 versus 1.836166), indicating that the distribution of revenues at constant prices is steeper than the distribution of revenues at current prices.
5. Jarque-Bera test: The results of the Jarque-Bera test indicate that both the distribution of revenues at constant and current prices tend to be normal, as the probability values are higher than 0.05, which indicates that there is no strong evidence of non-conformity with the normal distribution, based on On these points, it can be said that revenues at constant prices show greater fluctuations and greater variation than revenues at current prices over the period studied, and the data also indicate a relatively balanced distribution of both types of revenues, with some indications of conformity with a normal distribution.

Figure (4): The attached box chart shows a comparison between revenue distributions at fixed prices and current prices



Comparing revenue distributions using the box chart: The attached box chart provides a comparison between revenue distributions at fixed prices and current prices, which is represented in the following points:-
1.Mean values: Both distributions show similar mean (median) values, as indicated by the lines inside the boxes, and this indicates that the central tendency of revenues is comparable between constant and current prices.
2. Data spread: The inner interquartile range (IQR), represented by the height of the two boxes, is slightly wider for current prices than for constant prices, indicating a wider spread of data points around the median of current prices.
3. Outliers: There do not appear to be any outliers, as there are no data points that appear outside the whiskers of the graph.
4. Whiskers: Whiskers, which indicate variance outside the upper and lower quartiles, extend larger for constant prices, indicating the presence of more outliers in constant price data.
5. Symmetry: Both distributions appear to be approximately symmetrical around the mean, with no bin showing significant skewness.
6. Possible anomaly: Both boxes appear to have a dark dot inside them, which could represent the average or a specific important data point, such as the arithmetic mean. The following table shows the comparison between growth rates:-

Table (6) shows the comparison between the constant and current growth rate in Iraq for the period (2004-2022)

Growth Rate (Δ%)	Rate Growth Rate (Δ)	Current Growth	Constant Growth Rate	Year
-	-	-	-	2004
-104.9	-41.750	39.800	-1.9500	2005
-473.4	-37.400	7.9000	-29.500	2006
-356.3	-25.400	7.1000	-18.2000	2007
30.4	-17.850	58.800	-40.9500	2008
13.2	-4.900	-37.000	-41.9000	2009
184.9	-35.500	19.200	-16.3000	2010
16.6	-7.7000	46.300	-38.6000	2011
73.2	-6.8000	18.300	-11.5000	2012
29.8	-1.7000	-5.700	-7.4000	2013
56.6	-2.1500	-3.800	-5.9500	2014
3.2	-1.0000	-31.400	-32.4000	2015
234.9	-35.700	-15.200	-20.5000	2016
-0.9	-0.3000	33.800	-33.5000	2017
-1.3	-5.0000	37.800	-37.3000	2018
22.2	0.2000	0.9000	-1.1000	2019
-87.9	36.210	-41.200	-4.9900	2020
97.2	44.600	-45.900	-1.3000	2021
97.0	46.000	-47.400	-1.4500	2022

Source: Prepared by the researcher based on the (Eviews) program.

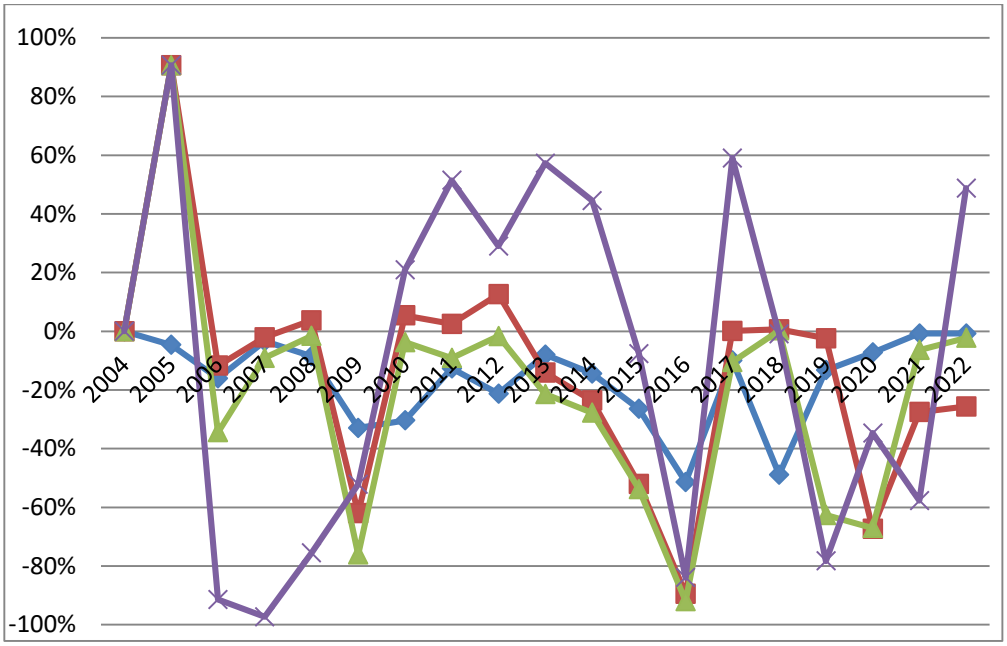


Figure (5) shows the comparison between the constant and current growth rate in Iraq for the period (2004-2022)

☐ The table, the comparative figure, and the descriptive statistics of the growth rates provide a comprehensive overview of the growth dynamics during the period covered, distinguishing between the constant growth rate and the current growth rate over the years. There are some key observations and insights learned from the data:-

☐ Volatility and Range: Growth rates show marked volatility, as evidenced by the wide range between the lower and upper values of both constant and current growth rates. The highest observed growth rate is 58.8% (current) and 40.95% (flat), while the lowest falls to -47.4% (current) and -41.9% (flat), highlighting significant fluctuations in year-on-year growth rates.

☐ Mean vs. Median: The averages of the constant and current growth rates are 1.231111 and 2.35, respectively, indicating a generally positive growth trend over time. However, the means (median value) (-1.675 for constant and 4 for current) indicate that the distribution of growth rates is skewed, with the average current growth rate being much higher than the mean, indicating a distribution with outliers affecting the mean.

☐ Standard Deviation: The high standard deviation for both the constant (24.9728) and current (33.57007) growth rates indicates a high level of dispersion in the data, confirming the previous point about volatility.

-Asymmetric and hypercurved: Asymmetric values are close to zero for both series, indicating a slight asymmetry in the distribution of growth rates. The hypercurve values for both series are close to the normal distribution value of 3, with values of 2.120816 (fixed) and 1.838840 (current), indicating a relatively peaked distribution but without extreme outliers.

☐ Jarco-Bera test: The results of the Jarco-Bera test (0.660663 for constant and 1.014775 for current) with high p-values (0.718685 for constant and 0.602067 for current) indicate that the distributions of growth rates do not deviate significantly from the normal distribution, indicating that the positivity assumptions did not They are violated at conventional levels of significance.

☐ Sum and Sum of Squares: The sum and sum of squares provide insight into the general trend and variation of growth rates over the years. The grand sum of growth rates is positive for both constant (22.16) and current (42.3), indicating overall growth. The sum of the deviations of squares is much higher for the current growth rate (19158.15) than for the constant (10601.9), reflecting greater variance.

Table (7) shows an analysis of descriptive statistics for public revenues in Iraq for the period (2004 AD - 2022 AD)

-	Col3	Col5	Col7
Mean	89.24737	3.044737	6.473684
Median	90.60000	2.200000	6.700000
Maximum	98.80000	8.700000	18.90000
Maximum	76.50000	0.500000	0.700000
Std.Dev.	6.806481	2.425756	4.104854
Skewness	-0.540714	1.310581	1.282382
Kurtosis	2.113729	3.655769	5.536123

Jarque-Bera	1.547678	5.779583	10.29953
Probability	0.461239	0.055588	0.005801
Sum	1695.700	57.85000	123.0000
Sum Sq.Dev.	833.9074	105.9173	303.2968
Observations	19	19	19

Figure (6) shows an analysis of descriptive statistics for public revenues in Iraq for the period (2004 AD - 2022 AD)

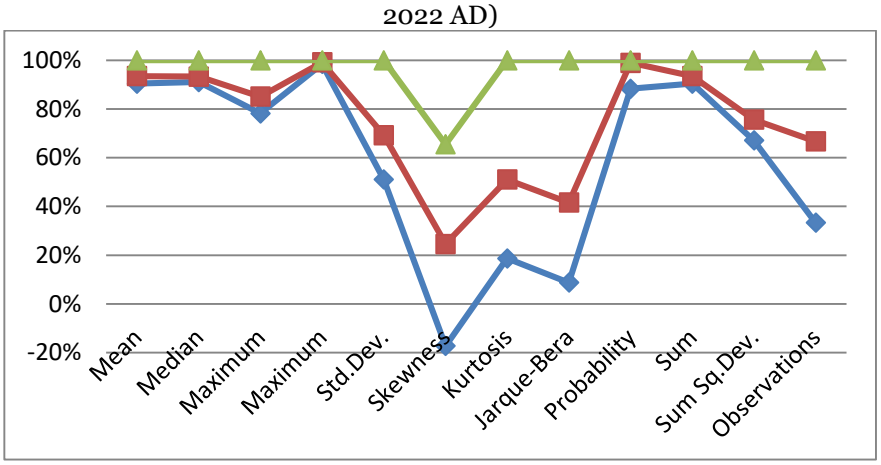
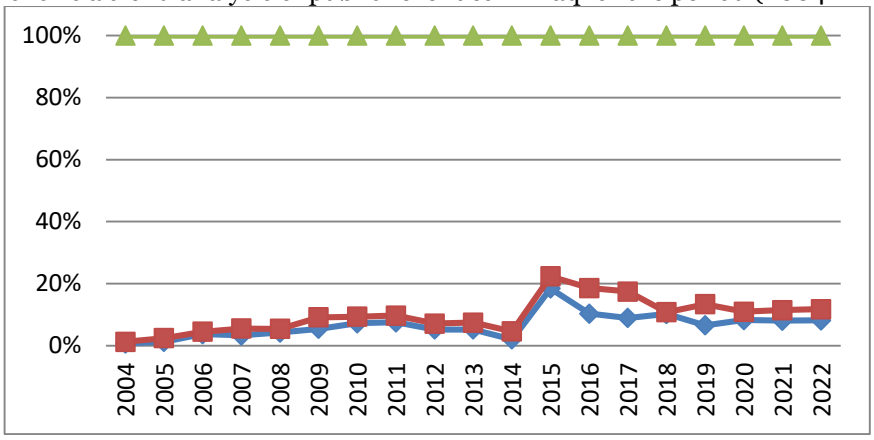


Table (8) shows the trend analysis of public revenues in Iraq for the period (2004 AD - 2022 AD)

Col3	Col5	Col7	YEARS
0.70000	0.50000	98.80000	2004
1.20000	1.20000	97.60000	2005
3.70000	0.80000	95.60000	2006
3.30000	2.20000	94.50000	2007
4.20000	1.20000	94.60000	2008
5.40000	3.70000	90.90000	2009
7.20000	2.10000	90.60000	2010
7.50000	2.20000	90.30000	2011
5.20000	1.90000	92.90000	2012
5.20000	2.20000	92.60000	2013
2.0000	2.60000	95.40000	2014
18.290000	3.90000	77.20000	2015
10.30000	8.30000	81.40000	2016
9.10000	8.70000	84.20000	2017
10.30000	0.570000	90.10000	2018
6.70000	6.980000	88.70000	2019
7.10000	2.30000	76.50000	2020
7.30000	3.10000	80.40000	2021
7.70000	3.40000	83.40000	2022

Source: Prepared by the researcher based on the (Eviews) program.

Figure (7) shows a trend analysis of public revenues in Iraq for the period (2004 AD - 2022 AD)



☐ Descriptive statistics for public revenues in Iraq for the period (2004 AD - 2022 AD)

a. Oil revenues (COL3):

-Stability: The high average oil revenues (89.25%) and narrow standard deviation (6.81%) are an indication that oil revenues consistently make up the largest portion of total revenues.

-Uniformity: Negative skewness (-0.54) indicates a distribution with a longer tail at the lower end. However, since it is close to zero, this indicates that the data is relatively symmetrical.

-Concentration: Hyper-Curity of less than 3 indicates a distribution that is flatter than a normal distribution, which indicates less variation in the oil revenue ratio.

-Normality: The Jarco-Bera statistic with a probability of 0.4612 does not provide evidence to reject the normality of the distribution.

B. Tax revenue (COL5):

-Variance: The average proportion of tax revenues is much lower (3.04%), with a wider standard deviation (2.43%) compared to oil revenues, indicating greater relative variance and a less consistent contribution to total revenues.

-Shape of the distribution: Positive skewness (1.31) indicates that the distribution has a longer tail at the upper end, indicating choppy years with much higher tax contributions.

-Centering: Hyper-Curity greater than 3 indicates a more centered distribution with heavier tails, meaning there are more outliers than normal distributions would expect.

-Normality: The Jarco-Bera statistic with a probability of 0.0556 indicates that there may be deviations from normality, although this is not conclusive.

T. Other revenues (COL7):

☐ A minor role but large fluctuations: An average of 6.47% indicates a minor role in total revenues, but with the highest standard deviation (4.10) among the three categories, indicating large fluctuations from year to year.

-Skewed distribution: Positive skewness (1.28) indicates the presence of years of unusual contribution from other revenues.

☐ Outliers and centering: The highest hyper-core value (5.54) among the three categories indicates a high peak and heavy tails in the distribution, indicating a greater probability of anomalous years with very high or very low contributions.

☐ Challenging normality: The low p value (0.0058) associated with the Jarco-Bera statistic indicates that the distribution deviates significantly from normality, indicating that outliers or outliers are more common.

☐ In general, while oil revenues show a consistent and dominant contribution to total revenues, tax revenues, although smaller on average, sometimes show significant contributions, and other revenues, although also contributing a small percentage on average, It shows the greatest volatility and the highest probability of extreme deviations, as indicated by its high hypercurvency and low Jarco-Bera probability value.

Table (9) shows the analysis of public expenditures at current and fixed prices for the period (2004-2022)

growth rate)Δ%(	growth rate)Δ(	Public spending at fixed prices)COL2(	Public spending at current prices)COL1(	YEARS
-0.6	-56116.7	88234.2	32117.5	2004
-0.5	-26481.2	52856.4	26375.2	2005
-0.2	-11988.1	50794.8	38806.7	2006
0.12	-0.10000	39031.3	39031.2	2007
0.12	6694.20	52709.2	59403.4	2008
0.12	6000.59	49589.1	55589.7	2009
0.25	14071.7	56062.4	70134.2	2010
0.32	19138.1	59619.6	78757.7	2011
0.40	30092.8	75046.8	105139.6	2012
0.42	35646.1	83481.5	119127.6	2013
0.45	35296.1	76896	112192.1	2014
0.47	22838	47579.5	70417.5	2015
0.41	2897.69	70673.3	7357.1	2016
0.43	3112.50	72377.6	75490.1	2017
0.47	3630.69	77242.5	80873.2	2018
0.45	4811.30	106912.3	111723.6	2019
0.29	17125.0	58957.3	76082.4	2020
0.29	18654	62583.8	81238.5	2021
0.25	16995.9	65369.4	82365.4	2022

Source: Prepared by the researcher based on the (Eviews) program.

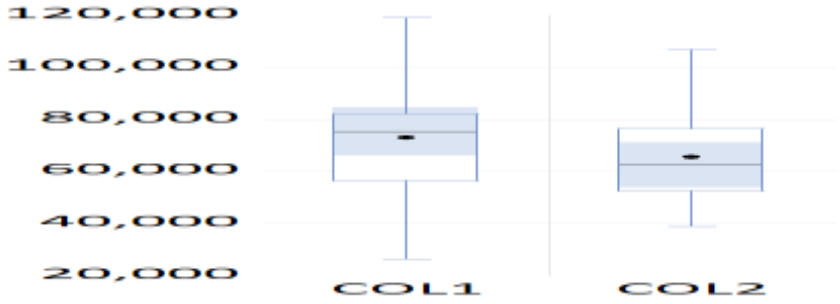
• The attached table and box chart provide a comparison between two categories of annual data (COL1 and COL2), and the following is clear from the previous table:-

•COL1 and COL2 represent annual data covering a time period from 2004 to 2022.

" •Delta" represents the difference between the two columns for each year, where a negative value indicates that COL2 is greater than COL1, and a positive value indicates that COL1 is greater than COL2.

" •Delta%" represents the percentage difference relative to COL1, which is calculated by dividing "Delta" by COL1.

Figure (8): The attached box chart shows a comparison between expenditure distributions at fixed prices and current prices



It is clear from the box graph that:

•The boxes represent the interquartile ranges (IQR), which is the range between the first quartile (IQR) and the third quartile (IIIQR) of the data, which gives an indication of the spread and centrality of the data.

•Lines (whiskers) extending from the bins indicate variation outside the upper and lower quadrants.

•The points in the middle of the boxes represent the arithmetic mean of each data set, giving an indication of central tendency.

•COL1 shows a narrower IQR and lower contrast compared to COL2, which has a wider IQR and greater contrast.

•The median of COL1 is lower than the median of COL2, which indicates that the central value of COL1 is generally lower than the central value of COL2.

☐ Common conclusions:

•COL2 values are usually higher than COL1 values as evidenced by many negative "Delta" values.

•The variance of COL2 is greater than the variance of COL1, as shown by the wider box in the box plot.

•There are years when the COL1 value exceeds the COL2 value, as evident in the positive "Delta" values, especially after 2007.

•The difference percentages are very large in some years, exceeding 40%, indicating large relative differences between the two categories.

Table (10) shows an analysis of GDP trends at current prices for the period (2004-2022) billion dinars

growth rate)Δ%(	growth rate)Δ(	Output growth rate) COL2(	Annual GDP at current prices الناتج (COL1)	YEARS
-0.04	-1467.5	32988.9	31521.4	2004
-0.23	-9604.4	40435.5	30831.1	2005
-0.23	-11561	49055.5	37494.5	2006
-0.28	-15656.6	54964.9	39308.3	2007
0.28	14976	52301.2	67277.2	2008
0.28	9648.5	45941.1	55589.7	2009
0.2	15553.3	54580.9	70134.2	2010
0.2	17832.1	60925.6	78757.7	2011
0.3	29351	75788.6	105139.6	2012
0.5	40380.8	78746.8	119127.6	2013
0.4	35487.5	77986	113473.5	2014
0.3	18564.6	51832.84	70397.5	2015
12.1	619224	51173.43	670397.4	2016
0.2	16464.4	59025.65	75490.1	2017
2.1	55177	25696	80873	2018
-01.8	-19672	107567	87895	2019
-0.7	-6895	92589	85694	2020
-0.8	-8008	99265	91257	2021
-0.4	-5198	107567	102369	2022

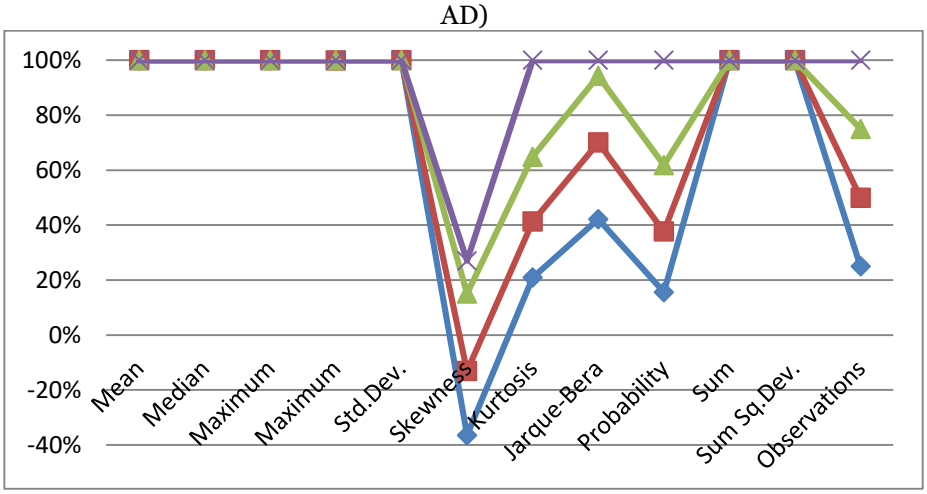
Source: Prepared by the researcher based on the (Eviews) program.

Table (11) shows a comparison between trends in GDP at current prices for the period (2004-2022) billion dinars

-	Col1	Col2	Col3	Col4
Mean	195231.105	12.8526315	3.32105263	2.85263157
Median	217327.1	13.8	3.2	2.8
Maximum	273587.5	31.1	4.2	3.8
Maximum	53295.4	2.4	2.7	2.1
Std.Dev.	72328.4519	8.81314475	0.45653154	0.38925630
Skewness	-0.6473290	0.41442548	0.50081829	0.21154216
Kurtosis	2.03277454	1.98013501	2.29456980	3.41429764
Jarque-Bera	2.06756800	1.36730215	1.18821852	0.27759228
Probability	0.35565859	0.50477066	0.55205408	0.87040545
Sum	3709391.00	244.2	63.100000	54.2
Sum Sq.Dev.	941652891	1398.08736	3.75157894	2.72736842
Observations	19	19	19	19

Source: Prepared by the researcher based on the (Eviews) program.

Figure (9) shows an analysis of descriptive statistics of GDP trends in Iraq for the period (2004 AD - 2022 AD)



Source: Prepared by the researcher based on the (Eviews) program.

Most important results

The research reached a set of conclusions, which were as follows:

-Public expenditures are considered one of the most important and effective financial policy tools in achieving economic growth, especially investment expenditures. Public expenditures witnessed great fluctuation during the research period, and investment expenditures did not achieve the desired proportion, in addition to the fact that unemployment rates remained high, especially disguised unemployment, and thus the role of expenditures decreased. General purpose in addressing the structural imbalances in the Iraqi economy and thus not achieving the desired economic stability, and this is what the research hypothesis led to.

-In the event of pressure on public expenditures, as happened in 2009 due to the global financial crisis, as well as the dual crises that occurred in the years (2014, 2020), the trade-off between current and investment expenditures usually goes to sacrificing investment expenditures at the expense of current expenditures, as the latter is linked to wages. Salaries are primarily an item that is difficult to touch, so investment expenditures are often sacrificed, through which some government programs can be abandoned, because their effects on members of society are indirect and intangible, unlike reducing current expenditures that directly affect individuals, which is What governments usually avoid, but it was easier in cases of prosperity and revenue growth and the resulting escalation of expenditures. In such cases, the increase included public expenditures (consumption and investment).

-The slow growth of public revenues and their failure to keep pace with the growth of public expenditures, as a result of the heavy reliance on oil revenues, which constitute more than 95% of total public revenues, and due to the fluctuation of their prices in global markets and the reflection of these fluctuations on public revenues, both positively and negatively, and then in a way The impact of these revenues on the amount of

the general budget is obvious, which raises concerns about the present and future of the Iraqi economy unless the government intends to take urgent and effective political and economic decisions.

-The general budget has suffered a continuous deficit over a number of years, and the reason for the deficit is due to the expansionist approach of spending policy in the Iraqi economy and the fluctuation of revenue growth and its failure to keep pace with public expenditures.

One of the reasons that led to the delay in approving the federal budget for the year 2020 is a combination of crises, represented by the instability of the political reality in Iraq, in addition to the decline in oil prices, due to the decline in global demand, which coincided with the Corona pandemic, which led to the creation of a deficit in the general budget and the occurrence of... An economic crisis may continue and worsen, and the citizen will be the biggest loser.

-The Corona pandemic and its repercussions on the Iraqi government, especially the oil sector, and its subsequent economic and financial impacts, are a station for reconsidering the economic reality and changing financial policies during the previous period, in addition to the components that the Iraqi economy possesses that can be exploited in order to advance the Iraqi economy and confront the deficit and financial risks.

Study recommendations

Based on the above, we recommend the following:

-The necessity of working to diversify sources of public revenues and not rely on a single source, which is oil, that is, creating more than one source to finance public revenues by adopting innovative financing methods, in order to avoid the effects associated with the fluctuations that occur in oil prices.

-The necessity of working to rationalize public expenditures and avoid wasteful expenditures by activating the role of financial control, fighting financial corruption, and eliminating unnecessary expenditure items.

-The necessity of working to restructure public expenditures and adopt policies that prioritize expanding the volume of investment spending and reducing current (consumer) spending for its important role in expanding the productive capabilities of the Iraqi economy and addressing the problems of the Iraqi economy, especially unemployment.

-The necessity of supporting the non-oil productive sectors (industrial and agricultural) through the optimal use of resources that contribute to the provision of goods and services in order to enhance the ability of the local economy to confront external fluctuations and crises, as well as employing components of the available labor force, which achieves economic stability.

-Working to reduce the deficit in the general budget by following a comprehensive reform policy according to a comprehensive and integrated plan or program in order to rebuild the Iraqi economy and reduce financial and administrative corruption.

-Imposing taxes and restrictions as promotions on imported goods that can be produced locally in order to support the local product and be an incentive to increase and develop production.

-Participation of the public sector with the private sector in preparing short- and long-term plans and programs to eliminate unemployment in Iraq because of its negative effects that are reflected in the social and security reality through increasing investment in basic projects that result in reducing unemployment rates and increasing the development and qualification of human capital, in addition to its contribution. Effectively in developing and growing the economy.

It is possible to find appropriate solutions to the problem of increasing unemployment rates, the most important of which is diversifying sources of national income by diversifying the growth of productive sectors (activating investment expenditures), which ensures better exploitation of surplus economic resources (natural and human), because these expenditures would absorb the surplus unemployment, and on the one hand Another way is to develop methods of employing workers in the government sector, transforming them into productive labor instead of surplus disguised unemployment, and exploiting and managing government resources efficiently.

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