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Measuring and analyzing the effectiveness of government spending in influencing some macroeconomic indicators in Iraq for the period 2010-2024

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Abstract
The research measures and evaluates the degree to which government spending affects certain macroeconomic variables in Iraq between 2010 and 2024 using a descriptive-analytical approach supported by an econometric methodology. The study examined the relationships between government spending and GDP, unemployment, and inflation. The results showed that while government spending had a big impact on GDP, the majority of current spending limited its ability to provide sustainable growth. It also became clear that it was unable to reduce unemployment rates because it placed more focus on government employment than on the development of quality jobs. The research discovered a positive correlation between inflation and prices in most years because current expenditure contributed to an increase in aggregate demand, which in turn raised prices because of insufficient production capacity. The study concludes that government spending priorities must be restructured toward investment sectors and reduced reliance on oil revenues to achieve sustainable economic stability.

Keyword: Government spending, gross domestic product, unemployment, inflation, Iraq

Introduction
Government spending is one of the state's most crucial fiscal policy tools for fostering growth and achieving economic stability. It stands for the government's overall approach to allocating resources and directing them toward achieving social, economic, and developmental goals. The importance of this spending is increasing in developing countries such as Iraq, where the state controls economic activity because to the limited involvement of the private sector. Between 2010 and 2024, Iraq's most significant security, political, and economic problems were its over-reliance on oil revenue, its unstable oil prices, its lack of economic diversification, and the spread of financial and administrative corruption. These problems significantly impacted the efficiency of government spending and its capacity to support macroeconomic indicators. Despite significant increases in public spending during this period, particularly following the rise in oil prices in some years, macroeconomic indicators such as GDP, unemployment rates, and inflation rates have not seen the desired improvement. This raises serious questions about the effectiveness of this spending and its actual contribution to achieving comprehensive and sustainable economic growth.

Research Problem
Although Iraq's government spending rose dramatically over the study period, macroeconomic indicators did not improve in tandem, which raised questions about the effectiveness and efficiency of the spending. What effects did Iraqi government spending have on macroeconomic indicators including GDP, unemployment, and inflation between 2010 and 2024?

Importance of Research
The study is important because it explains the relationship between government spending

and a few macroeconomic indicators as well as the potential impact of changes in government spending on these indicator.

Research objectives

analyzing the theoretical and fundamental foundations of government spending and macroeconomic data.

1. An analysis of Iraq's macroeconomic information and shifts in public spending between 2010 and 2024
2. Evaluating the impact of this investment on macroeconomic indicators.

4-Research hypotheses

Based on the observation that government spending significantly affects many macroeconomic factors in Iraq from 2010 to 2024, the following sub-hypotheses have been proposed:

- Government spending increases the GDP.
- Government spending has a negative effect on the unemployment rate.
- Government spending has a favorable effect on the inflation rate.

Research methodology

- **Methodology:** Descriptive - analytical - quantitative**.**
- **Data:** Annual reports from the Ministry of Finance, Central Bank, World Bank**.**
- **Statistical tools:** Multiple linear regression models (ARDL), time series analysis**.**

Research limits

Iraq serves as a model for the study's geographical borders, which span the years 2004-2024.

Methodology Search

The descriptive analytical approach was used to examine the relationship between government spending and the necessary statistical and quantitative methods. and macroeconomic indicators, which are used to evaluate expenditures via the identification, estimation, testing, and prediction phases of conventional models and to explain the relationship between spending and inflation, GDP, and unemployment rates.

Research structure

The study's three components were as follows: The theoretical foundations of government expenditure and macroeconomic indicators were covered in the first section, while Iraq's actual public spending and macroeconomic indicators from 2010 to 2024 were studied in the second. The effect of public expenditure on Iraq's unemployment index between 2010 and 2024 was quantified in the third part. After the inquiry was completed, a number of remarks and recommendations were made.

Part One: Theoretical Framework of Public Spending and Macroeconomic Indicators

First: The Concept of Public Spending

Government expenditure, whether at the federal or municipal level, is one aspect of the state's financial policy that shows the extent of government involvement and the costs it has imposed on the populace. It can also serve as a standard by which to measure the size of the state's economy, the amount of money spent, the distribution of that spending among the different economic sectors, and other related productive activities, like financing government expenditures through tax cuts or increases that do not have a detrimental effect on the economy or cause delays in specific social and economic projects. (Khafaja, 2013, 35) [6] It may also be defined as a monetary "quantity" that is required by law for a person to spend in order to satisfy a public need. 126 Al-Takriti (1986) [2]. Capital expenditures are defined as public investments made by the state to build factories or buildings that attract investment or services that facilitate the development of human capital, such as the establishment of hospitals, schools, and research facilities, or to acquire capital goods or increase productivity Hamid, Abd. (2016) [11] subject Government spending decisions For the government's political considerations and economic and social priorities Over a certain period of time, That is, it is not affected by income levels or other variables. The government influences public spending and exercises its decisions through financial policies, and finances this spending from During the revenues, these policies are used to achieve its economic and social goals as follows: (Al-Afandy, 2010, 89) [1]

1. Expansionary fiscal policies the government increases public spending and reduces taxes when it wants to increase the rate of economic growth and employ the unemployed. The goal is to reduce unemployment and eliminate recession and economic contraction**.**
2. Contractionary fiscal policies. The government is trying to reduce public spending and increase revenues. Tax increases reduce people's disposable income, which leads them to remove their extra buying power and reduce investment and consumer expenditure. This may result in a higher unemployment rate as a result of the efforts to battle inflation and establish price stability.

Second: Practical divisions of public expenditures.

Practical or situational divisions are those that appear in the various state budgets. These divisions are not based on scientific considerations, but are rather influenced by administrative functional considerations. This division is divided into

1. **Administrative division:** State general budget expenses are categorized according to the administrative structure of each state. Each ministry has its own chapter, which is further split into branches, each of which is further subdivided into items that reflect the ministry's affiliated directorates, agencies, and departments, in accordance with the organizational structure. 2014: 123 Al-Hariri and colleagues
2. **Qualitative classification**: According to this classification, public expenditures included in the budget are classified according to the objective that the process of consuming goods and services takes, for example, buildings, factories, roads, bridges, and means of transportation. The achieved return. If the expenditure results in income, it is considered a current expenditure. If it achieves the amount of money used, a small amount that does not exceed a certain amount is considered a current expenditure. The operating and allocated to each administrative unit, and according to

the nature of the things for which the general agreement is allocated, is divided into capital expenditures and current expenditures, and each of them differs in terms of two returns: one is considered capital and the other is capital. The other is repetition and regularity. Current expenditures are described as repetitive, while capital expenditures are described as non-repetitive. (Al-Khawlani, 2019) 36) [7]

3. Functional classification: The functional classification of public expenditures is considered a macroeconomic monitoring tool and a method that provides us with a comprehensive view of the scope of state intervention. The primary goal is to facilitate the study of the size of each function and to determine the extent of the state's interest in one function over another through the size of the financial capabilities approved for that. In general, government expenditures are functionally classified into five groups: the basic public services agreement (security, justice, defense, and government apparatus administration expenses). (Al-Khatib and Shamiya, 2018: 116-117) [5]

Third: The phenomenon of increasing public spending and its causes We distinguish between two types of reasons for increasing public expenditures**.**

1. Apparent causes

Apparent increase means an increase that does not result in an increase in public burdens. The costs are borne by the taxpayers, and these reasons include the following: (Hamdi, 2015, 79-80)

- **Value of money depreciation:** When the value of money falls, prices often rise, which raises the amount of nominal public expenditure without raising the quality of services provided to the public.
- **Changing budget preparation methods:** The budget is the basis of the principle of comprehensiveness, as all public expenditures incurred by the state appear in the general budget. Also, resorting to multiple budgets leads to overlap between them and thus leads to the creation of what is known as the phenomenon of duplication in calculating public expenditures in the budget. This is what makes comparing public spending in previous years with a current percentage that has been explained in the budget preparation method, leading to the possibility of an apparent increase

2. **Population increase:** The increase in public expenditures resulting from population increase is considered apparent when the per capita share does not increase. However, if it results in an increase in the per capita share, then this increase is considered real

3. The real reasons

The real increase in public spending in most countries in recent years This is due to several reasons that vary depending on the level of development achieved by each country. We summarize these reasons as follows

A. Economic reasons: can be summarized as follows

- **National income development:** The size of the national income is one of the main economic elements influencing the increase in public expenditure. The state increases its many programs in parallel with the increase in national revenue because the expansion of tax bases allows the state to deduct a greater proportion of people's income and use it for the public benefit. The increase the state's income encourages it to increase expenditure in many areas.
- **The state's function in the economy:** The free economy system pushed the state to adopt a new policy focused on involvement in economic concerns when it lost its neutrality due to crises. The expansion of Keynesian ideas, in particular, resulted in a rise in the quantity, variety, and variety of public spending, including the allocation of subsidies or investments, with the goal of raising national income by driving actual demand to the level necessary to attain full employment. Its objective is to attain the equilibrium that the automated market system failed to do.

B. Social reasons

The rise of social awareness, the establishment of socialism, and the power of the working class led to the state's participation in the social sphere to support the lower classes and protect and strengthen their position. The Great Crisis of 1929 contributed to the expansion of social spending and the provision of subsidies and services because social solidarity requires that the socioeconomic conditions of those who can afford them be improved. As a result of all of this, social security systems have been established in many countries, with the primary goal of ensuring that individuals can continue to support themselves and get healthcare. All of this undoubtedly leads to increased public expenditure. It is also common for population growth to lead to more public spending as a result of countries attempting to expand their offerings and enhance the quality of their services.

C. Financial reasons

As a consequence of the development of state responsibilities and tasks, the number of workers has increased along with the state's administrative machinery. As this happened, so did the quantity of goods and services needed to keep its administrative machinery running. This development leads to an increase in public expenditure, which includes wages and salaries. Two administrative factors that contribute to the increase in public expenditure are a growing workforce and a weak administrative framework, which is a reality in many developing countries. The state's provision of government services depends on the intensity of the labor component, which increases the demand for more employees and the amount of salaries and wages paid, ultimately increasing the state's public spending. This situation is made worse by the decline in worker productivity and efficiency in state agencies in these countries. p. 20 of Razouqi.

D. Administrative reasons

Government expenditure has undoubtedly increased due to a variety of factors, including the administrative structure's incapacity to keep up with social and economic progress, the disproportionate number of workers compared to the number required for their occupations, and the costly public job accessories. Since it does not directly raise the value of the public benefit, this increase is real because it makes the burden of public costs grow more quickly than the rate of

public service development. Instead, it is more like transfer expenditures than actual (real) expenses (Al-Samarrai, 2018, 23) [10].

E. Political reasons

As democratic systems and ideals proliferated, governments turned to extravagant expenditure to curry favor with the populace. Their workers' level of morals resulted in significant financial waste due to bribery, embezzlement, and their disregard for public monies, which increased public expenditure. The expansion of the state's international contacts also resulted in a rise in the level of commercial and diplomatic representation, involvement in international organizations and conferences, and support for liberation groups and sympathetic foreign nations to boost their expenditures. The spread of wars and the sophisticated machinery and equipment needed to win them, as well as the costs associated with civil defense and recompense for the damage of what they left behind, are some of the political causes. The nation's public expenditure has soared as a result of the war and other circumstances. Shamiya, Al-Khatib, 2018, 86 [5]

Fourth: The theoretical framework for some macroeconomic indicators

1. concept GDP

One of the most important economic indicators used to determine the extent of economic activity in any given country is GDP, which is the total monetary value of finished goods and services produced within its borders over a specific time period, typically a year or a quarter, regardless of the nationality of the producers. This indicator is often used to evaluate economic performance, compare living standards between countries, or track changes in the economy over time (Al-Azzawi, 2017, 26) [13]

Methods of measuring GDP

Theoretically, GDP can be measured in three main ways

A. Production method (value added)

This method is used to calculate the overall value provided at each stage of production in the several economic sectors (agricultural, industrial, and service). Value added is calculated by subtracting the value of intermediate inputs from the total value of output in each sector. The gross domestic product (GDP) is then calculated by adding the entire value of production.

B. Spending method

This approach is predicated on calculating the overall expenditure on finished products and services using the following formula:

(GDP = C + I + G + (X - M)

C. Income method

This approach calculates the overall revenue received from a nation's production of goods and services, which includes indirect taxes, wages, profits, interest, and rents, less subsidies.

D. Types of GDP

1. **Nominal output:** Measured at current year prices, making it vulnerable to the effects of inflation and deflation.
2. **Real output:** Measured at constant base year prices, it is used to measure real growth in the economy.
3. **The per capita GDP:** Calculated by dividing the gross domestic product by the population, this figure represents the standard of living (Al-Rifai, 2018, 45) [9]

Fifth: The concept of unemployment.

Unemployment is a pathological economic-social issue that manifests as either a large number of persons searching for work behind a restricted number of accessible job opportunities or an increase in the number of workers available over available job opportunities. A community cannot use all of its physically competent boys, just as a body cannot use all of its members. It is difficult to imagine the increasing material and moral situations of an unemployed person without money in a time when a person with a good income cannot meet all of his basic needs. (Mansour, 2014, 31) [14] According to the criteria given above, unemployment occurs when individuals who are of working age, capable of, desiring, and looking for work are unable to engage in economic activity for a certain period of time due to uncontrollable conditions. This is known as total unemployment. Comparably, in economics, unemployment is the termination of employment or the absence of employment for a person who is prepared and able to work, gets paid the going wage, but is unable to obtain employment. Here's what the term "unemployed" means. The two essential qualities that together define the unemployed are ability and desire to work.

1. To no avail, you look for and accept a job offer at the market rate.
2. Those without jobs who are entering the labor for the first time and those who have previously worked but were forced to leave for whatever reason are likewise subject to these two standards. Hazza, 2021, 289 [15]

Sixth: Types of unemployment:

Unemployment varies depending on how one looks at it, and the presence of these types in society depends on the degree of its economic progress or the degree of its backwardness and underdevelopment. We will try to cover as much as possible the different types and names of unemployment. The following are the different types of unemployment: (Mansour, 2014, 32) [14]

1. **Cyclical unemployment:** Economic activity is exposed to recurring and periodic periods of ups and downs called the economic cycle, where it moves from a boom phase (expansion in which income, output and employment increase until it reaches a peak point, then a turning point occurs, after which it heads towards a periodic decline in all its previous components, so the national economy enters a contraction phase to begin to recover towards expansion again, and so on.
2. **Frictional unemployment:** This occurs when individuals move between places and professions in search of work that suits them. In other words, there is a mismatch between the supply and demand for labor due to the ignorance of job seekers and business owners that have job vacancies. It also happens when changes in businesses and professions within different economic

sectors cause a divergence between the desires of job seekers and the vocations that are accessible in the labor markets.

3. **Structural (technical) unemployment:** This unemployment results from a surplus of unskilled labor that cannot be employed in modern or advanced fields that require technical proficiency compatible with modern production methods. For example, the economic transition from agriculture to industry presents a challenge in converting farmers into workers on advanced machinery. This unemployment often occurs in developing countries due to a lack of technical skills and the inability of the local workforce to meet the professional needs of society.
4. The term "disguised lining" describes unproductive surplus labor that exceeds the true demand for work; its removal from their places of employment has no impact on production levels. It is widespread in all governmental, agricultural, service, and other sectors, especially in developing countries, as a result of the increase in government employment and governments' dedication to assigning university graduates and graduates of higher and technical institutes to achieve social goals without the actual need for this labor. Page 85 of Mansour (2014) [14].
5. **Unemployment by season:** Seasonal unemployment, which is linked to social and environmental conditions, affects many workers all year round. For example, workers in the soft drink and summer beverage sectors, as well as construction workers, lose their jobs due to cold weather. In the summer, people in the winter industry are unemployed. This unemployment is a direct result of fluctuations in labor demand brought on by irregular work and output.
6. **Imported unemployment:** When the number of Arab or foreign workers increases, this kind of unemployment occurs because these workers compete with the domestic labor and are willing to work for much lower wages than what local workers would accept.

Seventh: Measuring the unemployment rate

Unemployment rates are tracked to evaluate market conditions and to provide a complete picture of a country's economic situation. A high unemployment rate indicates that the economy is not reaching full employment, which is a sign of a restricted labor supply. The unemployment rate is the percentage of the work force that is unemployed. Changes in unemployment rates over time also reveal the level of economic activity and the economy's ability to provide jobs for all people. It is the ratio of the working population to the unemployed.

Rural and urban regions, as well as the center and the periphery, have different unemployment rates. Age, gender, governorate, educational level, and kind of education are further divisions. The unemployment rate may be obtained using the following formula:

Unemployment rate = number of unemployed ÷ number of labor force × 100.

Labor force participation rate = Labor force ÷ Active rate × 100.

Labor force size = number of employed + number of unemployed.

Household surveys are the preferred approach for estimating unemployment rates since they are computed in compliance with international standards for unemployment statistics. Reliable statistical statistics on unemployment give a solid and logical basis for decision-making and the development of general and sectoral economic policy. Labor force data is crucial since it is necessary for the decision-making process, regardless of whether it is at the state level, private, public, or mixed enterprises, or research centers for all activities related to public and private issues (Hazza, 2021, 290) [15].

Eighth: The concept of inflation

Inflation is generally defined as a significant and sustained increase in the general level of pricing. There is a time limit on these price increases. The first of two main elements that comprise this notion is the general increase in the price level. The second is the notable increase, since not all price rises are considered inflation (Abdul Hamid, 2007, 319) [12]. Inflation may be defined broadly as the difference between the flows of cash and commodities, or as the difference between aggregate supply and demand that favors the latter. Therefore, the gradual and comprehensive increase in the general level of prices over a certain period of time is referred to as inflation in economics. The extent and level of inflation may affect how long this period of time is (Al-Hiti, 2005 197) [16] Inflation is a major economic problem that affects both developed and developing countries. The causes, effects, and therapeutic modalities vary by country. Most people agree that inflation is the consistent rise in the average level of prices for goods and services, despite the fact that there are several meanings of the term. Inflation is seen as a serious problem as it indicates imbalances in the economic system. Others, however, believe that inflation results from a mismatch between the amount of money available for spending and the prices of goods. The reason is the monetary component, which raises the price ratio relative to the rise in available income. The amount of money in circulation or its rate of circulation then rises as a result. Additionally, if output declines, the availability of commodities may also decrease, thus contributing to inflation. This may be attributed to either poorly focused investments or natural imbalances. Rather than increasing prices, the money rise increases production.

Second: The following will be the most important forms of inflation, albeit there are more (Abdul Hamid, 2007, p. 319) [12].

Real inflation Real inflation, in Keynes' view, happens when production does not increase to match the additional growth in aggregate demand. Additionally, Keynes believed that production elasticity came from aggregate demand; this kind of inflation is referred to as real inflation or true inflation. The gross domestic product of industrial economies rose over the 20th century, especially after World War II. At the time, this caused inflation to creep. Economies have been experiencing a persistent, sequential, and short-term non-cumulative price increase. Furthermore, rather of developing vertically, it progressively rises over time. This

kind of inflation is brought on by persistent price rises rather than an increase in bank credit or the money supply. Although hyperinflation may be caused by creeping inflation, it is more severe because it happens when prices and salaries are rising in a series of sharp increases one after the other. Therefore, if the inflation rate is 5% annually for four consecutive years, the upper boundaries of creeping inflation are shown. If the economy expands beyond these limits, it is said to as suffering hyperinflation since money loses one of its basic functions, namely as a store of value and a unit of account.

Hyperinflation is a state in which prices are very high, exceeding the 50% monthly and 1000% annual thresholds. It occurs when prices rise significantly. This kind of inflation is frequently called severe since it is achieved by a sharp and abrupt increase in prices. As a result, the value of money rapidly declines and its purchasing power is significantly diminished in a short period of time. Additionally, when money's velocity of circulation increases, it becomes less useful as a store of value and is abandoned. Suppressed inflation: This kind of inflation is linked to the state's activities, which impose stringent rules and restrictions to prevent future price increases. The mandated pricing policy and the use of ration cards in addition to government permits for the distribution of certain items are two examples of these methods. Because there is no appropriate way for them to be spent, economic forces are able to control prices via government facilities even in the face of rising cash earnings. They are also not allowed to appear Imported inflation is the price increase that arises when global inflation enters a country via imports, particularly in countries with rentier economies. This kind of inflation is brought on by price increases in outside markets where the nation purchases goods. Furthermore, a high level of economic openness to the outside world makes this kind of inflation riskier. The impact of external factors on local price levels and the extent to which the local currency's buying power has grown are often used to measure it. This is due to the fact that it is equivalent to the outcome of dividing the losses brought on by the rise in import prices by the sum of the money spent at current prices by (100). Measuring inflation (there are several ways to measure inflation, including: (Al-Hiti, 2005, 200) [16]. Price indices: Price indices are one of the methods of measuring inflation, as they express relative and temporal averages of prices, and they are also prepared for different types of goods, as they are expressed in monetary units, in order to measure the purchasing power of individuals and different sectors. That is, the indices are relative numbers as well as temporal numbers. On the other hand, this method is more widespread, as it depends on estimating the inflation rate through price changes (the price index), that is, through the use of indices, in order to measure the purchasing power of individuals and projects and to know the price developments of a certain commodity during a specific period of time. If:

P1: General price level in the base year
P2: General price level in the comparison year

$$\text{Inflation Rate} = \frac{p_2 - p_1}{p_1} \times 100$$

Part Two: Analysis of Public Spending and Macroeconomic Indicators in Iraq for the Period 2010-2024

First: The reality of public spending in the Iraqi economy

Table 1 displays the evolution of Iraq's public expenditure from 2010 to 2024 along with the distribution of current and investment spending. The fact that overall public spending increased at a variable annual growth rate from 55.5 trillion dinars in 2010 to 119.2 trillion dinars in 2024 demonstrates the impact of public spending on the status of the economy and oil prices. Current expenditures make up between 71% and 95% of total public spending, according to the data. This suggests that consumer and operational spending dominate fiscal policy at the expense of investment spending, which often does not exceed 30%. As an indication of a reversal in the trend toward financing infrastructure and productive projects, they instead dropped to less than 10% in 2022 and 2024.

It is also noted that the growth rate of public spending was negative in some years (2010, 2016, 2019), often linked to financial crises or declining oil revenues.

Meanwhile, years such as 2013 and 2022 saw the highest growth in public spending, driven by improved oil revenues or expanded government spending

Table 1: An examination of Iraq's actual public spending index for the years 2010-2024 (in millions of dinars)

Year	Public expenditures (1)	Growth rate	Current expenses (2)	Ratio (1:2)%	Investment expenditures (3)	Ratio (1:3)%
2010	55,589,722	-0.17	45,941,062	82.7	9,648,659	17.3
2011	70,134,201	0.26	54,580,859	77.8	15,553,341	22.2
2012	78,757,566	0.12	60,925,554	77.3	17,832,114	22.7
2013	105,139,576	0.33	75,788,622	72.1	29,350,954	27.9
2014	119,127,556	0.13	78,746,805	73.7	40,380,750	26.3
2015	125,321,074	0.05	86,568,374	69.1	38,752,700	30.9
2016	70,397,515	-0.44	51,832,827	73.6	18,564,679	26.4
2017	67,067,434	-0.05	51,173,425	76.3	15,894,008	23.7
2018	69,430,753	0.04	52,599,836	75.7	14,744,313	21.2
2019	80,873,189	0.16	67,052,856	82.9	13.820.332	17.1
2020	111,723,523	0.38	87,300,921	78.1	24,422,602	21.9
2021	76,082,443	-0.32	72,712,413	95.6	3,370,030	4.4
2022	102,849,659	0.35	89,526,686	87.0	13,322,974	13.0
2023	116,959,581	0.14	104,941,090	89.7	12,018,490	10.3
2024	119,234,124	0.02	108,198899	90.7	11,035,225	9.3

Source: "Ministry of Finance data / Economic Department / Unpublished data / Data from open general budget documents for various years / Central Bank statistical bulletin for various years"

Second: The reality of inflation in the Iraqi economy*:*

The Consumer Price Index (CPI) and the inflation rate are two of the most important economic indicators that demonstrate the stability of the general price level and directly affect people's purchasing power and real income. According to statistics in Table (2), the Consumer Price Index (CPI), which measures a general increase in the cost of goods and services, increased gradually between 2010 and 2024, rising from 89.3 in 2010 to 130.0 in 2024. This growth has shown both periods of relative slowdown (as in 2015-2019) and substantial jumps (as in 2021 and 2022). The yearly inflation rate has fluctuated significantly, peaking at 6.1% in 2012 and then falling in subsequent years to reach 0.2% in 2017. In 2019, it even shrank by -0.2%, indicating weak or basically unchanged aggregate demand. However, inflation rose sharply in 2021 (7.7%) as a result of the dinar's devaluation and the rising cost of imported goods. After that, inflation rose at an extremely high rate of 7.3% in 2022 before gradually declining in 2023 and 2024.

These trends indicate that inflation in Iraq is influenced by structural and temporary factors, most notably dinar exchange rate fluctuations, reliance on imports, oil prices, and government spending. The data also reflect weak control over inflationary pressures in some years due to the absence of effective monetary policy tools.

Table 2: Iraq's Consumer Price Index and Inflation from 2010 to 2024

Year	Consumer Price Index	Inflation rate %
2010	89.3	2.4
2011	94.3	5.6
2012	100	6.1
2013	102.4	1.9
2014	101.6	2.2
2015	104	1.4
2016	104.1	0.5
2017	104.3	0.2
2018	104.7	0.4
2019	104.5	(0.2)
2020	105.1	0.6
2021	113.2	7.7
2022	121.5	7.3
2023	126.1	3.8
2024	130.0	3.1

Source: "Columns (1) and (2) prepared by the researcher based on the Central Bank of Iraq, official website, annual reports, various years (2010-2024)

Third: The reality of the gross domestic product in the Iraqi economy

The gross domestic product, or GDP, is one of the most often used aggregate measures for assessing economic activity. The changes in Iraq's GDP at current prices throughout the period of 2010-2024 are shown in Table (3), along with the annual rates of change. The data shows that during a 14-year period, GDP increased by around 2.5 times, from 163.1 trillion dinars in 2010 to 412.3 trillion dinars in 2024. But since it has been affected by a number of domestic and international crises, its growth has been unstable.

Growth rates in 2011 and 2012 were 0.34 and 0.17, respectively, due to rising oil prices. Following that, a gradual decline began, with contractions of -0.03 in 2014 and -0.27 in 2015, respectively, caused by declining oil revenue and security shocks (ISIS). Up until 2020, when the Corona outbreak and the decline in oil prices led to a decrease of around -0.21, the volatility continued. After 2021, the output gradually increased again, reaching 0.27 in 2022 and 0.05 in 2024. However, growth rates remained low, highlighting the structural vulnerability of the Iraqi economy, its excessive dependence on the oil sector, and the little contribution of non-oil sectors.

Table 3: Iraq's GDP trends between 2010 and 2024 (millions of dinars)

Years	Gross domestic product	Annual rate of change %
2010	163,104,739.2	0.24
2011	218,617,834.8	0.34
2012	255,727,068.5	0.17
2013	274,745,875.0	0.07
2014	267,262,787.8	-0.03
2015	196,203,013.3	-0.27
2016	198,774,369.4	0.01
2017	224,636,323.2	0.13
2018	272,083,889.0	0.21
2019	279,757,642.6	0.03
2020	221,593,971.7	-0.21
2021	302,691,912.5	0.37
2022	383,064,152.3	0.27
2023	391,431,910.5	0.02
2024	412,345,435.3	0.05

Source: "Prepared by the researcher based on data from the Ministry of Planning / Central Satistical Organization / Accounts / Central Bank of Iraq bulletins for various years"

Fourth: The development of the unemployment rate in the Iraqi economy during the study period*:*

Unemployment, a measure of the economy's ability to generate enough job opportunities to absorb new workers, is one of the largest economic and social problems facing the Iraqi economy. Iraq's unemployment rates from 2010 to 2024 are shown in the table. Examining temporal trends may reveal clear events related to the political, economic, and security conditions the country faced at the time.

Data shows that unemployment rates were much lower in the beginning of the period (2010-2013), ranging from 11.0% to 12.0%. This suggests that as oil income and government investment increased, the market was mostly steady. But between 2014 and 2016, the unemployment rate rose sharply, reaching 16.4% in 2014 and 16% in 2015 and 2016. This might be linked to the economic downturn caused by the decline in global oil prices, as well as the security issue caused by the expansion of ISIS and the ensuing disruption of economic activity in many governorates.

The unemployment rate remained at around 13% in 2017 and then rose to 16% in 2018, signaling a weakening of the economic recovery, even if oil output and exports had improved somewhat. As a consequence of several government initiatives to support small businesses and employment, the ratio fell to 14% in 2019. However, the COVID-19 pandemic crisis in 2020 led the unemployment rate to soar rapidly to 28% due to the economic lockdown and the suspension of various service and manufacturing businesses.

While 2021 saw a relative decline in the unemployment rate to 22% as economic activity began to resume, unemployment rates remained high compared to pre-pandemic levels. From 2022 to 2024, indicators returned to levels closer to the historical trend (around 16 %), reflecting a gradual recovery in the labor market due to improved oil prices and the resumption of some investment projects. Structural challenges persist, such as weak economic diversification, the labor market's reliance on the public sector, and the private sector's limited absorption of new workers.

Table 4: Iraq's unemployment rate from 2010 to 2024

Years	Unemployment rate
2010	12.0
2011	11.1
2012	11.9
2013	11.0
2014	16.4
2015	16
2016	16
2017	16
2018	16
2019	14
2020	28
2021	22
2022	16
2023	14
2024	16

The Iraqi Ministry of Planning, various years (2010-2024).

Part Three: The Applied Aspect of the Impact of Government Spending on Some Macroeconomic Indicators in Iraq for the Period 2010-2024.

First: Study Variables:

Table 5: Study variables

Description	Variable name	Variable symbol
dependent variable	Gross Domestic Product	Y1
dependent variable	unemployment rate	Y2
dependent variable	Inflation rate	Y3
independent variable	government spending	X

Source: "Table based on model description".

Second: Standard Model Tests Unit Root Test

The Phillips-Perron (PP) test showed that all research markers are stationary at the level and at the first difference, which makes this model suitable for measurement, as shown in the following table.:

Table 6: Results of the Phillips-Perron test statistics

Stability Test				
Variables	Level		1st Difference	
	PP	Sig.	PP	Sig.
Y1	-2.7657	0.0231	-2.0912	0.0000
Y2	-4.9977	0.0026	-2.8876	0.0000
Y3	-2.6675	0.0434	-2.0012	0.0000
X	-2.8876	0.0000	-2.5112	0.0000

Source: Eviews.13 output table

Third: Estimating the impact of government spending on some macroeconomic indicators.

Estimating the impact of government spending on some GDP indicators.

The aforementioned makes it clear that because the study data are stationary at the first level and difference, there is no need to go on to the second difference. It meets the following ARDL methodology requirements:

Model integrity

Table 7: Initial ARDL model estimate results

Dependent Variable: Y1				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
R-squared	0.925134	Mean dependent Var		108.2714
Adjusted R-squared	0.911523	SD dependent Var		10.45256
F-statistic	67.96546	Durbin-Watson stat		1.099900
Prob(F-statistic)	0.000000			

Source: Table Outputs (3 Eviews)

The model's first estimate findings are shown in the table above, where public expenditure was found to account for 91% of the variation in GDP (Y1) using the (R2 = 0.911523) Additionally, the F-test indicated that the model was generally acceptable.

Bound Test

Table 8: Bound Test Results

Null Hypothesis	No relationship levels	Test Statistic	Value
F-statistic		F-statistic	4.648183

	10%		5%		1%	
Sample Size	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)
60	2.738	3.465	3,288	4.07	4,558	5.59

Source: Table Outputs (13 Eviews)

The findings demonstrate the testing of the boundaries between GDP and public expenditure, indicating a long-term equilibrium connection between the two variables. Based on these findings, the effect coefficients for the short and long terms may be determined.

The impact of government spending on GDP in the short term

Table 9: Findings from the short-term effects of government expenditure on GDP

Dependent Variable: D(Y1)				
Method: ARDL				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
COINTEQ*	0.0201423	0.0103665	1.9429999	0.0573
X	0.9346033	0.4813558	1.9416059	0.0575

Source: "The table was prepared by the researcher using the (13 Eviews) program".

At a significance level below 0.05, it is clear from the previously described table—which concentrates on calculating the short-term impact—that public expenditure (X) and the GDP index (Y1) are directly correlated. This

suggests that a greater GDP was the outcome of increased governmental expenditure.
Public spending's long-term implications on GDP

Table 10: Findings from the long-term effects of public expenditure on GDP

Variable *	Coefficient	Std. Error	t-Statistic	Prob.
X	-46.4000	33.08867	-1.40229319	0.1665
C	73.7041	17.70799	4.16219642	0.0001
Note: * Coefficients derived from the CEC regression.				

Source: "The table was prepared by the researcher using the (13 Eviews) program.

The previous table, which focuses on assessing the long-term impact, shows that there is no association between public spending (X) and the GDP index (Y1). This suggests that this year's GDP was unaffected by higher spending.

Estimating the impact of government spending on some unemployment indicators.
It is evident from the foregoing that there is no need to proceed to the second difference since the research data are stationary at the first level and difference. It satisfies the following requirements of the ARDL methodology

Model integrity

Table 11: Initial ARDL model estimate results

Dependent Variable: Y2				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
R-squared	0.7367024	Mean dependent var		15.81090
Adjusted R-squared	0.7265756	S.D. dependent var		4.434614
F-statistic	72.747607	Durbin-Watson stat		1.906729
Prob(F-statistic)	0.000000			

Source: "The table was prepared by the researcher using the (13 Eviews) program".

The findings of the model's first estimate are shown in the table above, where public expenditure was found to account for 72% of the variation in the unemployment rate (Y2) using the (R2 = 0.911523) Additionally, the F-test indicated that the model was generally acceptable.

Bound Test

Table 12: Bound Test Results

Null hypothesis: No relationship levels	
Test Statistic	**Value**
F-statistic	5.76868

	10%		5%		1%	
Sample Size	**I(0)**	**I(1)**	**I(0)**	**I(1)**	**I(0)**	**I(1)**
60	2.738	3.465	3.288	4.07	4.558	5.59

Source: "The table was prepared by the researcher using the (13 Eviews) program".

It is possible to estimate the short- and long-term effect coefficients from the data, which demonstrate the testing of the boundaries between unemployment and public expenditure, indicating a long-term equilibrium connection between the two variables.

The short-term effects of government expenditure on unemployment

Table 13: Findings from the short-term effects of government expenditure on unemployment

Method: ARDL				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
COINTEQ*	-0.140627	0.071336	-1.971306	0.0540
X	0.183668 -	1.333184	0.887850	0.0087

Source: "The table was prepared by the researcher using the (13 Eviews) program".

The aforementioned table, which focuses on assessing the effect in the near term, makes it evident that public expenditure (X) and the index have an inverse relationship. At a significance level below 0.05, the unemployment rate (Y2) indicates that public expenditure has decreased. Rate of unemployment.

The long-term effects of governmental expenditure on unemployment

Table 14: Findings from the long-term effects of governmental investment on unemployment

Variable *	Coefficient	Std. Error	t-Statistic	Prob.
X	8.417072	10.869523	0.774373666	0.4421
C	15.40720	2.3469073	6.564896435	0.0000
Note: * Coefficients derived from the CEC regression.				

Source: "The table was prepared by the researcher using the (13 Eviews) program".

There is no correlation between public spending (X) and the unemployment index (Y2), as can be seen from the accompanying table, which aims to estimate the long-term effect. This implies that the more money spent, Unemployment was unaffected this year.

Estimating the impact of government spending on some inflation indicators
It is evident from the foregoing that there is no need to proceed to the second difference since the research data are stationary at the first level and difference. It satisfies the following requirements of the ARDL methodology:

Integrity of the model

Table 15: Initial ARDL model estimate results

Dependent Variable: Y3				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
R-squared	0.793689	Mean dependent var		2.858181
Adjusted R-squared	0.781553	S.D. dependent var		2.70587
F-statistic	65.40000	Durbin-Watson stat		1.907324
Prob(F-statistic)	0.000000			

Source: "The table was prepared by the researcher using the (13 Eviews) program".

The model's first estimate findings are shown in the table above, where public expenditure was found to account for 78% of the variation in the inflation rate (Y3) using the formula (R2 = 0.781553). According to the F-test statistic, the model was usually deemed satisfactory.

Bound Test

Table 16: Bound Test Results

Null hypothesis: No levels relationship	
Test Statistic	Value
F-statistic	4.9349668

	10%		5%		1%	
Sample Size	**I(0)**	**I(1)**	**I(0)**	**I(1)**	**I(0)**	**I(1)**
60	2.738	3.465	3.288	4.07	4.558	5.59

Source: "The table was prepared by the researcher using the (13 Eviews) program."

The findings demonstrate the testing of the boundaries between public expenditure and inflation, indicating a long-term equilibrium connection between the two variables. Based on these findings, the effect coefficients for the short and long terms may be determined.

The effect of government spending on inflation in the short term

Table 17: Findings from the short-term effects of government expenditure on unemployment

Variable	Coefficient	Std. Error	t-Statistic	Prob.
COINTEQ*	-0.101248	0.059302	-1.707306	0.09361
X	-2.068874	0.940232	-2.200386	0.0321

Source: "The table was prepared by the researcher using the (13 Eviews) program".

The aforementioned table, which focuses on assessing the effect in the near term, makes it evident that public expenditure (X) and the index have an inverse relationship. At a significance level below 0.05, the inflation rate (Y3) indicates that public expenditure has decreased. Rate of unemployment.

The long-term impact of governmental expenditure on inflation

Table 18: Findings from the long-term effects of governmental expenditure on inflation

Variable *	Coefficient	Std. Error	t-Statistic	Prob.
X	-2.735850	8.090077	-0.33817358	0.7365
C	3.387333	1.821620	1.85951635	0.0685
Note: * Coefficients derived from the CEC regression.				

Source: "The table was prepared by the researcher using the (13 Eviews) program".

There is no correlation between public spending (X) and the inflation index (Y3), as can be seen from the accompanying table, which aims to estimate the long-term effect. This implies that the more money spent, Inflation was unaffected this year.

Conclusions and recommendations

First: Conclusions

1. The research demonstrated that government expenditure had a major influence on boosting economic growth rates in Iraq throughout the period (2010-2024). However, this influence was changing owing to the dominance of current expenditure in the general budget structure at the cost of investment spending, which constrained the capacity of fiscal policy to produce sustained growth in the gross domestic product.
2. The findings demonstrated that government expenditure did not adequately lower unemployment rates, since most spending was centered on government employment and pay, without developing constructive job prospects in actual sectors (such as agriculture, industry, and productive services). This maintained unemployment levels relatively high despite the rise of state expenditure.
3. The analysis found that the link between government spending and inflation was positive in most years, as increasing current expenditures contributed to boosting aggregate demand levels, which was reflected in higher prices in light of the restricted production capacity of the Iraqi economy. This proved the inadequate capacity of fiscal policy to regulate inflation levels.
4. The findings indicated Estimating the effect in the near term is that there is a direct link between public expenditure (X) and the GDP index (Y1).) At a significance level of less than (0.05), this suggests that the larger the public expenditure, the higher the gross domestic output. In the long run, there is no link between the variables.
5. The findings indicated Estimating the effect in the near term is that there is an inverse link between public expenditure (X) and the index. Unemployment rate (Y2) at a significant level of less than (0.05), implying that the greater the Public expenditure has led to a drop. Unemployment rate, but in the long run there is no association between the variables.
6. the short-term effect assessment indicated that there is an inverse relationship between public expenditure (X) and the index. Inflation rate (Y3) at a significant level of less than (0.05), implying that the greater the Public expenditure has resulted to a fall. unemployment rate In the long run, there is no link between the factors.

Second: Recommendations

1. Restructuring government spending priorities so that it is directed towards productive sectors (such as agriculture and industry) rather than focusing excessively on consumer or operational spending, thus enhancing economic diversification and reducing dependence on the oil sector.
2. Working to limit the fiscal deficit by boosting non-oil income and enhancing tax and customs collection methods, which will assist to establishing financial sustainability and lessen the dangers of relying on fluctuating oil prices.
3. Activating public-private partnerships in financing and implementing development projects, as this plays a role in alleviating pressure on the general budget and stimulating sustainable economic growth.
4. Enhancing the efficiency of public finance management by developing monitoring and evaluation systems for spending programs and adopting quantitative indicators to measure the feasibility of government projects and their direct impact on macroeconomic indicators.
5. 5. Developing an accurate and accessible national database on government expenditure items and their economic results, allowing academics and policymakers to undertake periodic reviews and study the real impact

of spending on GDP, inflation, and unemployment.

6. -cyclical spending policies, whereby investment spending is increased during times of recession and controlled during times of recovery, with the aim of achieving macroeconomic stability.

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