

UDC:336.5:338.1(567)
 DOI:<https://doi.org/10.30546/2521-6341.2026.01.6087>

ANALYSIS OF THE IMPACT OF THE RELATIONSHIP BETWEEN CURRENT AND INVESTMENT EXPENDITURES AND ITS REFLECTION ON ECONOMIC GROWTH IN IRAQ

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ARTICLE INFO	ABSTRACT
Article history: Received: 2025-10-01 Received in revised form:2025-10-20 Accepted:2025-11-28 Available online:2026-06-26 Keywords: Fiscal sustainability, Government expenditure structure, Macroeconomic performance, Budget allocation efficiency, Economic policy analysis, Public sector finance, Growth determinants, Developing economies, Resource allocation, Iraq JEL Classification: E62, H50, H54, O47	This study will examine the influence of public spending in the form of current and investment on economic growth in Iraq from 2004 to 2023. It is fueled by the increasing dominance of consumption-driven expenditure, which might reduce the effectiveness of fiscal policy in achieving sustainable development. The research will examine the relationship between these two indicators of spending and economic growth and identify its direction. It employs a mix of descriptive, analytical, and quantitative techniques, relying on time-series data that enables the estimation of how expenditure components influence growth performance. The study's hypothesis suggests that the unequal distribution of government spending may influence economic growth in various ways. The findings should provide insights into the effectiveness of social resource distribution and emphasize the need to raise investment expenditures to foster long-term economic growth. The study presents several policy suggestions that policymakers could implement to enhance fiscal policy development in Iraq

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INTRODUCTION:

Public expenditure is one of the core tools of fiscal policy with governments using it to shape economic activity and develop extensively. It is often divided into current and investment expenditures, the former being used to fund the operating and administrative activities of the state, and the latter being used to increase productive potential and broaden the economic base. Within the framework of Iraqi economy that has been susceptible to the negative effects of long-

term political and economic problematic issues, the analysis of the performance and the structure of the government expenditures has become more urgent in determining the extent to which it contributes to economic growth paths.

The nature of public expenditure in Iraq during the past decades suffered a high degree of bias such that it was consumed-based spending, effectively limiting its ability to bring about sustainable developmental results. This structural imbalance poses some key questions on the efficiency of the distribution of the public resources, especially in the context of the low role of investment spending in the long-term growth. In this connection, this study is driven by the fact that the differences between current and investment spending could have varying and possibly negative impacts on economic growth.

The research question is to find out the nature and trend of the relationship between the elements of the public spending and the economic growth in Iraq; that is, whether the current and investment expenditure attribute either negative or positive effects on the performance of the growth. To this end, the research hypothesis suggests that there should be a statistically significant relationship between these variables that may be of either direction depending on the kind of expenditure.

The importance of the research is that it can bring a further insight into how the idea of public investment is effective as a policy instrument of promoting economic activity and attaining more extensive economic, social, and political goals. The research paper intends to determine structural imbalances of the Iraqi economy by examining the structure of the public spending, especially the role of the spending elements in the gross domestic product of the economy [1]

In order to accomplish these goals, the study takes the integrated approach methodology integrating the descriptive, analytical, and quantitative research methods. It draws upon the use of time-series data which spans the span 2004-2023 to evaluate empirically the effect of current and investment spending on economic growth in Iraq.

The research structure is divided into three major sections. The initial section shows the conceptual and theoretical framework of the existing expenditure, investment expenditure and economic growth. The second part gives an analytical description of how these variables evolved in Iraq during the study period. The third part is dedicated to the empirical analysis of the implications of current and investment spending on the economic growth, that is, an evaluation of their contributions and their implications on the election economic policy.

Previous Studies:

- 1- The research (Mahmoud, 2025) sought to evaluate and examine the effects of government expenditure on inflation in Iraq and to offer suggestions that might help lower inflation rates. This was accomplished by employing a descriptive method to illustrate theoretical ideas and an analytical and quantitative method to examine the connection between public expenditures and the inflation rate in Iraq, particularly by utilizing a threshold regression model. The research found that government expenditures have a positive yet restricted effect on inflation when spending is low, and this effect grows with higher spending levels. It suggests lowering current expenditures and boosting investment in infrastructure to foster economic growth and development, while diversifying revenue streams and decreasing dependence on oil resources [2].
- 2- The research (Mankhi.,2024) seeks to show how effective government expenditure, the main instrument of fiscal policy, is in affecting economic activity and enhancing Iraq's economic

growth rates. The study is founded on the assumption that government expenditure, directed by a solid fiscal policy, is the right way to enhance economic growth and societal efficiency. To validate this hypothesis, the research examines the connection between the two. The research also produced various conclusions, the key one being that government expenditure as a fraction of GDP has not yet attained the levels needed to boost Iraq's economic growth rate. This is due to the political and economic turmoil the nation has faced along with the worsening security conditions. Key recommendations suggested by the researcher include: engaging the private sector, boosting its investments, drawing in foreign investment, rejuvenating the banking sector, and establishing a favorable investment environment. This will elevate GDP growth, expand the tax base, and produce greater tax revenues, thus enhancing the state's income and, in turn, its ability to spend [3].

- 3- The research (Al-Rilawi, 2023) seeks to evaluate and assess the effect of public expenditures on Iraq's trade balance, as well as to investigate the nature and composition of public spending and the net trade balance, while also highlighting the financial and trade repercussions of public spending in Iraq. The researcher employed a mixed strategy, integrating a descriptive-analytical method to form the theoretical foundation for public expenditure and the net trade balance, alongside an inductive approach utilizing contemporary econometric models grounded in the Autoregressive Distributed Lag (ARDL) model. The study found a direct link between government expenditure and Iraq's net trade balance; a rise in government spending causes an improvement in the net trade balance. In particular, a rise in public expenditure of 1 billion Iraqi dinars leads to a 266 million Iraqi dinars increase in the net trade balance. This discovery aligns with the principles of economic theory [4].
- 4- The research (Hussein, 2022) indicates that human capital is a crucial factor in economic expansion and significantly impacts every nation. As a result, governments in both advanced and emerging countries have prioritized their policies on this aspect over the last forty years. Empirical studies frequently utilize government expenditure on education and health to evaluate its influence on economic growth. This study aims to evaluate the influence of investments in human capital (education and health) on the growth of the Iraqi economy from 1992 to 2018 by utilizing an econometric model (ARDL) to examine this relationship in both the short and long run. The results suggest a temporary equilibrium connection and a beneficial impact of human capital on economic growth in both the short and long run [5].

This research is distinct from earlier studies as it incorporated an analysis of how current and investment expenditures affect economic growth in Iraq during the years 2004-2023.

METHODOLOGY

Conceptual Framework for Current and Investment Expenditures

First: The Concept of Current and Investment Expenditures (Types and Characteristics)

Public expenditure serves as a crucial fiscal policy instrument that the government depends on to maintain economic and social equilibrium, showcasing its priorities in distributing available resources across various sectors [5]. The magnitude of economic activity can be assessed through this spending [6].

Current expenditure: represent the financial outlays governments make to sustain daily administrative functions and operational needs—ranging from employee compensation and procurement of supplies to the provision of essential services. Unlike capital investments, these allocations do not generate new physical assets; instead, they maintain the continuous functioning of public institutions and service delivery. One might characterize this category as the recurring operational backbone of governance: salaries, administrative overheads, subsidies, and social welfare payments that keep state machinery running without expanding its infrastructural footprint [7].

The current expenditures are a core element of financial management by citizens and can be organized into a number of different types. To begin with, the expenditures on wages and salaries are a substantial amount of expenditure since they encompass all the types of payment to the government employees such as basic salaries, bonuses, and other incentives. Second, operating and maintenance expenses include the daily operating costs that are used in day-to-day operations such as consumable supplies, electricity, fuel, water, and the normal maintenance of buildings and equipment. Third, administrative expenditures are operational expenses of the ministries and the government institutions to implement their administrative roles and support bureaucracy. Fourth, the current transfers encompass the social welfare payments, support programs to the low-income groups, and subsidies that are offered on key products such as food and fuel. Fifth, interest payments are the expense involved in servicing government debt be it the domestic or foreign borrowed money. Sixth, security and defense spending is the amount that provides funding needs of military forces, internal security services, and intelligence services [8].

In addition to their classification, the current expenditures have various characteristics, which characterize them against other types of government spending. They are recurring in nature, and have to be disbursed periodically on monthly or annual basis to keep the government running. They also do not lead to the development of fixed assets or new productive infrastructure like roads, bridges, or factories as is the case with investment expenditures. These costs are directly connected to functioning of the state machinery and therefore cannot be done away with since they would be necessary in the sustained operation of key state institutions such as school, hospitals and government ministries. Their economic contribution to the economy is usually in the short-term aspect and affects the economy by impacting the economy by immediate consumption and income effects rather than creating any long-term growth that is comparable to investment expenditure. Also, the current expenditures are a valuable tool to social justice because it allows governments to offer subsidies, medical care, free education, and other social benefits that can mitigate socioeconomic inequality between the various population groups [9].

The investment spending is a critical component of governmental financial allocation towards the funding of development projects that are both productive and social in nature which includes the construction of educational facilities, health facilities, transportation systems and industrial facilities. These are systematically categorized expenditures, which in most cases are infrastructure investments to upgrade roads, bridges, utilities, and marine ports, social development investments to develop schools, universities, hospitals, and care centers to enhance human capital in the long-term, economic development investments to establish firms and factories and promote their operations, technological and innovation investments to modernize the government system, develop digital infrastructures, and advance scientific research, and energy sector investments to expand refineries and build oil and gas pipelines [10].

The expenditures on investment are further differentiated by various distinct features, which put them apart with other types of government spending. They have a long-term orientation in that they are directed to projects and infrastructure that are meant to last long, including the learning facilities, hospitals, and energy plants. They are driving forces to economic growth since they increase the level of productivity and gross domestic product. They lead to establishment of capital assets by the establishment of fixed properties, social amenity and working equipment. They have an effective target of being productive since they focus on critical sectors such as industry, agriculture, energy, transportation, and education, which create favorable economical ripple effects. They also help in reducing unemployment by creating job opportunities in various investment projects especially in the construction and contracting sectors [11].

Second: The Concept of Economic Growth (Types and Indicators:)

Economic growth is one of the most important indices of prosperity in the society and it shows the ability of a given nation to improve on the standards of living and achieve a sustainable development. It refers to the continuous growth of production of goods and services within an economy at a given period of time and is the basic cornerstone of development of infrastructure, high levels of employment, and elevated standard of living. The actualization of economic growth is dependent on the combination of several vital variables that the most notable ones are capital investment, advancement in technology, and the best application of available resources. In the current global economic conditions, the promotion of economic growth has become one of the strategic priorities that the countries strive to achieve by means of the well-balanced fiscal and monetary policy that is meant to bring the economic stability and the expansion of productive capacity together [12].

Technically, economic growth can be described as the constant increase in the real gross domestic product of a nation over a certain period, which is the measure that the economic output of goods and services in a country has changed positively over a period of time, which is usually measured using the real GDP rate of growth [13]. Another conceptualization focuses on the ability of the economy to ensure cumulative increments of real national income through the process of increasing production, increasing investing and improving resource efficiency [14].

1. Types of Economic Growth

- Real Growth: Measures the change in Gross Domestic Product (GDP) after accounting for inflation and reflects the actual growth in the quantity of goods and services.
- Nominal Growth: Measures the change in GDP without accounting for inflation and may give a false impression of economic progress if prices rise.
- Intensive Growth: Resulting from increased productivity and efficiency, not from an increase in the factors of production, such as the use of modern technology.
- Extensional Growth: Achieved through an increase in the quantity of factors of production (labor, land, and capital), such as expanding agricultural land or the number of workers.
- Balanced Growth: Occurs when different economic sectors grow harmoniously, aiming to avoid economic imbalances such as inflation or sectoral unemployment.
- Unbalanced Growth: The state focuses on certain strategic sectors to achieve a growth boost and then generalizes the results and theories, using them in growth models for developing countries [15].

2. Indicators for Measuring Economic Growth

- Gross Domestic Product (GDP) Growth Rate: This measures the percentage increase in the value of goods and services produced by the economy over a specific period. It is the primary indicator for determining the strength of economic activity. For example, if GDP increases by 5% annually, this indicates positive economic growth.
- Real Per Capita Income Growth Rate: This shows the average per capita income as a percentage of GDP and is used to measure the standard of living. A higher rate indicates an improvement in the population's standard of living.
- Employment and Unemployment Rates: High employment rates and low unemployment rates reflect improved economic performance, while high unemployment often indicates an economic slowdown.
- Investment Rate: This measures the percentage of GDP invested in productive projects and infrastructure. High investment supports future economic growth [16].
- Inflation Rate: This measures the change in the general price level. Moderate inflation often accompanies economic growth, but excessive inflation can weaken it. The trade balance is the difference between the value of exports and imports. A trade surplus often promotes growth while a deficit may limit it.

Third: The Relationship Between Current and Investment Expenditures and Economic Growth:

The interrelation between the existing spending and economic growth is complex and volatile and is influenced by various economic, political and managerial factors. In general terms, this relationship can be of two types:

On the one hand, a positive correlation will appear when the existing expenditure is redirected to the optimization of the human capital quality, i.e., the payment of teachers and medical professionals, as well as the correct maintenance and successful operation of state institutions. Such spending increases domestic consumption, hence promoting economic growth both in the short and mid run.

Conversely, a destructive relationship is formed when existing expenditure is flushed away in random recruitment, bureaucratic swell, or subsidies that are not properly targeted and directed. These practices consume the tax payers money without any significant productive outcomes, and in the end result into a slow or weak economic growth. The current expenditures affect economic growth through government consumption whereby they increase purchasing power through wages and subsidies thereby increasing the total demand. Such an increased demand has the capability of facilitating production and growth. Moreover, such spending influences growth by means of essential services, including enhanced investment in education, healthcare, and urban maintenance, which enhance human capital, which is an essential factor to long-term economic progress [17] .

As an alternative, turning to investment expenditures, they are a highly effective stimulus to economic growth, as they finance capital-intensive projects. The effects that take place due to this type of government outlay, have a lasting impact on the productive base and increase the potential of the economy to accumulate income and create workplaces [18], The relationship between the expenditures of investments and economic growth is direct and positive, in the sense that the more government spending is used in bringing economic growth, the higher the

economic growth will be, provided that these funds are utilized in viable and sustainable productive sectors. Investment expenditures contribute to economic growth by financing capital projects such as the construction of infrastructure, highways, bridges, and water barriers, by strengthening the farming and manufacturing sectors by providing development projects, and by modernising energy, transport and communication networks [19].

Analysis of Current and Investment Expenditures in Iraq

First: Analysis of the Reality of Current and Investment Expenditures in Iraq for the Period 2004-2023.

Table (1) Current and Investment Expenditures in Iraq for the period 2004-2023

years	Current expenditures	growth rate	investment expenditures	growth rate	public spending
2004	275971	-	305116	-	31521
2005	270661	22.7	390352	28.0	30831
2006	349176	45.1	620906	59.0	37494
2007	327198	8.5	921137	48.3	39307
2008	523011	31.1	203159	120.6	67277
2009	459410	17.5	964865	52.5	55589
2010	545808	18.8	155533	61.2	70134
2011	609255	11.6	178321	14.7	78757
2012	757886	24.4	293509	64.6	105139
2013	787468	3.9	403807	37.6	119127
2014	779861	2.5	354504	12.2	83556
2015	518328	32.5	185846	47.6	70397
2016	511734	1.3	184082	14.4	67067
2017	590256	15.3	164645	3.6	75490
2018	670528	13.6	138203	16.1	80873
2019	873009	30.2	244226	76.7	111723
2020	728735	16.5	320890	87.9	76081
2021	895266	22.85	133227	315.18	102849
2022	1049411	17.21	120185	9.79	116959
2023	1182427	12.6	241928	101.2	142435

Source: (Central Bank of Iraq, 2004-2023).

The information in the table demonstrates the trend of the government spending within Iraq during the years of 2004-2023. Total public expenditures were estimated at 31, 521 billion Iraqi dinars in 2004. Nevertheless, the international financial crisis caused by the mortgage crisis in 2008-2009 had a drastic negative effect on the revenues of the Iraqi people, which made the government adopt the contractionary fiscal policy. Therefore, the government spending was reduced to 55,589 billion dinars in 2009.

On 2013, there was a significant turnaround with a significant increase in the public expenditure to 119,127 billion dinars. This increase was so much explained by the growth of current expenditures which started to obtain the dominant role in the system of the public expenditures. Another very high growth was observed in the year 2021, as the government spending amounted to 102,849 billion dinars. The development was supported by the fact that the global economy started recovering after the COVID-19 pandemic and reimbursement reestablished the global production, the result of which increased the demand in oil. The resultant oil price boom significantly boosted the oil revenues of Iraq and consequently the fiscal space in which the Iraqi government could spend on in the economy was increased significantly.

The growth in the current expenditure continued up to 2023 and reached an impressive level of 1,128,427 billion dinars. This is a growth rate of an average of 12.6 every year mainly due to strong public revenues and high oil prices and increased level of export volumes. In line with this, investment spending was also showing a significant momentum in 2023 with a 241,928 billion dinars expenditure that has an impressive growth rate of 101.2, meaning that there was a high level of commitment to capital formation and long-term economic structure.

Second: Analysis of the reality of economic growth in Iraq:

Table (2) Analysis of Economic Growth in Iraq for the Period 2004-2023

years	gross domestic product	growth rate
2004	532352	-
2005	735330	38.1
2006	955871	29.9
2007	111961	16.6
2008	158443	40.8
2009	131632	16.8
2010	163104	24.05
2011	218617	34
2012	255727	16.9
2013	256562	7.6
2014	267262	2.6
2015	196203	26.9
2016	198774	1.1
2017	224636	12.5
2018	272083	21.3
2019	279757	2.69
2020	217413	21.9
2021	305191	39.6
2022	383064	25.53
2023	330046	13.8

Source: Source: (Central Bank of Iraq, 2004-2023).

The gross domestic product had an upward trend with a gross domestic product of about 73, 533 billion Iraqi dinars in 2004, equating to the 38.1 percent economic growth rate in 2005. This impetus growth was sustained and by 2008, the amount of GDP had grown to 157,026 billion dinars. The following year however recorded a severe contraction with the GDP decreasing to 130,643 billion dinars in 2009 which reflected negative growth rate of 16.8. This recession was largely caused by collapse of oil prices worldwide and the low demand of Iraqi export due to the mortgage crisis experienced worldwide and its effects on the global markets.

The economic environment was however recovering a decade later, in 2019, with GDP improving to 279,757 billion dinars and recording a slight growth rate of 2.69 which was majorly due to the rebound in international oil prices. The pace of the growth has increased significantly in 2021 with GDP of 305,191 billion dinars producing a very strong growth rate of 39.6.

The empirical evidence provided below makes it eminent that the key feature of the Iraqi economy is the gross domestic product, which is highly volatile and directly interconnected with the changes in the oil revenues. Since the economy is highly dependent on the hydrocarbon sector, its stability is determined by the fluctuations and uncertainties of global petroleum markets that are cyclical. This structural dependency makes the national economic performance susceptible to any external shocks and commodity price volatility and this points to the need to diversify the economy in order to reduce such vulnerabilities.

Third: Analysis of the relationship between current and investment expenditures and economic growth in Iraq.

Table (3) Analysis of current and investment expenditures in Iraq for the period 2004-2023.

years	Current expenditures (1)	investment expenditures (2)	gross domestic product (3)	Current expenditure as a percentage of GDP: 1/3	Investment expenditure as a percentage of GDP: 2/3
2004	275971	305116	534992	51.58	5.70
2005	270661	390352	739110	36.62	5.28
2006	349176	620906	960671	36.34	6.46
2007	327198	921137	111961	29.22	8.23
2008	523011	203159	158443	33.01	12.82
2009	459410	964865	131632	34.90	7.33
2010	545808	155533	163104	33.46	9.53
2011	609255	178321	218617	27.87	8.14
2012	757886	293509	255727	29.64	11.48
2013	787468	403807	256562	30.69	15.74
2014	779861	354504	267262	29.18	13.26
2015	518328	185846	196203	26.41	9.47
2016	511734	184082	198774	25.74	9.26
2017	590256	164645	224636	26.28	7.33
2018	670528	138203	272083	24.64	5.08
2019	873009	244226	279757	31.21	8.73
2020	728735	320890	217413	33.52	1.48
2021	895266	133227	305191	29.33	4.37
2022	1049411	120185	383064	27.40	3.14
2023	1182427	241928	330046	35.82	7.33

Source: (Central Bank of Iraq, 2004-2023).

Analysis of the trends in the public expenditure patterns in Iraq shows there is a major dynamic structure between the years 2004 and 2023. Current expenditures were 275,971 billion Iraqi dinars or 51.58 percent of the gross domestic product in 2004. This large percentage experienced significant contraction in 2008, when current spending was 523,011 billion dinars but accounted only 33.1 of GDP with the contraction largely led by the global oil price crisis that hampered the ability to spend. The following trend showed further decline where the current expenditures have become 779,861 billion dinars or 29.18 percent of GDP by 2014, which can be mainly attributed to the financial strains of military action against the terrorist group ISIS. However, a turnaround was experienced in 2019, with current spending increasing to 873,009 billion dinars, which is 31.21% of GDP, as a result of the international petroleum prices recovery. This upward trend continued until 2023 with 1,182,427 billion dinars or 35.82% of GDP, supported by the improvement of public revenues based on higher oil prices and increased export volumes.

In terms of investment spending, the year 2004 was recorded with investment spending of 305116 billion dinars, which constituted a very small percentage of 5.70 of the GDP, which as compared to current expenditure is extremely low in the total scheme of public expenditure. Slow progress was felt by the year 2010 as the investment expenditures stood at 155,533 billion dinars or 9.53% of GDP. In 2013 significant gains were made, with investment expenditures running up to 403,807 billion dinars, which constituted 15.74 of GDP, as a result of the increase in revenue and other positive oil price trends that allowed an increase in resources to be allocated to capital investments. But this progress was harshly interrupted in 2020, when investment spending fell to 320,890 billion dinars or only 1.48 per cent of GDP, a recession caused by the

situation of the global COVID-19 pandemic and the corresponding fall in the price of crude oil that severely worsened the situation in the economies. In 2023, it was noted that it partially recovered because investment expenditures increased to 241,928 billion dinars or 7.33 percent of GDP, as the investment projects put on hold in the wake of fiscal instability were reinstated.

Results and Discussion

Assessing the Relationship Between Current and Investment Expenditures and Economic Growth

First: Study Variables

In order to select the study hypotheses and achieve its objectives, the model was described as follows:

Table (4) Model Variables Description

Symbols	Variable type	Variables
CE	independent	Current Expenses
IE	independent	Investment Expenses
EG	continued	Economic growth

Source prepared by researchers

First, we estimate the regression equation in order to obtain the initial form of the relationship between the model variables, as in the equation below. $EG=f(CE,IE) \dots\dots\dots(1)$

$EG= b_0+b_1 CE+b_2 IE+U_i \dots\dots\dots(2)$

Second: Results of the Time Series Stationability Test:

Verifying the stationarity of time series is a fundamental requirement to avoid spurious regression. To verify the stationarity of the variables, the extended Dickey-Fuller test (ADF) was used before statistically estimating the model. The results in Table (1) below indicate that the time series of the variables (CE, IE, EG) is stationary at the first difference [I(1)] according to the ADF test, based on a t-test greater than the tabulated value. Furthermore, the p-value is less than 5%, which necessitates rejecting the null hypothesis that the time series is not stationary and accepting the alternative hypothesis that the time series of the variables is stationary at the first difference I (1).

Table (5) Time series stationarity test for the extended Dickey-Fuller (ADF) model

UNIT ROOT TEST RESULTS TABLE (ADF)				
Null Hypothesis: the variable has a unit root				
	<u>At Level</u>			
		CE	IE	EG
With Constant	t-Statistic	-0.32258	-1.7498	-3.90877
	Prob.	0.9042	0.3912	0.0090
With Constant & Trend	t-Statistic	-1.758054	-5.50890	-3.87863
	Prob.	0.6843	0.0015	0.03575
Without Constant & Trend	t-Statistic	1.516893	-1.012567	-0.562500
	Prob.	0.962660	0.267606	0.457501
	<u>At First Difference</u>			
		d(CE)	d(IE)	d(EG)
With Constant	t-Statistic	-4.40384	-8.6013	-6.0503

	Prob.	0.0033	0.0000	0.0001
With Constant & Trend	t-Statistic	-4.3361027	-8.346406	-5.981710
	Prob.	0.0154	0.0000	0.0010
Without Constant & Trend	t-Statistic	-3.809746	-8.84791	-6.27565
	Prob.	0.0007	0.0000	0.0000
Notes:				
a: (*) Significant at the 10%; (**) Significant at the 5%; (***) Significant at the 1% and (no) Not Significant				
b: Lag Length based on SIC				
c: Probability based on MacKinnon (1996) one-sided p-values.				

Source: From the work of the researchers, based on research data and outputs of the (Eviews13) program

Nevertheless, the presented Phillips-Perron (PP) unit root test, Table 6, indicates that the variables under analysis, i.e., current expenditures (CE), investment expenditures (IE) and economic growth (EG) are not stationary at their level values. When these variables are first differentiated, the test statistics have shown the variables to be stationary as evidenced by the t-values calculated to be greater than the critical values. Moreover, the probability values related to it are less than the traditional 5% significance level, which justifies rejecting the null hypothesis of the event of unit root existence. Therefore, an alternative hypothesis that the time series variables are stationary is accepted and the time series variables are shown to be integrated of order one [I (1)].

Table (6) Time series stationarity test for the Phillips-Perron (PP) model

UNIT ROOT TEST RESULTS TABLE (PP)				
Null Hypothesis: the variable has a unit root				
	At Level			
		CE	IE	EG
With Constant	t-Statistic	-0.24201736	-3.8029963	-3.907481
	Prob.	0.9169	0.0106	0.0090
With Constant & Trend	t-Statistic	-1.8372290	-5.5846050	-3.8752473
	Prob.	0.6462	0.0013	0.0359
Without Constant & Trend	t-Statistic	1.51689	-1.662124	-1.843953
	Prob.	0.9626	0.0901	0.0633
	At First Difference			
		d(CE)	d(IE)	d(EG)
With Constant	t-Statistic	-4.40384624	-14.786961	-11.606912
	Prob.	0.0033	0.0000	0.0000
With Constant & Trend	t-Statistic	-4.33610	-12.7560	-13.01187
	Prob.	0.0154	0.0000	0.0000
Without Constant & Trend	t-Statistic	-3.807741	-12.92474	-10.791146
	Prob.	0.0007	0.0001	0.0000
Notes:				
a: (*) Significant at the 10%; (**) Significant at the 5%; (***) Significant at the 1% and (no) Not Significant				
b: Lag Length based on SIC				
c: Probability based on MacKinnon (1996) one-sided p-values.				

Source: program (Eviews13).

Second: Determining the optimal time gap rank.

Table (7) presents the values of information criteria employed for determining the optimal lag order within the vector autoregression (VAR) framework for the economic growth model, incorporating current expenditures and investment expenditures as explanatory variables in the Iraqi economy over the period 2004–2023. The empirical evidence derived from the table

indicates that the most appropriate lag length for the specified model is two, as consistently suggested by the information criteria under consideration.

Table (7) Determining the optimal slowdown gap rank for the economic growth model and consumer and investment spending variables according to (VAR) analysis.

VAR Lag Order Selection Criteria						
Endogenous variables: EG CE IE						
Exogenous variables: C						
Date: 11/20/25 Time: 20:53						
Sample: 2004 2023						
Included observations: 16						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	-496.97606	NA	2.79e+23	62.49701	62.64187	62.50443
1	-482.21377	22.14344*	1.40e+23	61.77672	62.35616*	61.80639
2	-471.71795	11.80780	1.36e+23*	61.58974*	62.60377	61.64167*
3	-462.89057	6.620532	2.20e+23	61.61132	63.05993	61.68550
* indicates lag order selected by the criterion						
LR: sequential modified LR test statistic (each test at 5% level)						
FPE: Final prediction error						
AIC: Akaike information criterion						
SC: Schwarz information criterion						
HQ: Hannan-Quinn information criterion						

Source: program (Eviews13).

Third: Cointegrating Test

Table (8) shows the results of the cointegration test of the model variables, which are the current expenditures (CE), the investment expenditures (IE), and the economic growth (EG) using the bounds testing technique. The calculated F -statistic of 4.596 is larger than the upper critical values at all traditional levels of significance, including the 5 percent level. This empirical observation implies the null hypothesis of the non-existing long-run equilibrium relationship between the variables has to be rejected. As a result, the alternative hypothesis that states the presence of the cointegration between the research variables is accepted thus confirming the existence of a stable and long-term associative scheme relating the current expenditures, investment expenditures and economic growth in Iraqi economy.

Table (8) F-Bound test for Cointegrating

Null hypothesis: No levels relationship

Number of cointegrating variables: 2

Trend type: Rest. constant (Case 2)

Sample size: 18

Test Statistic

F-statistic

Value

4.5961725

	10%		5%		1%	
Sample Size	I(0)	I(1)	I(0)	I(1)	I(0)	I(1)
30	2.915	3.695	3.538	4.428	5.155	6.265
Asymptotic	2.63	3.35	3.1	3.87	4.13	5

* I(0) and I(1) are respectively the stationary and non-stationary bounds.

Source: program (Eviews13).

Fourth: Estimating and Analyzing the Long-Term Relationship:

Table (9) presents the estimated coefficients of the long-run equilibrium relationship, elucidating the impact of current expenditures (CE) and investment expenditures (IE) on economic growth (EG) within the Iraqi economy. The empirical results indicate that the computed t-statistics exceed their respective critical values, while the associated probability values remain below the 5% significance threshold. These findings warrant the rejection of the null hypothesis and the acceptance of the alternative hypothesis, thereby confirming the statistical significance of the estimated parameters.

The coefficient estimates reveal a counterintuitive negative relationship between both categories of public spending and economic growth. Specifically, a one percent increase in current expenditures is associated with a 2.0083268 percent decline in economic growth, whereas a commensurate increase in investment expenditures corresponds to a 2.2463999 percent reduction in economic growth. These outcomes stand in marked contradiction to conventional economic theory, which posits a positive, growth-enhancing effect of public expenditure, particularly investment outlays.

This anomalous result may be attributed to pervasive institutional inefficiencies, wherein bureaucratic rigidities and systemic corruption inflate project costs substantially beyond their intrinsic economic value, thereby generating negative marginal returns on public investment. It may be argued, however, that this finding does not fundamentally invalidate established theoretical propositions; rather, it substantiates the conditional nature of investment-led growth. Investment functions as an engine of economic expansion only when complemented by administrative efficiency, appropriate temporal sequencing, and a conducive institutional framework. In the absence of these prerequisites, public investment degenerates into a mere dissipation of scarce resources, undermining rather than advancing long-term economic prosperity.

Table (9) Results of estimating the long-term relationship of the economic growth model

Dependent Variable: EG Method: ARDL Date: 11/20/25 Time: 22:13 Sample: 2006 2023 Included observations: 18 Dependent lags: 1 (Automatic) Automatic-lag linear regressors (0 max. lags): CE IE Deterministics: Restricted constant and no trend (Case 2) Model selection method: Akaike info criterion (AIC) Number of models evaluated: 1 Selected model: ARDL (1,0,0)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
EG (-1)	0.2775452	0.27217230	1.01974111	0.032515
CE	-2.0083268	1.54590077	-1.29913051	0.021887
IE	-2.2463999	1.55064190	-1.4486903	0.019450
C	34.697013	13.058715	2.6570005	0.01877
R-squared	0.15447845	Mean dependent var		19.698333
Adjusted R-squared	-0.0267047	S.D. dependent var		12.001302
S.E. of regression	12.16049	Akaike info criterion		8.0273918
Sum squared resid	2070.2860	Schwarz criterion		8.2252522

Log likelihood	-68.246526	Hannan-Quinn criter.	8.0546741
F-statistic	0.8526092	Durbin-Watson stat	1.8075921
Prob(F-statistic)	0.4881586		
*Note: p-values and any subsequent test results do not account for model selection.			

Source: program (Eviews13).

Table (10) shows the estimated parameters of the error correction model given that there is a long-run relation between economic growth, current expenditures and investment expenditures in Iraq during the period of 2004-2023. The empirical results confirm a stable long-run cointegrating equilibrium amongst the variables whose structure confirms that economic growth, current and investment expenditure can be consistently associated over multiple time-horizons.

The autocorrelation term appears with a negative and statistically significant coefficient of -0.7224547 at the 5% level, which fulfills the theoretical requirement for convergence towards long-run equilibrium. This coefficient measures the rate of adjustment, suggesting that about 722% of any disequilibrium from long-run steady state persistence is closed within a year.

Table (10) Error Correction Model Coefficient for the Long-Term Relationship between Economic Growth and Consumer and Investment Spending Variables

Dependent Variable: D(EG) Method: ARDL Date: 11/20/25 Time: 22:13 Sample: 2006 2023 Included observations: 18 Dependent lags: 1 (Automatic) Automatic-lag linear regressors (0 max. lags): CE IE Deterministics: Restricted constant and no trend (Case 2) Model selection method: Akaike info criterion (AIC) Number of models evaluated: 1 Selected model: ARDL(1,0,0)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
EG(-1)*	-0.7224547	0.272172306	-2.65440199	0.0188662
CE**	-2.0083268	1.545900777	-1.29913051	0.2148876
IE**	-2.2463999	1.55064190	-1.44869036	0.1694503
C	34.6970138	13.05871539	2.657000538	0.0187707
R-squared	0.5647151	Mean dependent var		-1.350000
Adjusted R-squared	0.4714398	S.D. dependent var		16.726456
S.E. of regression	12.1604925	Akaike info criterion		8.027391
Sum squared resid	2070.28609	Schwarz criterion		8.2252522
Log likelihood	-68.246526	Hannan-Quinn criter.		8.054674
F-statistic	6.05428253	Durbin-Watson stat		1.8075921
Prob(F-statistic)	0.00731494			
* p-values are incompatible with t-bounds distribution.				
** Zero-lag variable.				

Source: Source: program (Eviews13).

Sixth: Testing the Quality of Estimation of the Standard Model:

The econometric model estimated on the basis of the above empirical analysis describing the correlation between economic growth and the explanatory variables of the current expenditures and investment expenditures in Iraq (between 2004 and 2023) show a very high level of statistical significance and very high explanatory power. The model has some desirable econometric characteristics and is not subjected to typical specifications inadequacies like heteroscedasticity, autocorrelation or even multicollinearity and is also stable and structurally consistent over the entire horizon of the study.

To determine whether the residual data meet the assumption of normality, which is an essential requirement in the validity of statistical inference on the classical linear regression model, Jarque-Braille test was used. This omnibus test of normality is based on two moment-based statistics, skewness which measures the amount of asymmetry in the distribution, and kurtosis which measures the concentration of observations around the central tendency in comparison with the normal distribution.

The test process implies the development of competing hypotheses:

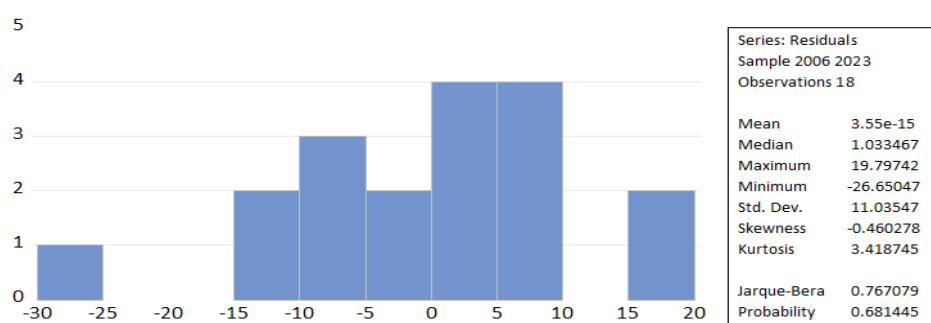
Null Hypothesis (H0): The residuals are normally distributed.

Alternative Hypothesis (H1): The residuals are not normally distributed.

The decision rule is that in case the probability value is greater than the traditional significance of 5 per cent, then the null hypothesis is kept and thus, there is no statistically significant violation of the distributional normality.

The empirical outputs indicate that every calculated probability values are higher than the 5 percent critical value with respect to the Jarque-Bra statistic values. As a result, there is inadequate proof that would justify the rejection of the null hypothesis, and thus, it can be stated that the regression residuals and consequently, the underlying variables are normally distributed. The result of this finding is that there is no strong distributional asymmetry or tail heaviness, hence, the inferential integrity of the estimated model holds. Grapical support is offered in Figure (1) which shows that the empirical distributions of the variables studied do not differ much with the theoretical normal density.

Figure 1 Model quality test (normal distribution)



Source: Source: program (Eviews13).

Furthermore, the residuals of the estimated model do not exhibit serial correlation, as demonstrated by the Breusch-Godfrey test, where the Prob value is 0.625969103, which is greater than 5%, thus accepting the null hypothesis and rejecting the alternative hypothesis. The model also does not suffer from Heteroskedasticity, as demonstrated by the Breusch-Pagan

Heteroskedasticity test, where the Prob value is 0.3620028, which is also greater than 5%, thus accepting the null hypothesis and rejecting the alternative hypothesis.

Table (11) Autocorrelation Test (Breusch-Godfrey Serial Correlation LM Test)

Breusch-Godfrey Serial Correlation LM Test:			
Null hypothesis: No serial correlation at up to 2 lags			
F-statistic	0.32945091	Prob. F(2,12)	0.725623405
Obs*R-squared	0.93690852	Prob. Chi-Square(2)	0.625969103

Source: program (Eviews13).

The estimated model is well described, as confirmed by the Ramsey RESET test (Ramsey Regression Equation Specific Error test), where the statistical value of the F test is (3.4) and the value of (P) is (0.4723), which is greater than (5%), which means rejecting the null hypothesis and accepting the alternative hypothesis, i.e., the estimated model is well described.

Table (12) Ramsey Regression Equation Specific Error Test

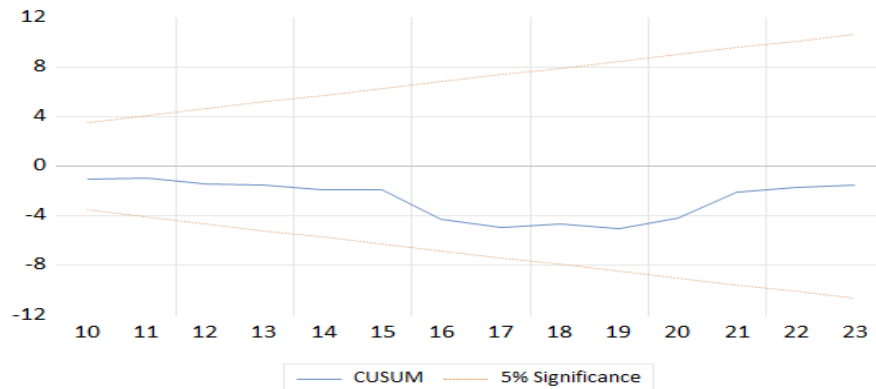
Ramsey RESET Test			
Equation: UNTITLED			
Omitted Variables: Squares of fitted values			
Specification: EG EG(-1) CE IE C			
	Value	df	Probability
t-statistic	1.474876071797723	13	0.16404918
F-statistic	2.17525942716148	(1, 13)	0.16404918
Likelihood ratio	2.784907350580113	1	0.0951561

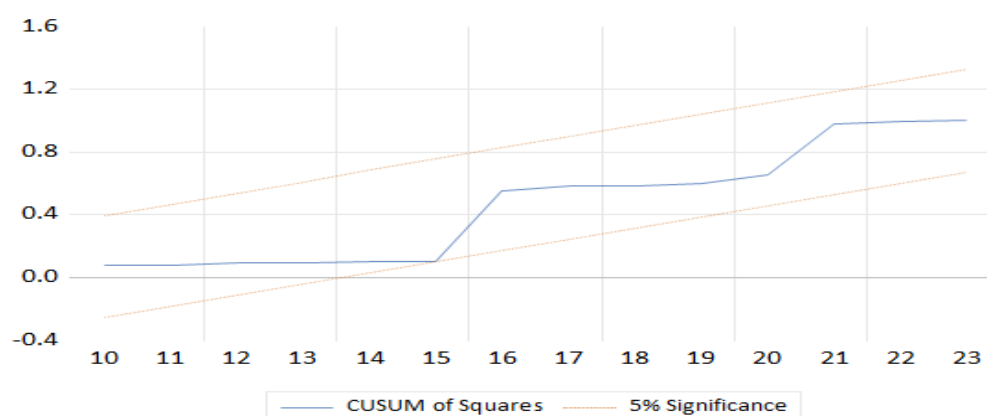
Heteroskedasticity Test: Breusch-Pagan-Godfrey			
Null hypothesis: Homoskedasticity			
F-statistic	1.008482648951	Prob. F(3,14)	0.4181692
Obs*R-squared	3.1986273261873	Prob. Chi-Square(3)	0.3620028

Source: program (Eviews13).

This is shown in Figure (2), which illustrates the very large convergence between the actual values of the economic growth rate and the values predicted by the distributed time slowdown auto regression model, as well as the error or residual values, where the range of these errors for economic growth was between (4) and (-4), million dinars.

Figure (2) Cumulative sum of remainders and of remainders squares (Cusum) and (Cusum of Squares).





Source: program(Eviews13).

Conclusions:

The exploratory study provides a number of substantive findings on the nexus between the composition of the public expenditure and economic growth in Iraq in the period of 2004-2023. First, the pattern between the present spending and economic growth has contingent nature, as it entails positive results when it is used to increase human capital and institutional efficiency, but results in negative outcomes when it is absorbed in bureaucracy expansion and unproductive labor. Second, the structural formulation of the government spending indicates a consistent preponderance of present expenditures and a relatively low level of investment distribution differentiated against GDP. Third, the unit root diagnostics ensure that the variables attain the stationarity of the first differencing in order to meet the conditions of the cointegration analysis. Fourth, bounds testing determines that there exists a long-run relationship between the current expenditures, the investment expenditures, and the economic growth. Fifth, this long-run associational structure with speedy adjustment mechanism which restores the equilibrium over a time frame of around one year is supported by the error correction specification. Sixth, the estimates of the long-run coefficients reveal surprisingly negative signs of the parameters of both types of expenditure, which suggest institutional inefficiencies and resource mis-allocation against the theoretical expectations and therefore justify the necessity of a governance reformation to bring the growth-enhancing potential of public investment into reality.

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