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Analysis of the General Budget and Public Debt in Iraq for the Period (2004-2022)

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Abstract:

The research focuses on the problem facing Iraq due to the crisis in its public budget, which has significantly affected many people—specifically, the public debt crisis and its pressure on economic resources to service these debts and avoid fiscal deficits in the public budget. The objective is to find optimal solutions while minimizing reliance on both internal and external borrowing. The research begins with the issue of indebtedness that has led to a deficit in the public budget. The central problem revolves around addressing this deficit through internal and external borrowing, which often produces counterproductive results. This approach exacerbates a separate but equally serious issue: the increase in indebtedness in Iraq during the study period.

The research proceeds from the hypothesis that there is a relationship influenced by fluctuations in public expenditures and revenues, which determine the net public budget in the form of either a surplus or deficit. This relationship has been vacant in the Iraqi general budget due to increased indebtedness throughout the study period, leading to a direct correlation between public debt and the net budget represented by the deficit. The research aims to identify the relationship between public debt and the net public budget, as well as its indicators. This requires an examination of the issues in this relationship and the extent of its impact on the general economy for the period (2004-2022).

The research gap arises from the need to understand the extent of the danger posed by public debt to the Iraqi economy. The research is divided into three sections: The first section analyzes the budgetary components of the Iraqi economy for the period (2004-2022), with the first requirement focusing on the analysis of public expenditure development. The second requirement addresses the analysis of public revenue development and the net public budget. The second section highlights the evolution of public debt and the deficit gap during the period (2004-2022), focusing on the growth of both internal and external public debt and its relationship to the net public budget. This section also examines the indicators of the burden of public indebtedness during the same period. The third section discusses the shocks affecting the Iraqi public budget for the period (2004-2022), concluding with findings and recommendations.

The results of the study indicate that the public budget deficit is directly related to public indebtedness, whether internal or external, stemming from the negative imbalance between the growth of public expenditures and public revenues. This imbalance reflects the reciprocal impact of their growth on one another, leading to increased borrowing levels exceeding the government's ability and the local economy's capacity to service the debt burden. The most important recommendation from this thesis is to develop a comprehensive database of processed data and solutions to study the challenges that Iraq has faced, particularly during the study period, and to understand how to prevent their recurrence in the future.

Keywords - requires , Analyzes, Expenditure, Recommendations, solutions.

Introduction

The development of total expenditures and revenues portrays a negative trend that has led to several crises, including the public debt crisis, which affects the net budget. This budget tends toward deficit and surplus trends, where both deficits and surpluses in the net budget indicate deflationary and expansionary effects in the general budget. The deficit reflects negatively on economic growth in the budget due to excessive expenditures and low revenues. With the continuation of this deficit over several years, negative effects arise, including the reliance on sub-borrowing policies to bridge the deficit gap in the budget.

Despite the issuance of oil revenues in the overall budget, fluctuations in global oil prices have adversely affected the local situation, resulting in an imbalance marked by a lack of infrastructure development and an increase in total expenditures, thus deepening the crisis in Iraq. The concept of budget deficit has troubled many developing and developed economies, resulting from various financing operations and mechanisms that vary according to the country's level of economic progress. Many economies depend on external debt, similar to the Iraqi economy, which faces increasing service costs and accumulated debt.

Research Problem

The research problem is rooted in the Iraqi public budget deficit, revolving around the issue of addressing this deficit through internal and external borrowing to finance it. This approach results in a problem that is no less serious than the budget deficit itself, represented by the increase in Iraqi indebtedness.

Research Objective

The aim of this research is to identify the relationship between public debt and the net public budget, along with its indicators. This requires an analysis of the issues surrounding this relationship and the extent of its impact on the general economy for the period (2004-2022).

Research Hypothesis

The research is based on the hypothesis that there is a relationship between public debt and the net budget, which has led to an imbalance in the budget due to the increase in indebtedness during the study period. This imbalance is caused by the direct relationship between public debt and the net budget.

Research Methodology

The research employs an analytical approach to analyze the problem of the deficit in the public budget and its effects on public debt in relation to the period (2004-2022).

Research Gap

The research gap arises from the need to understand the seriousness of public debt on the Iraqi economy.

Research Structure

The research is divided into three sections. The first section analyzes the budget components of the Iraqi economy for the period (2004-2022), where the first requirement includes an analysis of the development of public expenditures. The second requirement addresses the analysis of public revenues and the net public budget. The second section highlights the evolution of public debt and the deficit gap during the period (2004-2022), covering the development of both internal and external public debt and its relationship to the net public budget. This section also examines the indicators of the burden of public indebtedness during the same period. The third section discusses the shocks affecting the Iraqi general budget for the period (2004-2022), concluding with findings and recommendations.

First Investigator

Analysis of the General Budget Components in the Iraqi Economy for the Period (2004-2022)

The First Requirement: Analysis of the Development of Total Public Expenditures in Iraq for the Period (2004-2022)

The index of public expenditures in Iraq is one of the most critical indicators of the economy, used across all economic and social areas. Following 2003, there has been a significant development in public expenditures, with a clear transition from a socialist system dominated by state intervention to a free market system that embraces global integration and economic freedom. Despite this progress, Iraqi budgets have undergone numerous transformations to ensure sustainability and improve the standard of living for all citizens. This includes support provided to citizens through the ration card, social welfare networks, job opportunities, attention to salary scales and wages, as well as support for the army, police, and security services, which receive the largest share of public expenditures (current state expenditure). As a result, current expenditures have increased and have often surpassed investment expenditures, except in rare cases of urban development. Nevertheless, current expenditures remain the largest percentage of overall expenditures.

Thus, public expenditures can be categorized into current and investment expenditures at current prices, as illustrated in Table No. (1).

Table No. (1) Actual, current and investment public expenditures, their percentage and growth rate for the period (2004-2022) billion dinars

Yea r	Expenses Public	Investme nt Expenditu res	Current Expenditu res	Rate Growth populati on Expense s library.	Rate Growth populati on Expense s Running 2	Rate Growth populati on Expense s Investm ent Free Zones:	Percenta ge Current Expendit ure to Expendit ure library.	Percent age Expense s Investm ent Free Zones: To Expense s library.
200 4	32117.49 1	1970.	30147.33	62.00			93 (87- 99)	6.13
200 5	26375.17 5	02	21803.15 7	88.00	25-0	51.6	82.67	17.33
200 6	38,806.6 79	68	32778.99 9	47.13	50.3	31.8	84.47	15.53
200 7	39031.23 2	04	31308.18 8	58	4:48	28.1	80.21	19.79
200 8	59,403.3 75	11880	47522.70 0	52.19	51.7	53.8	80.00	20.00
200 9	52567.02 5	10513	42053	11.51	11-5	11-5	80.00	20.00
201 0	70134.20 1	16130.87	54003.33 4	33-42	6.72	85.2	77	23.00

201	78757.66	17832	60,925.55	12.30	24.8	30-	77	22.64
1	6		3					
201	105139.5	29350.95	75,788.62	33.50	24.28	52.3		92
2	76		4					
201	119,127.	34,647.00	84480.55	13.30	3.7	66.9	70-92	29.08
3	556		6					
201	115937.7	33951.56	81986.19	2-68	18-8.	28.	70-72	29.28
4	62		9					
201	70397.51	18564.68	51832.83	39-	93.2	3772-	73.63	26.37
5	5		9	40/28		94-9		
201	75055.86	-0.17882	57173.42	6.62	1-27	14-3	§ 76:17	23.83
6	5		8					
201	75,490.1	16,464.46	59025.65	0.58	15.3	3.59	78:18-	21.81
7	15		4				19).	
201	80873.18	13820	67052.85	7.13	13.59	16 06	91	17.09
8	9		6					
201	111723.5	24422	87300.93	38.15	30.19	76.7	78	21.86
9	23		3					
202	76082.44	3208	72873.53	90 31	91-23-6	;919-86-	78	4.22
0	3		8			8		
202	102849.6	24625	78224.30	35.18	22.8	757-58-	06	23.94
1	00		0			4		
202	116959.5	12018.49	104941.0	13.72	217	791	89.72	10.28
2	82		92					
CAG	388	961	472					
R								

- **Source:** The researcher's work based on:
- Ministry of Planning / Central Statistical Organization
- Central Bank of Iraq / Department of Statistics and Research / Annual Economic Report for the years (2004-2022)
- Iraqi Ministry of Finance / Accounting Department, Consolidation Department / System of Consolidation of State Accounts for the Federal Budget until December 2022
- Columns No. (1, 2, 3, 4, and 5) of the researcher's work
- The CAGR was calculated using the exponential growth function method after logarithmic conversion, which does not neglect the values of any observation.

First: Public Expenses

The development of public expenditures in 2004 amounted to **(32,117.491)** billion Iraqi dinars, reflecting an annual growth rate of **(62.0%)** over the previous year (2003), which was **(19,825.48)** billion dinars. This increase was a result of the Third Gulf War, which halted many important projects in the country and led to the suspension of all development plans. Consequently, in 2004, the annual growth rate returned due to the security situation and instability, which increased military expenditures that burdened the Iraqi economy in terms of investment and development. This situation was exacerbated by

amended budget programs and laws regarding salary scales and functional allocations. As a result, current expenditures increased, leading to a continuous rise in total public expenditures until 2008, when they reached their highest level of **(59,403.375)** billion dinars, with an annual growth rate of **(52.19%)**. The increase in this annual growth rate was attributed to the rise in operating expenses, including salaries, wages, and entitlements, alongside the increase in investment expenses.

In 2009, public expenditures decreased to **(52,567.025)** billion dinars, marking a negative annual growth rate of **(11.5%)**. This decline resulted from the global financial crisis (real estate crisis), which affected the world, including Iraq, and reflected on international oil prices and the international oil market. The Iraqi state and central financial authority took actions to implement deflationary policies and reduce the prices of goods and services across all economic sectors. However, public expenditures experienced a positive and continuous fluctuation, reaching **(106,873.27)** billion dinars in 2013, with an annual growth rate of **(13.30%)**.

In 2014, military expenditures increased due to the instability of the security situation, particularly following the incursion of ISIS into Mosul and several other governorates. This instability hindered development projects and public investments, leading to numerous obstacles, including security challenges. Thus, public expenditures for 2014 increased to (115,937.762) billion dinars, with a negative annual growth rate of (2.68%). Notably, there was a significant decline in the volume of public expenditures in 2015, dropping to (70,397.515) billion dinars, resulting in a negative annual growth rate of (-39.28%). This decline represented the largest negative growth rate during the study period and was a result of the war against terrorism, which necessitated increased military expenditures that burdened successive Iraqi budgets.

After 2016, there was a slight increase in public expenditures, with 2017 seeing public spending rise to (75,490.115) billion dinars and an annual growth rate of (0.58%). Public expenditures continued to rise in 2018, recording an expenditure of (80,873.89) billion dinars and a growth rate of (3.71%). The year 2019 was characterized by significant changes, including increased global oil prices affecting Iraqi oil prices and the implementation of economic development plans. Public spending for that year reached (111,723.523) billion dinars, marking a substantial increase with a growth rate of (38.15%).

However, in 2020, Iraq was affected by the COVID-19 pandemic, disrupting its public economy along with declining oil prices. Consequently, the Central Bank of Iraq devalued the Iraqi dinar at the end of 2020 against the US dollar to implement a new measure to finance all financial expenditures alongside social obligations and public sector salaries. This situation led to a decline in public expenditures, which reached (76,082.443) billion dinars, accompanied by a negative annual growth rate of (-31.9%).

Despite improvements in Iraqi revenues from the oil sector in 2021—fueled by positive changes in global oil prices—there were still structural imbalances rooted in the composition of public expenditures, leading to a complete deviation towards consumer expenditures, which hindered economic growth processes. By 2022, public expenditures rose to (116,959.582) billion dinars, reflecting an annual growth rate of (13.72%). Throughout the research period, public expenditures grew at a compound annual growth rate of (6.388%).

Second: Main Public Expenditure Divisions

These expenses were divided based on their impact on the economy:

- 1. **Current Expenditures**: Also known as consumption or revenue expenditures, these are incurred by the state on various sectors such as civil administration, defense forces, public health, education, and government agencies. They are essential for the functioning of the state's administrative apparatus and include all salaries and wages, as they do not contribute to capital formation.
- 2. **Investment Expenditures**: These are capital expenditures allocated by the government for public investments aimed at forming fixed assets. Known as development expenditures, they play a critical role in increasing the production and investment capacity of the public economy. Examples include

expenditures for agricultural and industrial development, the construction of irrigation dams, and public institutions. These are some of the most significant components of total public demand.

The divisions of these expenditures have seen notable changes in Iraqi spending policy after 2003, as current consumer expenditures increased at the expense of investment expenditures. This rise has placed a significant burden on the Iraqi general budget, creating financial constraints on the state. The reasons for this rise are tied to numerous changes in salary scales, public wages, and allocations for the reconstruction and development of Iraq, resulting in a dominance of salaries and wages in public expenditures that restrict progress in investment financing.

Data shown in Table No. (1) indicates that 2004 had the highest ratio of current expenditures to public expenditures at **(93.87%)**, accompanied by a decrease in the ratio of investment expenditures to public expenditures at **(6.13%)**. The decrease in investment expenditures and their share of public expenditures that year is attributed to the aftermath of the 2003 events, which led to the destruction of many institutions and economic sectors due to the conflict.

The lowest ratio of these expenditures to public expenditures occurred in 2015, amounting to about (70.72%), whereas the ratio of current expenditures was offset by an increase in the ratio of investment expenditures to (29.28%). The increase in this ratio in 2020 represented the highest percentage during the study period, with current expenditures reaching about (95.78%), juxtaposed against a lower percentage for investment expenditures at (4.22%).

Second Requirement:

Analysis of the Development of Public Revenues and the Net Budget in Iraq for the Period (2004-2022)

Public revenues are directly related to financial resources, and given that Iraq is an oil-dependent country, there is limited interest and not much diversification in other funding sources, whether through tax revenues or other types of revenue. The revenues derived from these sources are declining and are not at the required level to cover crises and public expenditures.

It is essential to identify the nature of the main components and sections of the revenues in the general budget, along with the percentage of change and growth of each component in creating funding sources. The significant factor in increasing total revenues derives from non-renewable natural resources [such as oil, gas, sulfur, and phosphate], as well as sovereign sources, including fiscal taxes. Oil sales revenues constitute the highest percentage in the general budget and serve as the primary source of total public revenues, alongside other non-oil and non-tax revenues. Table No. (2) outlines general revenues and their divisions, including percentages and annual growth rates.

First: General Revenues and Their Main Divisions

1. **Public Revenues**: Estimated public revenues for 2004, which were the lowest during the study period, amounted to **(32,948.547)** billion dinars, reflecting an annual growth rate of **(51.3%)**. Oil revenues constituted the highest percentage of revenues in the budget because the Iraqi economy is single-rented and heavily reliant on non-renewable resources, estimated at **(32,593.011)** billion dinars—accounting for **(98.92%)** of total revenues. Other revenues amounted to **(195.892)** billion dinars, contributing less than **(0.59%)**. Tax revenues were the lowest, totaling **(159.644)** million dinars, with a contribution rate of **(0.48%)**.

Following this minimal growth, an upward trend began, albeit with fluctuations between increases and decreases over time. In 2012 and 2022, public revenues witnessed the highest amounts, reaching approximately **(119,466.403)** to **(161,697.436)** billion dinars. Throughout the period (2004-2022), public revenues, in general, increased at a compound annual growth rate of **5.25%**.

Table No. (2) Divisions of General, Tax, Oil, and Other Revenues and Their Relative Importance for the Period (2004-2022) in Billion Dinars

Year	Revenues :- library.	Tax Revenue	Revenues :- Oil	Other Revenues	Annual growth rate of public revenue s	Ratio of oil revenu es to public revenu es % 2	Ratio of tax revenue s to public revenue s % 3	Ratio of Other Revenue s to General Revenue s %
2004	32948.547	644	32593.01 1	195	51.3	98.92	0.48	0.59
2005	40502.890	495	39480.06 9	.527	22.9	97.0	1.22	1.30
2006	49055.545	**887	46908.04 3	95.62	21.11	95	1.21	3.17
2007	54599.451		53162.59 2	68	11.30	97.37	2.56	0.07
2008	80252.182	.985	79131.75 2	93	46.9	98.60	1.23	0.17
2009	55209.353	3334.809	51719.05 9	155	31.2	93	6.04	0.28
2010	69521.117	1532.438	66819.67 0	1169.009	25.92	(96.I.1)	2.20	1.68
2011	776. 99998	1783.59 3	98090.21 4	124	43.84	98	1.78	0.12
2012	119466.403	2633.357	116597.0 8	235	19.47	97.60	2.20	0.20
2013	112,124.77 2	2876.856	109034.9 2	212	4Ë77	89.28	2.36	0.17
2014	105386.623	127	410.9707 2	6429.086	7-3	92.11	1.79	6.10
2015	66470.252	2015).	61312.62 1	3142.621	36.9-	92.24	3.03	4.73
2016	54409.270	3861.896	063.4426 7	6280.311	18-14	81.36	7.10	11.54
2017	77335.955	272	65071.92 9	5965.754	" (42:13).	84	8.14	7.71
2018	834. 106569	5.686211	95619.82 0	5263.803	37.80	89-73	0.01	10.27
2019	107566.995	4014.531	99216.31 8	146	0.93	92.24	3.73	4.03
2020	63199.689	190	54448.51	4032.985	00:41:2	86.15	7.47	6.38

			4		5			
2.0	109081.464	0.242	95270.29 8		72.5	87	4.16	8.50
2022	436. 161697	497 '	154038.6 5	1124.290	05:48:2 3	95	4.04	0.70
Annu al growt h rate	5-25 %	9:44	4:54	24-52				

Source: Prepared by the researcher based on:

- Central Bank of Iraq, Annual Economic Report of the Central Bank for the years of study (2004-2022)
- Columns (1, 2, 3, and 4) of the researcher's work based on data from the Central Bank
- Ministry of Finance, Economic Department, reports from the Ministry's publications for the year 2004 regarding oil revenues.

2. Oil Revenues:

Based on the data used to classify public revenues in Table (2), it is evident that Iraq's budgets have relied heavily on oil revenues throughout the study period. As mentioned earlier, the Iraqi economy is a rentier economy, with oil revenues for 2004 amounting to (32,593.011) billion dinars. The proportion of oil revenues to the public budget reached (98.92%) for that year, primarily due to the rise in crude oil prices, which reached \$36 per barrel. This significant factor contributed to the increase in oil revenues. However, the lowest percentage occurred in 2016 at (81.36%). Despite fluctuations, oil revenues increased during the period, reaching (154,038.649) billion dinars in 2022, with an annual growth rate of (4.54%), which is close to the growth rate of overall public revenues.

3. Tax Revenues:

Tax revenues have constituted a percentage of the general revenues of the Iraqi economy; however, they play a weak role in the general budget. Iraq has long faced challenges with underdeveloped, complex, or even non-existent tax systems, which has resulted in a decline in per capita income and a distortion of the tax base. This tax base is crucial for all developing countries, including Iraq. The lowest percentage of general revenues from tax contributions was (0.48%), while the highest occurred during the study period at (8.144%) in 2017. Nevertheless, the general trend of tax revenues has been upward, growing at a compound annual growth rate of (9.44%).

4. Other Revenues:

This category encompasses all sources included in public revenues that do not fall under tax or oil revenues. It includes fees, grants, rental revenues from state properties, social contributions, department services, and other miscellaneous revenues. Other revenues in 2004 were estimated at (195.892) billion dinars, representing (0.59%) of total public revenues. Following that, other revenues experienced growth due to developments in laws related to grants and fees, but they subsequently declined, reaching their lowest level in 2008 at (134.93) million dinars. Their contribution to public revenues hit its lowest in 2007 at (0.071%), while the highest percentage during the study period was (11.54%) in 2016. Despite these fluctuations in the value of other revenues and their contribution rates, they increased at a growth rate of (24.52%) during the period, which is higher than the growth rates for oil and tax

revenues. The reason for this improvement lies in the development of various economic activities, which have gained importance in the Iraqi economy, particularly customs duties.

Third: Net General Budget in Iraq for the Period (2004-2022)

During a time when public expenditures were predominantly focused on current expenditures, increases in public expenditures outpaced public revenues. Public expenditures grew at a compound annual rate of **(6.388%)**, while public revenues experienced an annual growth rate of **(5.25%)**. According to Table (3), the value of the net public budget amounted to **(831.06)** million dinars in 2004. During the period (2004-2009), the public budget achieved an actual surplus, attributed to a low implementation rate of both investment and operational expenditures as well as increased oil prices, which were often budgeted at conservative estimates.

However, the budget recorded an actual deficit in 2010 amounting to (-613.08) billion dinars due to the repercussions of the mortgage crisis in the United States and declining prices. This deficit recurred during the years (2014-2016) due to a dual crisis involving both oil and security, which resulted in decreased oil revenues alongside a reduction in public expenditures. This fluctuation persisted in the size of the net public budget during the study years, with surpluses in 2021 and 2022 amounting to (6,231.806) and (44,737.85) billion dinars, respectively. Notably, this surplus is not used to pay off debts; instead, it prompts the government to borrow in order to finance overall economic activity.

"Table No. (3)"

Net Public Budget and Its Annual Growth Rate for the Period (2003-2022) in Billion Dinars

			Balancing
Year	Revenues	Expenses	Public
	Public	Public	Surplus and deficit
			1
2004	32948	32117.491	831
2005	40,502.890	26375.175	14,127
2006	49055.545	38,806.679	10248.87
2007	54,599.451	39031.232	15568.22
2008	80252.182	59,403.375	20,848.81
2009	55,209	52567.025	33
2010	69521.117	70134.201	613
2011	99998.776	78757.666	21241
2012	119466.403	105139.576	14326.83
2013	112,124.772	119,127.556	2997
2014	105386.623	115937.762	10551.14-
2015	66470.252	70397.515	26
2016	54409.270	75055.865	20646.60-
2017	77335.955	75,490.115	1845
2018	106,569.834	80873.189	25696.65

2019	107566.995	111723.523	-53
2020	63199.689	76082.443	12882.75-
2021	109,081.464	109081.464	86
2022	161697.436	116959.582	44,737.85
CAGR	5.25%	388	,023

Source: From the work of the researcher based on:

- Central Bank of Iraq / Department of Statistics and Research / Annual Economic Report for the years (2004-2022).
- The net budget was calculated using the formula: **Net General Budget = Public Revenues Public Expenditures**.

The Second Topic:

2003 Evolution of Public Debt and Deficit Gap for the Period (2004-2022)

The First Requirement:

2003 The Development of Internal and External Public Debt and Its Relationship to the Net Public Budget

2003 First: Public Debt

Public debt is significantly linked to the public budget. It represents the means by which governments finance their public spending and fund infrastructure development projects. The issue of public debt that the Iraqi economy faces is one of its most pressing problems, stemming from structural financial imbalances in the public budget that impact the overall economy and the living standards of society. This situation forces the government to adopt programs implemented by international institutions and bodies, including austerity policies aimed at reducing public spending while cutting government support for essential goods and services. Public debt accumulates as a result of rising public expenditures, leading to borrowing at the expense of revenues over a certain period or even several years.

2003 Second: The Relationship Between Public Debt and Net Budget (Deficit Gap)

Internal debt has a significant relationship with surplus savings. By converting these savings into wealth within the country, savers may be willing to invest in government loan bonds, thus providing the government with a basis for internal balance. However, when debt generates a budget deficit due to the misallocation of loans—that can be lost or diverted through capital flight—the economy experiences imbalances. External debt, on the other hand, arises from loans received from organizations or contracts made by the state with other countries, which may be either short-term or long-term. If not managed properly, these debts can lead to inflation, stagnation, and excessive external borrowing, influenced by high-interest rates and fluctuations in crude oil prices.

The net public budget, which may show negative values (indicating a deficit) in some years while displaying surpluses in 2020 and 2022, demonstrates a budget surplus. However, the years with deficits prompt the government to resort to borrowing to finance the shortfall and sustain economic activity. The changes in the net public budget and the debt gap during the study period are illustrated in Table (4) below.

As for the internal deficit gap, which shows negative values in some years of the study, it indicates that the debt is less than the surplus. Despite this surplus, it is not used to pay off debts, which leaves room for government borrowing to finance economic activities. Notably, the compounded growth rate of internal debt was (18.60%) during the study period, which is less than the growth rate of the deficit gap, which reached (17.07%), indicating a continued expansion of the government deficit gap between internal public debt and the net public budget.

It is important to note that the growth rates of internal debt were significantly higher than the growth rate of external debt, which was growing at a negative rate of (-3.26%). Furthermore, the growth rate of the deficit gap between the net budget and internal debt was growing at a rate of (17.07%), while the deficit gap between total public debt was growing at a rate of less than (0.754%). These trends indicate the inflation of domestic debt and show that the net budget deficit is influenced by the increase in internal debt.

Table number 4 Net public budget and deficit gap for the period (2004-2022) billion dinars

Year	Internal	External	total public	Balancing Public	Internal Debt Deficit Gap	Gross Debt Deficit Gap
	State	public debt	debt	Surplus and deficit	2	3
				1		
2004	06	186021.8	191946.86	831	5094	191115.80
2005	57	176251.3	182506.87	14,127	15	168379.16
2006	01	110172.2	115479.21	10248.87	.86	105,230.34
2007	70	93758.0	98951.70	15568.22	10374.52-	83383.48
2008	56.	76947.5	81,403.06	20,848.81	16393.25-	60554
2009	04	75989.6	84423.64	33	71	81781.31
2010		67632.8	76,812.88	613	16	77,425.96
2011	85	73275.3	80722.15	21241	13794.26-	59481.04
2012	51	71151.5	77,699.01	14326.83	-32	63372.18
2013	45	72340.6	76,998.05	2997	1660	74000
2014	9520	66865.8	76385.80	10551.14-	20071.14	86,936.94
2015	32142.8	65763.5	97,906.30	26	36070.06	101833.56
2016	47362.2	71404	118767.00	20646.60-	68008	139413.60
2017	47678.7	78136.6	125815.30	1845	45,832.86	123969.46
2018	41822	87365.2	129188.10	25696.65	16126.25	103,491.46
2019	38331.5	58,606.25	96937.75	-53	42488	101094.28
2020	64246.6	90109.5	154356.10	12882.75-	77129	167,238.85
2021	69912	74,451.86	144364.25	86	63680.53	138132.39
2022	69445.73	73111	142556.98	44,737.85	24,707.88	97819.13

CAGR	From 18	26 March	517	,023	17:07	754
	- 60					

From the researcher's work based on:

The Central Bank of Iraq, the Department of Statistics and Research, the annual economic report of the Central Bank of Iraq for different years.

- Column No. (1, 2, and 3) from the researcher is based on Table 1 and Table 3 using the following calculations:
- 1. **Net Public Budget** = Public Revenues Public Expenditures
- 2. **Deficit Gap** = Internal Debt Net Budget

The Second Demand: Indicators of the Burden of Public Indebtedness for the Period (2004-2022)

First: Indicators and Their Main Divisions

1. Indicators Based on Balances Measured by the Current and Nominal Value of Public Debt This category includes measures that assess public revenues, exports, and GDP.

2. Flow-Based Indicators

These are measured by the values of public debt outflows, referred to as "debt service" (*). This provides comprehensive information on the resources allocated by the country to service the public debt burden. Additionally, it measures the ratios of expenditures, revenues, exports, and GDP.

1. The First Indicator: Ratios of Public Debt to Revenues, Exports, and GDP

2. The Ratio of Public Debt to Public Revenues: ___

This ratio relates to the fiscal space of the state, expressing the government's ability to maintain financial sustainability or economic stability without incurring costs due to laxities and imbalances in its budgets. This fiscal space is linked to public debt and its ratio to public revenues. A higher deficit in the budget financed by loans, whether internal or external, impacts this ratio. This increase diminishes the fiscal space, reducing the ability to spend, particularly in terms of investment expenditures.

- 3. According to the data in the above table, the highest ratio of public debt to public revenues was (582.57%) in 2004, which is an extreme percentage due to the significant debts calculated after 2003, most of which are considered illegal debts. The lowest ratio occurred in 2013, reaching (63.05%) during the study period.
- 4. The evolution of public debt and its ratio to exports, public revenues, and GDP in Iraq for the period (2004-2022) can be illustrated in Table (5).

Table (5) Ratio of public debt to public revenues, exports and GDP for the period (2004-2022) billion dinars

Year	Public debt	Revenues library.	Exports	GDP	Growt h in GDP: Total (1)	public debt ratio Public Revenue s	public debt ratio Export s %	GDP ratio (4)
						% (2)	(3)	

200 4	191115.8 0	32948	21855.180	34992.395	78.96	582	878	548
200 5	168379.1 6	40,502.890	28009.850	39110.887	38.15	450	.651	466.64
200 6	105,230.3 4	49055.545	36085.278	96067.161	29.98	235	320	120
200 7	83383.48	54,599.451	46,791.83 4	111961.23 0	16.54	181	211	88
200 8	60554	80252.182	75324.132	258443.58 4	41.52	101	108.07	31.50
200 9	81781.31	55,209	46,606.26 0	131632.21 0	-92	152	181	64.14
201 0	77,425.96	69521.117	61187	163104.73 9	23.91	110.49	.125	15:47:0 9
201 1	59481.04	99998.776	94182.942	218617.83 5	34.04	80.72	85.71	36.92
201	63372.18	119466.40 3	111355.03 8	255727.06 8	16.97	65.04	69-78	30.38
201 3	74000	112,124.77 2	107073.83 4	274,725.87 5	7.44	63.05	91	28.03
201 4	86,936.94	105386.62 3	100907.34 0	267262.78 8	2/72	72.48	75.70	28.58
201 5	101833.5 6	66470.252	60681.516	196203.01 3	26-59	147	161	49.90
201 6	139413.6 0	54409.270	48814.236	198774.36 9	1.31	218	243	59.75
201 7	123969.4 6	77335.955	68034.738	228692.36 9	15.05	162	184.93	55.02
201 8	103,491.4 6	106,569.83 4	102077.52 0	249574.27 6	9.13	0.121	126	51 76 7
201 9	101094.2 8	107566.99 5	96433.470	254443.95 3	1.95	90; 12	100.52	38.10
202 0	167,238.8 5	63199.689	55820.168	219768.79 8	13.62-	.244	.276	70.24
202 1	138132.3 9	109,081.46 4	86803.824	301439.53 4	37.16	132.35	166	89
202 2	97819.13	161697.43 6	115273.94 0	226629.00 0	92-86- 4	88	.67	62/90

Source: The researcher's work is based on the following:

- Ministry of Planning, Central Agency for Statistics and Research, various reports and data.
- Central Bank of Iraq, Department of Statistics and Research, Annual Economic Reports, data from different years.
- World Bank, GDP at current prices for various countries, years (2017-2021).

3. The Ratio of Public Debt to Exports:

This ratio indicates a comparison between the growth rates of public debt and the growth rates of the main source of income, which is exports. In the case of Iraq, oil exports constitute the largest percentage of GDP. The data presented in the above table shows that the highest percentage during the study period occurred in 2004, reaching (878.27%), while the lowest percentage was in 2012, at approximately (69.78%).

4. The Ratio of Public Debt to GDP:

This ratio reflects the available resources to service public debt. A larger ratio signifies a lower GDP, indicating the burden that public debt places on GDP. GDP is considered the economic strength of the country and should not exceed the safety limits estimated at (60%). According to the data in the above table, the ratio of public debt to GDP began high, amounting to approximately (548.54%) in 2004, which marked the highest percentage during the study period. This elevated ratio was due to public debt being at its peak, especially external debt, which reached (186,021.8) billion dinars, while GDP was about (34,992.395) billion dinars. The percentage continued to decline in subsequent years, eventually reaching its lowest level in 2013, at (28.03%).

This trend reflected a decrease in both public debt and GDP. In that year, public debt reached about (74,000.83) billion dinars, down from (59,481.31 and 63,372.18) billion dinars in the years 2011. Conversely, the volume of GDP began to rise in 2013 to about (274,725.875) billion dinars, primarily due to oil revenues, which are the mainstay of the Iraqi economy in financing public spending.

Afterward, this percentage returned to an upward trend again, rising to (59.75% and 55.02%) respectively in 2016 and 2017, due to the increasing volume of public debt. Public debt was estimated at (139,413.60 and 123,969.46) billion dinars during those years, in contrast with an increase in GDP to (198,774.369 and 222,869.369) billion dinars. Consequently, the negative effects of the global economic crisis and its impact on international oil markets led Iraq to resort to borrowing to finance the deficit in its general budget and to meet the needs of the war against terrorist organizations.

The year 2020 saw the highest level of this ratio at (70.24%), driven by an increase in internal debt, which amounted to (64,246.6) billion dinars, raising total public debt to (154,356.10) billion dinars. This increase occurred alongside a decrease in GDP, which fell from (254,443.953) billion dinars in 2019 to (219,768.798) billion dinars due to the effects of the COVID-19 pandemic.

The percentage then decreased again owing to a decline in external debt, which reached (73,111.25) billion dinars, while internal debt increased to (69,445.73) billion dinars in 2022. The percentage remained at (62.90%), exceeding standard ratios.

When comparing the annual growth rate of public debt with the general budget channels, a disparity in ratios emerges. The compound annual growth rate of public debt is estimated at (0.517%), while the compound annual growth rate of public revenues reached (5.25%). Public expenditures come in at an estimated rate of (6.388%), which is the highest relative to public revenues. This indicates that the increase in public expenditures has occurred at the expense of public revenues, suggesting that the rise in public debt is a consequence of increased public expenditures and reliance on borrowing. This trend has

contributed to an additional deficit crisis that negatively impacts the overall structure of the general budget.

Indicator 2: - Ratio of debt service to public revenues and expenditures, exports and GDP

1: - The ratio of debt service to public revenues:_____This ratio is used to clarify the ability of the state and its effectiveness in paying public debts, so its decline is a positive indicator of the state and its ability to bear the burden of external debt.

According to Table $\,$ (6) below, the ratio of debt service to public revenues $\,$ fluctuates once up and again down, so that its lowest ratio in $\,$ 2012 was ($\,$ 0.81%) and its highest ratio in $\,$ 2020 was ($\,$ 17.87%) during the study period, with an annual average of ($\,$ 2.528) billion dinars $\,$

Indicator 2: Ratio of Debt Service to Public Revenues, Expenditures, Exports, and GDP

The Ratio of Debt Service to Public Revenues: ____

This ratio is used to clarify the state's ability and effectiveness in paying public debts; a decline in this ratio is a positive indicator of the state's capacity to manage the burden of external debt.

According to Table (6) below, the ratio of debt service to public revenues fluctuates, with its lowest point recorded in 2012 at (0.81%) and its highest in 2020 at (17.87%) during the study period. The annual average for this ratio was approximately (2.528) billion dinars.

Table 6Ratio of debt service to public expenditures and revenues, exports and GDP For the period (2004-2022) billion dinars

Year	Public debt	public debt ratio Expenses % 1	public debt ratio Revenues % 2	public debt ratio Exports % 3	% Public Debt of GDP 4
2004	592	1.30	1.26	1.91	11.91
2005	735	1.45	0.94	1.37	9.79
2006	.403	1.04	0.82	1.12	0.42
2007	.607	1.56	1.11	1.30	0.54
2008	640.	1.08	0.80	0.85	0.25
2009	446	0.85	0.81	0.96	0.34
2010	769	1.10	1.11	1.26	0.47
2011	1430	1.82	1.43	1.52	0.65
2012	913	0.87	0.76	0.81	0.36
2013	722	0.73	0.71	0.82	0.32
2014	1054	0.91	1.00	1.04	0.39
2015	466	2.70	2.86	3.13	0.79
2016	2511	3.35	4.62	5.14	1.26

2017	2690	3.56	3.48	3.95	1.18
2018	2071	2.56	1.94	2.03	0.83
2019	1636	1.46	1.52	1.70	0.64
2020	11294.4	14.84	87	20.23	5.14
2021	02	11.7	6.70	8.42	2.43
2022	.75	6.89	4.98	6.99	3.56
Average Time:	223	2.904	.528	3.354	2.172.00

Source: Prepared by the researcher based on:

- Central Bank of Iraq, Department of Statistics and Research, Annual Economic Report, data for various years. Note: Internal and external debt service was not included in the budgets; only public debt service was included for the years 2019-2022.
- Republic of Iraq, Ministry of Planning, Central Bureau of Statistics, various years.

3. The Ratio of Debt Service to Public Expenditures:

The ratio of public debt service to public expenditures fluctuated between increases and decreases during the study period, with an average annual growth estimated at about (2.904) billion dinars. This ratio peaked in 2020 at (14.84%), representing the highest percentage of public expenditures, while the lowest percentage was recorded in 2006 at about (0.82%).

3. Debt Service to Exports:

This indicator measures the efficiency of the state and its ability to pay public debt through deductions from total proceeds of public exports. The Iraqi economy is burdened by debt due to the deductions that occur from its oil export revenues, which are primarily directed towards debt service. This situation impacts all economic activity. Consequently, debt service is considered a sustainable indicator that helps measure the proportion of exports allocated to public debt service, reflecting the fragility of debt service in response to unexpected declines in exports. This highlights the importance of short-term debts and their effectiveness in servicing public debt; a higher percentage of short-term debts increases the fragility of debt service.

According to the previous Table (5), the volume of exports fluctuates due to internal and external crises and shocks affecting Iraq over time, particularly in oil exports. Oil exports rose consistently from 2004 to 2012, achieving the highest volume of exports in previous years at approximately (111,355.038) billion dinars, with public debt service estimated at about (913.004) billion dinars. However, the security crisis and its repercussions negatively impacted export volumes, causing a gradual decline until 2018. In that year, exports began to recover, reaching approximately (102,077.520) billion dinars, accompanied by a debt service estimated at (2,071.526) billion dinars. This decline was exacerbated by the shock resulting from falling oil prices due to the global health crisis. By 2022, oil exports had increased to their highest volume during the study period at (115,273.940) billion dinars, while public debt service peaked at (8,059.75) billion dinars. The highest ratio of public debt service to exports reached (20.2%) as a result of the decline in export values in 2020, while the lowest ratio was (0.80%) in 2012 and 2013, showing relatively similar values, with an annual average of (3.354) billion dinars.

4:- Debt service to GDP:_____ The ratio of public debt service to GDP for the year (2004) was estimated at (11.91%) billion dinars, knowing that it is the highest during the period of study, and with public debt service estimated at (416.592) billion dinars, offset by GDP for the same year with a volume of

(34992.395) billion dinars , and that the year (2008) witnessed its lowest ratio estimated at (0.25%) billion dinars , so the average duration of the ratio of public debt service to GDP is (2.172) billion dinars.

Section Three

Shocks Affecting the Iraqi Budget for the Period (2004-2022)

The First Demand: Shock 2008 (Real Estate-Oil Finance)

After 2000, the so-called Internet bubble caused the shares of real estate companies to rise in stock markets around the world. Countries, including the United States, began investing heavily in real estate, viewing it as a prime investment opportunity. This trend opened the door for low-income individuals to borrow and purchase property, leading to the formation of a real estate bubble that peaked and burst in 2007. Consequently, property values plummeted, and many individuals were unable to repay their debts, resulting in financial losses. This shock negatively impacted the financial markets and was infamously dubbed Black Monday. The crisis deepened, becoming widespread globally and affecting Iraq in particular. Among the effects were:

1. Impact on Oil Prices:

Iraq is a rentier state, with 95% of its budget dependent on oil revenues. Consequently, the government forecasted a budget based on an oil price of (57) BD per barrel. However, oil prices decreased, affecting both variable and fixed budget costs. Oil revenues contributed 100% to the Development Fund for Iraq, with 5% allocated as war compensation for Kuwait. As a result, the government turned to oil reserves to finance the 2009 budget. The Central Bank faced challenges in financing, which impacted the Budget Fund's ability to maintain the value of the Iraqi currency, ultimately leading to a decrease in its overall value.

2. Impact on Financial Markets:

The Iraqi Stock Exchange was not significantly affected by the global crisis because it was not electronically linked to international financial markets. Additionally, there was a lack of investment awareness regarding the global stock collapse. This separation proved beneficial in minimizing the crisis's impact on Iraq's investments, the exchange rate of the Iraqi dinar, and the banking sector.

The Second Requirement: Shock 2014 (Security-Oil)

1. Security Shock:

The instability and deterioration of the security situation led to increased public expenditures on military matters and heightened government services provided to the displaced, such as camps and food. In this context, Iraq sought a loan of (5.34) billion dollars from the International Monetary Fund (IMF). In 2014, the takeover of Mosul by various internal and external forces, including the rise of the terrorist organization ISIS, prompted significant security challenges. This crisis not only destroyed the heritage of ancient cities but also resulted in military offensives to reclaim the lost territories. The declaration of victory against ISIS on (July 10, 2017) is now recognized as Victory Day. As a result, the budget took on a "war budget" characteristic, overshadowing developmental and reconstruction efforts. Despite military victories, foreign investment was hindered by security concerns, even with potential investment opportunities present, particularly in the oil sector, which remained crucial for financing the Iraqi budget.

2. Oil Shock:

From 2014 to 2016, there was a decrease in the prices of exported oil, despite increases in the quantity of crude oil exported. This represented Iraq's primary source of public expenditure financing. However, the exported quantities did not match the rates of decline in public prices in the regional and international oil markets.

The Third Requirement: Shock 2020 (Health-Oil)

During 2020, expenditures were lower than expected for several reasons, leading to two significant shocks:

1. Health Crisis:

The global health crisis known as the Coronavirus pandemic (COVID-19) necessitated urgent short-term measures, most notably a complete curfew and a halt to business and trade activities. This situation caused a near-total suspension of the public sector, producing negative effects on the Iraqi economy across various sectors, including health, the private sector, and food security. Consequently, oil pricing and exports significantly impacted the structure of the public budget and human resources.

2. Oil Price Crisis:

The global oil market experienced a collapse due to the cessation of operations in major factories and industries in developed countries such as China, the United States, and Japan. Despite the existence of alternatives, these countries depend heavily on oil for production. A decline in global demand for oil resulted in a drastic price drop, losing 60% of its value and causing severe crises in many countries, including Iraq. The Iraqi economy contracted by more than 11% in 2020 but saw growth of 2.8% in 2021 as movement restrictions eased and non-oil production in the service sector expanded. While there was a surplus in public and external financial balances, public finances stagnated due to considerable unrecognized arrears, intertwining with the new government's formation and the adoption of the budget, given the excessive reliance on oil, which stymied local reform efforts and exacerbated economic challenges.

Conclusions

- 1. The Iraqi public budget deficit bears a direct relationship to public indebtedness, whether internal or external. This situation arises from the negative imbalance between the growth of public expenditures and public revenues, reflecting that the growth of public expenditures leads to increased borrowing beyond the government's and local economy's capacity to manage debt.
- 2. The general budget relies primarily on oil revenues, estimated at (154,038.65) billion dinars for 2022, which accounted for (95.26%) of public revenues. The ratios during the study period have fluctuated between peaks and troughs.
- 3. Tax revenues remain very weak in the Iraqi economy, attributed to poor administrative practices and limited tax awareness. As such, tax revenues are considered a non-sovereign resource.
- 4. Debt service represents a sustainable indicator that measures its ratio to public revenues, public expenditures, exports, and GDP in the public budget, reflecting its vulnerability amidst high short-term debt ratios and the pressures of external debt.

Recommendations

- 1. Addressing the budget deficit and eliminating public debt requires the enhancement of public revenue sources by activating tax revenues, thereby combating tax evasion and improving the efficiency of the tax system. Such measures would positively impact the mobilization of financial resources and facilitate the financing of public expenditures.
- 2. The government should work on diversifying revenue channels in the general budget by expanding other revenues aside from oil revenues and increasing its capacity to attract investments, given that Iraq's economy has become overly reliant on oil.
- 3. Development of a comprehensive database of processed data and solutions is essential for studying the shocks Iraq has faced during the study period, aiding in the prevention of similar occurrences in the future.
- 4. Explore ways to ensure timely payments related to principal and interest for servicing already incurred debts and enforce obligations to pay public debts while addressing any fees on late payments.

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