

The Relationship Between Public Debt And Selected Economic Indicators Of Iraqi Economy: An Analytical Study

¹Ahmed Jassim Al-yasiri ²Zuher Mahmood Kadhem

¹Corresponding Author, Faculty of Administration and Economics, University of Kufa, Najaf, Iraq. E-mail: ahmedj.alyaseri@uokufa.edu.iq

²Faculty of Administration and Economics, University of Kufa, Najaf, Iraq.

Article History: Received: 11 January 2021; Revised: 12 February 2021; Accepted: 27 March 2021; Published online: 16 April 2021

Abstract: In recent years, the increasing frequency of credit financing activities in Iraq's public and household sectors has led to the rapid expansion of public and household debt. There are some common determinants of changes in public and household debt. The article uses statistical data from 2004 to 2020 to examine common determinants of public and household debt changes. The study found that the continuous increase in the size of Iraq's public debt and internal debt resulting from a combination of factors such as oil exports, savings, gross domestic product, interest rates on loans, housing prices. We find compelling evidence for a negative relationship between debt and development. Furthermore, there is no linear relationship between expansion and contraction for some of these economic factors. The government and related departments should start with reasonable control, adjust taxes, establish a sound social system to prevent the risks of high public debt and debt, and maintain macroeconomic stability.

Keywords: Public debt, Economic growth, internal debt, external debt, Iraqi Economy

1. Introduction

This article aims to examine Iraq's foreign debt accumulation and its impact on economic development. To truly comprehend its economic effects, we will perform a thorough analytical review of data spanning the 16 years from 2004 to 2020. This time was chosen to include the post-debt relief phase, as Iraq's foreign debt stock has been increasing over the last decade (Khaghaany, Kbelah, & Almagtome, 2019). External debt can stimulate economic growth; moreover, the absence of a responsible debt management system may have the opposite effect (Almagtome & Alnajjar, 2020). The research in this field often provides contradictory findings. According to some scholars, the accumulation of international debt would have a detrimental effect on economic development, although others expect a positive impact. According to some sources, there is no connection between these two factors.

Scholars have advanced a variety of explanations for the international debt crisis. This theory incorporates a double gap study, demonstrating that economic growth is a feature of investment. This type of investment cannot foster economic development without a proper national savings rate (M. Ali, Hameedi, & Almagtome, 2019). This article employs time series data on Iraq's GDP, external debt stock, external debt payment, and exchange rate from 2004 to 2020 to examine the effect of external debt accumulation on economic growth in Iraq. This article employs estimation techniques such as the augmented Dickey-Fuller (ADF) test, vector error correction, and Johansen cointegration assessment to examine the causal relationship between variables between 2004 and 2020. The second stage's findings indicate that in the long term, there is a strong positive link between Iraq's GDP growth rate and foreign debt, implying that foreign debt leads to economic growth in Iraq and that public debt and economic growth are bidirectional. The model's findings indicate a robust positive association between international debt and GDP, even though debt servicing has a substantial adverse effect. This finding is consistent with several early research analyzed in the literature, indicating that international debt and GDP have a strong association. The following recommendations are made to the Iraqi government considering these findings: 1. The Iraqi government should provide a corresponding control system to assist the Iraqi debt management department monitoring and managing the government debt portfolio's projected costs and risks. First, Identifying and handling market uncertainties entails examining the financial features of the government's revenue and other cash flows used to fund borrowings, as well as selecting a mix of liabilities that closely fits these characteristics. Iraq's government has increasingly strengthened its debt management procedures to diversify its creditor base and provide a flexible monetary base conducive to financial development.

2. The development of Iraq's external indebtedness

Iraq was not previously classified as one of the countries in need of international funding for development as a rent-based country that relied on financing spending on oil revenues, and Iraq could achieve financial sustainability by balancing payments from oil exports with public spending (A. Almagtome, Khaghaany, & Önce, 2020). But the events and circumstances that Iraq has experienced, particularly the wars and the embargo, whose effects continue, have forced it to resort to borrowing from many states and international financial institutions (Beehner, Collins, Ferenzi, Person, & Brantly, 2018). This situation continued until the occupation of Iraq in 2003, resulting in Iraq incurring debts and compensation estimated at \$300 billion, which was paid 30 percent of Iraq's oil revenues under UN Security Council resolution 678 (Hinrichsen, 2019). Though this figure was later lowered to 5% after 2003, it is essential to understand the size of Iraq's foreign debt and the deferred gains associated with it. There is a discrepancy in assessments of Iraq's external debt owing to the fall of the Iraqi government's financial institutions and the destruction of goals and properties. Still, it is estimated that foreign debt was estimated at \$125 billion by 2003 (Rasool, 2018). Iraq's foreign debt is therefore limited to:

- Group A: Paris Club Countries.
- Group B: Dole outside Paris Club.
- Group C: Gulf creditor states.
- Group D: Commercial creditors.
- Group 5: Unprocessed debt (outstanding).

It estimates that the total debt ranges from \$115 billion to \$120 billion. The debt trading company Exotex estimates that Iraq's debt ranges from \$103.4 billion to \$129.4 billion, including debt assets and interest arrears. Iraq only recognizes the 41 billion dollars (41 billion dollars) figures submitted to the United Nations in 1990 (Bieberly, 2018). The diplomatic landscape shifted, and the US assumed responsibility for its administration by pressing creditor countries to reduce their debt to Iraq, impeding rebuilding efforts and the revival of Iraq's collapsing economy (A. H. Almagtome, Al-Yasiri, Ali, Kadhim, & Bekheet, 2020). Due to the efforts and coercion of those outside the Paris Club, a deal was reached with the 18 Paris Club countries in 2004, when the debt totaled 51.6 billion dollars, to decrease the volume of debt owed by Iraq by 80 percent (Lieberman, 2018). Iraq has held several negotiations with creditor countries under which the debt has been reduced (80 percent). By the conditions:

- Reduction (30%) When the agreement is signed.
- Reduction (30%) Another of the debt balance and its benefits is the signing with the IMF of the agreement on the prevailing arrangements.
- Reduction by (205) if Iraq complies with all IMF conditions.
- Giving Iraq six years of grace period does not pay any amounts during the first three years but spends part of the interest during the other three years starting in 2008.

About the 36 countries outside the Paris Club, the debt amounted to \$17.9 billion before the reduction, but after the removal, it became (2.9) billion dollars (Bank, 2019). Iraq has conducted several negotiations with these countries, as it was agreed with a number of these countries to sign bilateral agreements in late 2005 (Acker, Bräutigam, & Huang, 2020). under which 80 percent of the deals will be written off Iraq's debt as follows:

- Write-off (40%) During 2006.
- Write-off (40%) During 2007.
- Payment of the rest (20%) Three-year debt starting in 2006 of 7 percent. Annually.

Thus, 2006 saw a write-off (40%) Of Iraq's debt repayment (7%). It means that the Iraqi economy has rid itself of the burden and benefits of this debt (Hinrichsen, 2019). Regarding the foreign private sector's financial and commercial institutions, the Ministry of Finance has made an offer to small creditors whose debt does not exceed (35) million dollars, reflecting the outlines of the Paris Club Agreement by paying 25 percent. And (10%) Cash from the total value of the debt asset and accumulated interest. The rest is permanently written off, and the debt is estimated at \$2.6 billion. For institutions with a deficit of more than \$35 billion, a project (cash offer) was submitted to them by issuing bonds by the Iraqi government equivalent to no more than 20 percent (A. Almagtome, Shaker, Al-Fatlawi, & Bekheet, 2019). As for the debts of the Gulf states (Saudi Arabia, Kuwait, Qatar) ranging from (30-40) billion dollars, although most of these debts were interest-free loans or

grants, except for the United Arab Emirates, which extinguished its debt towards Iraq by 100 percent, as described in table 1:

Table 1. Classification of creditor countries (2004-2020)

Years	Paris Club Countries	Dole outside Paris Club	Tagaryon Creditors	International Financial Institutions	Total
2004	28,994	11,579	19,922	28,293	88,788
2005	14,691	9,835	18,461	28,293	71,280
2006	16,147	10,031	4,097	28,257	58,532
2007	16,478	10,070	4,097	28,257	58,902
2008	9,930	2,719	3,686	28,117	44,452
2009	10,094	2,830	3,681	28,080	44,685
2010	10,094	2,830	3,681	28,048	44,653
2011	10,586	2,879	3,681	28,013	45,159
2012	9,444	2,712	3,681	27,977	43,814
2013	8,639	2,545	3,681	27,938	42,803
2014	8,385	2,462	3,681	27,920	42,448
2015	7,153	2,211	3,558	27,835	40,757
2016	5,979	2,044	3,558	27,792	39,373
2017	5,819	1,878	3,558	27,763	39,018
2018	5,195	1,711	3,558	27,766	38,230
2019	4,612	1,539	2,790	27,789	36,730
2020	4,144	1,366	2,615	27,736	35,861

Some states have refrained from rescheduling their debts to Iraq as described in the following table:

Table 2. Countries that have refrained from rescheduling their debts

State	Origin of religion	Type of religion
Egypt	0.860	Commercial, service, and military debt
Jordan	1.4	Agreements with the Central Bank within the Memorandum of Understanding
Pakistan	0.112	Food and medical supplies
Poland	0.852	Banking arrangements between the Central Bank of Iraq and Poland
Sudan	0.074	Employment benefits, salaries, commercial and food items
Turkey	9,5	Commercial and food debt and banking arrangements
Saudi Arabia	15.89	Loans to support Iraq during the war and air transit fees
Kuwait	6.8	Compensation
Qatar	1,5	Loans to support race during the war
United Arab Emirates	3,5	Loans to support race during the war
Total		40.4

2.1. Analysis of the paths of public debt in Iraq 2004-2020.

Table (2) shows the growth trajectories of internal and external public debt and their total during 2004-2020. It is essential to analyze each of the internal and external public debt changes to explore the relationship between them and the dependent variables. We will try to explain the course of the internal and external public debt separately.

Table 3. Iraq's public debt (2004-2020)

Year	internal religion (\$1 billion)	External debt (\$1 billion)	Public debt (\$1 billion)
2004	4.40	58.41	62.81
2005	4.49	35.72	40.21
2006	3.84	22.06	25.90
2007	4.13	24.88	29.01
2008	3.73	26.78	30.51

The relationship between public debt and selected economic indicators of Iraqi economy: An Analytical Study

2009	7.08	17.05	24.13
2010	8.98	16.87	25.85
2011	10.24	17.53	27.77
2012	9.61	16.16	25.77
2013	10.89	14.37	25.26
2014	16.63	15.67	32.30
2015	26.64	16.72	43.36
2016	39.21	12.82	52.03
2017	40.62	25.40	66.02
2018	36.62	26.19	62.81
2019	32.42	25.49	57.91
2020	55.21	23.60	78.81

2.2. The internal debt path for 2004-2020.

Table3 shows data on domestic and public debt as absolute values (billions of dollars) and the rate of change in growth in domestic and public debt during the Period 2004-2020.

Table 4. Values of internal debt, public debt, and changes for 2004-2020

Year	internal religion (\$1 billion)	Change in domestic debt	Public debt (\$1 billion)	Change in public debt
2004	4.40		62.81	
2005	4.49	2.05	40.21	-35.98
2006	3.84	-14.48	25.90	-35.59
2007	4.13	7.55	29.01	12.01
2008	3.73	-9.69	30.51	5.17
2009	7.08	89.81	24.13	-20.91
2010	8.98	26.84	25.85	7.13
2011	10.24	14.03	27.77	7.43
2012	9.61	-6.15	25.77	-7.20
2013	10.89	13.32	25.26	-1.98
2014	16.63	52.71	32.30	27.87
2015	26.64	60.19	43.36	34.24
2016	39.21	47.18	52.03	20.00
2017	40.62	3.60	66.02	26.89
2018	36.62	-9.85	62.81	-4.86
2019	32.42	-11.47	57.91	-7.80
2020	55.21	70.30	78.81	36.09

Table 3 states that domestic debt growth rates ranged from high to low during the Period 2004-2020. Domestic income growth in 2005 increased by 2.05% and in 2006 decreased by 14.48% to 7.55% in 2007 and 9.69% in 2008. It may be due to the increase in crude oil exports and prices, which account for the bulk of the state budget, reflecting positively to achieve a surplus in the state budget. As of 2009, the debt growth rate had increased dramatically, reaching a record 89.81 percent, mainly due to the decline in government revenues due to lower oil prices due to the decline in global oil demand from industrialized countries following the aftermath of the 2008 financial crisis. Domestic growth rates continued to increase, but at a declining pace in 2010 and 2011, which recorded 26.84, 14.03, respectively, with a negative growth rate in 2012. It is due to the low debt generated by the government's debt resulting from the extinguishment of the value of bonds and government remittances held by the central bank at the end of 2012, as well as the decline in loans granted by the central bank to the government departments during the year (Al-Mousawi & Al-Safi, 2019). As of 2013, domestic public debt growth rates had increased significantly in 2013-2017, albeit in varying proportions. The main reason for the increase in domestic public debt during 2014-2017 is the double shock to the Iraqi economy in the second half of 2014, the drop in oil prices, and the enormous military expenditures required to counter the terrorist organization ISIS. It burdened the state budget and led to an apparent lack of liquidity due to the deficit in the state budget. Especially in 2015 and 2016, forcing the government to resort to domestic and external debt to fill the financial gap. During 2018 and 2019, growth rates in public domestic debt declined, due to improved

security and economic conditions in Iraq and a slight improvement in oil prices, reflected in increased government revenues. In 2020, domestic debt rates rebounded.

2.3. The external debt path for 2004-2020.

Table4 shows data on external debt and public debt as absolute values (billions of dollars) and the rate of change in growth in exterior and public debt during the Period 2004-2020.

Table 5. Values of external debt, public debt and changes for 2004-2020

	External debt (\$1 billion)	Growth of external debt	Public debt (\$1 billion)	Growth of public debt
2004	58.41		62.81	
2005	35.72	-38.85	40.21	-35.98
2006	22.06	-38.24	25.90	-35.59
2007	24.88	12.78	29.01	12.01
2008	26.78	7.64	30.51	5.17
2009	17.05	-36.33	24.13	-20.91
2010	16.87	-1.06	25.85	7.13
2011	17.53	3.91	27.77	7.43
2012	16.16	-7.82	25.77	-7.20
2013	14.37	-11.08	25.26	-1.98
2014	15.67	9.05	32.30	27.87
2015	16.72	6.70	43.36	34.24
2016	12.82	-23.33	52.03	20.00
2017	25.40	98.13	66.02	26.89
2018	26.19	3.11	62.81	-4.86
2019	25.49	-2.67	57.91	-7.80
2020	23.60	-7.41	78.81	36.09

Table 4 shows that external debt began to rise during 2004 by 58.41, which may be expected because of the accumulation of debt and its interest before 2003. However, this debt gradually declined during the Period 2004-2016, with different growth rates ranging from negative to positive. The rate of adjustment over this period favored the reduction of foreign debt, at a negative annual rate of 3.67 percent, due to the easing of the economic embargo levied on Iraq before 2003 by the ratification of the Paris Club Agreement. Under 80% of Iraq's debt has been repaid, taking into account the rise in Iraq's crude oil exports in tandem with rising oil prices. It resulted in an increase in oil sales, which had a favorable effect on foreign currency reserves. As of 2017, there has been a significant increase in the volume of external debt of \$25.4 billion, with an annual change rate of 98.13. This increase was caused by the sharp drop in oil prices, which had a significant impact in conjunction with the security challenges faced by the state in the ISIS guerrilla war, which seemed to have repercussions in early 2016. Table 4 shows that external debt as an absolute value remained conservative throughout 2018-2010 but declined significantly as a growth rate. Due to the decline in new loans and rescheduling loans, as well as the slight improvement in oil prices, reflected in increased government revenues. Figure 1 shows that the growth of domestic debt over the years 2004-2020 is much greater than the growth of external debt for the same period, considering the difference in development direction, as evidenced by figure 1. The growth of domestic debt is contrary to the growth of external debt. It precedes it, i.e., the increase in the development of domestic debt reflects negatively in the development of external debt except for the period between 2016-2017 as described in Figure 1, and data in Table 4, due to the significant drop in oil prices and the security challenges faced by the state in fighting ISIS gangs.

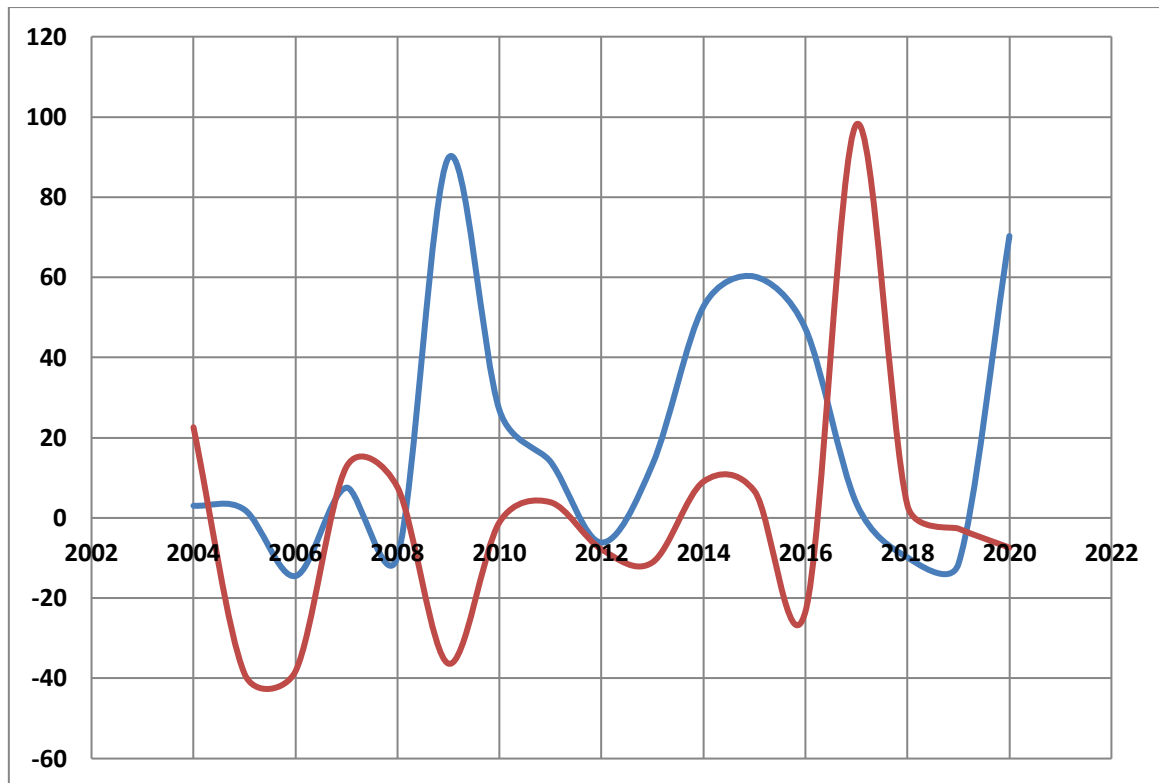


Figure1. The relationship between the growth of internal debt and external debt

3. The relationship between debt growth and inflation.

Table 5 shows the relationship between changes in inflation because of changes in debt growth in its three categories, namely, the development of public debt, domestic debt, and external debt.

Table 6. Changes in public debt and inflation

Year	Growth of public debt	Growth of domestic debt	Growth of external debt	Inflation
2004				26.8
2005	-35.98	2.05	-38.85	37.1
2006	-35.59	-14.48	-38.24	53.1
2007	12.01	7.55	12.78	30.9
2008	5.17	-9.69	7.64	12.7
2009	-20.91	89.81	-36.33	8.3
2010	7.13	26.84	-1.06	2.5
2011	7.43	14.03	3.91	5.6
2012	-7.20	-6.15	-7.82	6.1
2013	-1.98	13.32	-11.08	1.9
2014	27.87	52.71	9.05	2.2
2015	34.24	60.19	6.70	1,4
2016	20.00	47.18	-23.33	0,1
2017	26.89	3.60	98.13	0.2
2018	-4.86	-9.85	3.11	0.4
2019	-7.80	-11.47	-2.67	-0.2
2020	36.09	70.30	-7.41	0.6

3.1. The relationship between domestic debt and inflation.

Through Figure 2, it is apparent at first glance that the relationship between the growth of domestic debt and inflation is almost non-existent. The figure shows that the internal growth curve swings between ups and downs over 2004-2020, although inflation curves tend to stabilize, mainly through 2010-2020. The main

effect of monetary stability is monetary policy, which has adopted currency stability through the so-called currency auction. At the same time, this reality indicates the weak impact of fiscal policy.

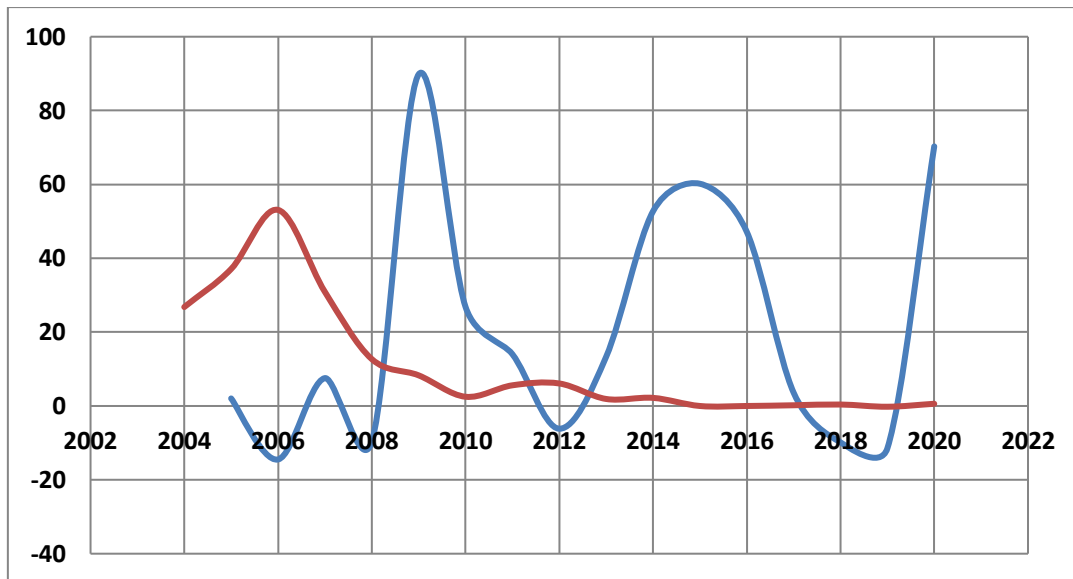


Figure 2. The relationship between internal debt and inflation

3.2. The relationship between external debt and inflation.

The previous analysis of the relationship between external debt growth and inflation almost applies, as evidenced by Figure 3. The relationship between external debt growth and inflation seems practically non-existent. The internal growth curve swings between ups and downs over the years 2004-2020, although inflation curves tend to stabilize. Especially during the years 2010-2020, the fact that this stability may be due to the indirect impact of external debt by financing the budget deficit aimed at setting a fixed rate of currency against the dollar. It became an annual tradition during the Period 2009-2020, and the more needed it is, it takes.

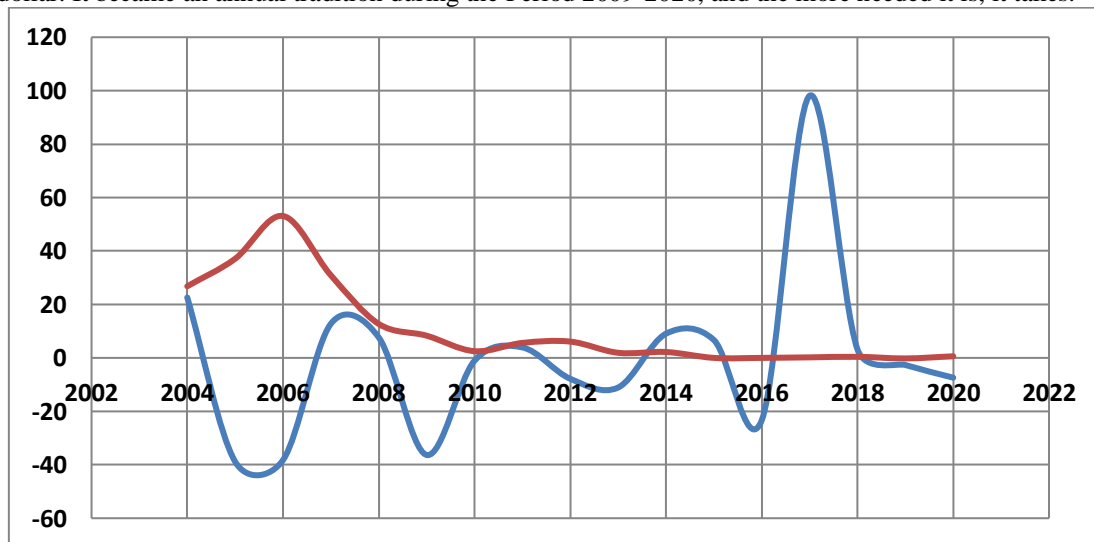


Figure 3. the relationship between external debt and inflation

3.3. The relationship between the growth of public debt and inflation.

Figure4 shows the relationship between the growth of public debt and inflation. The two curves of public debt reflect the outcome of domestic and external debt and the impact on the stability of inflation over the years 2004-2020. The picture here may be more apparent than before (Kbelah, Amusawi, & Almagtome, 2019). In other words, the amounts of inflation achieved through the Period 2004-2020 are only a natural result of public debt in both domestic and external terms.

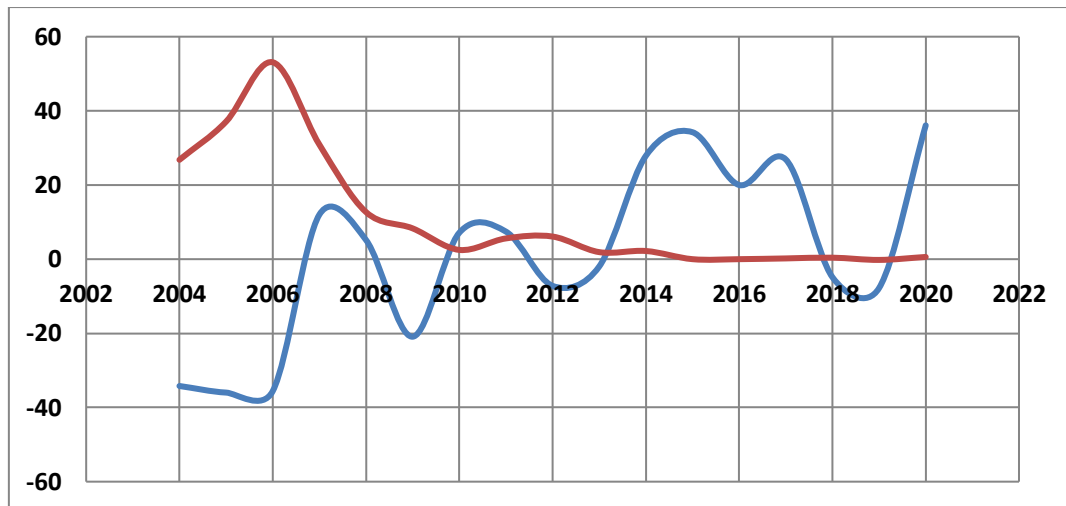


Figure 4. The relationship between the growth of public debt and inflation

While public debt has a significant impact on the stability of inflation, as shown above, we note that most of the effects on inflation stability are due to domestic debt, which has been growing at higher rates than external debt growth.

4. Analysis of the relationship between debt growth and economic growth.

Table 6 shows the relationship between changes in economic growth because of changes in debt growth in its three categories, namely, the development of public debt, domestic debt, and external debt.

Table 7. Changes in public debt and economic growth

	Growth of public debt	Growth of domestic debt	Growth of external debt	Economic growth
2004				176.3
2005	-35.98	2.05	-38.85	36.3
2006	-35.59	-14.48	-38.24	30.5
2007	12.01	7.55	12.78	35.1
2008	5.17	-9.69	7.64	47.9
2009	-20.91	89.81	-36.33	-14.2
2010	7.13	26.84	-1.06	24.1
2011	7.43	14.03	3.91	34.1
2012	-7.20	-6.15	-7.82	17.4
2013	-1.98	13.32	-11.08	7.6
2014	27.87	52.71	9.05	-2.7
2015	34.24	60.19	6.70	-27.0
2016	20.00	47.18	-23.33	-0.1
2017	26.89	3.60	98.13	12.6
2018	-4.86	-9.85	3.11	21.3
2019	-7.80	-11.47	-2.67	3.3
2020	36.09	70.30	-7.41	-12.1

4.1. The relationship between domestic debt and economic growth.

Figure 5 shows a high correlation between internal debt growth and economic growth, particularly during 2008-2020. At first glance, there may seem to be a reverse correlation between inner debt growth and increased economic growth rates. The impact of public spending is that domestic debt directly impacts the significant rise in the budget paragraphs, particularly those relating to investment spending (HAMEEDI, AL-FATLAWI, ALI, & ALMAGTOME, 2021). Therefore, in 2004-2008, there is no correlation between domestic debt and economic growth, which may have been due to the state budget, which focused on consumer spending due to increased wages, salaries, and security spending due to security challenges.

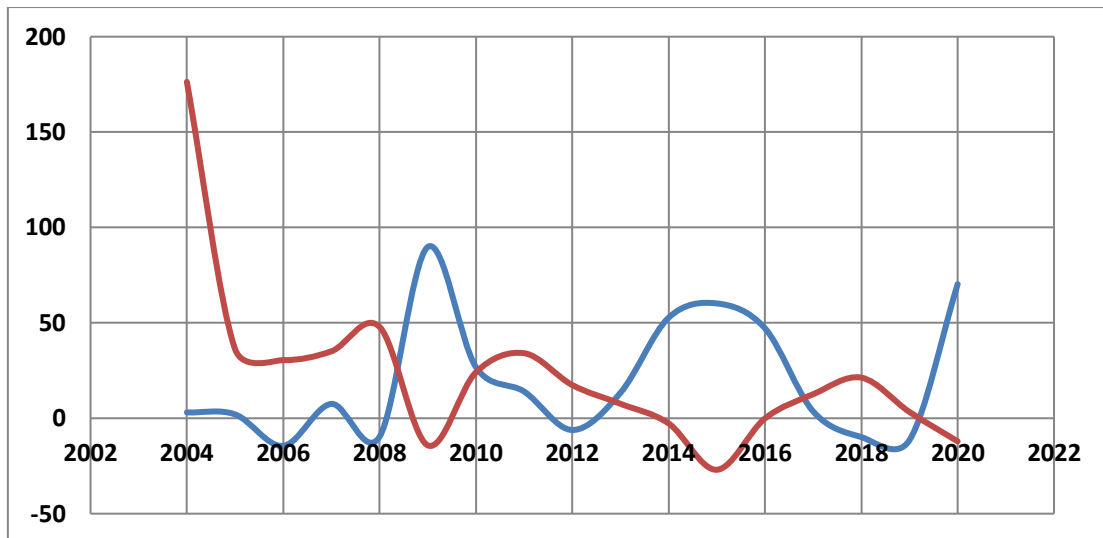


Figure 5. The relationship between internal debt and economic growth

4.2. The relationship between external debt and economic growth.

Figure 6 shows a close correlation between growth in external debt and an increase in economic growth rates, with economic growth rates higher than those of external debt, particularly for 2004-2016. There has been a significant increase in external debt growth rates due to the significant decline in oil prices, which has negatively affected oil revenues, which represent the total revenues of the state budget and the security challenges that accompanied that period.

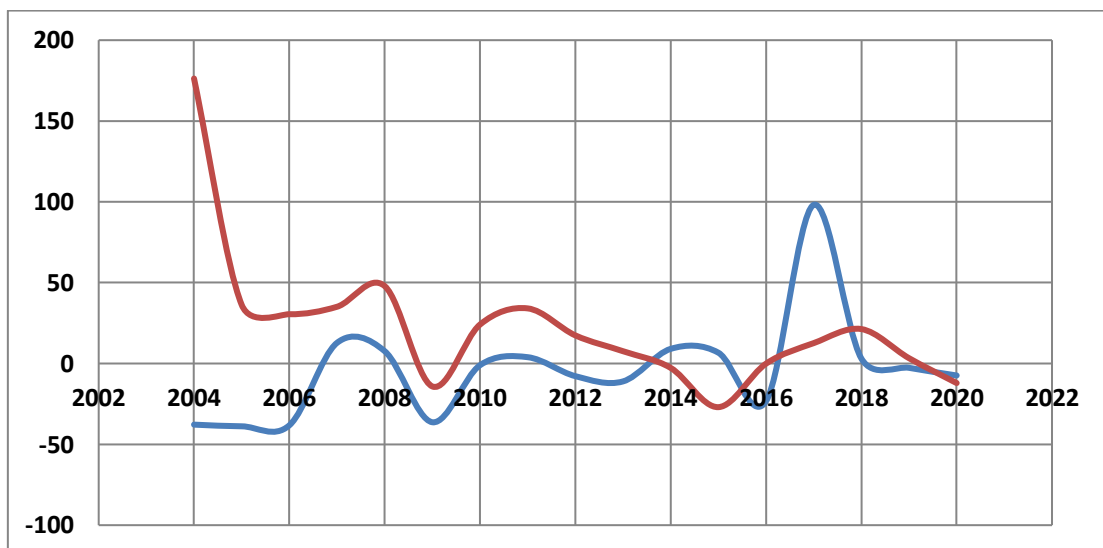


Figure 6. The relationship between external debt and economic growth

4.3. The relationship between public debt and economic growth

Figure 7 shows the strength of the relationship between change in public debt rates and economic growth rates. It is not surprising, as the relationship between public debt derivatives in both domestic and external terms has significantly impacted economic growth rates.

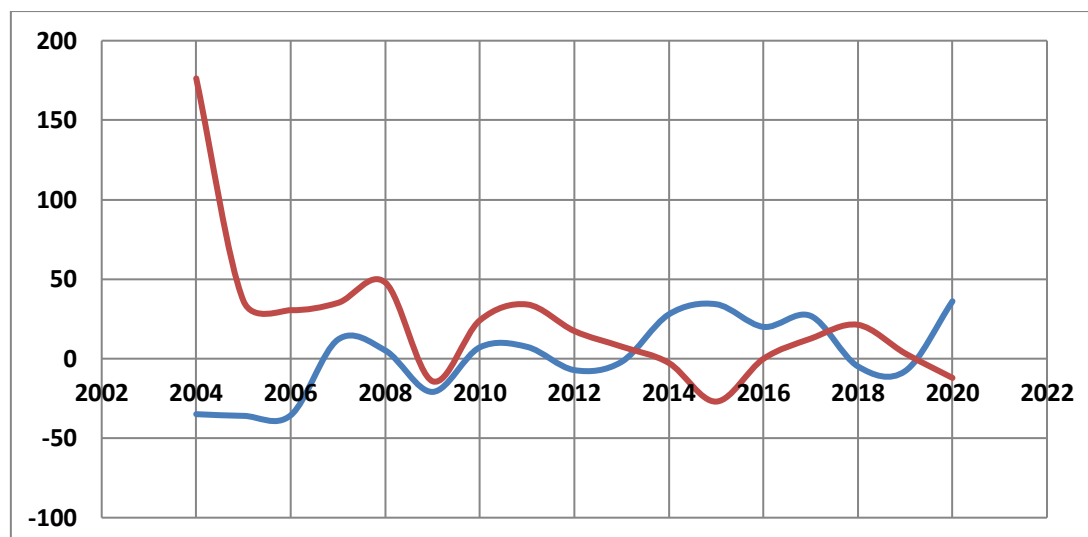


Figure 7. The relationship between public debt and economic growth

Figure 7 shows that most of the changes in economic growth rates over the years 2004-2020 distinguish the impact of economic growth rates between domestic and external debt. It indicates that these changes are due to changes in the rate of internal growth (M. N. Ali, Almagtome, & Hameedi, 2019). this is not possible because of the lack of funds. The other option is to finance the deficit through external debt, particularly for 2006-2020.

5. Analysis of the relationship between debt growth and growth in investment.

Table 7 shows the relationship between changes in fixed capital because of changes in debt growth in its three categories, namely, the development of public debt, internal debt, and external debt.

Table 8. Changes in public debt and investment as a proportion of output

Years	Growth of public debt	Growth of domestic debt	Growth of external debt	Investment percentage of output
2004				0.70
2005	-35.98	2.05	-38.85	0.60
2006	-35.59	-14.48	-38.24	0.94
2007	12.01	7.55	12.78	0.61
2008	5.17	-9.69	7.64	0.51
2009	-20.91	89.81	-36.33	1.04
2010	7.13	26.84	-1.06	1.25
2011	7.43	14.03	3.91	1.13
2012	-7.20	-6.15	-7.82	1.86
2013	-1.98	13.32	-11.08	3.52
2014	27.87	52.71	9.05	5.09
2015	34.24	60.19	6.70	8.40
2016	20.00	47.18	-23.33	5.66
2017	26.89	3.60	98.13	6.59
2018	-4.86	-9.85	3.11	4.17
2019	-7.80	-11.47	-2.67	4.17
2020	36.09	70.30	-7.41	0.42

5.1. The relationship between domestic debt and growth in investment.

Figure 8 shows the evolution of the relationship between internal debt growth and growth in investment as a proportion of output. At first glance, the relationship between domestic debt and investment is almost non-existent (Amusawi, Almagtome, & Shaker, 2019). The impact of the independent variable of household debt on investment as a continuing variable is almost weak or non-existent, despite significant increases in domestic debt growth rates over the years 2004-2020. It may be because domestic debt does not apply directly to arrange investment. After all, the main objective of household debt is to finance the budget deficit, which may not affect investment growth rates as a proportion of output.

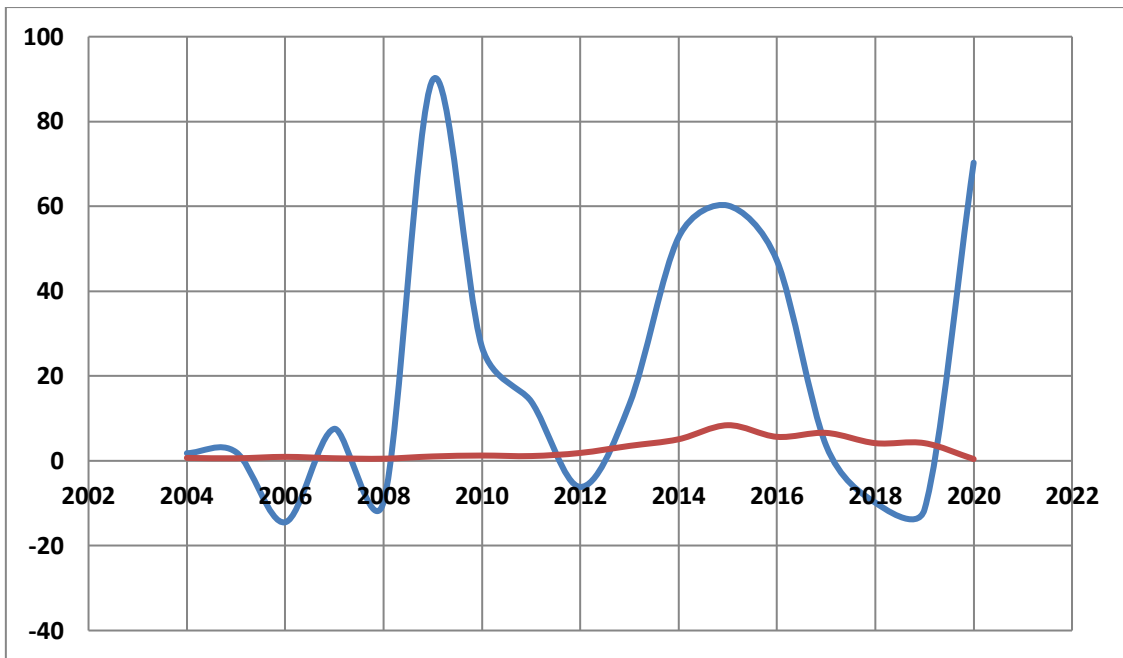


Figure 8. The relationship between internal debt and growth in investment

5.2. The relationship between external debt and growth in investment.

Figure 9 shows that the previous analysis we have adopted in the relationship between domestic debt growth and investment as a proportion of output applies to the relationship between external debt growth and investment (Al-Wattar, Almagtome, & AL-Shafeay, 2019). The figure shows investment rates as a proportion of output are relatively stable for the Period 2004-2020, despite the rise and decline in the growth rates of external debt.

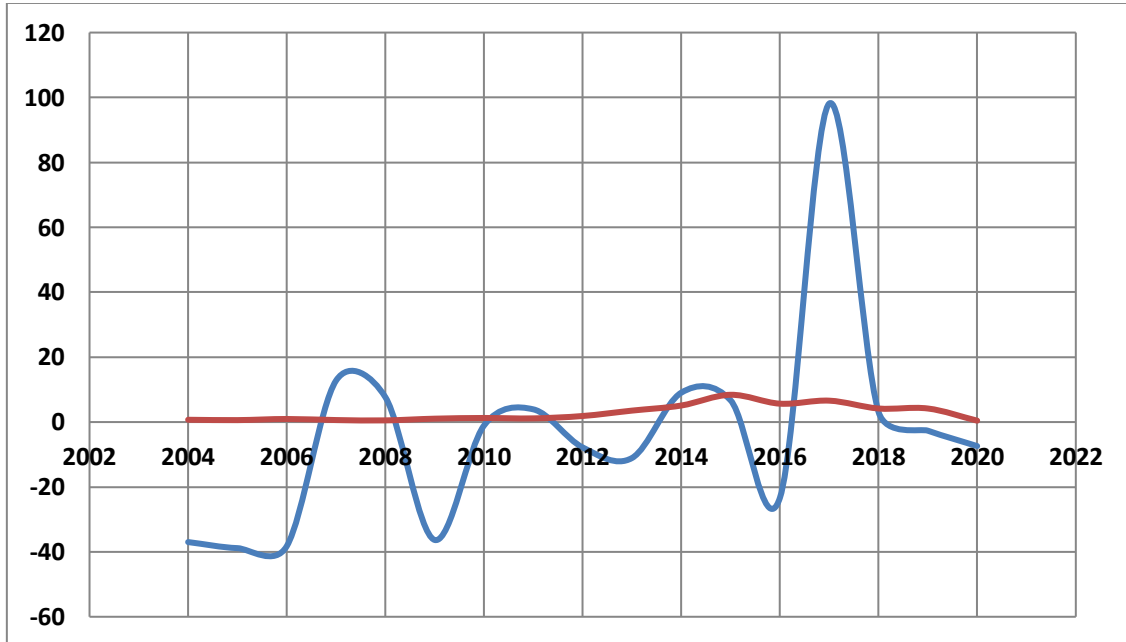


Figure 9. The relationship between public debt and growth in investment as a proportion of output

The relationship between growth in domestic debt, growth in external debt, and change in investment rates. The relationship between public debt and investment rates is almost non-existent. This reality is quite true because public debt is nothing but an expression of domestic debt and external debt, as confirmed by figure (10).

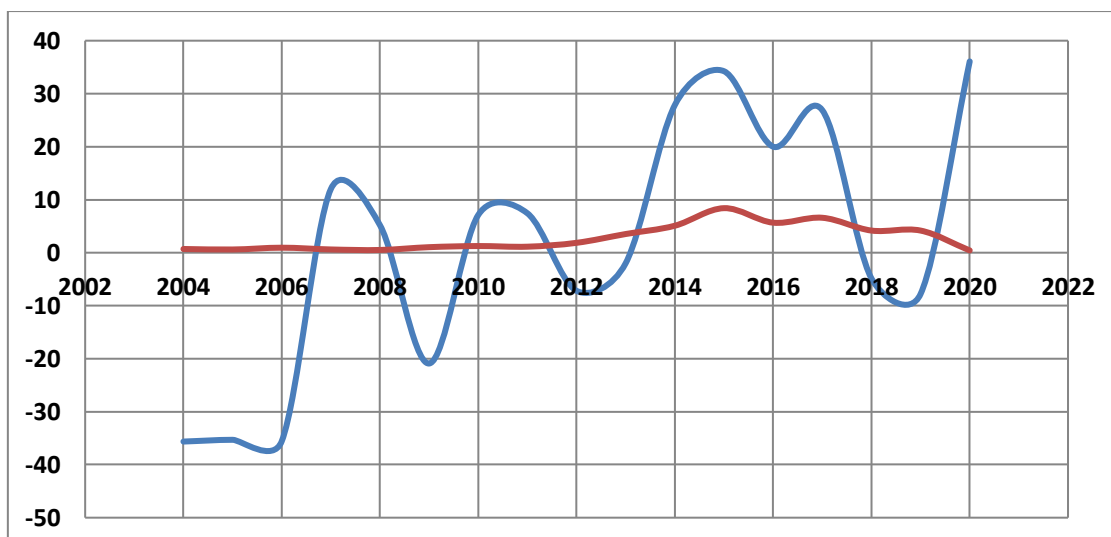


Figure 10. The relationship between public debt and investment growth

Based on the above, we cannot distinguish the impact of both domestic or external debt on investment rates because it simply does not exist or is weak.

5.3. The relationship between debt growth and growth in the balance of payments.

Table 8 shows the relationship between changes in the balance of payments as a proportion of output because of changes in debt growth in three categories: the development of public debt, domestic debt, and external debt.

Table 9. relationship between changes in the balance of payments

Years	Growth of public debt	Growth of domestic debt	Growth of external debt	Balance of payments percentage of output
2004				11.50
2005	-35.98	2.05	-38.85	8.76
2006	-35.59	-14.48	-38.24	-11.30
2007	12.01	7.55	12.78	-13.35
2008	5.17	-9.69	7.64	-14.40
2009	-20.91	89.81	-36.33	5.21
2010	7.13	26.84	-1.06	-4.54
2011	7.43	14.03	3.91	-5.60
2012	-7.20	-6.15	-7.82	-3.66
2013	-1.98	13.32	-11.08	3.94
2014	27.87	52.71	9.05	-5.13
2015	34.24	60.19	6.70	-8.43
2016	20.00	47.18	-23.33	-5.01
2017	26.89	3.60	98.13	1.44
2018	-4.86	-9.85	3.11	2.90
2019	-7.80	-11.47	-2.67	3.71
2020	36.09	70.30	-7.41	-4.17

5.4. The relationship between domestic debt and growth in the balance of payments.

Figure 11 shows a weak correlation between the change in domestic debt and growth in the balance of payments. It is a logical relationship consistent with the logic of economic theory because domestic debt has no direct impact on the balance of payments, as in the shift in interest rates, exchange rates, and GDP growth rate.

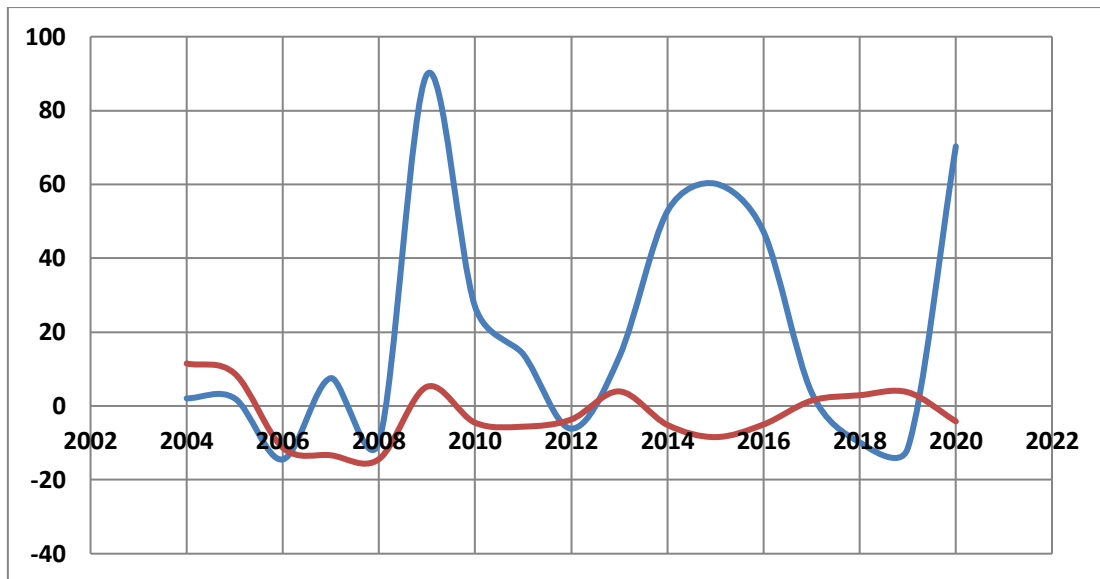


Figure 11. The relationship between external debt and growth in the balance of payments as a proportion of output

Contrary to the impact of domestic debt, figure 11 shows that changes in public external debt are closely linked to changes in the balance of payments. Mainly, they know that the primary purpose of external debt is to fill the budget deficit and achieve relative stability in exchange rates. If the amounts of external debt are appropriately exploited, they will positively impact GDP growth, contributing to positive balance-of-payments growth.

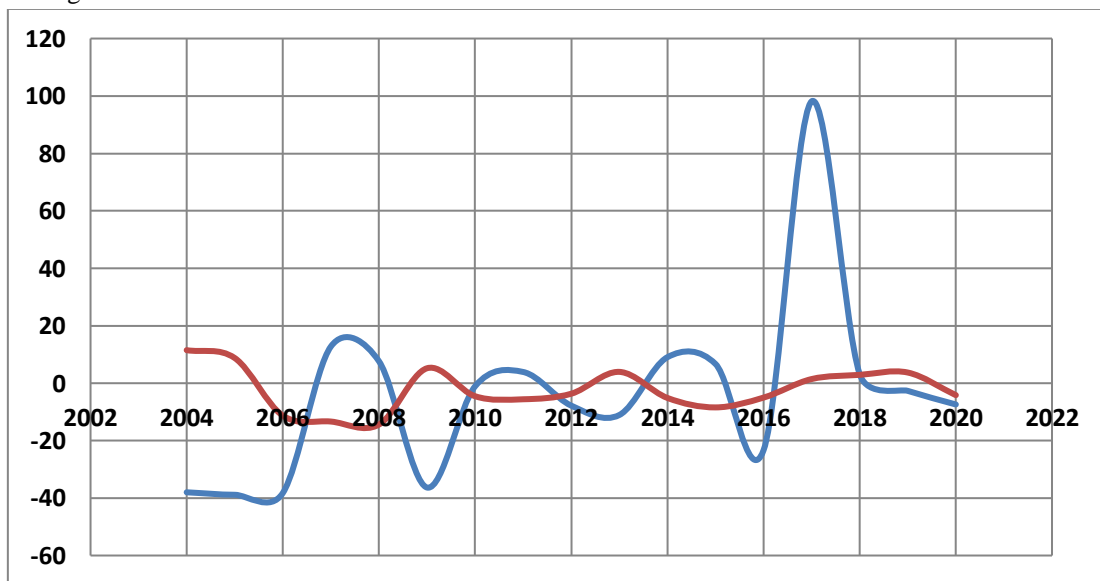


Figure 12. The relationship between public debt and growth in the balance of payments

The figure shows the relationship between public debt and growth in the balance of payments as a proportion of output, which shows that changes in public debt in domestic and external debt are offset by adverse changes in the balance of payments. In other words, growth in public debt is offset by an adverse change in the balance of payments and vice versa. It is in keeping with the logic of the economic theory, considering the significant impact of external debt on the overall balance of payments changes.

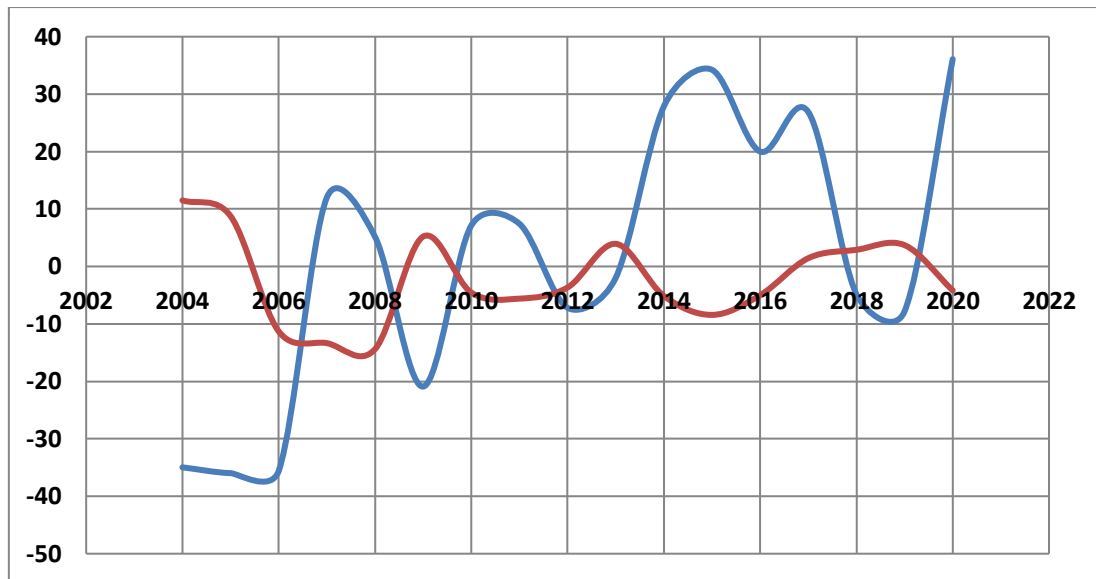


Figure 13. The relationship between public debt and growth in the balance of payments

6. Conclusions

This article aims to examine Iraq's foreign debt accumulation and its impact on economic development. To fully comprehend its economic effects, we will perform a thorough empirical review of data spanning the 16 years from 2004 to 2020. This time was chosen to include the post-debt relief phase, as Iraq's stock of external debt increased over the last decade. External debt can stimulate economic growth; however, the absence of a responsible debt management system may have the opposite effect. The literature in this field often produces contradictory findings. According to some scholars, the accumulation of foreign debt would have a detrimental impact on economic development, while others expect a positive effect. According to some sources, there is no connection between these two variables. Scholars have advanced a variety of explanations for the international debt crisis. This theory incorporates a double gap study, demonstrating that economic growth is a feature of investment. This type of investment cannot promote economic development in the absence of an adequate national savings rate. This article employs time series data on Iraq's GDP, external debt stock, external debt payment, and exchange rate from 2004 to 2020 to examine the effect of external debt accumulation on economic growth in Iraq. This article employs estimation techniques such as the augmented Dickey-Fuller (ADF) test, vector error correction, and Johansen cointegration evaluation to examine the causal relationship between variables between 2004 and 2020. The second stage's findings indicate that in the long run, there is a strong positive link between Iraq's GDP growth rate and foreign debt, implying that foreign debt leads to economic growth in Iraq and that public debt and economic growth are bidirectional. The model's findings indicate a substantial positive association between foreign debt and GDP, even though debt service has a significant negative effect. This finding is consistent with some early studies reviewed in the literature, indicating that foreign debt and GDP have a positive association. The following recommendations are made to the Iraqi government considering these findings: 1. The Iraqi government should establish a corresponding management system to assist the Iraqi debt management department monitoring and managing the government debt portfolio's projected costs and risks.

References

1. Acker, K., Bräutigam, D., & Huang, Y. (2020). Debt Relief With Chinese Characteristics. *Acker, Kevin, Deborah Brautigam, And Yufan Huang*.
2. Al-Mousawi, H. Y., & Al-Safi, H. A. (2019). The Internal Government Debt And Its Impact On The Indices Of Trading The Financial Market In Iraq For The Period (2012-2016). *Al Gharee For Economics And Administration Sciences*, 16(1).
3. Al-Wattar, Y. M. A., Almagtome, A. H., & Al-Shafeay, K. M. (2019). The Role Of Integrating Hotel Sustainability Reporting Practices Into An Accounting Information System To Enhance Hotel Financial Performance: Evidence From Iraq. *African Journal Of Hospitality, Tourism And Leisure*, 8(5), 1-16.
4. Ali, M., Hameedi, K., & Almagtome, A. (2019). Does Sustainability Reporting Via Accounting Information System Influence The Investment Decisions In Iraq. *International Journal Of Innovation, Creativity And Change*, 9(9), 294-312.

5. Ali, M. N., Almagtome, A. H., & Hameedi, K. S. (2019). Impact Of Accounting Earnings Quality On The Going-Concern In The Iraqi Tourism Firms. *African Journal Of Hospitality, Tourism And Leisure*, 8(5), 1-12.
6. Almagtome, A., Khaghaany, M., & Önce, S. (2020). Corporate Governance Quality, Stakeholders' Pressure, And Sustainable Development: An Integrated Approach. *International Journal Of Mathematical, Engineering And Management Sciences*, 5(6), 1077-1090.
7. Almagtome, A., Shaker, A., Al-Fatlawi, Q., & Bekheet, H. (2019). The Integration Between Financial Sustainability And Accountability In Higher Education Institutions: An Exploratory Case Study. *Integration*, 8(2).
8. Almagtome, A. H., Al-Yasiri, A. J., Ali, R. S., Kadhim, H. L., & Bekheet, H. N. (2020). Circular Economy Initiatives Through Energy Accounting And Sustainable Energy Performance Under Integrated Reporting Framework. *International Journal Of Mathematical, Engineering And Management Sciences*, 5(6), 1032-1045.
9. Amagtome, A. H., & Alnajjar, F. A. (2020). Integration Of Financial Reporting System And Financial Sustainability Of Nonprofit Organizations: Evidence From Iraq. *International Journal Of Business & Management Science*, 10(1).
10. Amusawi, E., Almagtome, A., & Shaker, A. S. (2019). Impact Of Lean Accounting Information On The Financial Performance Of The Healthcare Institutions: A Case Study. *Journal Of Engineering And Applied Sciences*, 14(2), 589-399.
11. Bank, W. (2019). *Pakistan Development Update, June 2019: Weathering The Storm-Restoring Macroeconomic Stability*: World Bank.
12. Beehner, L., Collins, L., Ferenzi, S., Person, R., & Brantly, A. F. (2018). Analyzing The Russian Way Of War: Evidence From The 2008 Conflict With Georgia. *Analyzing The Russian War Of War: Evidence From The 2008 Conflict With Georgia*.
13. Bieberly, M. (2018). United Nations Resolutions 661: Intervention, Devastation And The Internal Collapse Of 1990s Iraq.
14. Hameedi, K. S., Al-Fatlawi, Q. A., Ali, M. N., & Almagtome, A. H. (2021). Financial Performance Reporting, Ifrs Implementation, And Accounting Information: Evidence From Iraqi Banking Sector. *The Journal Of Asian Finance, Economics And Business*, 8(3), 1083-1094.
15. Hinrichsen, S. (2019). *Tracing Iraqi Sovereign Debt Through Defaults And Restructuring*: Economic History Department, London School Of Economics And Political Science.
16. Kbelah, S. I., Amusawi, E. G., & Almagtome, A. H. (2019). Using Resource Consumption Accounting For Improving The Competitive Advantage In Textile Industry. *Journal Of Engineering And Applied Sciences*, 14(2), 575-382.
17. Khaghaany, M., Kbelah, S., & Almagtome, A. (2019). Value Relevance Of Sustainability Reporting Under An Accounting Information System: Evidence From The Tourism Industry. *African Journal Of Hospitality, Tourism And Leisure*, 8, 1-12.
18. Lieberman, I. (2018). *In Good Times Prepare For Crisis: From The Great Depression To The Great Recession: Sovereign Debt Crises And Their Resolution*: Brookings Institution Press.
19. Rasool, A. B. (2018). Federal Units And International Loans. *Qalaai Zanist Scientific Journal*, 3(1), 1022-1051.