Research Article

The Impact Of Public Spending On Some Macroeconomic Variables Of The Tunisian Economy For The Period(2022-2004)

Sundus Jasim Shaaibith[1*], Slim Mahfoudh[2]

[1*]PhD student, Faculty of Economics and Management, University of Sfax, Tunisia; College of Administration and Economics, University of Al-Qadisiyah, Iraq. Email: sndsgasm@gmail.com; sundus.shaaibith@qu.edu.iq
[2]Higher Institute of Business Administration. S fax. Tunisia. Email: Slim.mahfoudh@isaas.usf.tn

ARTICLE INFO	ABSTRACT
	The research aims to analyses the impact of public spending on some of Tunisia's macroeconomic indicators for the period 2004-2022. One of the main findings of the research was: the impact of public spending on some of Tunisia's macroeconomic indicators for the period between (2004-2022) to the effect that economic growth, the results demonstrated that an increase in public spending could lead to an increase in economic activity and growth, thanks to the promotion of public demand, employment and investment. public expenditure has had an impact on the rate of inflation in Tunisia's economy. Increased public spending has increased the demand for resources and services Public expenditure has improved employment opportunities and reduced unemployment rates in Tunisia's economy. Public spending on government projects creates new jobs and boosts economic activity and, finally, fiscal deficits and public debt. The Government has committed itself to carefully managing public expenditure to avoid significant fiscal deficits and increasing public debt. In the event of an uncontrolled increase in public spending, a fiscal deficit is required to be financed through increased public debt. The study recommended: promoting public spending in Tunisia through increased public investment in infrastructure such as roads, ports and logistics systems as well as promoting government consumption, where increased public spending in areas such as education, health and social welfare can enhance government services to citizens public expenditure in Tunisia can contribute to the creation of new jobs through the financing of infrastructure projects and government services, as well as improving government revenues through increased public spending in Tunisia's economy s revenue flow can increase through value-added taxes and other taxes related to economic activities. **Keywords:** Public expenditures - macroeconomic variables Chapter One General framework of the study

Introduction:

The general budget in Tunisia is a financial document that determines the revenues and expenditures of the government throughout the year. The general budget aims to achieve a balance between revenues and expenditures, and to ensure the sustainability of financial matters and the stability of the national economy. The general budget of Tunisia is prepared annually, where the Ministry of Finance and other concerned parties participate in this process, where revenues are determined from various sources, such as taxes, fees, non-tax revenues, in addition to external financing if necessary. As for expenditures, amounts are allocated to various sectors and ministries, such as education, health, security, infrastructure, etc.

The research problem:

Therefore, the research question will focus on answering the following question: "Analyse the impact of public expenditure on some macroeconomic variables of the Tunisian economy for the period (2004-2022)?"

Importance of the research:
The importance of this research comes through the study of analysing the impact of public expenditure on some macroeconomic variables of the Tunisian economy for the period (2004-2022)

Research objectives:
The research aims to show the analysis of the impact of public expenditure on some macroeconomic variables of the Tunisian economy for the period (2004-2022)

Research methodology:
The researcher relied in this research on the induction process mainly, which is based on monitoring the impact of public spending on some macroeconomic variables of the Tunisian economy for the period (2004-2022), and then there may be another scientific approach that we will resort to in the course of addressing the issue, which is the analytical method with some standard procedures to understand the nature of the data and variables that affect the crisis, and with reference to the theoretical aspect, and based on previous studies and the reality of the impact of public spending on some macroeconomic variables of the Tunisian economy for the period (2004-2022).

Limitations of the research:
- The objective scope of the study (research topic): Studying the impact of public expenditure on some macroeconomic variables of the Tunisian economy for the period (2004-2022)
- Time frame of the study (research period): The time frame of the study is from 2004 to 2022
- The geographical (spatial) scope of the study: The geographical scope of the study is Tunisia.

First Requirement: Analysis of public expenditure trends in Tunisia for the period (2004-2022)
Public expenditures in Tunisia refer to the spending carried out by the Tunisian government in various fields and sectors to meet the needs of the country and its population.
A. Salaries and wages: A large part of public expenditures is allocated to pay the salaries of employees working in the public sector, including teachers, doctors, and other government employees.
B. Education and health: The government also allocates significant funds to improve Tunisia's education and healthcare sector, by building and renovating schools and hospitals, purchasing medical equipment, and providing basic and higher education.
C. Infrastructure: The government invests in infrastructure development to promote economic and social development, such as building roads, bridges, airports, improving the public transport network, and providing potable water and sanitation.
D. Security and defence: Public expenditures are also earmarked for national security and defence, including salaries and equipment for the army, police, intelligence and improving security infrastructure.
E. Social support: The government allocates resources to provide social support to vulnerable and needy groups, such as employment assistance, social subsidies, and scholarships(Boukhatem, 2021, p. 79).

Table (1) shows public expenditures in Tunisia for the period (2004-2022) million Tunisian dinars

Capital expenditure as a percentage of total expenditure %	Current expenditure as a percentage of total expenditure %	Total expenditure	Annual growth rate %	Capital expenditure	Annual growth rate %	Current spending	Year
12.2	83.6	4949.79	25.2	712.89	12.8	4236.9	2004
14.4	85.4	4983.8	3.11	714.7	12.5	4269.1	2005
13.9	85.4	6112.8	13.3	956.8	6.9	5156.0	2006
14.9	49.0	7397.7	10.9	965.9	22.9	6431.8	2007
16.8	85.3	8792.4	30.3	1365.8	14.6	7426.6	2008
13.9	86.6	2719.5	26.9	1682.6	24.2	1036.9	2009
11.1	87.4	9820.2	(1.30)	1698.6	(31.3)	8121.6	2010
10.9	86.1	14090.2	48.5	2369.5	35.7	11720.7	2011
8.7	86.8	15094.6	2.9	2398.7	4.64	12695.9	2012
14.2	85.4	16316.3	2.84	2456.7	22.39	13859.6	2013
14.9	88.5	15593.2	(3.38)	2468.8	(3.92)	13124.4	2014
8.9	85.9	19280.2	12.49	2698.9	18.46	16581.3	2015
10.8	91.3	16941.8	12.7	2789.3	(18.2)	14152.5	2016
14.0	91.3	19328.2	(23.53)	2345.6	18.9	16982.6	2017
13.2	49.5	19340.8	13.0	2358.1	21.8	16982.7	2018
12.1	87.5	22028.1	4.32	2658.4	15.8	19369.7	2019
9.2	87.0	15848.08	12.69	258.78	16.98	15589.3	2020
12.5	96.6	18294.17	13.56	2698.07	17.99	15596.1	2021
13.3	88.0	14488.6	49.1	2789.9	39.6	11698.7	2022

- Source: Central Department of Statistics, Financial Accounts of the Government of Tunisia, Annual Report (2004-2002)

-Central Bank of Tunisia, Annual Economic Report (2004-2022)
- Final Account of the Financial Administration, Annual Report, for different periods.

Second Requirement: Analysing the evolution of some macroeconomic variables in Tunisia for the period (2004-2022)

First: Analysing the evolution of GDP in Tunisia for the period (2004-2022)

In recent decades, Tunisia has experienced moderate economic growth with fluctuations in some years. After independence in 1956, the Tunisian government focused on promoting manufacturing industries and increasing investments in various sectors such as agriculture, tourism and services. In the 1990s, the Tunisian economy experienced high growth rates, but slowed down in the following years due to the economic and political challenges that affected the country, and since the Tunisian revolution in 2011, the country has experienced economic fluctuations, but continues efforts to promote investment and infrastructure development.

Prior to 2004, Tunisia was suffering from economic and social challenges, but then the country began to witness remarkable economic growth. Several factors influenced this growth, including economic reforms and transformations undertaken by the Tunisian government, as well as the strengthening of key sectors such as tourism and industry. In recent years, Tunisia's GDP has experienced moderate growth, driven by increasing exports and strengthening the private sector, however, there are still many challenges facing the Tunisian economy, such as inflation and unemployment, which require ongoing efforts to promote economic stability and improve employment opportunities. (GDP in Tunisia is influenced by the country's economic and political challenges.

GDP in Tunisia is pivotal to the country's economy and development, as Gross Domestic Product (GDP) is measured by estimating the total value of goods and services produced by the Tunisian economy during a specific period of time, such as one year, and Tunisia witnesses several impacts of GDP on the economy and society, including:

1. Economic growth: GDP reflects the growth of the Tunisian economy, as it is a key indicator of the development of production and productivity in the country. An increase in GDP indicates a growing economy and promotes employment and development.

2. Jobs and employment: GDP is linked to job creation, as an increase in GDP boosts investment and business and leads to more job opportunities for citizens.

3. Government revenue: GDP affects government revenues. An increase in GDP increases tax collections and government revenues, enabling the government to fund public services, infrastructure and other government programmes.

4. Equitable distribution of wealth: GDP also reflects the equitable distribution of wealth in society. If an increase in GDP is accompanied by a more equitable distribution of income and wealth, it can improve the standard of living of individuals and reduce poverty and social inequality.

5. Economic stability: GDP is one of the factors of economic stability in Tunisia, the strength and stability of the economy enhances confidence in the financial system, attracts national and foreign investments, and contributes to promoting sustainable growth. (Jabou, 2019, pp. 126-128)

• In general, it can be said that GDP plays a vital role in achieving economic and social development in the State of Tunisia, and the following table shows the development of GDP and its growth rate for the State of Tunisia for the period (2004-2022), as follows:-

Table (2) shows the development of GDP and its growth rate for the State of Tunisia for the period (2002-2022) Million Tunisian Dinars

Output growth rate %	GDP in current prices	Year
23.6	16785.1	2004
39.2	22345.1	2005
24.9	24455.3	2006
11.9	25543.2	2007
21.6	27765.1	2008
24.6)(	28437.4	2009
18.9	30441.3	2010
39.8	31341.1	2011
14.5	32341.1	2012
2.9	32311.1	2013
7.9)(	33245.5	2014
24.9)(	34544.2	2015
3.9)(	35098.5	2016
9.5	36123.4	2017
2.6	36444.5	2018
9.8)(	38351.6	2019
3.6)(	37566.8	2020
9.9)(	41564.5	2021
3.6)(	41897.2	2022

Source :- Ministry of Finance of the State of Tunisia, Annual Budget Report (2004-2022)
- Central Department of Statistics, National Accounts, Tunisia, Economic Report, for different years.

II: Analysing the evolution of inflation in Tunisia for the period (2004-2022)

When contemporary governments do not succeed in confronting inflationary pressures through monetary policy measures, they are obliged to use a set of fiscal policy tools and instruments, and one of the most important of these tools is public spending, where the budget policy exerts its influence in controlling inflation and deflation through government spending, whether consumption or investment, by raising or reducing its rates according to the prevailing economic conditions, in the event of an inflationary gap, the government reduces government spending, which leads to a reduction in the volume of consumption and affects other forms of spending, and thus a decrease in aggregate demand, which addresses the increase in inflation.

In light of the increasing needs to improve living conditions, reduce poverty, reduce the disparity in the distribution of wealth among members of society, create job opportunities, accelerate the pace of economic growth, reconstruction and encourage investment, in addition to the political conditions in the Arab region, all this led to the formation of pressures to increase public expenditures, so we note the increase in the size of public expenditures in all the countries under study, as we note that public expenditures in Morocco moved from about $ 7 billion in 2004 to about $ 20 billion in 2022, and public expenditures in Tunisia witnessed a significant increase from $ 3.5 billion in 2000 to $ 8.4 billion in 202 (Yahya, 2021, p.171)

Economic inflation in Tunisia refers to the increase in the price level of goods and services over a certain period of time, as inflation is affected by several factors, such as demand and supply of goods and services, changes in production costs, and changes in government and central bank policies, in recent years, Tunisia has witnessed varying inflation rates, and inflation may cause an increase in the cost of living, as prices rise and the purchasing power of citizens is affected(Yahya, 2021, p. 172).

In general, economic inflation requires maintaining a balance between demand and supply, promoting investments and developing the economic sector, enhancing transparency and strengthening economic management in the country.

The phenomenon of inflation is a pathological condition suffered by the majority of global economies, whether developed or developing countries, and then witnessed a gradual decline to reach 0.43% in 2014, while in 2015 and 2016 the inflation rate increased slightly to reach 1.55% and 1, We note that inflation rates in Tunisia were acceptable with slight fluctuations, and it can be said that they were stable between 32 during the period (2004-2022), but in 2010, which was characterised by the outbreak of the Tunisian revolution and as a result of political and security instability in the country, the inflation rate stabilised at a relatively high level during the period 2010-2014 compared to previous years, as the inflation rate in 2010 was estimated at 4, 41% and 5% in 2014, as a result of the monetary expansion adopted by the Central Bank to support economic activity and cover the liquidity needs of the banking system; the rise in the prices of imported basic materials, as well as the continued decline in the exchange rate of the dinar, which reached 2.128 against the euro and 1.607 against the dollar in 2013. (Yahya, 2021, p. 172)

Þ The following table shows the analysis of the evolution of inflation in Tunisia for the period (2004-2022)

Table (3) shows the analysis of the evolution of inflation in Tunisia for the period (2004-2022)

Output growth rate %	Inflation rate	YEAR
7.5	5.6	2004
7.6	5.7	2005
8.8	6.1	2006
8.9	6.3	2007
10.8	11.2	2008
4.9	3.2	2009
3.5	3.4	2010
5.2	4.1	2011
3.2	3.2	2012
3.3	3.4	2013
2.5	3.0	2014
2.6	3.2	2015
2.1	3.3	2016
2.3	3.5	2017
2.6	4.2	2018
2.7	4.3	2019
2.9	4.6	2020
2.8	4.5	2021
3.1	4.3	2022

Source :- Ministry of Finance of the State of Tunisia, Annual Budget Report (2004-2022)

Third: Unemployment in Tunisia for the period (2004-2022)

Unemployment is an economic variable that affects the public budget in Tunisia. When the unemployment rate increases in the country, economic production decreases and government revenues from income taxes and sales taxes decrease, and thus, a gap occurs in the public budget as government expenditures exceed revenues, and unemployment also increases dependence on social subsidies and financial aid by the government, which

also increases government expenditures, and this leads to an increase in the budget deficit and the accumulation of public debt, which negatively affects economic stability and sustainable development, in addition, high unemployment affects government spending in other areas such as education and health, as the unemployed need

1. Low economic growth: High unemployment rates reduce production and reduce economic growth, when there are a large number of unemployed people, overall economic output is reduced and the pace of economic growth slows down.

2. Increased burden on government resources: Providing social subsidies and support to the unemployed requires a large cost to the government, and government revenues decrease as a result of a decrease in personal income and consumption, and at the same time expenditures on social support and unemployment increase, and this leads to an increase in the public budget deficit and the accumulation of public debt. **(Al-Senussi, 2021, pp. 129-131)**

2. Decreased investments: High unemployment rates may lead to a decrease in investments in the country. When there is an abundance of unemployed labour, there is pressure on salaries and labour costs, which makes investments less attractive, and this negatively affects economic growth and the possibility of creating new job opportunities. In order to address the effects of unemployment, the government must pay special attention to promoting economic growth, enhancing employment opportunities, developing infrastructure, supporting entrepreneurship and national industries, and promoting education and vocational training to qualify youth for the labour market. **(Al-Senussi, 2021, p. 131)**
• The following table shows the analysis of the development of unemployment in Tunisia for the period (2004-2022)

Table (4) shows the analysis of the development of unemployment in Tunisia for the period (2004-2022)

Output growth rate %	Unemployment rate	Year
8.2	3.6	2004
6.3	4.5	2005
8.4	5.3	2006
8.6	6.4	2007
9.2	8.9	2008
5.9	3.4	2009
6.3	4.9	2010
6.9	4.7	2011
6.7	3.9	2012
6.8	3.7	2013
6.1	3.8	2014
6.8	3.9	2015
4.6	3.7	2016
4.6	4.1	2017
4.8	5.2	2018
4.9	4.8	2019
3.6	6.3	2020
3.8	5.8	2021
3.4	4.9	2022

Source: Ministry of Finance of the State of Tunisia, Annual Budget Report (2004-2022)

IV: Analysing the development of foreign trade in Tunisia for the period (2004-2022)
Foreign trade in Tunisia has developed over recent decades and is considered one of the most important sectors of the country's economy, as Tunisia relies on foreign trade to increase employment opportunities, increase revenues, and achieve economic development, and Tunisia is part of the European Union and one of the most important trading partners of the European Union in the Mediterranean region, and the trade agreements signed by Tunisia with the European Union, including the Deep and Comprehensive Partnership Agreement (DCFTA), are among the most important initiatives that helped to strengthen trade relations between the two countries.

1- Exports: Tunisia is a country located in North Africa with a diverse industrial base and a long history of exports, as Tunisia's exports include a wide range of products and services, and the following is some information about exports in Tunisia:- **(Youssef, 2023, p. 410)**

A- Traditional Industries: These include traditional handicrafts such as ceramics, carpets, traditional clothing, jewellery, and furniture, as these products play an important role in Tunisia's exports.

B- Tourism: Tourism is one of the most important economic sectors in Tunisia. The magnificent beaches, historical sites and rich culture attract tourists from all over the world, and tourism revenues are a large part of Tunisia's exports.

Services: Including financial services, insurance, logistics, software delivery, quality control, and education, these services contribute to exports and contribute to the development of the Tunisian economy. **(Youssef, 2023, pp. 412-415)**

The above are just some examples of exports in Tunisia, and there are many other sectors that play an important role in the country's exports, which changes the size and composition of exports in Tunisia over time, and it is clear from the following table the relative importance of exports to GDP in Tunisia, as follows:-

Table (5) shows the relative importance of exports to GDP in Tunisia

Exports as a percentage of GDP (per cent)	Exports billion	GDP billion	Year
55.051	54.9	55.6	2004
59.936	56.4	60.5	2005
61.214	58.6	61.8	2006
73.885	61.5	74.5	2007
78.261	63.9	78.9	2008
80.851	64.9	81.5	2009
82.943	65.7	83.6	2010
88.738	66.2	89.4	2011
91.126	67.4	91.8	2012
91.714	68.6	92.4	2013
93.071	72.9	93.8	2014
93.975	72.5	94.7	2015
97.655	74.5	98.4	2016
98.332	76.8	99.1	2017
100.721	77.9	101.5	2018
108.404	79.6	109.2	2019
88.747	75.3	89.5	2020
91.632	76.8	92.4	2021
55.051	79.8	98.3	2022

Source: Researcher based on World Bank statistics for the period (2004-2022) **1-**

Imports: Imports in Tunisia play an important role in the country's economy, as it relies heavily on imports to meet its needs for goods and services that are not produced in sufficient quantities locally or do not exist in the required quality, which includes goods that are imported to Tunisia in various industries such as cars, machinery and equipment, electricity, mobile phones, electronic devices, medicine, foodstuffs and oil derivatives, and imports are considered part of the total value of the country's foreign trade, including**: -**

A- Linkage to global markets: Imports can strengthen Tunisia's connection to global markets, thus allowing local companies to access new trade opportunities, which can result from exchanging trade with other countries and boosting Tunisian exports.

B. Impact on the trade deficit: The amount of imports versus exports should be monitored to avoid increasing the trade deficit, as increasing imports without increasing exports can lead the country to enter a negative trade deficit that affects the local economy **(Youssef, 2023, pp. 422-424)**.

Þ In general, imports play an important role in the development of the domestic economy in Tunisia by meeting local needs, improving technology and production, and expanding the trade base. However, the balance of imports and exports must be considered to achieve sustainable development and economic stability, and the following table shows the relative importance of imports to GDP in Tunisia.

Table (6) shows the relative importance of exports to GDP in Tunisia

Exports as a percentage of GDP (per cent)	Exports billion	GDP billion	Year
55.147	55.6	45.3	2004
55.631	56.1	46.9	2005
56.728	57.2	47.2	2006
57.715	58.2	48.5	2007
58.602	59.1	49.8	2008
59.698	60.2	50.2	2009
59.888	60.4	51.2	2010
61.777	62.3	52.3	2011
62.564	63.1	53.6	2012
63.652	64.2	54.8	2013
67.243	67.8	55.7	2014

68.635	69.2	56.5	2015
69.518	70.1	58.2	2016
71.605	72.2	59.5	2017
73.298	73.9	60.2	2018
74.988	75.6	61.2	2019
69.562	70.2	63.8	2020
72.655	73.3	64.5	2021
55.147	74.8	65.7	2022

Source: Researcher based on World Bank statistics for the period (2004-2022) **1- Volume of foreign trade (terms of trade)**

The terms of trade **(also known as the balance of trade) is** "an indicator that measures the value of exports and imports between one country and its trading partners over a certain period of time, usually measured annually. The trade exchange rate reflects the trade surplus or trade deficit of the country." The trade exchange rate is calculated by subtracting the value of imports from the value of exports, if the value of exports is higher than the value of imports, the country has a trade surplus or a positive trade balance, and if the value of imports is higher than the value of exports, the country has a trade deficit or a negative trade balance, and the trade exchange rate is an important indicator of the commercial and economic activity of the country, as it reflects the strength of its industrial and agricultural sector and its dependence on import and export, and helps in analysing the performance of economic sectors and understanding the impact of foreign trade on the **context of** Trade exchange in Tunisia is one of the main factors of the Tunisian economy, due to its strategic location as it is considered a gateway for trade between Africa, Europe and the Middle East, and Tunisia depends on a wide range of products and sectors in trade, and the main products for export include olive oil, clothing, pharmaceuticals, cars and electronics components, as for imports, they include foodstuffs, oil and oil derivatives, industrial equipment and machinery, international trade agreements are also an important part of trade in Tunisia, and Tunisia is a member of the World Trade Organisation and has signed agreements with the World Trade Organization. **(Al-Khattab, 2022, pp. 146-147)**

In 2004, Tunisia's trade exchange was of great importance to the national economy. During that year, Tunisia imported products and services with an estimated value of about 18.5 billion US dollars, while Tunisia exported products and services with a value exceeding 14.3 billion US dollars, and the most important trade partners of Tunisia in that period were the European Union, especially France, Italy and Germany, and Tunisia's export activities were mainly concentrated in the sectors of clothing, textile and footwear, chemical and plastic industries, agriculture and food industry, in addition, the tourism sector witnessed a remarkable growth, as Tunisia received a large number of tourists from various countries, as Tunisia in that period faced the **following** challenges

Table (7) shows the value of trade exchange (in million US dollars) for Tunisia in the mentioned period

Value of trade exchange	Exports	Imports	Year
3.700	14.300	18.000	2004
4.100	16.100	20.200	2005
4.200	23.100	27.300	2006
6.100	23.700	29.800	2007
5.500	27.800	33.300	2008
2.100	26.300	28.400	2009
5.300	28.200	33.500	2010
6.300	26.800	33.100	2011
3.100	29.800	32.900	2012
2.100	32.300	34.400	2013
3.200	34.000	37.200	2014
4.900	32.600	37.500	2015
6.200	31.500	37.700	2016
10.300	34.400	44.700	2017
9.700	38.800	48.500	2018
10.400	40.300	50.700	2019
10.800	36.400	47.200	2020
12.500	39.500	52.000	2021
3.700	41.200	47.400	2022

Source: Researcher based on World Bank statistics for the period (2004-2022)

The third requirement: Description of the measurement methods
The researcher adopted a modern method in economic measurement used to analyse the relationship between the time series (Vector) of the variables under study, as the autoregression vector estimation model was used to analyse the relationship between the study variables, and the Autoregression Estimates (VAR) model consists of a system of equations dealing symmetrically so that the unrestricted vector autoregression The unrestricted vector autoregression (UVAR) represents each variable in the system as a function of the same variable and other variables in the system with different lags, and there are no external variables in this type

of model, which is described as a reduced form of a structural model that shows the relationships and interactions between variables over time, and this method includes: -

1. Time Series Regression Models: These models are used to analyse the temporal relationship between public spending and macroeconomic variables such as gross domestic product (GDP), inflation, and unemployment rate over the specified time period, which can be represented by a general mathematical equation as follows:

$(Y\_t = \beta\_0 + \beta\_1 X\_t + \varepsilon\_t)$

Where:
- (Y_t) is the dependent variable (e.g. GDP).
- X_t is the independent variable (e.g. public expenditure).
- β_0 and β_1 are the regression coefficients.
- ε_t is the error term.

3. Impact Evaluation Models: These models help to analyse how public spending affects economic variables such as GDP and unemployment, and assess the effectiveness of government policies in achieving their economic objectives, which can be represented by impact evaluation equations such as difference-in-differences equations or using difference-in-differences regression models.

4. Input-Output Analysis Models: These models help in understanding the impact of public spending on different sectors in the economy and how they interact with each other and contribute to GDP, which can be represented using equations of production, consumption, and total productivity for each sector in the economy.

5. Time Series Models: These models allow analysing time trends and changes in public expenditure and macroeconomic variables over time and predicting future developments, which can be represented by time series equations such as ARIMA or vector autoregression.

6. General Equilibrium Models: These models help in understanding the impact of public spending on all economic sectors and the distribution of resources between them, and how changing public spending can affect the general balance of the economy, which can be represented by a general analysis model that includes equations for each sector of the economy and their interactions with each other and with public spending.

Second: Characterisation of the **study variables**
The factors affecting both the general budget deficit and the production structure in the Iraqi economy, which have been explained earlier, are important topics, which cannot be analysed only on the descriptive side, but it is necessary to identify and measure their impact and the percentage of their contribution to the changes that occur in both of these variables during the study period (2004-2022), and this is done through the use of economic measurement, which is one of the distinct quantitative methods in this field, as it is easy and highly possible to determine the nature of the variables that are introduced or excluded from the models, and the study includes a set of economic measurements, which include the following

A. The impact of public spending on economic growth
The success of economic policies in achieving economic growth is manifested through the high rate of actual economic growth, and the impact of public spending on economic growth appears through the impact of spending on GDP, and the relationship between the impact of public spending and economic growth is not unidirectional but is a reciprocal relationship, in which the dependent variable replaces the independent variable, and the following table shows the analysis of public expenditures, GDP and per capita output in Tunisia during the period (2004-2022 AD)

Table (8) shows the analysis of the reality of the deficit in the general budget of the State of Tunisia for the period (2004-2022) in million Tunisian dinars

--	Total Public Revenues	Total Public Expenditure	Surplus - Deficit	Deficit or surplus to public revenue %	Deficit or surplus to public expenditure %	Deficit as a percentage of GDP
Mean	42893.3	86549.1526	-68540.605	-315063947	38.3105263	-314.742
Median	23685.9	12269.2	5417.8	30.5	43.9	32.1
Maximum	201269.6	1410948	16132.7	53.1	113.3	53.8
Maximum	6341.2	5456.2	-1389340	-6429.75	-98.4	-6429.7
Std.Dev.	54874.0519	320751.083	319898.124	1480.83225	54.0833296	1481.04007
Skewness	1.98662305	4.00554555	-4.0047552	-4.0048315	-0.7300995	-4.0048082
Kurtosis	5.45404835	17.0485502	17.0445887	17.0449323	3.17488466	17.0448141
Jarque-Bera	17.2654883	207.051980	206.943828	206.953405	1.71218974	206.95187

Probability	0.00017817	1.09454499	1.15536324	1.14984438	0.42481781	1.15169591
Sum	814972.700	1644433.9	-1302271.5	-5997.15	727.900000	-5980.0999
Sum Sq.Dev.	542009084	185186264	184202657	39471555.2	52650.1178	39482634.8
Observations	19	19	19	19	19	19

- **Source:** Prepared by the researcher based on the Eviews programme

Figure (1) shows the analysis of the reality of the deficit in the general budget of the State of Tunisia for the period (2004-2022) in million Tunisian dinars
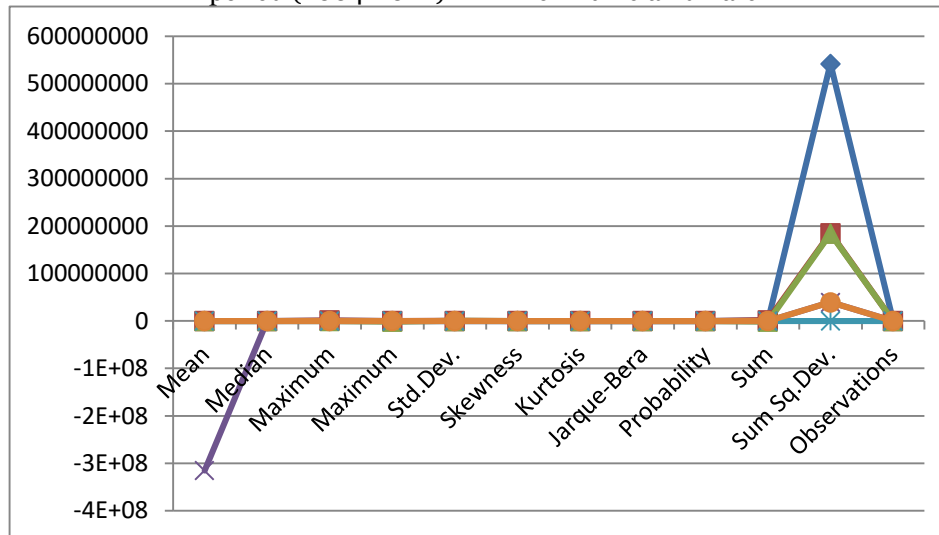
- **Source:** Prepared by the researcher based on the Eviews programme

The presented table shows analytical statistics for a set of data related to GDP, public expenditures, public revenues, and the percentage of deficit or surplus in the economy, and the following are the main analytical and statistical results presented in the table:
1. (Mean) (Mean):
- The average deficit to GDP ratio is -314.742.
- The average ratio of deficit or surplus to public expenditure is 38.31%.
- The average ratio of deficit or surplus to public revenue is -315063947.

2. (Median):
- The median gives a more accurate view of the group's data, as the deficit to GDP ratio in the median is 32.1%.

3. (Maximum Value) (Maximum):
- The maximum value indicates the highest level of the deficit to GDP ratio at 53.8.
- Also, the maximum value of public expenditure is 1410948 and public revenue is 201269.6.

4. (Minimum Value (Minimum) :
- The minimum value represents the lowest level of the deficit-to-GDP ratio at -6429.7.
- The lowest level of public expenditure is 5456.2 and the lowest level of public revenue is 6341.2.

5. (Standard Deviation) (Std.Dev):
- The standard deviation of the data set reflects how much the values are dispersed around the mean.
- The table shows that the standard deviation of the deficit to GDP ratio is 1481.04.

6. (Skewness):
- Skewness shows the asymmetric distribution of the data.
- The result of -4.0048082 indicates a negative asymmetric distribution of the GDP deficit ratio.

7. Kurtosis:
- Kurtosis measures the sharpness of the peak of the data distribution.
- Values near 3 indicate a normal distribution.

8. (Jarque-Bera Test):
- This test measures whether the data follows a normal distribution.
- A value of 206.95187 for the GDP Deficit to GDP ratio indicates no normal distribution.

9. (Probability):
- A low probability value indicates a high probability that the data does not follow a normal distribution.

10. Sum:
- The sum of the deficit to GDP ratio is -5980.0999.
- The total public expenditure is 1644433.9 and the total public revenue is 814972.7.

Table (9) shows the analysis of the reality of the Tunisian trade balance for the period (2004-2022) in millions of Tunisian dinars

-	Exports (X)	Imports (M)	Trade Balance (X-M)
Mean	25203.6578	48323.0631	100080.639
Median	23512.3	45235.9	21.8791
Maximum	35345.2	66345.2	1901112
Maximum	21789.8	24213.2	2.4234
Std.Dev.	3938.92705	12583.2548	436139.649
Skewness	1.29711182	-0.2899829	4.00693842
Kurtosis	3.58479431	2.28779135	17.0555555
Jarque-Bera	5.59865139	0.66758135	207.243183
Probability	0.06085108	0.71610700	9.94751273
Sum	478869.5	918138.2	1901532.1575
Sum Sq.Dev.	279272633	2850089424	342392029
Observations	19	19	19

- **Source:** Prepared by the researcher based on the Eviews programme

Figure (2) shows the analysis of the reality of the Tunisian trade balance for the period (2004-2022) in millions of Tunisian dinars
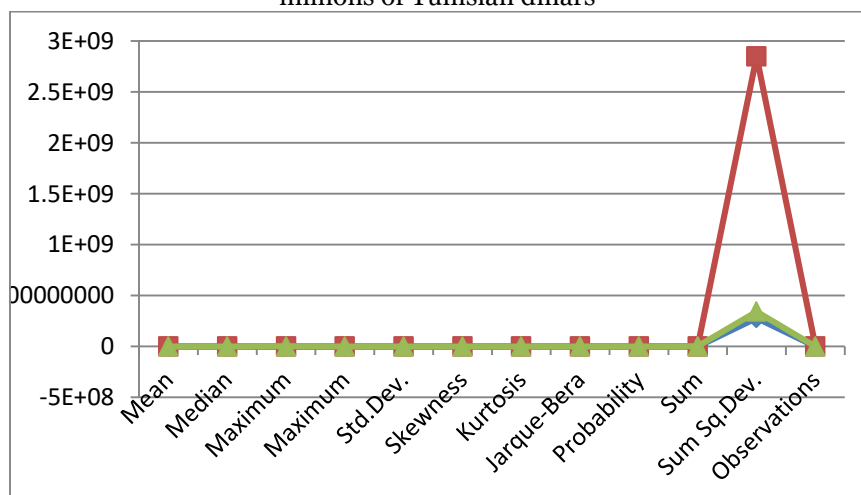
- **Source:** Prepared by the researcher based on the Eviews programme

From the previous table containing analytical and statistical values for a set of data including trade balance (X-M), imports (M), and exports (X), the following are the analytical and statistical results of these data:
1. (Mean):
- Trade Balance (X-M): The average trade balance is positive, indicating that exports generally outweigh imports.

- Imports (M): The average imports is a high value compared to the other two averages, indicating that imports make up a significant portion of the trade balance.

- Exports (X): Average exports are lower than imports, but generally not insignificant.

2. (Median):
- The median of the trade balance is close to zero, indicating a balanced distribution around the mean.
- Imports and exports have a median close to the mean, indicating a balanced distribution around the mean.

3. (Maximum):
- The maximum value of the trade balance is 1901112, which is very high compared to the average trade balance.
- The minimum value of the trade balance is 2.4234, indicating that there are very low values in the data

4. (Minimum Value) (Minimum):
- The minimum value represents the lowest level of the deficit to GDP ratio at -6429.7.
- The lowest level of public expenditure is 5456.2 and the lowest level of public revenue is 6341.2.

5. (Standard Deviation) (Std.Dev):
- The standard deviation **of** the trade balance indicates a large variation in the data and is much higher than the deviation of imports and exports

6. (Skewness):
- The skewness of the trade balance is greater than 4, indicating a distribution that is skewed towards the positive side.
- Imports and exports show a more moderate distribution, although exports have a positive skewness.

7. Kurtosis:
- Kurtosis in the trade balance shows a distribution with a sharp peak, indicating the presence of anomalous values.
- Flattening in imports and exports indicates a more normal distribution

8. (Jarque-Bera Test):
- The Jarque-Bera test shows a low probability for the trade balance, indicating that the data does not follow a normal distribution.
- While the probability of imports and exports shows a normal distribution

Table (10) shows the evolution of GDP and its growth rate for the State of Tunisia for the period (2002-2022) Million Tunisian Dinars

-	GDP in current prices	Output growth rate %
Mean	4.5	4.5
Median	3.2	4.2
Maximum	10.8	11.2
Maximum	2.1	3.0
Std.Dev.	2.7	1.9
Skewness	1.0	2.3
Kurtosis	2.6	8.6
Jarque-Bera	3.5	41.7
Probability	0.17	8.6
Sum	87.2	87.1
Sum Sq.Dev.	133.2	65.7
Observations	19	19

- **Source:** Prepared by the researcher based on the Eviews programme

Figure (3) shows the development of GDP and its growth rate for the State of Tunisia for the period (2002-2022) Million Tunisian Dinars
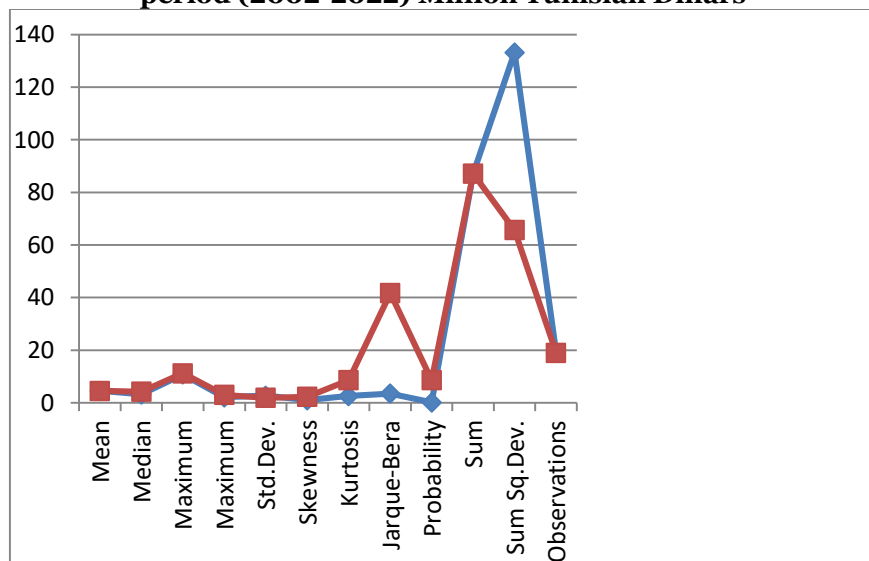
- **Source:** Prepared by the researcher based on the Eviews programme

It is clear from the previous table containing statistical data related to the GDP growth rate (per cent) and GDP at current prices. The following analytical and statistical results illustrate the general trends in the data:

1. (Mean):
- The average GDP growth rate is 4.5 per cent, indicating that the economy is experiencing steady growth on average.
- The **average** GDP in current prices is 4.5 per cent, reflecting the overall economic performance.

2. (Median):
- The median GDP growth rate is 4.2 per cent, indicating a balanced distribution around the mean.
- The median for GDP in current prices is 3.2 per cent, reflecting a reasonable balance in the data.

3. (Maximum):
- The maximum GDP growth rate is 11.2%, which is well above the mean, indicating high outliers.
- The maximum GDP in current prices is 10.8 per cent, which is also well above average.

4. (Minimum value) (Minimum):
- The minimum GDP growth rate is 3.0 per cent, while the minimum GDP in current prices is 2.1.

5. (Std.Dev):
- The standard deviation of the GDP growth rate is 1.9, indicating moderate variation in growth.
- The standard deviation of GDP in current prices is 2.7, indicating moderate variation.

6. (Skewness):
- The skewness of the GDP growth rate is 2.3, indicating that the data is skewed towards higher values.
- The skewness of GDP in current prices is 1.0, indicating a fairly even distribution.

7. (Kurtosis):
- The kurtosis of the GDP growth rate is 8.6, indicating the presence of anomalous values in the data.
- The kurtosis of GDP in current prices is 2.6, which is closer to a normal distribution.

8. (Jarque-Bera Test):
- The Jarque-Bera test result for the GDP growth rate is 41.7, indicating that the data does not follow a normal distribution.
- The test result for GDP in current prices is 3.5, which may indicate that there may be more variance.

Table (11) shows the analysis of the evolution of inflation in Tunisia for the period (2004-2022)

-	Inflation rate	Output growth rate %
Mean	31926.4210	15.6
Median	32341.1	11.9
Maximum	41897.2	39.8
Maximum	16785.1	2.6
Std.Dev.	6549.26	11.6
Skewness	-.052752	0.70
Kurtosis	2.81524	2.54
Jarque-Bera	0.90826	1.74
Probability	0.63499	0.41
Sum	60660.2	297.6
Sum Sq.Dev.	772070	2440.1
Observations	19	19

- **Source:** Prepared by the researcher based on the Eviews programme

Figure 4: Analysis of the evolution of inflation in Tunisia for the period (2004-2022)
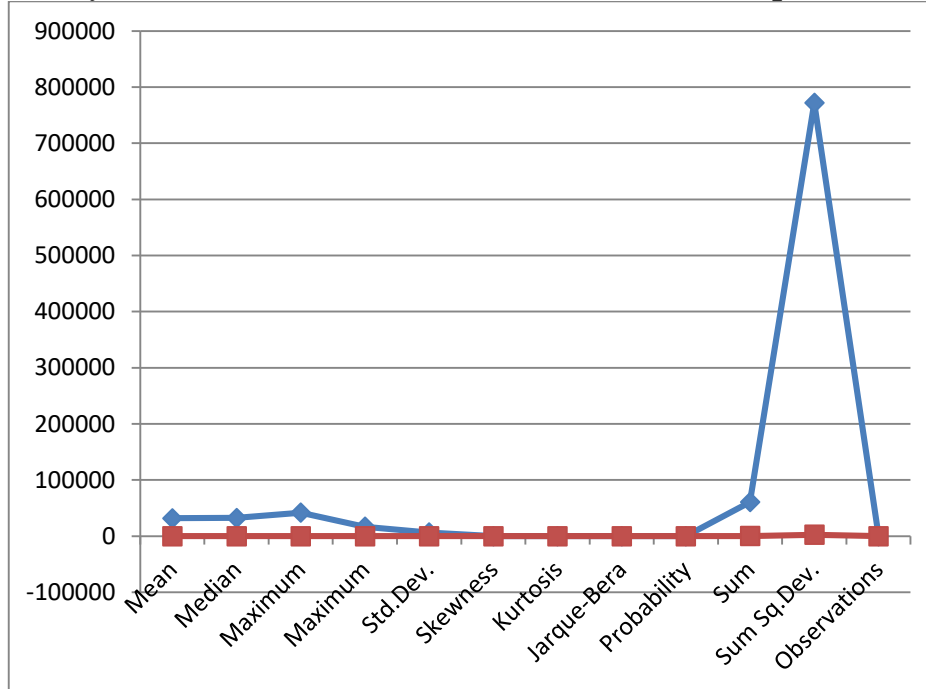
- **Source:** Prepared by the researcher based on the Eviews programme

It is clear from the previous table that contains statistical data related to the GDP growth rate (%) and the inflation rate, and the following are analytical and statistical results that show the general trends in the data:

1. (Mean) (Average).
- The average GDP growth rate is 15.6 per cent, indicating a significant increase in economic growth.
- The average inflation rate is 31926.4210, which is a large value suggesting high inflation.

2. (Median):-
- The median GDP growth rate is 11.9%, indicating that most of the data is centred around this figure.
- The median inflation rate is 32341.1, which is close to the average suggesting a balanced distribution.

3. (Maximum): -
- The maximum GDP growth rate is 39.8%, which is much higher than the average, indicating high anomalies.
- The maximum inflation rate is 41897.2, which is also a high value indicating high inflation.

4. (Minimum Value (Minimum): -
- The maximum GDP growth rate is 39.8%, which is much higher than the average, indicating high anomalies.
- The maximum inflation rate is 41897.2, which is also a high value indicating high inflation.

5. (Standard Deviation) (Std.Dev): -
- The maximum GDP growth rate is 39.8%, which is much higher than the average, indicating high anomalies.
- The maximum inflation rate is 41897.2, which is also a high value indicating the presence of significant inflation.

6. (Skewness): -
- The maximum GDP growth rate is 39.8%, which is much higher than the average, indicating high anomalies.
- The maximum inflation rate is 41897.2, which is also a high value indicating high inflation.

7. (Kurtosis): -
- The maximum GDP growth rate is 39.8%, which is much higher than the average, indicating high anomalies.
- The maximum inflation rate is 41897.2, which is also a high value indicating high inflation.

8. (Jarque-Bera Test): -
- The Jarque-Bera test result for the GDP growth rate is 1.74, indicating that the data may be normalised.
- The test result for the inflation rate is 0.90826, which may indicate the possibility of a normal distribution.

Table (12) shows the analysis of the evolution of unemployment in Tunisia for the period (2004-2022)

-	Output growth rate %	Output growth rate %
Mean	6.1	4.8
Median	6.3	4.7
Maximum	9.1	8.9
Maximum	3.4	3.4
Std.Dev.	1.7	1.3
Skewness	0.1	1.5
Kurtosis	2.0	5.5
Jarque-Bera	0.7	12.6
Probability	0.6	0.00
Sum	115.9	91.8
Sum Sq.Dev.	54.1	32.0
Observations	19	19

- **Source:** Prepared by the researcher based on the Eviews programme

Figure 4: Analysis of the evolution of unemployment in Tunisia for the period (2004-2022)
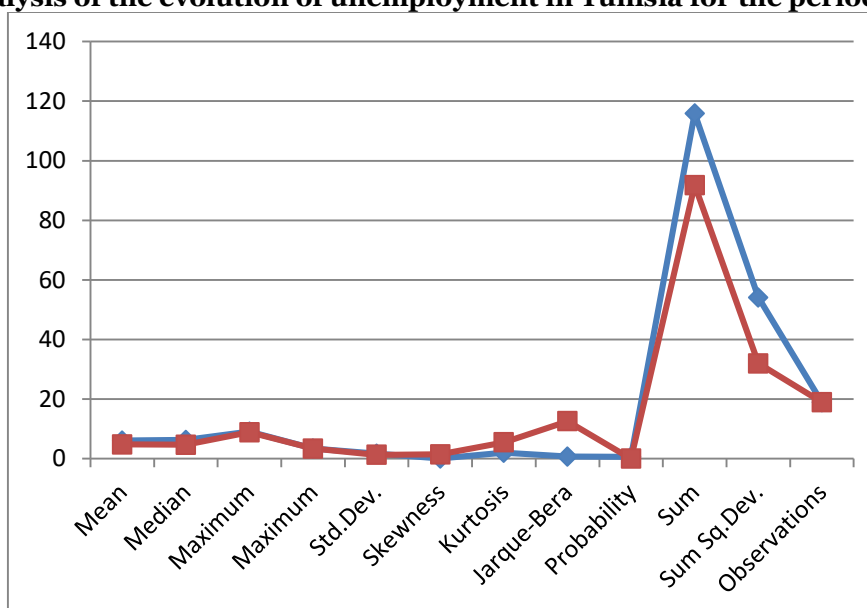
- **Source:** Prepared by the researcher based on the Eviews programme

It is clear from the previous table that the table contains statistical data related to the GDP growth rate (%) and the unemployment rate, the following are analytical and statistical results that illustrate the general trends in the data:-

1. (Mean) (Average): -
- The average GDP growth rate is 4.8 per cent, indicating a moderate economic performance.
- The average unemployment rate is 6.1%, which may reflect some challenges in the labour market.

2. Median.
- The median GDP growth rate is 4.7 per cent, indicating a balanced distribution around the mean.
- The median of the unemployment rate is 6.3%, indicating that most of the data is centred around this level.

3. (Maximum Value): -
- The maximum GDP growth rate is 8.9%, which is above average and reflects strong economic performance in some periods.
- The maximum unemployment rate is 9.1 per cent, well above average, reflecting periods of high unemployment.

4. (Minimum Value (Minimum): -
- The minimum GDP growth rate is 3.4 per cent, indicating that growth has been generally flat.
- The minimum unemployment rate is 3.4 per cent, indicating periods of low unemployment.

5. (Standard Deviation) (Std.Dev): -
- The standard deviation of the GDP growth rate is 1.3, indicating moderate variation in growth.

- The standard deviation of the unemployment rate is 1.7, indicating moderate variation in the unemployment rate.

6. (Skewness): -
- The skewness of the GDP growth rate is 1.5, indicating a distribution that is skewed towards higher values.
- The skewness of the unemployment rate is 0.1, indicating a fairly benign distribution.

7. (Kurtosis):-
- The kurtosis of the GDP growth rate is 5.5, indicating the presence of anomalous values.
- **The** unemployment rate is 2.0, which is closer to a normal distribution.

8. (Jarque-Bera Test): -
- The Jarque-Bera test result for the GDP growth rate is 12.6, indicating that the data may not follow a normal distribution.
- The test result for the unemployment rate is 0.7, indicating that the data may follow a normal distribution.

Table (13) shows the analysis of the relative importance of imports to GDP in Tunisia

-	GDP billion	Imports billion	Imports as a percentage of GDP (per cent)
Mean	86.6	69.1	83.7
Median	91.8	68.6	88.7
Maximum	109.2	79.8	108.4
Maximum	55.6	54.9	55.0
Std.Dev.	14.7	7.86	15.9
Skewness	-0.80	-0.29	-0.62
Kurtosis	2.74	1.91	2.27
Jarque-Bera	2.08	1.21	1.64
Probability	0.35	0.54	0.44
Sum	164	131	15.9
Sum Sq.Dev.	389	11	45
Observations	19	19	19

- **Source:** Prepared by the researcher based on the Eviews programme

Figure (5) shows the analysis of the relative importance of imports to GDP in Tunisia
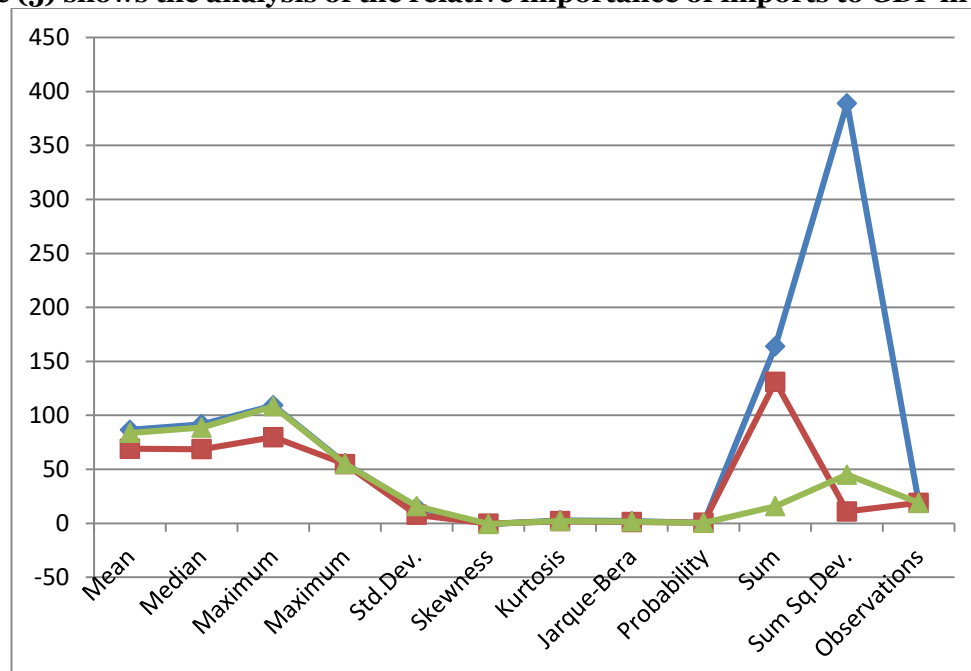
- **Source:** Prepared by the researcher based on the Eviews programme

It is clear from the previous table that the table contains statistical data related to the ratio of imports to GDP (%), imports in billions of units, and GDP in billions of units, and the following are analytical and statistical results that illustrate the general trends in the data:
1. (Mean) 1.
- The average ratio of imports to GDP is 83.7 per cent, indicating that imports constitute a significant portion of GDP.

- Average imports are 69.1 billion units, a large number that may indicate significant economic activity.
- The **average** GDP is 86.6 billion units, reflecting the overall size of the economy.

2. (Median): -
- The median of the ratio of imports to GDP is 88.7%, indicating that a large proportion of the data is centred around this value.
- The median of imports is 68.6 billion units.
- The median of GDP is 91.8 billion units.

3. (Maximum value): -
- The maximum ratio of imports to GDP is 108.4 per cent, which is a high value indicating a significant increase in imports compared to GDP.
- Maximum imports are 79.8 billion units.
- The maximum GDP is 109.2 billion units.

4. (Minimum Value (Minimum) : -
- The minimum ratio of imports to GDP is 55.0%.
- The minimum imports is 54.9 billion units.
- The minimum GDP is 55.6 billion units.

5. (Standard Deviation) (Std.Dev): -
- The standard deviation of the ratio of imports to GDP is 15.9, indicating a large variation in the ratio.
- The standard deviation of imports is 7.86 billion units.
- The standard deviation of GDP is 14.7 billion units.

6. (Skewness): -
- The skewness of the ratio of imports to GDP is -0.62, indicating that the data is skewed towards lower values.
- The skewness of imports is -0.29, indicating a moderate distribution.
- The skewness of GDP is -0.80, indicating that the data is skewed towards lower values.

7. (Kurtosis):-
- The kurtosis of the ratio of imports to GDP is 2.27, which is close to a normal distribution.
- The kurtosis of imports is 1.91, indicating a moderate distribution.
- **The** skewness of GDP is 2.74, indicating a relatively normal distribution.

8. (Jarque-Bera Test): -
- The Jarque-Bera test result for the ratio of imports to GDP is 1.64, indicating that the data may be normal.
- The test result for imports is 1.21.
- The test result for GDP is 2.08.

Table (14) shows the analysis of the relative importance of exports to GDP in Tunisia

-	GDP billion	Exports billion	Exports as a percentage of GDP (per cent)
Mean	55.0	65.4	63.8
Median	54.8	64.2	62.5
Maximum	65.7	75.6	74.9
Maximum	45.3	55.6	55.1
Std.Dev.	6.3	6.86	6.76
Skewness	0.16	0.04	0.18
Kurtosis	1.85	15.3	1.59
Jarque-Bera	1.13	1.70	1.68
Probability	0.56	0.42	0.43
Sum	10.4	124	1214
Sum Sq.Dev.	717.4	848.2	832.9
Observations	19	19	19

- **Source:** Prepared by the researcher based on the Eviews programme

Figure (6) shows the analysis of the relative importance of exports to GDP in Tunisia
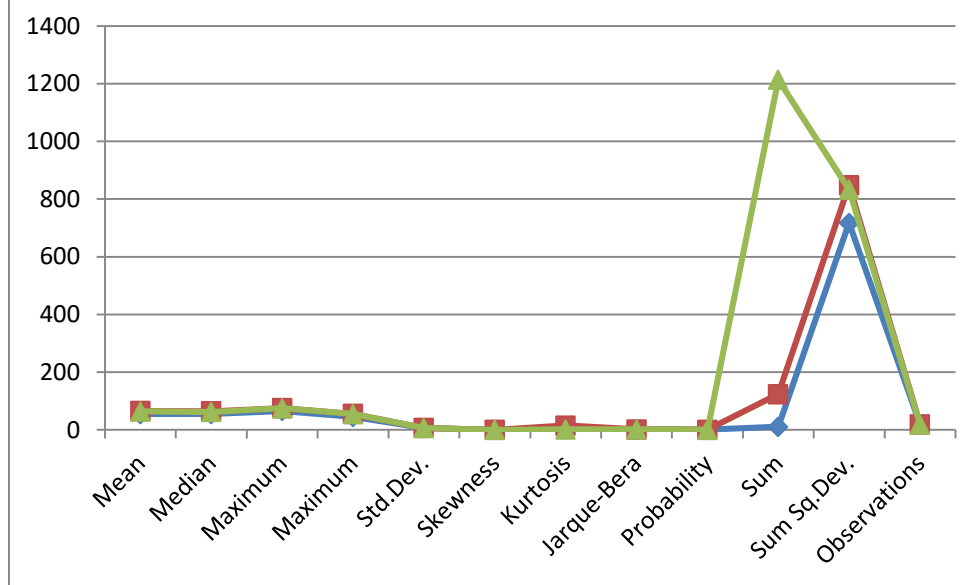
- **Source:** Prepared by the researcher based on the Eviews programme

It is clear from the previous table that the table contains statistical data related to the percentage of exports in GDP (%), imports in billions of units, and GDP in billions of units, and the following are analytical and statistical results that illustrate the general trends in the data:
A. Exports as a percentage of GDP:
- **Mean**: The average percentage of exports as a percentage of GDP is 63.8 per cent.

- **Median**: The percentage of exports as a percentage of GDP is 62.5 per cent at the median.

- **Maximum**: The maximum percentage of exports out of GDP is 74.9%.

- **Minimum**: The minimum percentage of exports out of GDP is 55.1%.

- **Standard Deviation (Std. Dev.):** The standard deviation of the percentage of exports from GDP is 6.76%.

- **Skewness:** The skewness of the data is approximately 0.18, indicating a moderate distribution.

- **Kurtosis:** The kurtosis is 1.59, which is less than 3 indicating a flat distribution.

- **Jarque-Bera test:** The Jarque-Bera test result is 1.68, indicating a normal distribution.

- **Probability**: The probability associated with the Jarque-Bera test is 0.43.

B. Exports in billions:
- **Mean**: The value of exports in billions is 65.4 billion on average.

- **Median**: The value of exports in billions is 64.2 billion at the median.

- **Maximum**: The maximum export value is 75.6 billion.

- **Minimum**: The minimum export value is 55.6 billion.

- **Standard Deviation (Std. Dev.):** The standard deviation of the export value is 6.86 billion.

- **Skewness:** The skewness of the data is close to 0.04, indicating a balanced distribution.

- **Kurtosis**: The kurtosis is 15.3, indicating a distribution with a long tail.

- **Jarque-Bera test:** The Jarque-Bera test result is 1.70.

- **Probability**: The probability associated with the Jarque-Bera test is 0.42.

C. GDP in billions:
- **Mean**: The GDP in billions is 55.0 billion.

- **Median**: GDP in billions is 54.8 billion.

- **Maximum (Maximum):** The maximum GDP in billions is 65.7 billion.

- **Minimum**: The minimum GDP in billions is 45.3 billion.

- **Standard Deviation (Std. Dev.):** The standard deviation of GDP is 6.3 billion.

- **Skewness:** The skewness of the data is approximately 0.16, indicating a moderate distribution.

- **Kurtosis**: The kurtosis is 1.85.

- **Jarque-Bera test:** The result of the Jarque-Bera test is 1.13.

- **Probability**: The probability associated with the Jarque-Bera test is 0.56.

Table (15) shows the value of trade exchange (in million US dollars) for Tunisia in the mentioned period

-	Imports	Exports	Trade Value
Mean	36.5	30.3	6.0
Median	34.4	31.5	5.3
Maximum	52	41.2	12.5
Maximum	18	14.3	2.1
Std.Dev.	9.8	7.6	3.1
Skewness	-0.6	-0.5	0.6
Kurtosis	2.21	2.6	2.2
Jarque-Bera	0.50	0.9	2.0
Probability	0.77	0.6	0.3
Sum	69	577	114.2
Sum Sq.Dev.	1720	1046	183
Observations	19	19	19

- **Source:** Prepared by the researcher based on the Eviews programme

Figure (7) shows the value of trade exchange (in million US dollars) for Tunisia in the period
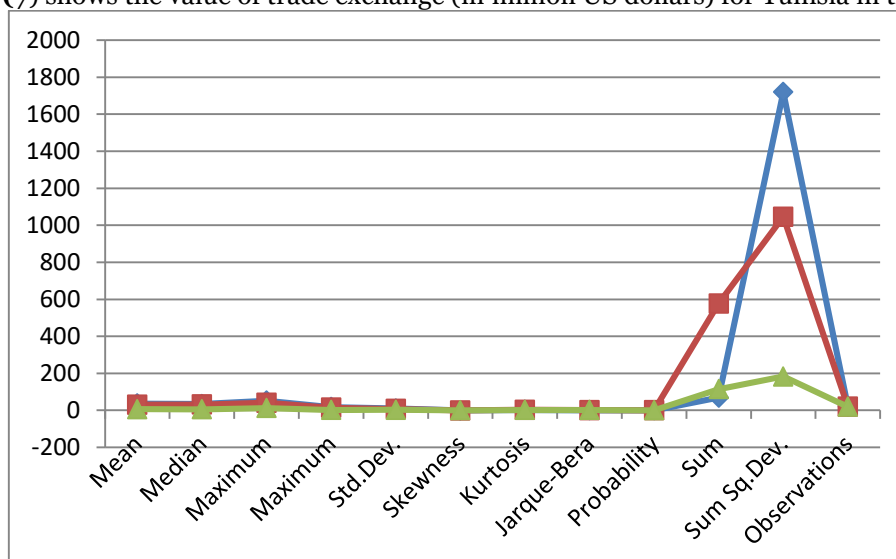
- **Source:** Prepared by the researcher based on the Eviews programme

It is clear from the previous table that the table contains statistical data related to the value of trade exchange (in millions of US dollars) for Tunisia in the period, and the following are analytical and statistical results that illustrate the general trends in the data:
A. Value of trade exchange:-
- **Mean (Mean):** The value of trade exchange is 6.0 on average.
- **Median**: The value of trade is 5.3 at the median.

- **Maximum**: The maximum trade value is 12.5.

- **Minimum (Minimum):** The minimum trade value is 2.1.

- **Standard Deviation (Std. Dev.):** The standard **deviation of** the trade value is 3.1.

- **Skewness:** The skewness of the data is approximately 0.6, indicating a moderate distribution.

- **Kurtosis**: The kurtosis is 2.2, which is close to 3, indicating a normal distribution.

- **Jarque-Bera test:** The result of the Jarque-Bera test is 2.0.

- **Probability**: The probability associated with the Jarque-Bera test is 0.3.

B. Exports: -
- **Mean**: The value of exports is 30.3 on average.

- **Median**: The value of exports is 31.5 at the median.

- **Maximum**: The maximum value of exports is 41.2.

- **Minimum**: The minimum value of exports is 14.3.

- **Standard Deviation (Std. Dev.):** The standard deviation of exports is 7.6.

- **Skewness:** The skewness of the data is -0.5, indicating a distribution that is skewed to the negative side.

- **Kurtosis:** The kurtosis is 2.6, which is close to 3, indicating a normal distribution.

- **Jarque-Bera test:** The result of the Jarque-Bera test is 0.9.

- **Probability**: The probability associated with the Jarque-Bera test is 0.6.

<div align="center">

Importance: -

</div>

- **Mean**: The average value of imports is 36.5.

- **Median**: The value of imports is 34.4 at the median.

- **Maximum**: The maximum number of imports is 52.

- **Minimum (Minimum):** The minimum number of imports is 18.

- **Standard Deviation (Std. Dev.):** The standard deviation of imports is 9.8.

- **Skewness:** The skewness of the data is -0.6, indicating a distribution that is skewed to the negative side.

- **Kurtosis:** The kurtosis is 2.21, which is close to 3, indicating a normal distribution.

- **Jarque-Bera test:** The result of the Jarque-Bera test is 0.5.

- **Probability**: The probability associated with the Jarque-Bera test is 0.77.

<div align="center">

Main findings

</div>

The research reached a set of conclusions on the impact of public expenditure on some macroeconomic variables of the Tunisian economy for the period (2004-2022)

1. Economic growth: It is believed that an increase in public spending may lead to an increase in economic activity and economic growth, thanks to enhancing public demand, providing employment opportunities and promoting investment.

2. Inflation: Public spending may have an impact on the rate of inflation in the Tunisian economy, as an increase in public spending may lead to an increase in demand for resources and services, which may lead to an increase in the price level.

3. Unemployment: Public spending may contribute to improving employment opportunities and reducing unemployment rates in the Tunisian economy, as public spending on government projects can lead to the creation of new jobs and boost economic activity.

4. Fiscal deficit and public debt: The government should carefully manage public spending to avoid incurring large fiscal deficits and increasing public debt. If public spending increases uncontrollably, it may lead to fiscal deficits that need to be financed by increasing public debt.

Recommendations of the study

Based on the above, we recommend the following:
1. Enhance public spending in Tunisia to boost economic growth by increasing public investments in infrastructure such as roads, ports, and logistics systems.
2. Boosting government consumption, as increased public spending in areas such as education, health, and social welfare can enhance government services provided to citizens.
3. Job creation, as public spending in Tunisia can contribute to the creation of new jobs by funding infrastructure projects and government services.
4. Optimise government revenues By increasing public spending in the Tunisian economy, the flow of government revenues through value-added taxes and other taxes related to economic activities could increase. Strengthening confidence in the economy Sustained public spending may contribute to building confidence in the Tunisian economy. By increasing public investments and enhancing government services, economic and social conditions improve, thus increasing local and foreign investors' interest in the sector and promoting sustainable growth.

(Sources and References)

A. Financial Reports
1. Central Bank Economic Report, Tunisia (2004-2022)
2. Central Department of Statistics, Financial Accounts of the Government, State of Tunisia, Annual Report (2004-2002)
3. Central Bank of Tunisia, Annual Economic Report (2004-2022)
4. Final Account of the Financial Administration, Annual Report, for different periods.
5. Ministry of Finance of the State of Tunisia, Annual Budget Report (2004-2022)

B. Arabic references
1. Ben Moufaki, El-Zein (2023): **The impact of R&D activities on economic growth in developing countries "2020-2000":** A **benchmark study using the stochastic coefficient model of Swami**, Algeria, Journal of Economic Notebooks, Achour Ziane University Djelfa - Faculty of Economic Sciences, Commercial Sciences and Management Sciences, Volume (14), Issue (1), pp. 118-122
2. Jabou, Salim (2019): A **benchmark study of the reflection of macroeconomic conditions on the performance of Arab financial markets during the period 2005-2017**, Algeria, Journal of Economic Reforms and Integration in the Global Economy, Higher School of Commerce - Laboratory of Economic Reforms, Development and Integration Strategies in the Global Economy, Volume (13), Issue (2), pp. 120-121
3. Al-Khattab, Aws Mohammed (2022): The **impact of budget deficit on the performance of a sample of Arab financial markets**, Iraq, Al-Rafidain Development Journal, University of Mosul, Faculty of Management and Economics, Volume (41), Issue (133), pp. 120-159
4. Al-Daraji, Wakal (2023): **Preferential agreements and their role in enhancing trade exchange:** The **case of Algerian-Tunisian intra-trade during the periods 2008-2013 and 2014-2022,**Algeria, Journal of Administrative and Financial Sciences, Chahid Hamma Lakhdar El Oued University - Faculty of Economic, Commercial and Management Sciences, Volume (7), Issue (1), pp. 45-52
5. Snoussi, Mohamed Ali (2021**): The relationship between economic growth and unemployment: Testing Okun's Law on oil and non-oil countries:** A **case study of the economies of Tunisia, Egypt, Algeria and Libya for the period 2000-2017**, Libya, Al-Sa'il Journal, Misrata University, Vol. (44), No. (27), pp. 127-129
6. Al-Azmi, Abdullah Ghazi (2008): **Economic inflation an applied study on the State of Kuwait**, Cairo, Journal of Commerce and Finance, Tanta University, Faculty of Commerce, Volume (4), Issue (2), pp. 111-115.
7. Malak, Sharafuddin (2016): **International trade liberalisation and its impact on the balance of payments position in developing countries: A comparative study: Algeria, Tunisia and**

Morocco for the period 2000-2013, Algeria, Master Thesis, Kassidi Merbah University, Ouargla, Faculty of Economics, Business and Management Sciences, Volume (4), Issue (23), pp. 109-120

8. Yahya, Medreka Zanoun (2021): The **role of macroeconomic variables in economic growth in selected developing countries for the period 1990-2017,** Iraq, Kirkuk University Journal of Administrative and Economic Sciences, Kirkuk University, Faculty of Management and Economics, Volume (11), Issue (1), pp. 171-17

9. Yusuf, Maroush (2023): **Determinants of Maghreb countries' trade exchanges with China: An approach using gravity model from 2000 to 2019**, Algeria, Journal of Economic Notebooks, Achour Ziane Djelfa University - Faculty of Economic Sciences, Commercial Sciences and Management Sciences, Volume (14), Issue (1), pp. 410-420