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RESEARCH ARTICLE

Sudan's External Debt and its Impact on Economic Growth, A Standard Study during the Period (2020-1990) using the (ARDL) Model

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ABSTRACT

Sudan continued to suffer from economic distortions due to the insufficiency of macro policies that led to a decline in the output of its sectors, which led to a decrease in the volume of exports with the increase in imports and the increase in the budget deficit in the last years of the study. All these problems cast a shadow over economic growth, which made Sudan resort to international institutions toborrow with an increase in the accumulation of previous debts and their burdens, which made it a crisis that threatens the stability of the state and its independence. Therefore, this study tried to analyze, measure and explain the impact of Sudan's external debt on economic growth during the period 1990-2020 AD. The importance of the study lies in building a standard model that mainly clarifies the impact of these debts and some important indicators on the growth of the Sudanese economy during the period 1990-2020 AD. The problem of the study appeared in several questions, including whether external debt affected economic growth? Accordingly, the study imposed a main hypothesis, which is that the external debt negatively affected the economic growth output in Sudan? While the study aimed to identify the debts of Sudan and its development and the reasons for the aggravation of debts, the descriptive approach and standard analysis were followed with the use of mathematical and statistical methods. The study concluded that the estimated model exceeded all stability tests and the examination of the rest. Thus, it was ensured that the error correction model is free of standard problems. The value of the error correction coefficient reached (0.988-), which indicates that the economic growth rates are adjusted towards their equilibrium value in a relative period of time from the remaining imbalance of the period (t-1), which is equivalent to (98%). This percentage reflects a very high adjustment speed towards equilibrium in the sense that the economic growth rates take a year and a month (0.98/1) towards their equilibrium values after the impact of any shock in the model as a result of the change in the determinants. The study recommended the need to work to address the imbalance in the trade balance so that the level and quality of imports are pressured to reduce the pressure on the use of foreign exchange earnings, as well as the importance of Islamic countries joining together so that the surplus countries help the Islamic deficit countries through the establishment of the Islamic Monetary Fund.

INTRODUCTION

Sudan's external indebtedness has begun to worsen since the early 1980s and has risen from (15) billion dollars in 1990AD to more than (77) billion dollars in 2020. Although these figures are lower than the actual figures, the developments of this increase in the volume of indebtedness are not limited only to the financial conditions that characterized the international lending market in the early years of the 1980s, especially the difficult conditions stipulated by the International Monetary

Fund when granting loans to countries that need them only. The reasons for the development of that indebtedness in Sudan are likely to be internal and external reasons, as the internal dimensions are the inefficiency of internal policies, the failure of structural reforms, the interventionist role of the state, the use of useless loans, the return and ineffective industrialization, the fluctuation and weakness of export proceeds, the weakness of domestic savings, the exacerbation of the balance of payments deficit and the poor The management of external debt and the failure of development policies. As for the external dimensions, they were the recession, the deterioration of the terms of trade, the change in exchange rates, the shrinkage of government assistance, the rise in oil prices, the rise in global interest rates, the collapse of the global monetary system and the economic recession in industrialized countries. These reasons led his society to produce many effects on economic growth. As a result, the effects of the development of the volume of external indebtedness put forward many proposed solutions to get out of this crisis.

Research Problem:

The problem of the study lies in the following pivotal questions:

1. Has external debt affected economic growth?
2. Did inflation affect economic growth?
3. Did GDP affect economic growth?

Research hypotheses:

The study assumed a major hypothesis, which is that external debt negatively affected the economic growth output in Sudan?

The Significance of The Research:

The importance of this study stems not only from the importance of the objectives to which external financing is attributed to the state and contributing to its achievement, but also from the possibility of its negative impact represented by the state entering into debts that it may be unable to pay in the future. However, the real contribution of this study lies in allocating its subject entirely to a preferential analysis of external financing without other means of financing the budget deficit and the need for Sudan to study an issue that clarifies the worsening of debt as well as building a standard model that clarifies the impact of these debts mainly and some important indicators on the growth of the Sudanese economy during the period 1990-2020.

Research Objectives:

The study aims at:

1. Identify Sudan's debts, their development and their impact on economic growth.
2. Identify the causes of debt aggravation.
3. How to develop a remedy for the external debt problem.

RESEARCH METHODS

The study followed the descriptive approach and standard analysis with the use of mathematical and statistical methods.

The limits of the research: -

This study deals with the Republic of Sudan within its spatial limits. As for its temporal limits, the researcher gave special attention to the period (2020-1990AD), which is the period under study.

Previous Studies:

1/Christine Makanza – 2023AD [(1)]

Following the rise in external debt in sub-Saharan Africa, the impact of external debt on economic growth has captured the attention of empirical studies during the last two decades of the twenty-first century. This study examined the short- and long-term impact of external debt on the economic growth of 39 sub-Saharan African countries during the past decade for the period 2011-2021. The data of the annual balanced dynamic panel of the study were obtained from a reliable and recognized data source, the World Development Index. The study found that external debt has a significant negative impact in both the short and long term and unequivocally with other factors remaining constant as the relative change in total external debt is associated with a decrease of 0.034 per cent in real GDP of sub-Saharan African countries in the short term while leading to a contraction of 0.65 per cent in real GDP of sub-Saharan African countries in the long term. The study concluded that the long-term negative impact is greater than the short-term impact. This implies that sub-Saharan African countries must allocate their external debt to projects that bring other investment opportunities to repay external debt. Moreover, sub-Saharan African countries must adopt strategies to improve sources of domestic revenue mobilization that complement external debt, such as improving the informal sectors to expand tax bases.

2/Abdul Karim Youssef – 2021AD[(2)]

This study examined the impact of government debt on economic growth in Nigeria using annual data from 1980 to 2018 and the automatic distributed lag technique. The empirical results showed that external debt is an obstacle to long-term growth, while its short-term impact was growth-enhancing. Domestic debt had a significant positive impact on long-term growth, while its short-term impact was negative. In the long and short term, debt service payments delayed growth, confirming the impact of debt surplus. The results indicated that the government should direct borrowed funds to diversify the productive base of the economy. This would improve long-term economic growth, broaden the revenue base and enhance the ability to repay outstanding debts as they fall due

Fiscal improvements that encourage domestic resource mobilization, effective debt management strategies, and reliance on domestic rather than external debt to increase deficit financing in order to generate greater growth are the main contribution of the study.

3/ Manal Jaber -2020 AD [(3)]

External public debt is an important source of financing as well as an essential supplement to domestic sources of financing to support growth, economic development and other needs of the state. Developing countries usually resort to borrowing from abroad, provided that the debt is paid in future in installments with interest agreed upon between the concerned authorities. However, this debt, if not used in income-generating productive activities, will result in a decrease in the state's ability to pay and meet these obligations. Most standard studies have stated that external public debt is one of the most important factors that significantly affect the economic growth process, and that both affect each other (that is, the relationship

They have a reciprocal relationship), but if it exceeds the reasonable limit, it will constitute an obstacle to sustainable economic growth. The study concluded that there is a negative impact of the increase in foreign debt on both GDP, total exports, cash reserves and the level of inflation in Egypt

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[1] Christine Makanza **- The Effect** of External Debt on Economic Growth in Sub-Saharan Africa - Estimates of the Global System Variable Model – Journal of Economics and Persuasive Finance – University of Cape Town - Volume 11 - Issue2 - 2023

[2] Abdul Karim Yusuf – The Impact of Government Debt on Economic Growth in Nigeria – Spines University - Malaysia – Volume 9 – Issue 1 - 2021

[3] Manal Jaber Moussa – The Impact of External Debt on Economic Growth in Egypt – Journal of Politics and Economics – Volume 9 – Issue 8 - 2020

during the period (1990-2019), and that foreign loans are mostly of the difficult type harmful to the economy because they are short, medium and high cost.

4/Thubika Nkanywa – 2018[4]

South Africa is a developing country facing diverse challenges such as high unemployment, poverty, inequality and low economic growth. In an attempt to address these issues, the government can initiate borrowing and assume public debt. Countries with large and persistent public debt indicate negative perceptions of investors. Debt may lead to credit risk imposed by weak currency and credit rating downgrade. The study examined whether public debt can affect public investment. Ultimately, economic growth. Delayed automatic regression distribution, Granger causality, pulse response function, and variance analysis were applied to achieve objectives. The co-integration test found a long-term relationship between the studied variables. It was found that in the long term there is a negative relationship between public debt and investment. Since there is a direct correlation between investment and economic growth, there is an inverse relationship in the relationship between public debt and economic growth. The error correction mechanism confirmed that the system can adapt to equilibrium at a speed of 17%. There is a two-way causal relationship between public debt and economic growth. The impulse response function has found that a single shock in the standard deviation in public debt adversely affects economic growth. The results of the analysis of variation indicate that the public debt shock represents fluctuations of 16.39% in economic growth. It is recommended to encourage countries suffering from scarcity of capital to borrow so that more capital can be accumulated. However, the subsequent stage of borrowing characterized by a high level of debt will lead to weak growth.

The first topic: the concept of external debt

Before addressing the concept of external debt, we will learn about other concepts related to it, namely:

First: The concept of subsidies:

The issue of foreign aid (development aid) hasbeen one of the economic and intellectual concerns of academia, intellectuals, and political and economic leaders in many countries of the world for more than three decades. In many international conferences, the last of which was the Second South Summit of the Group of 77 and China held in Doha in June 2005, which stressed the need to urge developed countries to commit to providing development aid as it represents a form of economic cooperation between countries. Aid was defined as financial resources provided by developed countries to developing and poor countries, and the latter does not commit to pay. Foreign aid also means the total value of grants and financial and technical gifts, which are included in soft loans provided by official sources (countries and international organizations) Donors to developing countries.

Second: Aid Sections:

Bilateral Assistance

It is represented in the assistance provided by one country to another, where developed countries provide development assistance in the form of soft loans, grants, and financial and technical assistance, and to many developing countries at varying levels and proportions under bilateral agreements, especially since developing countries may not have access to borrowing in accordance with the commercial conditions prevailing in the global financial markets. The prevailing political and social conditions in some developing countries do not encourage international financial institutions to provide commercial loans to them, and the disadvantage of this type of assistance is related to political, security, and military considerations.

[4] Thubika Nkanywa – Can public debt stimulate public investment and economic growth in South Africa – Journal of Economics and Persuasive Finance – Volume 6 – Issue 1 - 2018

Multilateral Assistance

These institutions are represented in the World Bank, the International Fund for Agricultural Development and regional development banks such as the Arab Fund for Economic Development, which in turn grant or lend these funds to developing countries receiving these aid.

TECHNICAL ASSISTANCE

The assistance can be in the form of technical assistance by providing skilled personnel to support national expertise or in the form of **capital assistance** and provide developing countries with financial financing or goods for different purposes.

Third: Aid Objectives

Aid between donor and recipient countries. Recipient countries often request this aid for economic motives, which is to bring resources to promote economic and social development internally or for humanitarian purposes, such as fighting poverty, confronting natural disasters, wars and treating diseases. Donor countries often provide aid for political and economic considerations that achieve their own interests, which often lead to counterproductive results. The experience of aid provided by the United States to some developing countries such as Zaire and Zambia, which have rich mineral resources, as well as the political concessions provided by recipient countries in line with the interests of the donor capitalist countries.

At the beginning of the twenty-first century, the path turned to the need for development assistance to achieve the Millennium Development Goals, which are as follows:

Achieving universal primary education.

Promote gender equality and empower women to work in all areas.

Reducing child mortality.

Combat HIV/AIDS and seek to stop the spread of malaria and other major diseases.

1. Ensuring environmental sustainability by integrating the principles of sustainable development into state policies and programs, halving the proportion of people without access to safe drinking water, and achieving an improvement in the lives of one million people living in slums and densely populated neighborhoods by 2015.

2. Developing a comprehensive global partnership for development by further developing an open financial and trade system based on sound rules, expected behavior and approaches. This system also includes obliging countries to good governance and development nationally and internationally.

3. Humanistic motives as they urged the divine religions to cooperate between peoples.

4. Motives for political and strategic interests, as it is noted in some countries such as America that the US aid law stipulates that US international aid is a tool of foreign policy.

5. Motives of economic and commercial interests, such as restricting goods and services from donor countries for loans and assistance. Donor countries also determine the areas of use of these loans, assistance and grants as a condition, as well as may require supervision of the areas of their use and work to manage them, thus providing job opportunities for donor countries.

On the other hand, recipient countries benefit from such assistance in exploiting their idle resources and providing infrastructure and job opportunities for their citizens.

Fourth: The Concept of Loans:

It is a source of financing for the purposes of international trade and occurs as a natural product to fill the deficit in the balance of payments as a result of the shortage of foreign currencies, or to fill the deficit in the balance of payments as a result of the shortage of foreign currencies, or to fill the budget deficit, or to bridge the gap between savings and investment. It is also a financial obligation expected in a specific period of time contracted by the government or individuals with a guarantee, as the acquirers of its bonds are natural or legal persons residing outside the countries and subscribed through the external financial market. In this case, the state has gone to the savings of another country, or resorted to international financial institutions to lend to it. The loan contract in this case requires the state to be subject to guarantees and benefits on the loan bonds, as well as the benefits stipulated, in order to encourage individuals and donor institutions to borrow to grant credit to the borrowing state.

It is noted that the state resorts to external (foreign) loans when domestic savings and private capital are unable to carry out developmental productive projects, as well as in the case of a shortage of foreign currencies to cover the balance of payments deficit.

Fifth: The Concept of External Debt:

It is the set of financial obligations due in a specific period of time, which are the obligations that the government or public institutions have contracted to guarantee the government for the account of a private body. This definition includes in its content the principal of government debt guaranteed by the government and long, medium or short-term commercial loans. External indebtedness is generally defined as a cash amount provided by the lender to the borrower on a consensual basis. The debtor is obligated to repay the principal and interest within the specified and agreed deadlines. It is an exceptional source of financing for economic operations due to insufficient internal sources of financing, which puts pressure on economic decisions and the borrower in particular.

Sixth: Types of Debt:

Debts can be divided into several sections:

By source

A. Internal debt, which depends on the local currency of an individual, body or government in the same country without a change in purchasing power. This is because of the stability of the amount of money. This debt does not lead to an imbalance in the economic cycle and does not constitute tampering in the state.

B. External debts: They are loans that move between countries significantly in the form of hard currency and in the event of insufficient internal debt or the need of individuals for external transactions and require the process of assuming the exchange of currencies in addition to the existence of guarantees provided to creditors.

By low

Public debt: At least one of its two parties is the state or one of its bodies, and it is usually borrowed to finance its public treasury (in case of deficit) or to address the imbalance of the state's economy or to equip its institutions with foreign goods.

Private debt: It is between two private administrations so that the borrower uses the loan to obtain profits while using this debt in an economic way in order to achieve the greatest benefit and the lowest cost.

By duration

Short-term debts: Debts that are borrowed from commercial banks and are due to be paid in a maximum period of one year. They are used in current assets such as commodities and primary

resources in addition to financing the budget deficit on an emergency basis. The interest rate in this type of loan is very high, which reflects the deterioration of the debtor's condition. These loans may be renewed or the creditor banks may refuse to renew them.

Medium-term debt: Debt that is repayable over several years and whose duration ranges from five to seven years in the case of loans to commercial banks, but far exceeds that in the case of advanced debt from governments, which is usually characterized by low interest from commercial debt.

Long-term debt: Debts that are repayable over a period of more than seven years and are characterized by a long grace period in addition to low interest rates.

By usage

Consumer loans: They are used in the purchase of goods and services for consumption and the borrower is always the state, and they are used in dealing with the depression crisis, and they are granted in order to reduce or eliminate the phenomenon of unemployment, which is difficult to pay.

Investment loans: This type is used to establish and expand projects with the aim of achieving profit and benefit, and it is considered long-term loans.

By donor

Official debt: It is defined as those debts provided by governments, international financial institutions and regional financial institutions. International financial institutions are those institutions affiliated with the United Nations, which include in its membership most of the countries of the world and deal in the field of international lending. As for regional financial institutions, they are institutions established to achieve the interests of a particular party or group of countries. They also often extend a helping hand to other developing countries, and they include the National Investment Bank, the African Development Bank, the Asian Development Bank, and the European Investment Bank.

Commercial or private debt: It is the debt provided by commercial banks. This type of debt takes the following forms:

Supplier Facilities (Export Loans).

Banking facilities: They are short-term loans granted by commercial banks for the purpose of financing a seasonal and temporary deficit in the foreign exchange treasury.

Seventh: Causes of the debt problem:

There are many factors that have contributed directly or indirectly to the continued growth and worsening of indebtedness, namely that developing countries bear a great deal of responsibility for the problem of worsening their external debt, because the economic and social policies that these countries have adopted during the development decade have been largely responsible for exacerbating this problem, as well as the increasing dependence on the outside world and the inability to mobilize the economic surplus, as there is a strong and direct link between the growth that has occurred in the external debt of developing countries and the so-called widening of the gap in their domestic resources, which is the gap The gap between the rate of national investment and the rate of domestic saving, which is the gap between exports and imports and the absence of an appropriate policy for external borrowing. When developing countries resorted to the problems of external financing, they did not draw a clear and sound borrowing policy for themselves. This in turn led to the explosion of the external debt crisis, as well as the smuggling of funds abroad and administrative corruption. The crisis of the worsening of external indebtedness has been accompanied by the existence of administrative corruption in the state apparatus in developing countries, resulting in the looting of a large part of foreign loans. This was done in the form of huge funds paid to some people and owners Influence as the proceeds of brokerage and brokering operations and these large and illicit funds that were looted from loans were smuggled abroad and the smuggling of these funds on a large scale has led to severe pressures on the balance of payments

of this country and domestic inflation.and There is a relationship between domestic inflation and increasing debt, as inflation negatively affects the balance of payments because it weakens the position of the country's exports in the global market and at the same time encourages increased imports. Domestic inflation also puts pressure on the exchange rate of the local currency, which deteriorates and encourages the flight of money abroad and creates obstacles to the flow of private foreign investments. These effects are severe Clarity in the case of countries that follow liberal policies in their foreign trade and do not apply the exchange control system. As for the failed liberal policies in the foreign trade and foreign exchange sector, the excessive indebtedness that occurred in a large number of developing countries in the past decade was characterized by a clear negligence in the foreign trade sector and in foreign exchange policies. A large part of the excessive indebtedness that occurred is due to the results of these policies. The most important features of negligence and mistakes that occurred in the foreign trade sector and in foreign exchange policies that are closely and directly related to the debt crisis of developing countries. Finally, the failure of the development and industrialization pattern, where the aggravation in the indebtedness of developing countries was linked to the failure of the development process and mistakes the egregious nature of industrialization strategies.

Eighth: The Impact of External Indebtedness on Economic Growth:

There are many negative effects of external indebtedness. Foreign capital flows have led to an expansion in aggregate demand and a rise in the money supply, which results in a rise in the inflation rate by increasing upward pressures on the relative prices of commercial goods, current account deficits, the deterioration of the exchange rate, a sudden decline in reserves and a deficit in the balance of payments. This may be due to the weakness of stock markets and the narrow size of markets in developing countries usually, which leads to fiscal imbalance, reducing the effectiveness of fiscal and monetary policy instruments, low growth rates and loss of confidence in macroeconomic policies. This may result in reverse financial flows. One of the greatest risks of external debt to economic growth is the exploitation of loans in weak technical and economic infrastructure projects with no returns to finance debt service. This poor exploitation of external resources contributes to the dependence of the state's decision or the state's fall into the external debt trap and the accumulation of external debt due to its mismanagement or misuse contributes to the pressure on domestic resources, which results in resorting to financing the state budget deficit. The accumulation of these debts means an increase in the rates of contractual and penal benefits, which increases the repayment rates from local resources. This process contributes to reducing development spending on high-priority projects and reducing development spending, which means higher living burdens and higher poverty rates. The accumulation of these debts has contributed to distorting the relationship with the outside world and reducing the opportunities for cooperation with global financial markets and the low flow of foreign currencies compared to demand. Therefore, the state is forced to reduce the value of its local currency and create an unfavorable environment for foreign investments, as well as the deficit in obtaining loans and facilities on concessional terms that contribute to increasing the growth rates of the national economy. The state is also vulnerable to being deprived of benefiting from international initiatives to address the debt burden (Heavily Indebted Poor Countries Initiative). The accumulation of these debts also leads to the declaration of the International Monetary Fund (IMF) as a non-cooperative country. This results in the cessation of all institutions related to the Fund's transactions with these countries. This means an economic boycottage that weakens the chances of these countries to benefit from concessional development financing and facilities.

The second topic: Sudan and external debt

First: The general features of the Sudanese economy:

There are common features of economic construction in all developing countries that are taking their first steps towards development, and these features characteristic of developing countries prevail to a large extent in Sudan and is one of the largest African countries in the area and enjoys a multiplicity of climates in it. This diversity helped in the multiplicity of agricultural crops. It is worth mentioning

that the Sudanese economy has a dual economy based on agriculture and animal husbandry. The arable area is estimated at more than 84 million. The contribution of the agricultural sector alone to the GDP is about (80%), which confirms the fact that the Sudanese economy is an agricultural economy. However, the structure of the Sudanese economy is weak compared to the economic structures of the developed country and with many developing countries. In light of the lack of production and the lack of a wide base of different agricultural products in the Sudanese economy, the country has become dependent on a single cash crop, cotton, which was at the top of the list of Sudanese exports. Perhaps the dependence on a single cash crop has made the economy vulnerable to the dangers of global price fluctuations and natural conditions that affect production in quantity and quality. A large part of national production depends on the methods Traditional, which has an impact on the decline in the volume of production, is one of the main features that can affect the growth rate of the national economy.

Second: The Evolution of Debt in Sudan:

Sudan has known loans since the 1930s due to the establishment of some development projects such as the island and railway project in light of the lack of resources represented by the presence of limited quantities of glue and others, and it was not possible to impose taxes because the society was traditional My eyes and income were limited because of the low national income and the lack of individual savings. Then the government saw intervention in the field of developing agriculture, electricity, transportation and following the planning approach. It resorted to external sources of financing and this was at intervals. From 1946 to 1958, 86% of the total public sector investments were financed from the budget surplus and 7% of the public sector investments were financed internally. The country's financial position improved until 1957, while 5% of the total investments were financed from external sources such as the International Bank for Reconstruction and Development. The importance of external sources of financing increased in the period from (1958-1960). Hence, borrowing began. During the 1950s, Sudan's loans began with loans of the first loan from the bank at $39 million, equivalent to 13.6 million Sudanese pounds, to be spent on the development of the Sudanese railway, and it was at an interest rate 5.5% are repaid within twenty years, including a grace period of three years. The second loan was from Yugoslavia in the amount of 5.5 million pounds for shipbuilding, and then loans began to flow over the years during the sixties from bilateral international and regional sources. This was to start organized planning in Sudan during that decade. There was a need to obtain a large amount of the foreign component to finance the projects included in the ten-year plan, which helped expand the scope of foreign loans to Sudan during the sixties, as it received thirty-three loans from various sources. In the nineties, it received 105 loans and 20 grants. 9 grants were provided by the European Common Market and the rest were provided by Britain, Germany, the Netherlands, Japan and Canada , while loans were 21.9% by the World Bank and its institutions (the International Development Authority) and the International Fund for Agricultural Development.

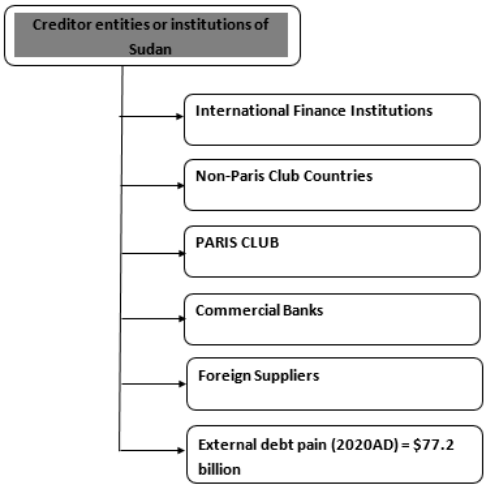

Figure No. (1) Creditors to Sudan

Sudanese official statistics showed that the volume of external debt reached about $77.2 billion by 2020, while the original debt ranged from $17 billion to $18 billion, and the remaining interest and sanctions became more than double the original amount itself, as the accumulation of Sudan's external debt began since 1958.

Table No. (1) shows the accession of Sudan to the membership of the International Monetary Fund

Description	**Period**
Sudan's accession to membership of the Fund	September 1957
Sudan's commitment to the economic stabilization program and benefiting from the Fund's facilities and loans	1983
The beginning of the accumulation of arrears and the emergence of the crisis	July 1989
Declaring Sudan a non-cooperative state	SEP 14.
Restoration of Sudan's membership in the Fund	July 27.

Source: IMF website

Most of the foreign aid from international, regional and Arab institutions exceeded 65 loans and 64 aid provided by bilateral cooperation countries. The aid provided from 1980, equivalent to 1242 million Sudanese pounds, was based on bilateral cooperation with other countries. Western European countries ranked first among other countries, where their aid to Sudan amounted to more than 412 million Sudanese pounds. Grants and loans that were on a bilateral basis were from Western European countries (Britain – Netherlands - Germany) In the first place and from the International Development Authority in the second place, perhaps this shows the small amount of loans provided by the socialist countries to Sudan compared to the rest of the other countries during the period from 1958-1982, but in the mid-eighties, the flow of loans to Sudan stopped from many sides as a result of the international loans that swept the world in 1982, which prevented many countries from continuing the issue of repaying their debts to donors, which hindered the flow of loans to Sudan from many sides as a result of the international loan crises that swept the world in 1982. The problems of the Sudanese economy with the largest donors, the International Monetary Fund, when it was announced in 1986 that Sudan is not eligible for the Fund's loans, as the Fund gives a certificate of passage to donors following which the countries eligible for lending are lent. In 2000, the normalization of the relationship with the International Monetary Fund began after the country followed some of the policies advocated by the Fund in the form of structural adjustment and economic reform programs. The Government of Sudan has also developed many strategies to address the problem of external debt. Although these strategies contributed to new flows, there are factors such as exchange rates and others that have worsened the external debt situation. The above figure shows that the total debt of Sudan reached (77.2) billion dollars by the end of 2020. The main reason for the increase in debt is the penal and contractual benefits that resulted from the failure or delay in payment. This escalating pattern in external debt results in the Sudanese economy's dependence on the conditions of the donor countries for loans. The accumulation of external debt helped to slow the process of economic growth. The worsening of the debt crisis affected the growth and economic development in Sudan. This resulted in the decline of many economic sectors and the deterioration of infrastructure. This was linked to a range of reasons, including inflation due to the emergence of a deficit in the fiscal budget. The inflation rate witnessed a continuous rise and the high price level contributed to the decline in the value of money. This resulted in a decline in capital and investments related to the private sector due to fear of economic imbalance. As a result, a scarcity was generated in the foreign exchange reserves, which led to the depreciation of the Sudanese pound compared to the exchange rate of the US dollar. Consequently, the deficit in the trade balance increased as a result of the decline in economic exports.

Sudan was not exempted within the Debt Relief Initiative (HIPC) because of the "negative vision of the international community of the previous government. This led to Sudan not obtaining exemptions after the secession of the South in 2011, and demanding that the two countries implement the" zero option "initiative and mutual debt forgiveness, so that the two countries can rise without burdens, and showing that the climate in the Sudan has become more favorable than before after the changes that took place in the political arena and the overthrow of the regime, and that this is a good indicator that facilitates Sudan's movement to forgive its external debts until the economy gradually recovers and overcomes the challenges it faces, as removing the name of Sudan from the list of countries labeled with international terrorism will give a positive indication that facilitates the process of partial or total external debt forgiveness and gives the country the opportunity to benefit from international loans on concessional terms, as well as enables the banking sector to deal with international banks .

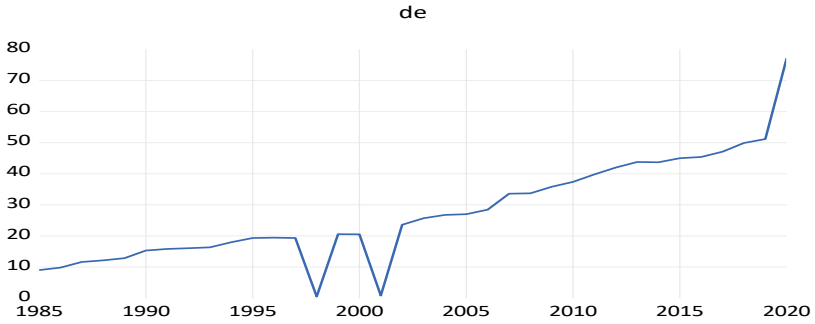

Figure No. (2) Evolution of the volume of indebtedness in Sudan
Source: Bank of Sudan reports

Third: Reasons for Sudan's external indebtedness:

There are many reasons for the accumulation of external debt on Sudan, including:

1- Internal reasons:

These include the inefficiency of internal policies and the failure of structural reforms, as the policies implemented by the state were not feasible for its economy, whether in the period of encouraging domestic savings and investment, monetary and tax policies, price policies and interest and exchange rates. The work of policies was counterproductive, as there was a decline in savings and investment and encouraged the flight of national capital to foreign markets and the deterioration of exports. As for the failure of structural reforms, it is due to the regulations African countries almost entirely in the implementation of macro trends effectively and the state did not pay attention to the design program to the end and help the World Bank and lenders and then spend huge amounts in the problems of failed investment as well as the dual economy as the government supported its role and control over various aspects of economic life so the public authorities intervened continuously in the areas of production, finance and public spending, and it became clear long ago in addition to the centralization of decisions related to the liberalization and operation of resources and the ineffectiveness of the public sector and the emergence of various exemptions such as the tax of convenience to invest in industry. However, the intervention of the state did not succeed, and banks became granting loans to public institutions and priority sectors at prices that are actually lower than those prevailing in the market, but the difference between the cost Loans and their returns are often very weak to cover their costs, and many of these loans have not been repaid, such as the deficit in the balance of payments and capital flight, as well as inefficient manufacturing. After its political stability, the state established public projects for the purpose of renewing its economy and revitalizing industry, as industries are not directly active to establish export goods, which causes an internal decline between large external loans and manufacturing. These projects are ineffective for export, which the state has not been able to use to pay its debt service, as well as the shrinking volume of government assistance provided by countries, as industrialized countries have reduced the proportion of their national income to developing countries in the form of aid and grants, fluctuation and weak export earnings. The country suffered from weakness and clear fluctuation in export

earnings, which prompted it to borrow from the outside world to secure minimum consumption and production needs in addition to meet internal and external security requirements, which resulted in the escalation of external debt. This decline and decline in export earnings are attributed to many reasons, including:

a- Weak domestic savings:

It is known that economic growth requires annual investments of not less than 15%, but since the savings rates in Sudan are much lower, the country has resorted to external financing because of the insufficient domestic savings to finance investment at the savings rate.

b- Worsening of the deficit in the balance of payments:

One of the main reasons for the explosion of the problem of external indebtedness and its negative impact on growth is the existence of a large and growing deficit in the balance of payments, which increased reliance on foreign capital to cover the deficit and the savings gap resulting from the shortage of domestic savings on the one hand and the shortage of exports on the other.

c. Misuse of foreign loans:

We can distinguish, according to the criterion of economic rationality, in the use of loans between three groups within the civil state, which are countries that borrowed to face real burdens of comprehensive development, countries that borrowed and used loans in non-investment fields and placed the burden of debt service on future generations, andcountries that borrowed to face increasing development burdens and military expenditures. Therefore, in many developing countries, borrowing has been accompanied by a significant increase in luxury consumption and poor planning in the use of these loans, which led to the failure of many projects in which these loans were used, including the use of external loans mainly to finance the decline in the domestic savings rate instead of using them to increase the national investment rate. In other words, loans have indirectly contributed to increasing domestic consumption, especially in countries that face difficulty in servicing their debts andreducing the efficiency of new investments.

d. Mismanagement of external debt:

The poor management of external debt in the country has led to a rapid crisis of the external debt problem, as we find that the borrowing process continued randomly and without systematic planning of the size, quality and time of borrowing, and there was no clear perception of how the borrowing process could be managed abroad, represented in the significant expansion of borrowing by the public sector, especially since many of these loans that were contracted exceeded the actual needs and the inability of the authorities responsible for following up and registering external loans, whether for the public or private sector, which led to the loss of capabilities to control the borrowing policy, as well as the lack of control over loans contracted by the private sector, which led to the expansion of this sector in relying on high-cost short-term loans. The multiplicity of agencies that borrowed also made it difficult to know the size of actual loans, and therefore did not benefit from some of them in whole or in part.

2- Exogenous causes

The most important external dimensions that led to the development of the problem of Sudan's external indebtedness are the recession, the deterioration of the terms of trade, the change in exchange rates, the decline in government assistance, the rise in oil prices, the rise in global interest rates, the collapse of the global monetary system and finally the economic recession in the industrialized countries.

Table (2): Indicators of suitability for indebtedness

Relevance Indicators	
Benefits Service	It measures the ratio of benefits to exports at the level of the terms of indebtedness and thus reflects the burden of indebtedness.
Indebtedness for exports	A trend indicator with a connotation related to the country's card on repayment of the debt.
Indebtedness to GDP	It links debt to the resource base and indicates the potential of the national economy to generate income and thus to service indebtedness.
Liquidity indicators	
International Reserves for Short-Term Debt	An important indicator of the suitability of reserves for a country that has difficulty entering international markets, in which it is easy to predict the possibility of facing liquidity problems.
Financial Indicators	
Foreign Exchange Status	The first is in hard currency minus liabilities plus long-term exchange position.
TOTAL LIABILITIES	Reflects how important assets are in covering liabilities.
Public sector indicators	
Public Debt Service for Exports	An indicator that reflects payability and transfer risk.
DP Public Debt or Government Revenues	The public sector adequacy index can be based on gross public debt or external public debt only.
Average non-concessional debt	A maturity measurement index that is unbiased to the long term of debt.
External Debt to Gross Debt	Reflects the impact of exchange rates on the growth of indebtedness.

The third topic: Characterization and estimation of the standard model

Standard models play an important role in economic analysis as well as in the study of economic alternatives, whether in the long term or in the short term. The use of these models in the field of economic research and studies has spread widely in recent times. This is due to two reasons. The first is that standard models have become a tool of economic and statistical analysis, which helps to identify the reality of economic variables and the extent of their relationship with each other and to determine the impact of each on the other and then draw conclusions that ordinary logic cannot easily perceive. The second is the emergence of electronic computers and the occurrence of a huge development in them, which allowed the use of the mathematical approach in solving complex mathematical problems easily along with confidence in the calculations when solving them.

First: Description of the proposed model:

In this section, the model will be defined and its data will be analyzed to reach the best model for economic growth using the **ARDL** model and using the statistical analysis program **Eviews** in the

model and determine the mathematical form and expected signals for the parameters of the economic growth function.

Second: Definition of the model variables:

The model is a set of equations that explain the structural structure of a particular sector or the economy as a whole. It is a translation of economic theory using mathematical and statistical tools or it is an equation or set of equations whose transactions are estimated and used as a tool in the process of forecasting and evaluating existing or proposed economic policies and then used in the process of analyzing the economic structure.

The variables of the proposed model are the following variables:

Dependent Variable:

It is the variable that determines its value according to the values taken by other variables called independent variables and is represented by the economic growth variable (EGRO) .

Independent variables:

They are the variables that cause a change or affect the dependent variable and are not affected by the value of the other variables in the equation, which are:

A- **Exchange rate** (EX): It is defined as (the rate of one currency denominated in another currency) and is used in the conversion of values from one currency to another and was measured in pounds against the dollar in the study.

B- **Inflation**(inf): It is a permanent annual increase in prices, which is the abnormal rise in prices. Inflation is the rate of relative change of the index of living expenditure between two time periods (the base period and the comparison period) attributed to the number in the base period.

C- **Gross Domestic Product** (GDP): It is the quantity or value of goods and services sold that are produced by members of the same society and we adopted in this study

D**- External debts** (de): which is a cash amount provided by the lender to the borrower in a consensual capacity, and the debtor is obligated to refund the principal and interest on the debt within the specified and agreed time.

E**- Exports** (x): It is the total goods and services exported abroad and the value of exports in millions of dollars was relied upon during the study period.

F- **Net foreign assets** (F): It is the reserve held by the state to meet foreign imports and payments. Statistics of net foreign assets in millions of dollars have been relied upon through statistics issued by the Bank of Sudan.

Third: Determining the mathematical shape:

The function of Sudanese economic growth can be represented in determining the model by studying the relationship between economic growth as a dependent variable with independent variables, which are (exchange rate – inflation - exports - imports - GDP - net foreign assets - external debt). This function was formed according to the economic theory as follows:

EGRO= b1+b2 EX +b3 INF+ b3 GDP+b4 X+b5 M+b6 F+b7 DE +U

Whereas((EGRO): Economic Growt, (Inf): Inflation, (Ex): Exchange Rate, (de): External Debt, (GDP): Gross Domestic Product, (F): Net Foreign Assets, (X): Exports)

Fourth: Expected indications of the parameters of the economic growth function:

1_Dependent variable **(**EGRO**:** It represents the rate of economic growth and is expected to be positive.

b) Transactions

Independent variable 1 (Ex): Due to the existence of a direct relationship between (Ex) and (EGRO), the coefficient signal is expected to be positive.

Independent variable 2 (Inf): Due to the existence of an inverse relationship between (Inf) and (EGRO), the coefficient signal is expected to be negative.

Independent variable 3 (X): Due to the existence of a direct relationship between (X) and (EGRO), the coefficient signal is expected to be positive.

Independent variable 4 (GDP): Due to the existence of a direct relationship between (GDP) and (EGRO), the coefficient signal is expected to be positive.

Independent variable 5 (F): Due to the existence of a direct relationship between (F) and (EGRO), the coefficient signal is expected to be positive.

Independent variable 6 (de): Due to the existence of an inverse relationship between (de) and (EGRO), the coefficient signal is expected to be negative.

Independent variable 7 (M): Due to the existence of an inverse relationship between (M) and (EGRO), the coefficient signal is expected to be negative.

Fifth: Stationarity Test of the Series:

Time series data often have a general trend factor (**Trend**) that reflects the presence of certain conditions that affect all variables either in the same direction or in opposite directions. Therefore, the static and stability of time series can be defined as the presence of a general trend of the data of one of the variables. The model reflects the instability of all existing data, which means that it does not contain the roots of the unit. The root of the unit in a time series means that the average and variation of the variable are not independent of time. The study will rely on a test **(Augmented Dicky-Fuller, 1981**) to test the stability of the study data, as shown in the following table:

Table No. (3) unit root Test (Trace)

Raise the level of career and job stability	**Augmented Dicky Fuller**	**Critical Value**	**Variables**
Level/ First Diff	6.261626	2.971853	External debt
Level/ First Diff	4.215530	2.971853	exchange rate
Level/ First Diff	6.674125	2.967767	Inflation
Level	5.084449	2.963972	Imports (M)
Level/ First Diff	3.638128	2.967767	GDP
Level/ First Diff	3.650256	2.967767	Net Foreign Assets (F)
Level/ First Diff	6.845674	2.967767	Exports (X)
Level/ First Diff	6.886042	2.960411	Economic Growth

It is clear from the table that all the variables of the model are stable at the first difference except for the variable of imports, which is independent at the level. These results are consistent with the standard theory, which assumes that most macroeconomic variables are not static at the level, but become static in the differences.

Sixth: Joint Integration Test:

Co-integration means that there can be a long-term equilibrium between time series that are unstable in their levels, that is, there are long-term properties of time series that can be matched. It is associated between two or more time series. (Engle-Granger, 1987) found that not in all cases where the time series data are unstable, the estimated regression is false despite the lack of stability of the series, as it leads to fluctuations in one to cancel fluctuations in the other in a way that makes the ratio between their values fixed over time. Perhaps this means that the time series data may be unstable if we take each separately, but it is stable as a group. Such a long-term relationship between the group of variables is useful in predicting the values of the dependent variable in terms of a group of independent variables.

Table (4) - Bounds Test

Null Hypothesis: No levels relationship			**F-Bounds Test**	
I(1)	I(0)	Signif.	Value	Test Statistic
	Asymptotic: n=1000			
2.89	1.92	10%	12.10773	F-statistic
3.21	2.17	5%	7	K
3.51	2.43	2.5%		
3.9	2.73	1%		

Source: Prepared by the researcher from the estimation results

It is clear from the above table that the imposition of nothingness, which means that there is no vector for joint integration, is rejected at a different level of significance, as the calculated value **(F= 12.10773**) exceeds all critical values, which means that there is a long-term equilibrium relationship.

Seventh: Estimating the error correction model:

After making sure that the time series of the variables of the study model are silent and then verifying that they are all jointly integrated, it becomes clear that there is a long-term equilibrium relationship between the variables of the model and after estimating the model, the results shown in the following table were reached: -

Table (5) Estimated Model

EGRO= b1+b2 EX +b3 INF+ b3 GDP+b4 X+b5 M+b6 F+b7 DE +U

	Dependent Variable: EGRO			
		Method: ARDL		
Dynamic regressors (2 lags, automatic): EX INF GDP X M F DE				
Selected Model: ARDL(1, 0, 1, 1, 2, 2, 2, 2)				
Prob.*	t-Statistic	Std. Error	Coefficient	Variable
0.9320	0.087489	0.132184	0.011565	EGRO (-1)

0.3136	-1.061013	0.045051	-0.047800	EX
0.1294	1.652658	0.025141	0.041549	INF
0.0064	3.430890	0.029978	0.102852	INF (-1)
0.0001	6.272520	8.59E-10	5.39E-09	GDP
0.0109	-3.116295	1.02E-09	-3.18E-09	GDP (-1)
0.0850	1.911651	0.039151	0.074844	X
0.0362	-2.418109	0.038108	-0.092150	X (-1)
0.1054	-1.779948	0.032370	-0.057617	X (-2)
0.0000	6.764792	2.41E-07	1.63E-06	M
0.0785	1.959802	5.38E-07	1.05E-06	M (-1)
0.0884	1.887790	5.28E-07	9.97E-07	M (-2)
0.0250	-2.632792	2.68E-09	-7.06E-09	F
0.9297	-0.090414	3.31E-09	-2.99E-10	F (-1)
0.0752	-1.985042	3.26E-09	-6.47E-09	F (-2)
0.1208	-1.695577	0.081032	-0.137396	DE
0.0655	-2.068209	0.078497	-0.162349	DE (-1)
0.1441	-1.584757	0.067751	-0.107369	DE (-2)
0.0213	-2.728356	10.30056	-28.10359	C
1.087743	Mean dependent var		0.958057	R-squared
4.488573	S.D. dependent var		0.882558	Adjusted R-squared
3.944767	Akaike info criterion		1.538223	S.E. of regression
4.840581	Schwarz criterion		23.66129	Sum squared resid
4.225324	Hannan-Quinn criter.		-38.19911	Log likelihood
1.757439	Durbin-Watson stat		12.68980	F-statistic
			0.000126	Prob(F-statistic)

Source: Prepared by the researcher from the estimation results

Table No. (6) Long Run"

ARDL Long Run Form and Bounds Test				
	Dependent Variable: D(EGRO)			
Conditional Error Correction Regression				
Prob.	t-Statistic	Std. Error	Coefficient	Variable
0.0213	-2.728356	10.30056	-28.10359	C
0.0000	-7.477738	0.132184	-0.988435	EGRO (-1)*

0.3136	-1.061013	0.045051	-0.047800	EX**
0.0142	2.962866	0.048737	0.144401	INF (-1)
0.0230	2.681281	8.22E-10	2.20E-09	GDP (-1)
0.2018	-1.366256	0.054839	-0.074924	X (-1)
0.0002	5.735963	6.42E-07	3.68E-06	M (-1)
0.0051	-3.567263	3.88E-09	-1.38E-08	F (-1)
0.0374	-2.399064	0.169697	-0.407114	DE (-1)
0.1294	1.652658	0.025141	0.041549	D(INF)
0.0001	6.272520	8.59E-10	5.39E-09	D(GDP)
0.0850	1.911651	0.039151	0.074844	D(X)
0.1054	1.779948	0.032370	0.057617	D (X (-1))
0.0000	6.764792	2.41E-07	1.63E-06	D(M)
0.0884	-1.887790	5.28E-07	-9.97E-07	D (M (-1))
0.0250	-2.632792	2.68E-09	-7.06E-09	D(F)
0.0752	1.985042	3.26E-09	6.47E-09	D (F (-1))
0.1208	-1.695577	0.081032	-0.137396	D(DE)
0.1441	1.584757	0.067751	0.107369	D (DE (-1))

Source: Prepared by the researcher from the estimation results

It is clear from the results of the estimation shown in the table above in the long term that thevariables with a significant significance at the level of 10%)) are the variable of GDP, exports and imports in the two periods and the monetary reserve in the two periods. The variable of inflation and exports in the first period and external debt and the exchange rate showed their statistically insignificant. The indication of both GDP and exports in the two periods and imports in the first period and monetary reserve in the first period and external debt are all consistent with economic theory. The indication of both imports and monetary reserves in the first period and external debt is consistent with economic theory. The variable of inflation, imports, monetary reserves and external debt in the first period does not correspond with economic theory.

Table No. (7) short run

ARDL Error Correction Regression				
Dependent Variable: D(EGRO)				
ECM Regression				
Case 2: Restricted Constant and No Trend				
Prob.	t-Statistic	Std. Error	Coefficient	Variable
0.0040	3.722483	0.011162	0.041549	D(INF)

0.0000	10.21615	5.28E-10	5.39E-09	D(GDP)
0.0015	4.328763	0.017290	0.074844	D(X)
0.0031	3.873283	0.014876	0.057617	D(X(-1))
0.0000	12.79517	1.28E-07	1.63E-06	D(M)
0.0005	-5.025218	1.98E-07	-9.97E-07	D(M(-1))
0.0002	-5.825642	1.21E-09	-7.06E-09	D(F)
0.0007	4.819980	1.34E-09	6.47E-09	D(F(-1))
0.0066	-3.416761	0.040212	-0.137396	D(DE)
0.0059	3.483059	0.030826	0.107369	D(DE (-1))
0.0000	-14.00518	0.070576	-0.988435	CointEq (-1)*
-0.407028	Mean dependent var		0.967917	R-squared
5.132214	S.D. dependent var		0.950094	Adjusted R-squared
3.393042	Akaike info criterion		1.146524	S.E. of regression
3.911672	Schwarz criterion		23.66129	Sum squared resid
3.555471	Hannan-Quinn criter.		-38.19911	Log likelihood
			1.757439	Durbin-Watson stat

Source: Prepared by the researcher from the results of the assessment

It is clear from the results of the estimation shown in the table that the model is statistically sound in the short term, as all significant variables appear at the level of 10%)). As for the economic aspect, the sign of GDP, exports in the first two periods, imports in the first period, cash reserves in the first period, and foreign debt are all consistent with economic theory. As for the indication of imports, cash reserves, and foreign debt in the first period, it is not consistent with economic theory, due to political, structural, and regulatory imbalances The value of the error correction coefficient (0.988-), which indicates that economic growth rates are adjusted towards their equilibrium value in a relative period of time from the remaining imbalance of the period (t-1), which is equivalent to (98%), which means that when economic growth rates during the short term in the period(t-1) deviate from their equilibrium value in the long term, the equivalent of (98%) of this deviation or imbalance is corrected during the period(t), and this percentage reflects a high adjustment speed Very balanced in the sense that the economic growth rates take a year and a month (0.98/1) towards their equilibrium values after the impact of any shock in the model as a result of the change in the determinants. The value of the adjusted determination coefficient reached 95%), which indicates that the independent variables explain 95% of the changes that occur in the dependent variable, which is economic growth.

Eighth: Diagnostic Tests:

It was confirmed that the model was free of standard problems through several tests, including (normal distribution - sequence correction – homogeneity). The results of the assessment showed that the estimated model exceeded all the statistics of the examination of the residues, and therefore it was confirmed that the error correction model was free of standard problems.

Table number (8)

Statistic	Estimate Value	P-value
Normality: (Jarque-Bera)	**1.55670**	**0.925117**
Breusch-Godfrey	**0.833066**	**6593**
ARCH	**0.467780**	**7914**

Source: Prepared by the researcher from the results of the assessment

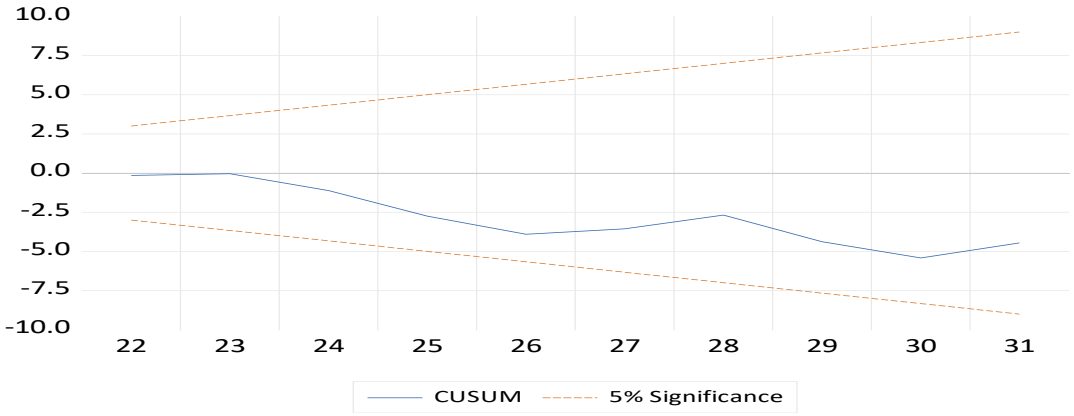

Figure No. (3) CUSUM Test

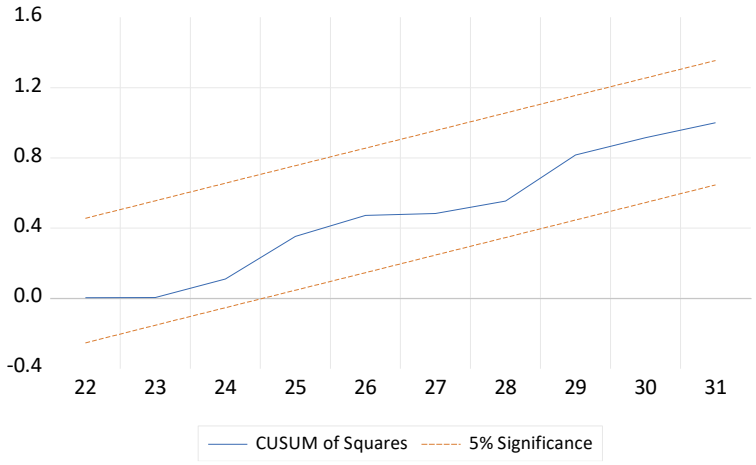

Figure (4) CUSUM of Squares

The two tests shown in FigureYin above indicate that the model has stability.

Tenth: **Forecasting**

Definition of forecasting as a quantitative estimate of the expected values of the dependent variables in the future based on the information available to us about the past and the present. Before using the estimated model in forecasting, its predictive ability should be tested. In many cases, the model is economically and statistically meaningful and standardly acceptable for the period in which the sample was taken. However, it may not be suitable for forecasting due to the rapid changes in the structural parameters of relations in reality and at the applied level. There are several tests used to achieve this goal, the most important of which are:

1. Test K2 to compare the expected distribution to the observed distribution.
2. Test t to test the significance of the difference between the prediction values and the actual value.

3. The unequal coefficient of Thayel.

Using a Thiel test to assess the predictive power of the model, we obtained the following result:

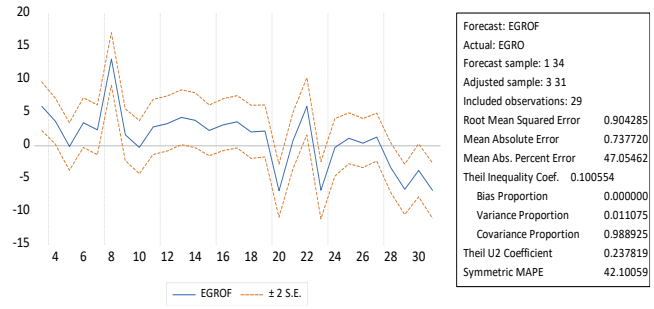

Figure number (4)
Theil Inequality Coefficient

The Thiel coefficient in the above figure, which has a value of (0.237819), is close to zero and indicates that the model has a high ability to predict.

RESULTS

The applied results proved the following: -

1. The variable of external debt has negatively affected economic growth in Sudan, as the increase in debt and the resulting debt burdens have further deteriorated the Sudanese economy and hindered its growth.

2. There is a direct relationship between the dependent variable (economic growth) and the independent variable (exports), which is consistent with economic theory. This is due to the lack of interest in the export sector, which led to its weakness, as well as its failure to direct it to public debt servicing.

3. Economic growth rates take a year and a month (0.98/1) in the direction of their equilibrium values after the impact of any shock in the model as a result of the change in the determinants. The value of the adjusted coefficient of determination reached 95%), which indicates that independent variables explain 95%) of the changes that occur in the dependent variable, which is economic growth.

4. That the estimated model has exceeded all stability tests and the examination of residuals, and therefore it was ensured that the error correction model is free of standard problems.

5. The applied results proved that the model has a high ability to predict future economic growth rates, as the value of the Thiel coefficient was (Theil= 0.23).

Recommendations

1. Seriously work to reduce the levels of the growing deficit in the state's budgets by adopting a choice based on balancing self-reliance and the development of local capabilities with resorting to external borrowing in the narrowest possible scope and using it in areas that are accurately determined and carefully studied.

2. Work to address the imbalance in the trade balance so as to put pressure on the level and quality of imports to reduce pressure on the uses of foreign exchange earnings and encourage and push all efforts to promote exports to create a surplus in the trade balance of the country and when this is achieved, the burden of servicing the external debt can be alleviated, which will inevitably affect the science of economic growth rates.

3. Exchanging debts for exports. Debts can be exchanged for exports, especially non-strategic and non-traditional ones. To implement this solution, it is necessary to identify the goods to be exchanged for debt and determine their prices. Debt prices must also be agreed upon in the secondary market.

4. Seeking possible means and ways without increasing the size of indebtedness and preventing its escalation in the future to achieve this, it proposes the establishment of an Islamic monetary fund similar to the International Monetary Fund to work at the level of the Islamic world and contribute to solving monetary problems.

REFERENCES

First: References in Arabic

Mohammed bin Makram bin Ali, Lisan Al-Arab (Beirut: Dar Sader for Printing and Publishing, 1st Edition, C7, 1959AD).

Abu Bakr Metwally, Foreign Economy, An Analytical View (Cairo: Ain Shams Library, 1st Edition, 1982AD).

Dr. Ahmed Al-Sharbasi, Islamic Economic Lexicon (Beirut: Dar Al-Jabal Publishing House, 1981AD).

Dr. Ismail Sabri Abdullah, The Place of Technology in Development Strategy (Egypt: Scientific Conference of Egyptian Economists, 1977).

Dr. Ismail Sabri Abdullah, Towards a New Colloquial Order (Egypt: Egyptian General Book Organization, 1976AD).

Dr. Hosni Ali Kharboush, Dr. Abdul Muti Reda Arshid, Investment and Finance between Theory and Practice (Jordan: International Publishing Company, 1996).

Dr. Hussein Omar, Economic Encyclopedia (Cairo: Dar Al-Fikr Al-Arabi, 4th Edition, 1992).

Dr. Ramzi Zaki, International Loan Crisis (Cairo: Arab Future House, 1st Edition, 1987).

Dr. Ramzi Zaki, The Relationship of External Debt: A Vision from the Third World (Egypt: Egyptian General Authority for Capes: 1978AD).

Dr. Ramzi Zaki, The Relationship of Inflation to Capital Accumulation in Growing Countries (Cairo: Planning Institute Publications, 1967).

Price of Maher Hamza, Financing Development Projects in Sudan (Cairo: Al-Bayan Al-Arabi Press, 1962AD).

Dr. Suleiman Sayed Ahmed, Agriculture, Challenges and Globalization (Khartoum: Khartoum University Press, 1st Edition, 1999).

Dr. Saeed Al-Najjar, Global Economy and the Arab Countries in the 1980s (Cairo: Dar Al-Shorouk, 1st Edition, 1991AD).

Dr. Sherif Al-Dashouni, Issues in Sustainable Development (Khartoum, Azza Publishing House, 2005).

Dr. Shmilyov, Economic Development in the Third World (Damascus: Dar Al-Taqaddum Al-Arabi, 1974AD).

Dr. Taha Mohamed Bamkar, Planning and Economic Development in Sudan (Khartoum: Azza Publishing House, 2012).

Dr. Adel Al-Mahdi, International Finance (Cairo: Dar Al-Arabi Publishing House, 1st Edition, 1991).

Dr. Abdullah Saad, a study in Algerian law (Algeria: Diwan of Algerian Publications, 1994AD).

Abdullah Al-Saidi, Some Contemporary Problems in Development (Cairo: Dar Al-Nahda Al-Arabiya ,1st Edition, 1992).

Abdel Moneim Thanabili, Third World and the Economic Balance in Sudan (Khartoum: Sudan Currency Printing Press Company Limited, 2001AD).

Dr. Abdulwahab Osman Sheikh Musa, Methodology of Economic Reform in Sudan (Khartoum: Sudan Currency Printing Press Company Limited, 2001AD).

Osman Abdullah Bashri et al., National Symposium on the Development of Livestock Statistics in the Arab World (Khartoum: Arab Organization for Agricultural Development, 1998).

Osman Ibrahim Al-Sayed, Sudanese Economy (Khartoum: Without Publishing House, 1st Edition, 1991).

Abdel Hamid Mohamed El Kady, Introduction to Economic Development and Planning (Alexandria: Egyptian University House, bt).

Osman Ibrahim Al-Sayed, Sudanese Economy (Khartoum: Without Publishing House, 2nd Edition, 1998).

Dr. Falih Hassan Khalaf, Economic Development and Planning (Jordan: World of Modern Books, 1st Edition, 2006).

Dr. Falih Hassan Khalaf, The Process of Skills Formation and its Role in Economic Development in Iraq (Baghdad: Ministry of Culture and Information, 1980AD).
Dr. Qassoum Khairy Bilal, The Problems of Development in Sudan: Realities of the Past and Visions of the Future (Khartoum: The World of Boundary Books, 2005).
Lester Pearson, what is going on in the rich world and the poor world, translated by Ibrahim Nafie (Cairo: Maarif Publishing House, 1971AD).

Second: References in English:

D-SayedNimeiri, The Economic planning of the Sudan, University of Khartoum press,p.29

Edgerowens the future of freedom in the developing world: Economic Development as political reform New York, pergam 1987 on px.

Third: Periodicals and Bulletins:

Iraqi Journal of Administrative Sciences, Foreign Exchange Rate, Theoretical Introduction/ Volume (1), Issue (2), 2001.
Banker's Magazine, Bank of Sudan, Khartoum, External Debt Management Position and Strategies in Sudan, Khartoum, Issue (43), 2007.
Banker's Magazine, Bank of Sudan, Khartoum, Readings on External Debt in Reference, Sudan Agency, Khartoum, Issue (58), 2010.
Banker's Magazine, Bank of Sudan, Khartoum, Post-Secession Macroeconomic Policies, Khartoum, Issue (62), 2011.
Bashaer Al-Khair Magazine, Oil Revenues for Basic Infrastructure, Khartoum, Issue (1), 1998.
Al-Raya Kuwaiti Newspaper, Al-Ataa Till Al-Shifa, Kuwait, Issue (8402), 2005.
Qatar Planning and Development Journal, Reading in the International Human Development Reports, Doha, Issue (2), 2004.
Center for Strategic Studies, Annual Strategic Report, Khartoum 1999.
General Administration of Economic Policies and Macro Programs, Economic Presentation, Khartoum, 1999.
Arab Organization for Agricultural Development, Annual Report on Agricultural Development in the Arab World, Khartoum, 1998.
Economic Presentation, Khartoum, 1999.

Fourth: Research and Theses

Tarek Mohammed Al-Rasheed, and the proposed evaluation to address the problem of Sudan's external indebtedness, Master Thesis (Faculty of Economics, Omdurman Islamic University, Khartoum, 1994AD).
Khadimullah Hamad Abdullah, The Impact of Foreign Loans on the Sudanese Economy, Master Thesis (Faculty of Economics, Holy Quran University and Islamic Sciences, Khartoum, 2000AD).
Ammar Mahjoub Zaki, The Relationship of External Public Debt to Some Macroeconomic Indicators in Some Arab Countries with Special Reference to Sudan, Master Thesis (Faculty of Economics, Sudan University of Science and Technology, Khartoum, 2002).
Haitham Yousef Al-Fadhel, Sudan's attempt to benefit from the Heavily Indebted Poor Countries Debt Reduction Initiative, PhD Thesis (Sudan University of Science and Technology, Khartoum, 2011).
Dr. Jaballah Abdel Fadil, Diagnosis of the External Debt Crisis in Sudan, published research, Khartoum, 1985.
Dr. Riad Al-Mu 'min, Economic Impacts in the Arab Countries, paper presented to the Seminar on the External Indebtedness of the Arab Countries, Libya, 1989.

Fifth: Report Management

Reports of the Bank of Sudan for the years.
Annual report of the General Authority of Geology.