

Macroeconomic Determinants of External Debt in Somalia

Mohamed Abdulahi Khalif

Lecturer, Faculty of Economics and Management Science, Somali National University, Mogadishu, Somalia

ABSTRACT

This paper analyzed Somalia's external debt determinants from 1974 to 2018. ARDL structural break is used in this paper to test the co-integration approach to examine the model of short-run relationships between variables exist. This study employs and follows the existing framework determinants of foreign debt literature such as Bittencourt2015 and Gokmenoglu & Rfi 2018. The results show that Foreign aid, domestic investment have a significant and positive effect on foreign debt in the short term and government expenditure have positive but insignificant impact on foreign debt, while GDP and export have a significant negative impact on foreign debt.

Keywords: External debt, Domestic investment, GDP, Foreign aid and export.

Date of Submission: 01-07-2022

Date of Acceptance: 11-07-2022

I. Introduction

Public debt is a term which refers to the borrowings of public authorities in the country in order to finance their businesses due to the insufficiency of their own resources to fulfill the expense requirements of these businesses. Public debt is a global phenomenon that is acceptable to a certain extent and under certain controls. But, if the debt exceeds this extent and goes out of these controls, it would become a serious problem or turn into a crisis, leading to negative effects of large risks to public money and to the whole national economy. External debt is considered an important, main source of financing that governments depend on to achieve developmental or other public objectives. Thus, external debt is incurred in the case of needing funds, when governments suffer from shortages of domestic savings and foreign currencies needed (Siddique et al.,2016)

According to Muinga, (2018), capital accumulation is required for economic expansion. Both policymakers and academics are divided on the effects of external debt buildup on macroeconomic factors. It has both positive and negative aspects; certain analysts believe that foreign debt is beneficial to economic growth since an increase in capital inflow accelerates the rate of expansion. External debt increase that exceeds specific boundaries, on the other hand; By stifling investment, it will slow down economic growth (Krugman, 1985).

Foreign debt crises and the resulting fiscal imbalance are key issues in African economies, particularly in Sub-Saharan Africa, where the fiscal deficit is a common occurrence due to heavy government spending. In most African countries, long-term foreign debt is high and rising, with the median debt-to-GDP ratio rising to above 38% df. East African countries appear to face numerous downside threats that could threaten economic development and growth prospects. Another main factor is large current account deficits and associated rises in foreign debt. East Africa has numerous fragmented states, but mobilizing domestic capital is way below what's required to stimulate investment and development. Low domestic savings and high spending contribute to sustained fiscal deficits and rising debt (Regional economic outlook, October 2019, sub-Saharan Africa,2019).

In African economies, crises of foreign debt and inherent fiscal deficit are major problems, especially in Sub-Saharan Africa, where the fiscal deficit is a prevalent phenomenon due to the high level of government expenditure. Long-term foreign debt is high and increasing in most African countries, with the median debt-to-GDP ratio growing over 38%. The upward trend in foreign debt ratios is largely driven by the end of the commodity super-cycle, export revenues and slow productivity growth. East African countries appear to face numerous downside threats that could threaten economic development and growth prospects. Another main factor is large current account deficits and associated rises in foreign debt. East Africa has numerous fragmented states, but mobilizing domestic capital is way below what's required to stimulate investment and development. Low domestic savings and high spending contribute to sustained fiscal deficits and rising debt (regional economic outlook, October 2019, middle east and central asia, 2019).

The average debt-to-GDP in Somalia's economy was over 100% in 2018. According to a World Bank report in 2015, the gross foreign debt of Somalia was projected to rise to about 128% of GDP by 2039.

Moreover, according to the World Bank's Criminal Procedure and Investigations Act, Somalia's debt-carrying capacity is weak.

The majority of the population of Somalia (67%) was born after the civil war, receiving little benefit from the US\$4.6 billion of foreign debt that was used for development projects and whose effect was not sustained due to disruptive armed conflict. Saddling current generations with these debts is unreasonable and even more troublesome as these debts restrict access to grants and concessional services. Most foreign creditors are aware of the problems of the federal movement of Somalia and do not expect to collect payment on the current and past debt obligations until the external debt crisis in Somalia has been solved through debt relief processes (Somalia - Joint World Bank-IMF debt sustainability analysis).

For countries in the horn of Africa, such as Somalia, the decline in the economy's foreign exchange earning capacity was exacerbated by the country's notoriously long civil battles. This harmed Somalia's capacity to service its debt, resulting in a rapid accumulation of arrears. Borrowing externally is inevitable for the majority of developing countries such as Somalia. This can be attributed to various factors like low investment, the slow pace of economic growth, poor management of macroeconomic environment. As a result government borrows both domestically and externally to finance budget deficits (Mweni, 2016).

Sheng & Sukaj, (2021) found that foreign debt shocks cause a slow decline in the external debt-to-GDP ratio, which is likely due to the availability of other forms of financing. During recessionary periods, however, most emerging economies are heavily reliant on foreign debt financing. Shocks pose significant concerns about debt pressure for economies with higher levels of foreign debt on their paths to building resilience. The foreign debt-to-GDP ratio falls slowly as a result of foreign debt shocks; however, countries with higher levels of foreign debt face serious problems as a result of foreign debt distress.

Somalia is one of the least developed economies, relying on foreign debt to rectify economic disruptions and increase societal welfare. However, Somalia's growing reliance on foreign debt will result in future debt repayment challenges, increasing the burden. To escape the external debt burden or for the external debt burden strategy, it is crucial to study the major macroeconomic determinants of external debt. This paper's key purpose is to examine the determinants of Somalia's foreign debt over the period from 1974 to 2018. The objective of the study is to examine the determinants of the Somalia's external debt

II. Literature Revenue

Review of Empirical Studies on External Debt

Since the 1979 world oil crisis, which forced numerous emerging economies into recession, the subject of foreign debt has been at the forefront of international conversation, and considerable study has been performed on the drivers of external debt. In recent years, there has been a surge. A study by Sargent & Vilmunen, (2013) used a longitudinal method to predict what factors explained debt servicing. Both domestic and external public debts of 44 economies in both developing and developed countries were investigated. By employing the debt service model, the study discovered that payments of debts were largely explained by economies amount of exports. In addition countries with viewer export had a highly probability of default or reschedule debt servicing. Furthermore, using monetary approach, the study reported that positive link between inflation and public debt service. The study therefore concluded that inflation and exports were key determinants of country's external debt.

Another study conducted by Greenidge et al., 2020 proposed that a debt management policy be implemented in order to improve the efficiency of the producing sectors. Higher GDP growth would close the gap between investment and savings, reducing the demand for foreign debt and, as a result, the rate of expansion of foreign debt. A higher level of private production, in particular, might contribute to stronger export growth, while an increase in foreign currency received would help with debt servicing. An growth in exports will also help to manage the volume of foreign debt in the case of currency depreciation, as acceleration threatens to lead to a rise in foreign debt. A study conducted by Omotor et al., 2020 investigated the relationship between external debt and economic growth in the East African Community during the period (1970-2010). Johansen cointegration test, have been used for data analysis. The results indicated a negative, statistically significant relationship between external debt and economic growth in the East African Community. Another study used an econometric analysis to investigate the relationship between Lebanon's economic growth, exports, and external debt over the period 1970-2010, with the addition of a fourth macroeconomic variable, the exchange rate. To test the export-led growth hypothesis for Lebanon, exports were included in the model. We study this relationship using vector error correction models (VECM) and the Granger causality technique to see if there is any causality between the variables. The results show that both short run and long run relationships exist among these variables. Moreover, the finding suggests, i) bidirectional Granger causality between GDP and external debt servicing, ii) unidirectional Granger causality that runs from external debt to exports, iii) unidirectional

causality running from exports to economic growth, and iv) unidirectional causality running from exchange rate to economic growth (Saad, 2012).

Similarly, study done by Beyene & Kotosz (2020) looked at the macroeconomic determinants of Ethiopia's external indebtedness between 1981 and 2016, using two- and three-gap models as a theoretical framework and an autoregressive distributed lag bound testing approach. They discovered that in the long run, the savings-investment gap, trade deficit, fiscal deficit, and debt service all have a negative impact on the country's external indebtedness. The pace of growth of the country's gross domestic product, trade openness, and inflation, on the other hand, have a negative and considerable impact on the country's external indebtedness.

Finally, according to Sheng & Sukaj, 2021 foreign debt shocks cause a slow decline in the external debt-to-GDP ratio, which is likely due to the availability of other forms of financing. During recessionary periods, however, most emerging economies are heavily reliant on foreign debt financing. Shocks pose significant concerns about debt pressure for economies with higher levels of foreign debt on their paths to building resilience. The foreign debt-to-GDP ratio falls slowly as a result of foreign debt shocks; however, countries with higher levels of foreign debt face serious problems as a result of foreign debt distress.

A study conducted by Mohamed Omar and Ise Ibrahim 2021, which they investigated by determinants of external debt of Somalia from 1980 to 2018. ARDL structural break was used to test the cointegration approach to examine the model for long run and error correction to determine whether short-run relationships between variables exist. Their result showed that, exchange rate and domestic investment have a significant and positive effect on external debt in the long run, while GDP per capita and government expenditure have a significant negative relationship with external debt; the result in the short run is consistent with the long-run result.

A study published by (Mensah et al., 2017) that looked into the factors that influence Africa's foreign debt. They found that a high growth rate in foreign debt has positive long-term effects on unit shocks or adjustments in government expenditure and domestic borrowing. Inflation, tax revenue, and growth rate demand all had a negative impact on foreign debt growth rates in the medium term. A study conducted by (Murwirapachena & Kapingura, 2015) was found that economic growth and an increase in foreign reserves reduce the level of external debt, while budget deficit and increases in infrastructure spending raise external debt in South Africa.

The large inflows of foreign aid to Africa since the 1960s have contributed to worsening the economic situation and human development of the continent by empowering self-interested elites. Results in (Bjørnskov, 2010) seem to indicate that foreign aid in some countries is primarily captured by political elites that may have little incentive to adopt a long-term horizon necessary to repay foreign loans. The same seems to pertain to funds attained in the international financial markets. As (Bulow & Rogoff, 1990) find, the loans of the 1970s and 1980s were generally misspent and “a very large percentage went to finance conspicuously unpromising government investment projects and capital flight”. Year period between 1976 and 2005, given the level of foreign debts. There are a series of alternative explanations to the causes of debt problems in poor countries, such as Dutch Disease and other externalities, moral hazard, reform delay, incentive distortions, etc. For these and other explanations found in the literature, see for example work as early as Bjerg et al., 2007, on Dutch Disease; Doucouliage & Paldam, 2007, the ineffectiveness of foreign aid to trigger follow-on investments; on government consumption increases or questionable government purchases see the works by Boone (1996), for an instructive overview of the recent trends in development economics at large. Hence, this sizable and diverse literature by itself would suggest that foreign aid would cause an increase in poor countries' debt burdens, which may provide part of the explanation for the absence of positive growth effects of aid, Nowak-lehmann et al., 2012, However, a direct link based on rationally acting agents between the amount of aid inflow and a slower and lower repayment pattern has to the best of our knowledge not previously been explored. Some aid critics have suggested, the mounting debt problems and shaky loan repayment are partially caused by foreign aid (Bjerg et al., 2007).

(Mayr, 2010) formalizes such concerns in a model in which aid inflows in part depend on countries' indebtedness. Given that donors try to alleviate problems associated with debt burdens, she shows the existence of a moral hazard problem, as politicians that are otherwise benevolent on behalf of their own population have an incentive to rationally run budget deficits. Even without voracity effects or problems of high discount rates due to, e.g., political instability, it is therefore rational to under-service international debt so long as donors are sensitive to the problems this may create; i.e. debtors partially or fully default because it generates aid inflows. Such problems are further exacerbated when politicians cannot be assumed to be entirely benevolent. Empirical evidence of the foreign debt determinants in Malaysia, studied by Pyeman et al., 2016, stated that a policy for external debt management is important for a nation because moderate international loans could be harmful to the economic condition of the country.

Several studies from around the world were examined in terms of theory, methodology, and outcomes. The empirical findings on the determinants of external debt are covered in the literature review. These recent

studies have revealed a variety of factors that influence external debt, confirming that there is still an open question. As a result, this paper investigates the factors that influence Somalia's external debt.

III. Methodology

The aim of this study is to examine the relationship among the explained variable which is External debt and explanatory variables which are Gross domestic product, Domestic Investment, Export, Foreign Aid, and government final consumption expenditure. We propose to follow a similar framework as past research based on the problem formulation. Which means the thesis will take a quantitative approach utilizing a statistical method. The statistical approach of choice is Autoregressive Distributed Lag model (ARDL) a relatively new but rapidly gaining popularity model for determining short- and long-run correlations between a groups of variables.

Time series data is a collection of data that can be categories as annually, semiannually, quarterly and monthly basis. The data that used in the project is time series, our observation period will be on year 1974 until year 2018 in Somalia. All data collected was a secondary data. Researcher used this type of data due to it helpful to reduce the time consuming, it makes the project can be effectively complete on time with quality works. Besides, World Bank and SESRIC have provided an accurate and completely data that enable researcher can easily obtain it help to save cost in the process of collecting a secondary data.

The researcher is using secondary data collected from web browsers ;World Bank database, Indux menu and SESRIC on those variables which will affected External Debt in Somalia such as exports, gross domestic product, foreign aid, domestic investment and government final consumption expenditure. The following step is researchers will key in the data into Excel format and import data to STATA, popular econometric software to estimate time series data.

Econometric model

This research used the autoregressive distributed lag (ARDL) structural break to empirically test the Short run to determine Somalia's external debt from 1974 to 2018 and to examine the long-term with the error correction model to determine whether the variables have existing short-term relationships. This study employs and follows the existing framework determinants of foreign debt literature, such as Bittencourt,2015. Therefore, the basic specification of the model is presented as:

$$\ln ED_t = \beta_0 + \beta_1 DI_t + \beta_2 GDP_t + \beta_3 FG CX_t + \beta_4 FA_t + \beta_5 EX_t + u_t \quad (1)$$

Where ED is external debt, DI is domestic investment, GDP is gross domestic product , GFCX is government expenditure, FA is foreign aid, EX is export and u_t is the error term. The ARDL methodology includes the bound F-test for co-integration and the ARDL method is a technique involving two steps. To examine the long-term co-integration presence, Equation 1 is re-arranged in the ARDL framework as an unrestricted error correction model (ECM).

$$\Delta \ln ED_t = C + \alpha_1 \Delta \ln ED_{t-1} + \alpha_2 \Delta \ln DI_t + \alpha_3 \Delta \ln GDP_t + \alpha_4 \Delta \ln FG CX_t + \alpha_5 \Delta \ln FA_t + \alpha_6 \Delta \ln EX_t + \sum_{p=1}^p \alpha_{1p} \ln ED_{t-p} + \sum_{q=1}^q \alpha_{2q} \ln DI_{t-q} + \sum_{q=1}^q \alpha_{3q} \ln GDP_{t-q} + \sum_{q=1}^q \alpha_{4q} \ln FG CX_{t-q} + \ln IFAT_{t-1} + \ln IEX_{t-1} + ECM_{t-1} + \mu t \dots \dots (2)$$

Where delta Δ is the operator of the difference and represents the short-term dynamics. Long-term relationships along with the variables are measured by the parameters attached. The model for short-run error correction is used to determine short-run dynamics and to confirm the robustness of the long-run coefficient in Equation 2. Based on data from the annual time series for the 1974–2018 period, the current data are in US dollars and were obtained from the World Bank Indux menu and SESRIC. The study applied the ARDL structural break to the cointegration test to examine the long-term and error correction model to determine whether there is a relationship between the variables in the short term.

ED= external debt

GDP= gross domestic product

EX= export

FA= foreign aid

DI= domestic investment

FGCX= final government consumption expenditure

Descriptive Statistics

This section describes summary of all variables considered in the study. The statistics analysed include mean, standard deviation, minimum and maximum values. These are presented in Table 4.1

Table 4.1 Descriptive Statistics

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---------------------------|-----|--------|-----------|--------|--------|
| Ln External Debt | 45 | 21.017 | 1.119 | 18.16 | 21.84 |
| Ln Domestic investment | 45 | 20.064 | .196 | 19.755 | 20.612 |
| Ln GDP | 45 | 21.524 | .154 | 21.236 | 21.792 |
| Ln Final gov. consumption | 45 | 18.563 | .435 | 17.285 | 19.275 |
| Ln Foreign Aid | 45 | 19.359 | .985 | 17.134 | 20.827 |
| Ln Export | 45 | 16.34 | 1.172 | 14.969 | 18.612 |

Correlation analysis

Table 4.2 Matrix of correlations

| Variables | (1) | (2) | (3) | (4) | (5) | (6) |
|------------|--------|--------|--------|--------|--------|-------|
| (1) lnED | 1.000 | | | | | |
| (2) lnDI | 0.434 | 1.000 | | | | |
| (3) lnGDP | -0.541 | 0.817 | 1.000 | | | |
| (4) lnFGCX | 0.445 | 0.081 | 0.265 | 1.000 | | |
| (5) lnFA | 0.649 | 0.692 | 0.836 | 0.304 | 1.000 | |
| (6) lnEX | -0.807 | -0.055 | -0.250 | -0.087 | -0.374 | 1.000 |

The above table reveals the correlation matrix of dependent and independent variables. External debt have positive correlations with Domestic investment, foreign aid government expenditure but negative correlations with GDP and Export.

Econometrics Analysis

This section presents analysed econometrics findings based on the study objectives. Since, the study utilized time series methods. It was imperative to first conduct unit root test to ascertain whether the variables were stationary or not. The study adopted Augmented Dicky Fuller (ADF) to test for stationarity. This was to make sure that no variable with unit root enters estimations because; unit roots in the series could result into spurious regressions. The tes was conducted at two stages, namely, constant and constant & trend. The hypothesis of the test states that there is unit root in the series. The hypothesis is rejected when the test statistics in the two stwps are significant. If the results are not significant, the variables is differenced and then re-subjected to unit root test again. Te results of unit root test are presented in Table 4.3

| Variables | Test for unit root in | Test critical values at 5% | t-Statistic | p- value | Remark |
|-----------|-----------------------|----------------------------|-------------|----------|-----------------|
| LnED | Level | 2.950 | 5.19 | 0.000 | Stationary |
| LnDI | Level | 2.950 | 1.99 | 0.053 | Nan-Stationary |
| LnGDP | Level | 2.950 | 1.50 | 0.140 | Non-Stationary |
| ln FGCX | Level | 2.950 | 4.44 | 0.000 | Stationary |
| lnFA | Level | 2.950 | 2.13 | 0.040 | Stationary |
| lnEX | Level | 2.950 | 1.40 | 0.169 | N-on Stationary |
| | | | | | |
| lnED | 1stdifference | | | | |
| lnDI | 1stdifference | 1.952 | 4.77 | 0.000 | Stationary |
| lnGDP | 1stdifference | 2.952 | 4.64 | 0.000 | Stationary |
| lnFCX | 1stdifference | | | | |

| | | | | | |
|------|---------------|-------|------|-------|------------|
| lnFA | 1stdifference | | | | |
| lnEX | 1stdifference | 2.952 | 4.95 | 0.000 | Stationary |

Unit root test results are instrumental in deciding which method of estimation to adopt. The results in table 4.3 shows that variables ED, FGXC and FA were found stationary at level, while DI, GDP and EX became stationary after differencing once. This imply that the series is integrated of order I(0) and I(1). Therefore, the suitable model to estimate the external debt equation is Vector Error Correction Model (VECM)following pesaran et al, 2001. To stimate th results, frist the stidy conducted Bound Test to cointegration in the next subsection.

Co- integration results

3 Johansen tests for cointegration
 Trend: constant Number of obs = 43
 Sample: 1976 - 2018 Lags = 2

5%

| Rank | parms | LL | eigenvalue | trace statistic | critical value |
|------|-------|-----------|------------|-----------------|----------------|
| 0 | 42 | 114.27725 | . | 160.1734* | 94.15 |
| 1 | 53 | 140.47442 | 0.70432 | 107.7791 | 68.52 |
| 2 | 62 | 161.4255 | 0.62261 | 65.8769 | 47.21 |
| 3 | 69 | 178.08417 | 0.53921 | 32.5596 | 29.68 |
| 4 | 74 | 188.58462 | 0.38639 | 11.5587 | 15.41 |
| 5 | 77 | 193.63469 | 0.20934 | 1.4585 | 3.76 |
| 6 | 78 | 194.36395 | 0.03335 | | |

Bound test to co-integration

this test was conducted because variables were declared stationary at two levels of integration, that is, I(0) and I(1) as shown in table 4.3.. the test was carried out to find out the presence of cointegration in the model (null hypothesis). This hypothesis is rejected if computed F-statistic is less than the upper bound of critical values at all levels of significance and accepted otherwise. When F-statistics value falls between lower and upper bound critical values, then the results are termed inconclusive. The results of the test are presented in Table 4.4...

| Level of significance | Critical value | | F-statistics |
|-----------------------|----------------|-------------|--------------|
| | Lower bound | Upper bound | |
| 1% | 2.26 | 3.35 | 2.024 |
| 5% | 2.62 | 3.79 | |
| 2.5% | 2.96 | 4.18 | |
| 10% | 3.41 | 4.68 | |

Findings of the Tale 4.3 ,indicates that F-statistics values is less than all the lower bound values at all levels of significance. This imply that not existence of cointeration in the model. Thus short run relationship are assumed in the model.

4.3 Lag Selection

| Lags | variables |
|------|-----------|
| 0 | ED |
| 1 | DI |
| 1 | GDP |
| 0 | FGCX |

| | |
|---|----|
| 1 | FA |
| 1 | EX |

The AIC criteria will be utilized to limit the lag time for both the ADF test and the ARDL model in order to produce a cohesive model. Serial correlation, heteroskedasticity, misspecification, and non-normality should not be present, according to Pesaran et al. (2001), hence the lag duration should be adjusted for the probable biases.

4.4 ARDL Results

After cointegration test analysis, the study implemented ARDL model to estimate the debt service equation. The findings are presented in Table 4.5

| Variables | Coef | Std. Deviation | t-statistics | p-value |
|----------------------------|-----------|----------------|--------------|---------|
| External debt | 1.012857 | .1856212 | 5.46 | 0.000 |
| Domestic investment | .8299053 | .2929909 | 2.83 | 0.020 |
| GDP | -1.078784 | .3883793 | 2.78 | 0.021 |
| Final gov. consumption exp | .1702194 | .047562 | 3.58 | 0.06 |
| Foreign Aid | .1262496 | .0317749 | 3.97 | 0.04 |
| Export | -.2060045 | .0520961 | 3.95 | 0.003 |
| Constant | -15.52573 | 11.80858 | 1.31 | 0.246 |
| ECT | -.9978436 | .365941 | 2.73 | 0.029 |
| Number of obs | 40 | | | |
| Adj R-squared | 0.9979 | | | |

The ARDL model results indicate that domestic investment is a significant factor that positively affects external debt in the short run. This implies that domestic investment may increase public investment which turns to government expenditure. An increase in the government’s need to borrow to meet the financial requirements leads to an increase external debt, similar findings were reported in the study by chung, 2009. A negative relation was found between GDP and foreign debt in long run, which indicates that GDP leads to an increase living standards, national income and savings, and will cause a decrease in external debt. A negative correlation between debt and GDP is consistent with (presbitero, 2006). Likewise, results shows the negative impact of export on external debt, similar findings was found in the study of sargent &vilmunen, 2013, which they discovered that payments of debts were largely explained by economies amount of exports. They also said that countries with viewer export had a highly probability of default or reschedule debt servicing.

In this findings, Foreign aid is another factor contributing External debt of Somalia in a positive and significant way. This can be said that it is because the large inflows of foreign aid to Africa since the 1960s have contributed to worsening the economic situation and human development of the continent by empowering self-interested elites .The result also indicates a positive but insignificant impact of government’s final consumption expenditure on external debt.

According to result, 1 percentage rise in Gross domestic product would result in a 0.82 percent increase in External debt in the short-run. Historically, nations have viewed foreign borrowing as a supplement to domestic saving in order to close the investment-savings gap and achieve quicker growth. the concept of dual-gap analysis, pioneered by Hollis Cheney and his collaborators, shows that external borrowing can be used as a supplement to foreign exchange if the gap between foreign exchange earnings from exports and imports is larger than the domestic investment-savings gap in order to achieve a faster rate of growth and development.

The GDP growth rate variable was found significant given the p-values 0.021. The estimated results indicate that GDP growth has a negative effect on external public debt (-1.078784). in the short run government does not have an elaborate plan to barrow heavily in order to finance development expenditure and hence, the reason why the growth in the GDP is not accompaniedby more external public debt. However, in the long run, the government puts in place plan for investment, which requires heavybarrowing and hence increased public debt.

The result shows that 1 percent rise in Foreign aid causes 0.1262496 percent increase in foreign debt means that Aid receive leads to worsening Somalia’s public debt instead of lowering it. Mayr,2010 formalizes such concerns in a model in which aid inflows in part depend on countries’ indebtedness. Given that donors try to alleviate problems associated with debt burdens, she shows the existence of a moral hazard problem, as politicians that are otherwise benevolent on behalf of their own population have an incentive to rationally run budget deficits. Even without voracity effects or problems of high discount rates due to, e.g., political instability, it is therefore rational to under-service international debt so long as donors are sensitive to the problems this may create; i.e. debtors partially or fully default because it generates aid inflows. Such problems are further exacerbated when politicians cannot be assumed to be entirely benevolent

The study further reveals that Somalia's export determines the level of external public debt in short run (-.2060045, p-value= 0.0030. the negative coefficient indicates that an increase in Somalia's export leads to a decline in external debt. More export brings in more revenue in terms of foreign currency which and therefore, enabling the economy to honour its external public obligations. In addition, more foreign exchange from the exports could stabilize macroeconomics such as employment and lead to steady growth in the economy and hence limited external borrowing. Similar results were observed by Mohamed et al., 2001 and Hull 2011 who argued that enhancement of export trade is a remedy to a country's external debt challenge.

IV. Conclusion And Recommendation

Most emerging countries need substantial foreign aid and external debt to achieve sustainable economic development. This paper analyzed Somalia's external debt determinants from 1974 to 2018. ARDL structural break is used in this paper to test the co-integration approach to examine the model of long run and error correction to determine whether short-run relationships between variables exist. This study employs and follows the existing framework determinants of foreign debt literature such as Bittencourt 2015 and Gokmenoglu & Rfik 2018. The results show that Foreign aid, domestic investment have a significant and positive effect on foreign debt in the short term and government expenditure have positive but insignificant impact on foreign debt, while GDP and export have a significant negative impact on foreign debt, which is consistent with long-term results in the short term.

Regarding policy recommendation based on the results, it is clear that the Somali economy is becoming more dependent on foreign debt, which can lead to potential difficulties in repaying debt and increase vulnerability to debt crises. Somalia should concentrate on the profitable sectors (e.g., livestock, fisheries and agriculture) with a view to improving the production and revenue base in order to minimize external debt, government expenditure and imports. Similarly, the expansion of a simpler tax base system and the removal of spending dependence on fiscal stability would boost fiscal balance, as many governments have disguised borrowing by those fiscal measures, which have expanded debt stocks. Finally, foreign debt and aid dependence are not conducive to creating a stable economy, so it is recommended that the Somali government should rethink the allocation of foreign aid, and policymakers could introduce a strategy to reduce high dependence on debt that has been proven to work in the past, e.g., the reduction of Nigeria's debt during the Okonjo-Iweala reform as the minister of finance who saw Nigeria's debt liability massively reduced. This was achieved through the establishment of a debt management office (DMO) to manage the external debts of the countries. Therefore, before adopting policies, we need to realize the growth effects of foreign debt in Somalia.

REFERENCES

- [1]. Banks & financial institutions. (n.d.). *Foreign Law Guide*. https://doi.org/10.1163/2213-2996_flg_1000000564
- [2]. IMF. Research Dept. (2006). World economic outlook, April 2005: Globalization and external imbalances: Globalization and external imbalances. *World Economic Outlook*. <https://doi.org/10.5089/9781589064324.081>
- [3]. Mohamed Omar, Z., & Isse Ibrahim, M. (2021). Determinants of external debt: The case of Somalia. *Asian Development Policy Review*, 9(1), 33-43. <https://doi.org/10.18488/journal.107.2021.91.33.43>
- [4]. Regional economic outlook, October 2019, sub-Saharan Africa. (2019). *Regional Economic Outlook*. <https://doi.org/10.5089/9781513514055.086>
- [5]. Siddique, A., Selvanathan, E., & Selvanathan, S. (2016). The impact of external debt on growth: Evidence from highly indebted poor countries. *Journal of Policy Modeling*, 38(5), 874-894. <https://doi.org/10.1016/j.jpolmod.2016.03.011>
- [6]. Somalia - Joint world Bank-IMF debt sustainability analysis. (2019). <https://doi.org/10.1596/32582>
- [7]. World development indicators 2015. (2015). <https://doi.org/10.1596/978-1-4648-0440-3>
- [8]. Muinga, R. (2018). External public debt and economic growth in Kenya. *International Journal of Scientific and Research Publications (IJSRP)*, 8(11). <https://doi.org/10.29322/ijsrp.8.11.2018.p8385>
- [9]. Gross domestic product. (n.d.). <https://doi.org/10.1787/341288614164>
- [10]. Al-Fawwaz, T. M. (2016). Determinants of external debt in Jordan: An empirical study (1990–2014). *International Business Research*, 9(7), 116. <https://doi.org/10.5539/ibr.v9n7p116>
- [11]. Beaugrand, P., Mlachila, M., & Loko, B. (2002). The choice between external and domestic debt in financing budget deficits: The case of central and west African countries. *IMF Working Papers*, 02(79), 1. <https://doi.org/10.5089/9781451850215.001>
- [12]. Beyene, S. D., & Kotosz, B. (2020). Macroeconomic determinants of external indebtedness of Ethiopia: ARDL approach to Co-integration. *Society and Economy*, 42(3), 313-332. <https://doi.org/10.1556/204.2020.00013>

- [13]. Churchman, N. (2001). Public debt and the economics of David Ricardo. *David Ricardo on Public Debt*, 21-47. https://doi.org/10.1057/9780230509016_2
- [14]. Gamel, K., & Pham, V. H. (2018). The short and long run effects of debt reduction: Evidence from debt relief under the enhanced HIPC and MDR initiatives. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3169893>
- [15]. Greenidge, K., Drakes, L., & Craigwell, R. (2010). The external public debt in the Caribbean community. *Journal of Policy Modeling*, 32(3), 418-431. <https://doi.org/10.1016/j.jpolmod.2010.02.004>
- [16]. Gross domestic product. (n.d.). <https://doi.org/10.1787/163450108212>
- [17]. JAIN, D. A. (2011). Hariyana me jain Moortiya. *Indian Journal of Applied Research*, 4(3), 221-221. <https://doi.org/10.15373/2249555x/mar2014/66>
- [18]. Karazijienė, Ž. (2015). Critical analysis of public debt and tendencies of its management. *Public Policy and Administration*, 14(2), 194. <https://doi.org/10.13165/vpa-15-14-2-03>
- [19]. Krugman, P. (1988). Financing vs. forgiving a debt overhang. <https://doi.org/10.3386/w2486>
- [20]. Mensah, D., Aboagye, A. Q., Abor, J. Y., & Kyereboah-Coleman, A. (2017). undefined. *Journal of Economic Studies*, 44(3), 431-455. <https://doi.org/10.1108/jes-05-2015-0080>
- [21]. Murwirapachena, G., & Kapingura, F. M. (2015). undefined. *International Journal of Economic Policy in Emerging Economies*, 8(2), 138. <https://doi.org/10.1504/ijepee.2015.069593>
- [22]. Omotor, D. G., Musa, B. Y., & Elu, J. (2020). External debt, governance, and economic growth: The African case. *Advances in African Economic, Social and Political Development*, 85-97. https://doi.org/10.1007/978-3-030-46482-0_6
- [23]. Pyeman, J., Noor, N. H., Mohamad, W. M., & Yahya, A. A. (2016). Factors affecting external debt in Malaysia: An empirical investigation. *Proceedings of the 1st AAGBS International Conference on Business Management 2014 (AiCoBM 2014)*, 449-455. https://doi.org/10.1007/978-981-287-426-9_39
- [24]. Regional economic outlook, October 2019, Middle East and Central Asia. (2019). *Regional Economic Outlook*. <https://doi.org/10.5089/9781513514000.086>
- [25]. Riddell, R. C. (2014). Does foreign aid really work? An updated assessment. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2409847>
- [26]. Saad, W. (2012). Causality between economic growth, export, and external debt servicing: The case of Lebanon. *International Journal of Economics and Finance*, 4(11). <https://doi.org/10.5539/ijef.v4n11p134>
- [27]. Sargent, T. J., & Vilmunen, J. (2013). Introduction. *Macroeconomics at the Service of Public Policy*, xiv-14. <https://doi.org/10.1093/acprof:oso/9780199666126.003.0001>
- [28]. Sheng, X. S., & Sukaj, R. (2021). Identifying external debt shocks in low- and middle-income countries. *Journal of International Money and Finance*, 110, 102283. <https://doi.org/10.1016/j.jimonfin.2020.102283>
- [29]. Tsoulfidis, L. (2007). Classical economists and public debt. *International Review of Economics*, 54(1), 1-12. <https://doi.org/10.1007/s12232-007-0003-8>
- [30]. Waheed, A., & Saqib, N. (2020). undefined. *International Journal of Energy Economics and Policy*, 10(1), 249-254. <https://doi.org/10.32479/ijeep.8819>
- [31]. Bjerg, C., Bjørnskov, C., & Holm, A. (2007). Growth, debt burdens and alleviating effects of foreign aid in Least Developed Countries. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.995265>
- [32]. Bjørnskov, C. (2010). undefined. *Journal of Development Economics*, 92(2), 115-124. <https://doi.org/10.1016/j.jdeveco.2009.03.001>
- [33]. Bulow, J., & Rogoff, K. (1990). undefined. *Journal of Economic Perspectives*, 4(1), 31-42. <https://doi.org/10.1257/jep.4.1.31>
- [34]. Doucouliagos, C. (.), & Paldam, M. (2007). Explaining development aid allocation by growth: A Meta study. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.1019525>
- [35]. Mayr, K. (2010). Optimal deficit and debt in the presence of foreign aid. *World Development*, 38(1), 19-27. <https://doi.org/10.1016/j.worlddev.2009.03.010>
- [36]. Mweni, F. T. (2016). The relationship between public investment to GDP ratio and external debt stocks in Kenya. *International Journal of Management and Economics Invention*. <https://doi.org/10.18535/ijmei/v2i7.01>
- [37]. Nowak- Lehmann, F., Dreher, A., Herzer, D., Klasen, S., & Martínez- Zarzoso, I. (2012). Does foreign aid really raise per capita income? A time series perspective. *Canadian Journal of Economics/Revue canadienne d'économique*, 45(1), 288-313. <https://doi.org/10.1111/j.1540-5982.2011.01696.x>
- [38]. Bittencourt, M. (2015). undefined. *Emerging Markets Finance and Trade*, 51(3), 463-472. <https://doi.org/10.1080/1540496x.2015.1025667>
- [39]. Gokmenoglu, K., & Rafik, R. A. (2018). undefined. *Emerging Trends in Banking and Finance*, 16-33. https://doi.org/10.1007/978-3-030-01784-2_2