

The Impact of Trade Liberalization Policy on Sub-Saharan African Countries' Debt Burden

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ABSTRACT

Poor public sector management, a bias against agriculture and over-valued exchange rates has been partially blamed for the economic crisis facing many Sub-Saharan African countries. Other culprits include unrestrained bank lending in the late 1970s and early 1980s and external shocks like the oil price hikes. To correct the situation, the World Bank and the International Monetary Fund (IMF) prescribed adjustment programs intended to stabilize the economy, restore balance in external transactions and stimulate growth through effective allocation of a country's resources. This paper assesses the impact of some of those policy prescriptions like trade liberalization and exchange rate depreciation on debt burden of seven of those countries that adopted the programs. Empirical result shows that increase in domestic imports relative to gross domestic product (GDP) will increase the external debt.

INTRODUCTION

The potential threat of Third World debt problems to the international financial institutions (IFIs), prompted the World Bank and the International Monetary Fund

(IMF) to design adjustment programs which aimed at restoring the credit worthiness of debtor countries, increase their economic efficiency and enhance their growth. In the case of African countries, the World Bank Report of 1981 (World Bank, 1981) argued that growth and development in Sub-Sahara Africa (SSA), could be reignited only through structural adjustment that focuses on realigning overvalued exchange rates, improving price incentives in the agricultural sector and enhancing the performance of the public sector. IMF policies focus on short-term stabilizing measures intended to reduce inflation and restore balance in external transactions while the World Bank policies on the other hand, have been designed to stimulate growth through better allocation and efficient use of a country's resources in the medium and long-term.

Three categories of policies have been observed to be present in most of the reform packages operated in SSA namely, demand restraint, switching policies and policies related to long-term supply or efficiency. The demand restraining components contain elements that would reduce demand of imported commodities and eventually free some resources for export purposes. The main instruments used for this objective include reductions in government expenditures and budget deficits as well as controlling money supply and credit creation. Also included are those policies that encourage shifting resources from non-tradables to tradables and those that change production incentives in the agricultural sector. Long-term supply policies are intended to secure market-oriented economy with minimum restrictions. Policy instruments used in this regard include trade liberalization, financial reforms to raise interest rates and unify credit markets. Cote d'Ivoire, Ghana, Nigeria and Zambia are some of the countries classified as early-intensive-adjustment-lending (EIAL) countries that adopted the three categories of policies. The non-adjustment-lending (NAL) countries included Benin, Cameroon and Botswana.

The purpose of this paper is to analyze the impact of trade liberalization policy, exchange rate devaluation and terms of trade on the debt burden of selected SSA countries. Understanding how these factors affect the ability of nations to cope or deal with their debt trap is crucial for the international community and policy makers to come up with prescriptions that could in the long-run lead to growth and development. The subsequent sections in this paper are review of literature, data description and model specification, result and discussion, and summary/recommendation.

REVIEW OF LITERATURE

Policy problems have always been cited as the main source of Africa's economic crisis (World Bank, 1981). According to this report, poor public sector management, a bias against agriculture, trade and exchange rate biases against exports are to blame. Other causes of the crises include macroeconomic shocks in the world economy, and unrestrained bank lending in the late 1970s and early 1980s. Jaycox attributed one of the remote causes of the financial crisis to deteriorating food situation that resulted in increase of annual food imports from 4 million tons to 24 million tons (Jaycox, 1988). Factors external to individual African countries include worsening terms of trade for primary commodities which resulted in decline of SSA's share of world exports to an all low of one percent in the 1980s. Terms of trade losses in the 1980s amounted to as much as 13 percent of GDP of such country as Ghana, 29 percent for Nigeria and 17 percent for Congo (Helleiner, 1994). Stewart (1994) reported that the cumulative deterioration in the external position between 1970 to 1982 and 1982 to 1990 amounted to an annual average of over \$ 17 billion in terms of trade and \$5 billion on capital account for a total of \$22 billion; which is an equivalent of 14 percent of SSA's 1990 exports.

Other external shocks are the oil price hikes of 1979 that resulted in downturn of organization of economic cooperation and development (OECD) countries' growth rates. This was also a major shock to the developing countries including Africa (Demery, 1994). These had adverse effects not only on the current account but on the capital accounts that had started showing serious problems. Also the rise in the world interest rates from an average of about 1.3 percent in 1973-80 to about 6 percent in 1980-86 due to a combination of restrictive monetary and expansionary fiscal policy of the then U.S. administration worsened Africa's problems (Toye, 1994). Given the interplay of external factors and inappropriate domestic policies, SSA's economic crisis was a disaster waiting to happen. The consequence is mounting debt which rose from \$56 billion in 1980 to \$ 170 billion in 1990 (Demery, 1994). Inappropriate government policies and objectives include high import tariffs, subsidies to urban consumers through farm price controls and preferences for imported food (Sissoko and Osuji, 1996).

As could be observed from Table 1, the situation even got worse as the debt increased from \$179 billion in 1991 to \$185 billion in 1993.

Another factor worth mentioning here is the effect of drought, which caused severe socioeconomic problems in the Sahel region of the continent. The drought which occurred in 1968-74 devastated nearly one-third of African countries while that of 1982-85 was even worse as about two-thirds of the continent were affected. There is no doubt that those SSA countries afflicted by recurrent drought experienced decline in agricultural production and severe budget deficits which definitely halted their economic growth.

SOME OF THE EFFECTS OF STRUCTURAL ADJUSTMENT PROGRAMS

As said earlier, adjustment policies adopted by many African countries were meant to restore macroeconomic balances by restoring aggregate demand and its components in line with aggregate output. Most of the countries had to use fiscal and credit restrictions as their principal policy variables, while in the areas of structural and sectoral reforms, exchange rate and trade liberalization, agricultural and pricing policies, to mention just a few were used. The effects of these measures have evoked diverse observations and comments from scholars, independent researchers and policy makers. Stewart (1992) argued that the stabilization and adjustment policies advocated by the IMF and the World Bank and adopted by many African countries have not succeeded in restoring growth, but instead have been accompanied by continued economic deterioration. On the issue of expanding primary products by most African countries, Stewart (1994) stated that the decline in commodity prices which occurred in the early 1980s was as a result of over expansion of aggregate export supply and not necessarily due to downturn in the economies of OECD

countries. Two studies, one by Woodward (1992) and another by the World Bank (1994) among others, presented contrary results. According to these studies, SSA countries that have vigorously pursued adjustment programs by establishing and maintaining macroeconomic stability, eliminating discrimination against agriculture, and taking measures to remove export bias, experienced the biggest turnaround in their economies. The assessment by the World Bank categorized Ghana, The Gambia, Burkina Faso, Tanzania and Zimbabwe as countries with strong economic resurgence between 1981-86 and 1987-90. During that period, the median growth rate of GDP was two percent. Cameroon, Sierra Leone and Zambia were among those countries considered not to be doing well, while Benin, Ethiopia and Malawi were in between. The studies however cautiously pointed out the harsh reality of stagnant per capita growth rates and rising incidence of poverty. The note of caution is not surprising as most of those countries that were reported to be doing well economically had their external debt more than doubled between 1980 and 1992. For example, while Ghana's total external debt was \$1,407 billion in 1980, it rose to \$4,275 billion by 1992. For Burkina Faso, the increase was from \$330 billion in 1980 to \$1,055 billion in 1992 and Cote d'Ivoire, from \$7445 to \$17,997 billion. Tanzania's total external debt, however, declined from \$2476 to \$1,356 billion during the same period, Osuji (1997).

DATA DESCRIPTION AND MODEL SPECIFICATION

Data sources for this study are secondary in nature. Time series data from seven Sub-Saharan African countries were collected to cover 20 years (1972-1992). Data sources include International Financial Statistics and publications of the World Bank. Information collected include long term debt, ratio of exports to GDP, ratio of imports to GDP, exchange rate and indexes of terms of trade. The selected countries reflect the diverse nature of SSA's economic, political, social, and

environmental conditions. Moreover, selection was based on World Bank country classification of Early Intensive Adjustment Lending (EIAL) countries which include Nigeria, Ghana, Cote d'Ivoire, Kenya, and Zambia and Other Adjusting - Lending Countries (OAL) involving Cameroon and Zaire. In all, seven countries were selected from the eastern, central and West African regions and none of these countries was directly affected by the severe droughts of the 1970s and early 1980s.

The dependent variable is the value of external debt of each country in millions of U.S. dollar on annual basis for the period 1972 to 1992 (based on availability of data). The independent variables include ratio of export to gross domestic product, ratio of imports to gross domestic product, terms of trade, and exchange rate. The double-log specification of the model follows:

$$\text{LEDT} = b_0 + b_1 \text{LXGSP} + b_2 \text{LMGSP} + b_3 \text{LTT} + b_4 \text{LEXC} + E_i$$

where

LEDT = log of external debt (in \$millions)

LXGSP = log of ratio of exports of goods and services to GDP

LMGSP = log of ratio of imports of goods and services to GDP

LTT = log of indexes of terms of trade (1987=100)

LEXC = log of exchange rate measured in dollars per unit of domestic
currency

b_0, b_1, \dots, b_4 = constant term, and coefficients associated with explanatory
variables

E_i = error term.

Detailed description and a priori expectations of the signs of the coefficients are explained below:

Dependent Variable (Log. of External Debt):

As mentioned earlier, the dependent variable is external debt in millions of U.S. dollars for each country. External debt comprises long-term debt, which includes Central Bank and IMF credit, public enterprises and private sector non-guaranteed loan, and short-term debt. The debt was partly due to African countries looking for help from private and government institutions to finance oil imports and other products necessary for development.

Independent Variables:

LXGSP: The coefficient of logarithm of the ratio of exports of goods and services to gross domestic product is expected to be negative. It is believed that the higher this ratio, ceteris paribus, the more the export earnings and the more likely a country is able to reduce its debt burden. Export expansion is one of the prescriptions recommended by the IMF as one of the ways African countries can improve their economic predicament.

LMGSP: The coefficient of LMGSP is hypothesized to be positive. To the extent that importation of capital goods leads to increase in domestic output of goods and services, this ratio will be beneficial to African nations. It is argued that sharp reduction in imports (and, even more, imports per capita) below prior levels would lead to import-related underutilization of both social and directly productive capital (Helleiner, 1991).

LTT: The coefficient of LTT is expected to be negative. Improved terms of trade should alleviate problems associated with debt burden assuming the demand for exported goods is price inelastic. Between 1971 and 1987, most Sub-Saharan African countries including Ghana recorded significant decline in their terms of trade. Declining terms of trade could lead also to a drop in external earnings if this

is accompanied by a decrease in exports. Decrease in quantity exported in the 1980s resulted in many countries (SSA) losing income equivalent to 5.4 per cent of GDP between 1971-1973 and 1981-86 (Svedberg, 1993). However, improved terms of trade may lead to a reduced export if the demand for the exported goods is price elastic, which will further exacerbate the debt burden or stress.

LEXC: Logarithm of exchange rate measured in dollars per unit of domestic currency. The currencies of most African countries were so over-valued that by 1982, the real exchange rate index (RERI) had exceeded 200 (1965=100). Those countries with severely over-valued exchange rates during the 1972-87 period also had a decline in their export volumes. Unrealistic exchange rate encourages imports of agricultural products by making food imports cheap and thereby discouraging producers of domestic substitutes. The coefficient associated with LEXC may be positive or negative depending on the magnitude of the change in exchange rate and its effect on the country's export.

RESULT AND DISCUSSION

Empirical analysis based on generalization very often fail to highlight individual country experiences and peculiarities. Since the countries under study have different economic and political background, the manner in which the macroeconomic variables affect their debt burden is discussed next. To capture the impact of the independent variables on the debt burden, ordinary least squares regression is used.

In this model, the coefficients of the double-log functional form are the elasticities. Table 2 shows the result of the regression analysis, which has coefficient of multiple determination (R^2) ranging from 0.919 for Zaire to 0.991 for Cote d'Ivoire.

Table 2

Result of Regression Analysis. Dependent variable: external debt (LEDT)

Country	Constant	LXGSP	LIMGSP	LTT	LEXC	R ²
Cameroon	1.9625	0.0026 (0.004)	2.5904 (4.284)*	-0.5418 (2.154)*	-1.1578 (3.813)*	0.965
Cote d'Ivoire	-0.7029	-0.2735 (0.757)	2.4711 (7.36)*	0.5272 (2.935)*	-1.6954 (8.974)*	0.991
Ghana	0.9480	-0.7711 (1.515)	0.4115 (2.722)*	0.0479 (0.270)	-0.2187 (5.422)*	0.963
Kenya	1.9625	0.4894 (0.875)	0.4636 (1.133)	-0.4729 (1.215)	-0.5319 (11.585)*	0.975
Nigeria	0.8432	0.2907 (0.624)	0.1954 (0.614)	-0.1853 (0.388)	-0.3119 (1.365)	0.975
Zaire	1.3488	0.0348 (2.535)*	0.7946 (2.483)*	-1.0514 (2.689)*	-0.0016 (0.056)	0.919
Zambia	1.0992	-0.0013 (0.643)	0.0786 (0.724)	-0.0766 (0.006)	-0.0282 (0.743)	0.985

(T-statistic in parenthesis)

*Coefficient is significant at .05 probability level of rejection

The coefficient of XGSP (ratio of imports of goods and services to GDP) is statistically insignificant for all the countries except Zaire where it is significant at 95 per cent level. For countries like Ghana, Cote d'Ivoire and Zambia, the signs are negative as expected, implying that any increase in the ratio is likely to alleviate the external debt burden. For instance, a one per cent increase in rates of XGSP would

lead to 0.77 per cent decrease in the external debt of Ghana. The coefficients are insignificant for all the countries except Zaire. The statistical insignificance of the export coefficients lends credence to Stewart's argument that simultaneous expansion in output of primary products by most African country results in less than proportionate increase in earnings. Liberal trade regime should encourage and accommodate diversification away from primary commodities into manufactures and other crops that have higher income elasticity.

The coefficient of MGSP (ratio of imports of goods and services to GDP) has positive sign for all the countries and statistically significant in four countries namely, Ghana, Cote d'Ivoire, Cameroon and Zaire implying that an increase in domestic imports relative to GDP will increase the external debts. Also, importation of certain products may adversely affect the domestic or local producers. For instance, the removal of import controls under the adjustment programs in Cote d'Ivoire so adversely affected domestic manufacturers that the government had to yield to the pressure of restoring import control. The impact of terms of trade on the external debt of the seven nations is consistent with the expected negative signs except for Ghana that has a positive coefficient. In other words, deteriorating terms of trade will have adverse effect on the external debt of these countries. The coefficients associated with Cameroon, Cote d'Ivoire, and Zaire are significant at 95 per cent level of confidence. Incidentally these countries depend on one or two primary commodities for their foreign exchange earnings. It is interesting to observe that the coefficient of exchange rate (EXC) has negative sign for all the seven countries but significant in four countries namely, Ghana, Cote d'Ivoire and Cameroon and Kenya. These varying levels of significance imply that the effect of devaluation varies from one country to another. For countries like Cote d'Ivoire and Cameroon, a 1% appreciation in exchange rate value will lead to a 1.70 % and 1.20% decline in their external debt, respectively. It seems that exchange rate devaluation does not improve these countries' external debt. Perhaps this was not

the intended effect of the original policy which if based on the specie flow mechanism, could have made these countries' exports more competitive abroad and their imports less competitive at home, thereby leading toward a surplus of exports over imports and subsequently improve those countries' balance of payments. Previous study by Faini (1994) supports the notion that devaluation in low-income countries will only induce a modest improvement in the trade balance. This, however, contradicts the result of Balassa (1989) which observed that SSA lost market share during the 1970s when its real exchange was appreciating.

The result of this study indicates that a modest appreciation of the exchange rate of these countries would have a beneficial effect on their trade balance, which could help to reduce the debt burden. Exchange rate depreciation to the extent that it nullifies the impact of increased export may not be in the best interest of these countries.

SUMMARY AND RECOMMENDATIONS

The effects of various trade and macroeconomic variables were studied on Sub-Saharan African countries' debt burden. Most of these variables are used by the World Bank and the International Monetary Fund (IMF) as prescribed policy or adjustment variables to solve Sub-Saharan African Countries' economic and financial problems. The worsening terms of trade in SSA countries have made the impact of exports in traditional tradeable insignificant as far as alleviating the debt burden. The ratio of export of goods and services to gross domestic product (XGSP) was statistically not significant in all the countries except Zaire. On the basis of this result, it becomes crucial to suggest improving the efficiency of production in the traditional export sector, deepening the export base by way of processing prior to exporting and a possible venture into non-traditional exports like fruit and vegetable juice market that has shown large increase in demand in the past

ten years. Exports marketing strategies and research that have suffered benign neglect are important components in revitalizing SSA countries' ailing export sector. So far, not much has been done by SSA countries to aggressively promote their primary commodities. For instance, one hears much about "Colombia Coffee," "Mountain Grown Coffee," etc., but not many people hear about the East African coffee and yet some parts of the continent (East Africa) is known to produce some of the best types of coffee in the world.

SSA policy makers should regard export promotion as an integral part of production. Trade shows, agricultural shows and other promotional mix activities should be undertaken by African countries to encourage the purchase and consumption of those primary products grown in Africa. The continent needs to think about establishing Export Promotions and Trading Agency (EPTA) under the aegis of Economic Commission for Africa (ECA) to ensure that primary products are adequately exposed to the international consumers. For this to succeed, each nation should as a matter of top priority pursue export promotions as well as lay a good foundation for industrialization by encouraging the introduction of new technology in the rural sector.

While there is no immediate solution to Africa's debt crisis, a thorough evaluation of programs and policies initiated by the IMF and the World Bank is inevitable as some of the packages are adversely affecting the economies of these countries. The figures as contained in Table 1 (in which not a single country adopting the IMF/World Bank adjustment program showed any decline in their external debt) speak for themselves. Exchange rate depreciation and consequent worsening of trade terms are some of the external shocks that if not treated, will continue to hurt these countries. These nations require fair prices for their produce. A situation where the debt status of the seven adjusting countries does not show any sign of decline should be of serious concern to the international community. This is particularly so as none of the countries under study experienced any drought

which could have caused decline in agricultural production. In light of this, it will not be out of place to recommend some changes in policy prescriptions aimed at solving or at least reducing SSA countries' debt trap.

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