MACROECONOMIC EFFECTS OF DEBT AND DEBT-SERVICE REDUCTION IN CAMEROON

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A RESEARCH PROPOSAL SUBMITTED TO THE AFRICAN ECONOMIC RESEARCH CONSORTIUM (AERC)

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ABSTRACT
The main purpose of this proposal is to test the hypothesis that debt and debt-service reduction when included in an adjustment programme, can improve the growth potential of a heavily indebted poor country like Cameroon, and thereby increase its ability to meet external obligations.

Using regression analysis, the relationship between debt and debt-service reduction (buy back operations) and the components of the aggregate demand will be established. This will enable decision-makers (like the "Caisse Autonome d'Amortissement") to design external debt policies in the appropriate direction.

A four-equation model will be used to handle the four objectives of this study.

With the expected results of the model, policy instruments aimed at lessening the debt burden will be formulated. The ultimate aim of the recommendations will be to foster economics growth and development through debt and debt-service reduction operations.
1 INTRODUCTION AND BACKGROUND

The economy of Cameroon is agriculture and natural resource-based, with nearly 70 percent of the population employed directly or indirectly in this sector. Its exports are mostly a suite of primary products - coffee, cocoa, timber, crude oil, cotton, rubber, bananas, tea, etc. Cameroon belongs to the Central African Financial Community. The Bank of Central African States (BEAC) carries out its monetary policy. Other members of the monetary group are Chad, Gabon, Central African Republic, the Congo Republic, and Equatorial Guinea.

Cameroon has experienced episodes of sustained high growth in the past. From 1967 to 1978, GDP and national income growth averaged 5.7 percent. From 1978 when the country started producing and exporting oil, the terms of international trade moved in Cameroon’s favour, and the pace of income growth stepped up sharply, averaging 10 percent until 1985 (World Bank, 1994). Since 1985/86, there has been a sharp reversal in economic performance. GDP per capita declined by 6.3 percent per year from 1985 to 1993 and this translated into a 6.0 percent rate of decline in private consumption. Investments dropped from 25 percent of GDP to 10 percent, while gross domestic savings dropped from nearly 35 percent of GDP to 10 percent. The balance of payments moved from a surplus (current account) equivalent to 4.7 percent of GDP in 1985 to a deficit averaging 9 percent in 1991-93. The country also faced a strong effective appreciation of the C.F.A Franc and a pronounced and sustained deterioration in its terms of trade. Between 1986 and 1989, the US dollar depreciated\(^1\). These factors affected the competitiveness of Cameroon’s exports. The failure to adjust the nominal exchange rate to compensate for such a drop left the Government with the instruments of domestic adjustment through deflationary policies which translated into a large drop in incomes without improving the country’s competitiveness. In 1988, the government agreed to an austerity programme supported by an IMF Stand-by arrangement, and a World Bank Structural Adjustment Credit. In the course of the 1992/93 fiscal year, the government took a critical step in its internal adjustment strategy. In addition to measures to increase non-oil revenue, it reduced the civil service wage bill beginning January 1993, through a nominal reduction in base salaries and other benefits.

\(^1\) Cameroon’s exports are denominated in US dollars
averaging 15 percent. A general worsening of Cameroon’s economic difficulties, in particular, the drop in tax revenues, negated the effects of these. All these developments left untold effects on the external debt-service problems of Cameroon, and the accumulation of debt arrears placed the country in a serious insolvent situation.

Foreign borrowing allows a country to invest and consume beyond the limits of current domestic production and, in effect, finance capital formation not only by mobilising domestic but also by tapping from capital surplus countries (Klein 1994). However, borrowing of foreign funds (i.e. the savings or the sacrifice of the taxpayers of other countries) to finance economic development, must be backed by the ability to readily and regularly service the debt payments, interest and amortisation (Ndoh Mbanga 1994). This is possible through efficient and economically justified investment projects with the borrowed funds. Thus, the default in the payment of the principal as well as the interest, will defeat not only the process of international borrowing from capital surplus to capital deficit countries, but also the very essence of economic development as envisaged by the Marshal Plan after the second world war.

One of the most serious problems confronting many developing countries, especially those of Sub-Saharan Africa (after the failure of the Baker and Brady plans) is the burden of external debt. Africa’s external debt is now widely acknowledged to be unsustainable, and the search for durable solutions has intensified. African debt increased from $289 billion in 1991 to over $314 billion in 1995. Sub-Saharan African debt climbed from $194.7 billion to $223.2 billion over the same period, and from over 239 percent to almost 270 percent of export earnings. Sub-Saharan Africa’s arrears on debt service payments have nearly doubled from $32.6 billion to $62.2 billion in the 1991 - 94 period (UN, 1996). Given this, a vicious circle of over indebtedness and economic stagnation is destabilising entire economies, giving rise to social and political tensions. For Cameroon, the situation is exceptionally severe, blocking any possibility for renewed economic growth. The debt has kept on rising despite increased public attention and the initiations of a variety of debt plans

\[ NPV = \sum_{t=1}^{T} \frac{B_t}{(1 + r)^t} - K \]

where B is the net social benefit using present consumption as the unit of account, K is the social cost of the investment, r is the social rate of discount, t is time and T is the life of the project.

The Marshal Plan had as one of its major ambitions, the development of political as well as economic stability in Europe after world war II. One of the key aspects of the plan was that the European nations had to work out a recovery plan on their own and then summit it to the US for review and funding. The phenomenal success of the Marshal plan in the late 1940s and 1950s led many to believe that similar transfers to LDCs would permit their comparably spectacular transformation.
by financial institutions and individual creditor governments. As of 3/31/94, the total external sovereign debt of Cameroon was CFA Francs 3,995,902 million (US D6,831 million) composed of

- CFA 849,819 million - multilateral debt;
- CFA 2,644,621 million - bilateral;
- CFA 291,834 million - commercial debt.

2 STATEMENT OF THE PROBLEM

External debt from all sources has over the years remained the sine-quo-non for filling the resource gap in Cameroon. This resource gap is three fold: the domestic savings gap; the foreign exchange gap\(^4\), and the fiscal gap resulting from budget deficits. External finance is necessary to finance increased investment that otherwise would not be possible because of the drain of external interest payments and low savings. The Harrod-Domar model\(^5\) is useful in determining the amount of foreign resources that will be necessary to realise the target growth rate in case domestic savings are inadequate in developing countries like Cameroon.

The necessity of external financing in the filling of the fiscal gap in Cameroon can be seen in the various five-year socio-economic development plans. In the first plan (1960 - 65), external financing made up about 72 percent of total investment. In the second plan (1966 - 71), it represented 37 percent. Under the third plan (1971 - 76), 25 percent of the funding came from external sources. The fourth and fifth plans maintained almost the same characteristics with external debt representing 168 million CFA Francs and 107 million CFA Francs respectively. Despite its strong growth rate of 9.8 percent in the course of the sixth plan (1986 - 91), external debt remained below a reasonable level (Ndoh Mbanga 1994).

What is critically important from the viewpoint of external debt analysis is that no level of external debt, even a low level can be serviced without difficulties by a developing country (Friedman 1983). The country can not be expected to have an external surplus unless new funds are borrowed or debt and debt-service reduction is offered. It starts with a deficit, yet it must have the flow of resources. Despite

\(^4\) In an open economy, domestic savings can be supplemented by many kinds of external assistance. An import surplus financed by foreign borrowing can supplement domestic savings directly or indirectly by providing foreign exchange to buy imports which could be capitals or substitutes for domestically produced consumer goods

\(^5\) The Harrod-Domar model assumes that limited savings and investment constitute the major constraints on aggregate economic growth. In the simplest form, the model can be set out as follows:

1) \( S_t = I_t \)
2) \( S_t = sY_t \)
3) \( I_t = K_t - K_{t-1} \), and
4) \( K_t = \nu Y_{t-1} \).

Where S is savings, I is investment, K is capital goods, Y is Net National income or GDP, \( \nu \) is capital output ratio, \( s \) is propensity to save out of income. Making the necessary substitutions from (2), (3) and (4) yields:

\[ (Y_t - Y_{t-1})/Y_{t-1} = s/\nu \]

but \( s/\nu \) represents the growth in income \( g \)  \( \Rightarrow g = s/\nu \)
the outflows needed to meet debt servicing, it must also pay for essential imports for consumption, production, and investment. Debt-servicing difficulties do not necessarily originate in changes in external financial markets, but rather unfortunately domestic or balance of payments conditions, international inflation, overvalued exchange rates, large fiscal deficits, or over expansionary monetary policies.

In the case of Cameroon, the fact that the public external debt is concentrated in the public sector has profound implications for adjustment in the country. The country has two serious problems to overcome. The first and widely recognised is that of transferring national income to the foreign creditors. The second problem which is perhaps, as difficult, is that of transferring income from the private sector to the public sector so that the latter may service its debt (thus, the heavy burden of internal public debt too). In this way, debt in many ways is similar to a cancer - once it gets a firm grip on a country, it is difficult to eradicate, and may develop in every organ of life (Thirlwall, 1994), thereby impairing the socio-economic development of the debtor country, unless the foreign creditors provide a financial "life-jacket" through the debt and debt-service reduction operations. There are no easy solutions to the debt-servicing problem short of a massive programme of debt and debt-service reductions, that leaves a manageable debt that the debtors can service. Failure to do so will mean a heavy debt burden which reaches an unacceptable proportion of export and total production (Klein 1994).

3 OBJECTIVES OF THE STUDY

The main objective of the study is to investigate the impact of debt and debt-service reduction on the macroeconomic performance of Cameroon.

The specific objectives are:
i) To assess the impact of debt rescheduled on consumption expenditures.
ii) To measure the link between debt forgiveness and government expenditures
iii) To quantify the relationship between the total debt stock reduction and total export supply; and
iv) To determine how debt buy-back affects total import demand.

4 TESTABLE HYPOTHESES

The hypothesis to guide this study is that debt and debt-service reductions have improved the growth potential of Cameroon, and thereby increased its ability to meet external obligations.
5 POLICY IMPLICATIONS OF THE STUDY

The analysis in this study will provide an insight into how a debt and debt-service reduction might be expected to help a heavily indebted poor country (HIPC) like Cameroon to improve its macroeconomic performance. The analysis will link the effects of debt and debt-service reduction operations to the aggregate demand components (government expenditures, consumption expenditures, real gross investment, and export and import volumes). This may help policy makers with ideas on how to resolve the debt problems.

6 REVIEW OF RELATED LITERATURE

Countries contract debts to fill the deficit in resource gaps that allow them to invest and grow. Sometimes the countries are not able to repay the debts on time, and require some relief. This relief is in many forms (World Bank, World Debt Tables, 1992/93 - vol. II). Most sizeable has been the rescheduling or the postponement to later years of debt repayments falling due in the near or medium term. Both commercial banks and official creditors have provided this kind of relief. In conjunction with such rescheduling, banks commonly have agreed to maintain or extend short-term credit lines and have also provided some new long-term ones. Besides this kind of relief, bridge loans have sometimes been arranged to enable debtor countries meet their obligations until a rescheduling could be undertaken. Other forms of relief have been partial cancellation of debts and conversion of parts of the debts into developmental projects such as environmental protection projects, aid projects, and various types of investment projects (World Resources Institute, 1989). An aspect of relief is also the conversion of debt from hard currency into local currency to pay for various aid projects.

Cameroon has benefited from these debt relief programmes. To address the external debt problems, the Government of Cameroon adopted a comprehensive programme aimed at stabilising the economy. A debt relief programme with the Club of Paris in 1992, consolidated arrears and maturities falling due in 1992. Following the signing of the third Stand-by arrangement with the IMF in 1994, the Paris Club decided to write-off about 50 percent of Cameroon’s external debts, and to stretch the payment period for the rest to 23-25 years, with a grace period of 6-14 years World Bank, World Debt Tables).

Some advocates of debt-relief call for total debt forgiveness, considered as an extreme position by some people. Advocates of this view base their arguments on two points:
a) forcing countries to continue debt service payments is immoral because the loans never benefited the "average person" who is paying dearly for them (World Bank 1995, Chinweizu 1985).

b) developing countries have already repaid their debt. Some economists and institutions such as Avramovic (1989), Cline (1985), Sarkar (1991) and UNCTAD (1992), have made extensive calculations to show that if lost earnings due to commodity price short falls, "excessive" interest charges, capital flight etc., were added together, debtor nations would have more than repaid the principal by now.

According to Sachs (1989), debt reduction is defined "as a restructuring of the outstanding debt in a way that reduces the expected discounted value of the contractual obligations of the debtor." Thus, reduction will mean something more than simply lowering the debt that is owed by repaying the principal. It also means more than converting external debt into an internal debt that carries the same or greater debt servicing burden. In this case, debt reduction will include a rescheduling of debt at sub-market interest rates, a cancellation of part of the principal, exit bonds with sub-market rates, a buy-back of debt at a discount relative to face value and so on. Sachs holds that Bolivia is one of those debtor countries that has eliminated a large part of its debt obligations. He adds that, under certain circumstances, debt reduction can improve the welfare of creditors as well as debtors, because a large debt overhang can worsen the economic performance of the debtor and thereby diminish the expected returns to the creditor. This point is well known in the literature of corporate bankruptcy and was first stressed in the context of sovereign debt.

Marcelo Selowsky (1989), commenting on the view of Sachs points out that, ..."debt and debt-service reduction coupled with an adjustment programme of domestic reforms agreed on with multilateral agencies guarantees a strong relief to the highly indebted countries." He adds that, "there is no doubt that in many countries, additional financing coupled with better domestic policies, while improving output and consumption growth, will not be able to lower indicators, that is, interest over GDP." Those economies can not grow out of debt because the initial conditions are too severe (the initial debt overhang particularly in the public sector), their export prospects are too grim, or because domestic savings can not increase significantly after so many years of consumption declines. That these economies need a reduction in their external debt obligations to cover growth and macroeconomic stability compatible with a declining debt burden.

The World Bank (1994) in its study on adjustment in Africa, argues that the external debt burden continues to be large for many countries and a sustainable solution to the debt problem is still elusive. Although debt restructuring is always done country-by-country, the
general approach in practice has been to have across-the-board, fixed-percent debt reductions as offered in the enhanced Toronto terms and the Trinidad terms. But these measures moved only a small number of countries to a sustainable position, using a present value of debt service of less than 200 percent of exports as a rough indicator of sustainability.

The Bank argues however, that debt reduction alone will not restore private investment and commercial lending, and except this is supplemented with strong policy reform efforts, can there be a favourable climate to new investment and growth. Two points are worth emphasising: first, it is important that debt reduction efforts aimed at restoring external viability be linked to comprehensive reform programmes to make sure that debt reductions continue to sustained growth and does not substitute for strong domestic policy reforms. Second, reducing the stock of debt is likely to have implications for the uniform treatment of creditors.

According to Lamdany and Underwood (1989), following a debt and debt-service reduction operation, the debtor will have two new types of obligations: (1) the new instrument given to participating creditors (new loans or bonds with reduced principal or lower interest rates); and (2) the loans linked to the financing of such operations (e.g. loans from International Financial Institutions (IFIs) or creditor governments. However, not all transactions introduce both types of obligations. Following a buy-back the debtor will not have any obligation to participating banks on the repurchased debt; and a debt-service reduction operation financed using a debtors own reserves does not create additional financing obligations.

These authors illustrate their argument with an analysis based on a buy-back assumed to be financed from the debtors’ own reserves. Rates of returns are highest under the assumption that the debtor would have paid in full and on time the debt service due on the repurchased debt. They are the lowest when a large share of the debt service on old debt would have been refinanced or scheduled.

7 METHODODOLOGY

In order to meet the objectives of this study, the methodology will be split into two main parts:

7.1 Data and sources of data

The data to be used for this study will be collected from the World Bank - World Tables, World Debt Tables, Global Development Finance, and African Development Indicators. Data will also be
collected from the International Monetary Fund - IMF annual reports, International Financial Statistics. These data will be supplemented with data from the Ministry of the Economy and Finance through the "Caisse Autonome d'Amortissement" - which is the debt management office of Cameroon, and the National Statistics and Accounting Office.

These data will be time-series running from 1970 to 1996 if possible. This is because after independence, Cameroon started experiencing economic hardship from the 1970s. For instance, in the 70s, the world experienced two serious crisis (the oil crisis and food crisis) during which the cost of borrowing to LDCs rose dramatically. In 1986, the economic crisis set in again to aggravate the debt burden of the country and led to adoption of a structural adjustment programme.

7.2 Data Analysis

The data to be collected will be analysed using regression analysis. The models will be designed to analyse the effects of debt and debt-service reduction on the aggregate demand components for Cameroon. These components include consumption expenditures, government expenditures, and total exports and imports. The models are specified below.

Model Specification

Real income is endogenous in the model and is defined as:
\[ Y_t = C_t + G_t + (X_t - M_t) \] or \[ Y_t + M_t = C_t + G_t + X_t \] \hspace{1cm} (1)

Given the research objectives of this study, the model is divided into four equations. Each equation seeks to meet each objective set out above. The equations are in log form so that we can interpret the coefficients as elasticities.

1. Consumption Expenditure
   Consumption expenditure \( C_t \) is specified to be affected by net national product (NNP), ratio of deflator of non-traded goods to export prices (DN/PX); real interest rate (RLR), debt rescheduled (DR), and inflation (II);
   \[ \ln C_t = a_0 + a_1 \ln(NNP)_t + a_2 \ln(DN/PX)_t + a_3 \ln(RLR)_t + a_4 DR_t + a_5 \ln C_{t-1} + a_6 II_t \] \hspace{1cm} (2)

This specification has included debt rescheduled as an explanatory variable because this is considered as a resource to the economy that improves on its liquidity position and should therefore increase consumption.
A1 is the marginal propensity to consume, a2 is the relative price elasticity, a3 represents the semi-interest elasticity, a4 is the effect of debt rescheduled to consumption, a5 is the lag coefficient in
consumption. Note that \( I_t = (P_t - P_{t-1})/P_{t-1} \)
\[ \text{.......................................................... (3)} \]

2. **Government Expenditures.**

   Government expenditures (GE) is divided into transfer expenditure (GT) and other expenditure (GO). Thus,
   \[ GE_t = GT_t + GO_t \text{ .......................................................... (4)} \]
   Given that government transfer expenditure is exogenous (Egwaikhide, 1997), we shall only be concerned with the other expenditures which is specified to relate to total government revenue (TR). Debt forgiven (DE) and the lagged value of other expenditure (included to capture lag in adjustment):
   \[ \ln GO_t = C_0 + C_1 \ln(\text{TR})_t + C_2 \text{DF}_t + C_3 \ln GO_{t-1} \text{ ........................................ (5)} \]
   The inclusion of debt forgiven (DF) as an explanatory variable here is explained by the fact this is an injection to the economy which leads to higher income and increases government expenditures. The specification is based on the notion that government equates expenditure with revenue. The lag value of the other expenditures helps to empirically test the Tanzi effect (Tanzi, 1997 and Egwaikhide, 1997).

3. **Total Exports Supply.**

   Total exports are conceived to be affected by the real gross investment ratio of export prices to deflator of non-traded goods (PX/DN); and total debt stock reduction (DT).
   \[ \ln X_t = d_0 + d_1 \ln I_{t-1} + d_2 \ln(PX/DN)_t + d_3 DT \text{ ........................................ (6)} \]
   It is envisaged that as the capacity to produce increases, exports are expected to rise and hence \( d_1 \) is hypothesised to be positive. When there is an increase in the prices of exports relative to deflator of non-traded goods, exports will rise, thus \( d_2 \) is expected to be positive. Following the “Dutch disease” theory, debt reduction, if properly handled by an adjustment country like Cameroon, can lead to an improvement in the export performance. Again, \( d_3 \) is designed to be positive.

4. **Total Import Demand**

   Import statistics in Cameroon are not dis-aggregated into government and private sectors. This makes it difficult to establish two separate import demand equations. The specification here will adopt the methods of Mansur (1989), Egwikhide and Dooley P. et al. (1990), with the demand for aggregate import being related to domestic absorption (A); import prices relative to deflator of non-traded goods (PI/DN), debt buy-back (BB); and total imports of the previous year.
\[ \ln M_t = e_0 + e_1 \ln A_t + e_2 \ln (PI/DN)_t + e_3 (BB) + e_4 \ln M_{t-1} + e_5 DU \] \[ \text{(7)} \]

A dummy variable (DU) is introduced to capture the period when the government liberalised quantitative restrictions on imports. A debt buy-back entails an additional expenditure on the country, thereby reducing resources to demand for more imports.

Note: \[ A_t = PC_t + I_t + GE_t \] \[ \text{(8)} \]

Where \( A = \) Domestic absorption

\( PC = \) Private consumption

\( I = \) gross investment

\( GE = \) government expenditure

**Summary of Models Specified Above**

1. \[ \ln C_t = a_0 + a_1 \ln (NNP)_t + a_2 \ln (DN/PX)_t + a_3 \ln (RLR)_t + a_4 D_t + a_5 \ln M_{t-1} + M_t. \]
2. \[ \ln GO_t = c_0 + c_1 \ln (TR)_t + c_2 DF_t + c_3 \ln (GO)_{t-1}. \]
3. \[ \ln X_t = d_0 + d_1 \ln I_{t-1} + d_2 \ln (PX/DN)_t + d_3 DR \]
4. \[ \ln M_t = e_0 + e_1 \ln A_t + e_2 \ln (PI/DN)_t + e_3 (BB)_t + e_4 \ln M_{t-1} + e_5 (DU)_t. \]
5. \[ Y_t = C_t + I_t + G_t (X_t - M_t). \]
6. \[ GE_t = GT_t + GO_t \]
7. \[ A_t = PC_t + I_t + GE_t \]
8. \[ II_t = (P_t - P_{t-1}/P_{t-1})*100 \]

**8 DURATION OF WORK PLAN FOR THE STUDY**

The study is expected to span a period of 12 months. This is broken down as follows:

- Review of previous studies: 2 Months
- Data collection and reconciliation: 2 Months
- Data processing and analysis: 2 Months
- Preparation of interim report: 1 Month
- Generation of initial results: 1 Month
- Supplementary analysis of data: 1 Month
- Writing of final report: 2 Months
- Submission of final report and other activities required by sponsors: 1 Month

**9 REFERENCES**