Macroeconomic Determinants of External Debts Burden in Nigeria (1970-2004)

by

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Abstract

The study examined the macroeconomic determinants of external debt burden in Nigeria, with a view to investigating whether macroeconomic variables such as export, exchange rate, inflation and foreign interest rate were major determinant of external debt burden in Nigeria. The study used annual time series data from 1970 to 2004 and specified an Error Correction Model (ECM) to analyze the main determinants external debt burden and to draw policy inferences. The stationary and cointegration properties of the variables were also examined. In this way, a provision was made to correct for the spurious inferences that may likely occur if the variables used in the study were not stationary or cointegrated at levels. The empirical results showed that external debt service payment was positively determined by existing external debt stock, negatively by export and exchange rate while total external debt stock was affected positively by fiscal deficit, level of economic growth and inflation. The study concluded that the external debt burden in Nigeria depend significantly on the fluctuations in export growth, real exchange rate, fiscal deficit, inflation and level of economic activity.

Key words: External Debt Burden, Macroeconomics, ECM JEL Classifications

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Macroeconomic Determinants of External Debts Burden in Nigeria (1970-2004) Introduction

The focus of this paper is to examine the macroeconomic factors influencing the increasing debt burden of Nigeria. There are several reasons to do so. One, Nigeria as an oil producing and exporting country is expected to be able to adequately service its debt from the oil revenue. However, the country has continued to groan under heavy debt servicing due to penalty and unpaid interest arrears. As Aluko (2005) observe, the bulk of Nigerian debts outstanding are due to unpaid fines and penalties. More than 34% of Nigeria's GDP is channeled to debt servicing yearly (Yesufu, 2002). Second, recently efforts are being made to reduce this burden and develop a framework for sustaining the nation external debt balance., Doing this effectively require a sound understanding of the factors that could strengthening such mechanism and also appreciate the underlying factors responsible for the precarious situation that is being redressed. Thirdly, while several studies have examined the effects of external debt burden on growth in Nigeria, less attention has been paid to the underlining factor explaining the trend and pattern of debt burden over the years in Nigeria. While such efforts are commendable, ignoring the macroeconomic determinants in the empirical analysis of debt-growth literature presents an unbalance story of the problem and hence can impair the proper diagnosis of the issue. This study therefore attempts to contribute to existing literature by examining the macroeconomic determinants of external debt in Nigeria.

Apart from this introductory chapter, the paper is divided into four sections. Section two reviews existing studies in order highlight the main empirical gaps that this study attempts to fill. Section three presents the methodology while Section four discusses the empirical results. Section five concludes with the summary of findings and policy implication of the findings

2.0 **Review of Empirical Studies**

A lot of studies have also investigated the relationship between foreign debt and economic growth in Nigeria. Akinlo (1991) analyzed the effect of structural adjustment on Nigeria external debt profile and economic growth using descriptive framework. The study categorized the factors responsible for Nigeria's external debt problem into domestic (overvalued exchange rate, fiscal deficit e.tc.) and foreign factors (e.g depreciation of world economy and interest rate adjustment in developed countries). It also observed that the exchange rate of devaluation introduced by the government to correct the overvalued domestic currency and eliminate cost price distortions was counteractive. The study attributed this development to the inability of the exercise to gain competitiveness for the local products due to the hike in the price of inputs, which the exercise caused.

Obadan (1991) in a study on foreign borrowing and development in Nigeria which is basically an exposition of the theoretical basis of the relationship between foreign debt and growth in Nigeria, used descriptive method of analysis, and observed that foreign debt can increase resources available for investment by supplementing domestic savings and augmenting foreign exchange earnings of the country. According to Obadan 1991), a country's foreign borrowing requirements depend on its total expenditure in relation to her total domestic production. For foreign borrowing to impact positively on economic growth, it must add to domestic savings and investment. Furthermore, Obadan asserts that for a country to reduce her foreign loan requirements, it has to increase her domestic savings sufficiently enough to sustain her desired target rate of growth.

Uniamukogbo (1991) gave an empirical analysis of Nigeria's external debt and interest payment between 1971 and 1988 using the ordinary least square method. He expressed interest payment as a function of export of goods and services, percapita income, change in per capita income, the magnitude of long-term public debt and long-term private external debt. He observed that Nigeria had the ability to pay interest on her debts during the study period (1971-1988). In terms of willingness to pay, it was equally observed that the country was willing to pay interest on her indebtedness because of her enormous receipts from export. His estimation further revealed that change in per capita income had no significant impact on interest payment during the period of his study.

Osagie and Idehai (1991), in an econometric evaluation of Nigeria's external borrowing, observed that the level of external public debt depends on the level of debt service payments due and paid for, the level of planned capital expenditure of the government, the level of government savings and the level of balance of payment on the current account. The study further revealed that increased reliance on off-shore borrowing may result in the relaxation of domestic savings drive by the government. In view of the above, the study suggested that capital expenditure of the government to be financed by external borrowing should be limited to those that could generate foreign exchange earnings or capable of saving equivalent foreign exchange.

Iyoha (1996) carried out an econometric study of debt-overhang, debt reduction, investment and economic growth in Nigeria for the period 1980-1994. He developed a macro-econometric model which permitted the simulation of the effects of external debt on economic growth in Nigeria. The complete simultaneous equation model in the study consisted of two stochastic equations for output and investment and five identities for debt accumulation. He used the two stage least square method and found a significant debt overhang effect as well as a "crowding out" effect of external debt servicing on investment and economic growth in Nigeria for the period of his study.

Ekpo and Egwaikhide (1998) used the two-stage least square technique to test the relevance of debt overhang hypothesis in Nigeria. The study regressed private investment on debt service payment as a percentage of export earnings, public investment, inflation rate, bank credit to the private sector, terms of trade and export earning. The result revealed that the coefficient of debt service ratio not only has a negative sign, but was also statistically significant at 95 percent. Thus, it is apparent that debt servicing adversely affected private investment during the period of study. The historical simulation carried out to assess the validity of the model gave a Theil's inequality coefficient of less than .08 percent for investment and output. The result of the policy simulation of the effect of debt reduction packages revealed that the hypothesized debt reduction of (40 percent, 50 percent, and 75 percent) assumed effective in 1986 would significantly increase investment and GDP

3.0 Empirical methodology

The analysis in this paper is carried out using secondary data collected from Central Bank of Nigeria's (CBN) Statistical Bulletin, with the exception of US interest rate which was obtained from the international financial statistics published by International Monetary Fund (IMF) for the periods of 1970 to 2004. The way each variable is used in the study is discussed below. Debt Burden measured by the debt servicing ratio was calculated as the ratio of outstanding external debt to gross domestic output. The debt burden was measured by the amount of domestic output that must be deployed to service external debt. The higher the ratio, the higher the proportion of domestic output needed to service external debt. The debt burden could also be expressed as ratio of export; the higher the ratio, the higher the amount of export that must be set aside to offset the outstanding debts. Total debt stock is the total amount of outstanding debt at the end of each financial year. The values were used as contained in the central bank statistical bulletin. Exchange rate is a measure of macroeconomic instability or credibility. The end of period values of average exchange rate for Naira to US dollar as reported in the CBN statistical bulletin were used to measure exchange rate. The world interest rate was proxied by the US interest rate on treasury bills. Inflation was measured as the changes in composite consumer price index.

Total government expenditure was the total outlay of government spending while public investment was proxied by the capital spending component of government expenditure outlay. The fiscal deficit relates to the differences between expenditure outlay and the total revenue of government. Total export and re-export of goods and services in million naira were used to measure export(in million naira). External Reserves was the total of external savings of the country. The external reserves figures were used as published by CBN. Changes in Gross Capital Formation were used to measure private investment. The capital inflows into the real sector were used to proxy foreign capital investment.

Following Yekini (2002), two principal hypotheses were tested. One relates to the determinants of external debt burden while the other relates to the determinants of external debt stock. However unlike Yekini (2002), exchange rate and world interest rate are used to capture the cost of foreign capital. External reserve was also included as additional debt determinant variable. Inflation rate was included as measures of macroeconomic stability and credibility (Were 2001). Thus, the system of equations

model is specified as:

$DSR = \delta_0 + \delta$	1 TDS+	δ_2 USINTR+ δ_3 EXPT+ δ_4 EXRT+ E ₁ 1
$TDS = \Phi_0 + \Phi$	1 DSR+	Φ_2 RSG+ Φ_3 GFDT + Φ_4 EXTRES+ Φ_4 INFL +E ₂ 2
Where		
DSR	=	debt services-export ratio,
TDS	=	total debt stock
GFDT	=	Government fiscal deficit
USINTR		= interest rate (average) on foreign debt
EXTERES	=	External reserves
EXRT	=	Exchange rate of Naira to dollar
EXP	=	Export of goods and services
E _i are the stor	chastic t	erms which satisfy the classical assumption of error terms.

Theoretical (apriori) Expectation

Equation 1 specifies the factors that affect the debt services ratio. These are; the total debt stock (TDS) which is assumed to be positively related to the debt services ratio, interest rate on foreign loans (INTR) has a positive relationship with debt services ratio (DSR) especially when borrowing terms are hardening; the growth rate of export of goods and services ratio for the reason that export growth is a potential source of repaying the debt. Secondly, the total debt stock (TDS) in equation 2 is specified in such a manner as to be positively related to External reserves (EXTRES) because high external reserves implies high credit rating and serves as impetus to raise more loans from the external market hence the accumulation of debt, but Total debt stock is negatively related to both the growth of real savings (RSG) and the debt services ratio (DSR) (Iyoha 1996).

Equation 1 and 2 were estimated and analyzed to determine the relative determinants of external debts. The t-statistics and beta coefficient tests were used in this respect to isolate the relative effects of these variables in the models. The model was estimated using vector error correction mechanism. This requires the examination of the time series properties as precondition for using the method, the next logical

steps was to determine the time series properties of the variables. The conventional Dickey-Fuller (DF) and Augmented Dickey –Fuller (ADF) tests were used to test for stationarity in the series. The next step after finding out the order of integration is to establish whether the non-stationary variables are cointegrated. However, differencing the variables to achieve stationarity leads to loss of long-run properties. The concept of cointegration implies that there is a long- run relationship between two or more non-stationary variables; deviations from this long run path are stationary. To establish this, the Johannes and Jesuits (1991) multivariate cointegration procedure were used. Hence Vector Error Correction Mechanism (VECM) was adopted for the estimation.

4.4 Empirical Results

The results of the unit root tests using Augmented Dickey – Fuller approach were presented in Table 4.1. It showed that the null hypothesis of stationary at level is rejected for the entire variable except foreign interest rate proxied by the US interest rate. This is in line with "a priori" expectation since interest rate is already a ratio of growth rate, so its level and form is already in first difference. This implies that these variables are non-stationary hence require first differencing to achieve stationarity. From the results, in Tables 4.2, the null hypotheses of no cointegration among the variables were rejected. For the Debt Servicing model, the likelihood ratio statistics (LR) indicates 5 cointegration equations at 5% significant level. The Debt Stock (Model II) equation has only one significant cointegration equation. This implies that there is presence of long run feedback effects on the short run dynamism of the models.

Variables	Series	At Levels	At First Differences
External Debt Service ratio	LEBTSERV	0.2459	-5.2098
Exchange rate	LEXRT	0.2112	-3.8674
Price Level	LCCPI	-0.1119	-3.8112
Government Expenditure	LGEXP	-0.6589	-3.7728
Total External Debt Stock	LEXTDEBT	-0.7691	-4.1798
Fiscal Deficit	FDCT	-1.9425	-6.2662
External Reserve	LEXTRES	-0.5709	-4.9069
Foreign Interest Rate	LUSINRT	-3.7760	-5.6327
Export	LEXPT	-0.3266	-4.6953
CRITICAL VALUES	One Percent	-3.6427	-3.6496
	Five Percent	-2.9527	-2.9558

 Table 4.1: ADF Statistics for the Unit Roots Tests

Table 4.2: The Results of Multivariate Cointegration Regression

A: External Del	bt Servicing m	nodel			
Series: GDSR GTDS GUSINRT GEXPT GEXRT					
	Likelihood	5 Percent	1 Percent	Hypothesized	
Eigenvalue	Ratio	Critical Value	Critical Value	No. of CE(s)	
0.623944	95.06106	68.52	76.07	None **	
0.493508	63.76449	47.21	54.46	At most 1 **	
0.452238	41.99660	29.68	35.65	At most 2 **	
0.375294	22.73534	15.41	20.04	At most 3 **	
0.213377	7.680190	3.76	6.65	At most 4 **	
(*) denotes reje	ction of the hypo	thesis at 5%(1%	b) significance level	
L.R	 test indicates 	5 cointegrating	equation(s) at 5°	% significance level	
	101/0/1	NC 1.1			
B: Total Extern	al Debt Stock	Model			
Series: GTDS G	DSR GUSINR	I GEXPI GEXR	I EXTRES INF	Ľ	
	Likelihood	5 Percent	1 Percent	Hypothesized	
Eigenvalue	Ratio	Critical Value	Critical Value	No. of CE(s)	
0.623944	95,06106	68.52	76.07	None **	
0.493508	63.76449	47.21	54.46	At most 1 **	
0.452238	41.99660	29.68	35.65	At most 2 **	
0.375294	22.73534	15.41	20.04	At most 3 **	
0.213377	7.680190	3.76	6.65	At most 4 **	
(*) denotes reie	ction of the hypo	thesis at 5%(1%	b) significance level	
L.R	L.R. test indicates 5 cointegrating equation(s) at 5% significance level				
		5 5		5	

Sources: Author Computation

The cointegration relationship established revealed nothing or little about which of these variables that have long run feedback effects actually contribute to this effects, it also failed to establish their relative contribution. The best that it reveals is that some of the variables have a long run effects on debt so we have to determine separately which of the variables and at what lag do they have effects on external debt variables, to carry out this analysis and other associated tests, an error corrections technique was adopted. In order to extract the error correction term a long run static version of the models were estimated and the residuals from this long run static model were extracted and used as the ECM term in the short run dynamic models. The ECM terms therefore measured the possible feed back effects on the short run dynamics of the dependent variables. The results of the Long run static model estimations are presented in Table 4.3a&b respectively. The long run estimates of the static model showed that only total debt stock have significant effect on debt servicing payment while debt servicing, level of economic growth and inflation rate had significant effects on the growth of total stock of debt accumulated. This implies that there is bidirectional long run causality between total debt stock and debt servicing. It means that as total debt increases, the debt servicing payment increases, this may increase total debt if part of the money to service this growing debt stock is again sourced through additional borrowing.

The over parameterized error correction models for the external debt servicing and total debt stock models are presented in Table 4.4a&b. The model lag is set at three to ensure that the dynamics of the models are not constrained by too short lag length. However, these models seem difficult to interpret; therefore these models were reduced to a more interpretable and certainly more parsimonious models. This reduction exercise is carried out by imposing zero coefficients on those lags where tstatistics is low (below 2.00 the rule of thumb for 5% significant value). The imposition of these conditions led to the final models. The resulting Schwarz Information criterion (SC), Akaike Information Criteria (AIC) and Log Likelihood (LR) statistic are used as guide to parsimonious reduction A fall in these values (in absolute term) is indication of model parsimony. The results of parsimonious model reductions are presented Tables 4.5a&b.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LTDS	0.993863	0.127974	7.766158	0.0000
LUSINRT	0.278692	0.721088	0.386489	0.7019
LEXPT	0.099237	0.278720	0.356048	0.7243
LEXRT	-0.104763	0.370035	-0.283117	0.7790
С	-3.680713	1.927801	-1.909281	0.0658
R-squared	0.956647	Mean deper	ndent var	8.255506
Adjusted R-squared	0.950867	S.D. depend	dent var	3.658422
S.E. of regression	0.810924	Akaike info	criterion	2.550279
Sum squared resid	19.72794	Schwarz cri	terion	2.772472
Log likelihood	-39.62989	F-statistic		165.5000
Durbin-Watson stat	_ 1.117259_	Prob(F-stati	stic)	0.000000

Table 4.3a: Long Run Static Model for External DebtServicing Determinants

Table 4.3b: Long Run Static Model for External Debt	stock
Determinants	

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LDSR	0.562304	0.118653	4.739047	0.0001
LSAV	-0.184700	0.130295	-1.417548	0.1670
FDCT	0.155548	0.490443	0.317159	0.7534
LGDP	0.273197	0.072323	3.777448	0.0007
LEXTRES	0.012224	0.148020	0.082586	0.9347
LCCPI	0.830287	0.295663	2.808218	0.0088
R-squared	0.970366	Mean deper	ndent var	10.49241
Adjusted R-squared	0.965257	S.D. depend	lent var	3.580806
S.E. of regression	0.667441	Akaike info	criterion	2.184074
Sum squared resid	12.91886	Schwarz crit	terion	2.450705
Log likelihood	32.22130_	Durbin-Wate	son stat	1.118471

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDSR(-1)	0.086918	0.434207	0.200176	0.8440
GDSR(-2)	0.916755	0.368164	2.490070	0.0250
GDSR(-3)	0.118025	0.346350	0.340769	0.7380
GTDS(-1)	0.144647	0.653773	0.221250	0.8279
GTDS(-2)	-0.701931	0.583953	-1.202032	0.2480
GTDS(-3)	0.499588	0.564219	0.885450	0.3899
GUSINRT(-1)	0.955903	1.134221	0.842783	0.4126
GUSINRT(-2)	-1.310897	1.293852	-1.013174	0.3270
GUSINRT(-3)	-0.893637	1.206028	-0.740976	0.4701
GEXPT(-1)	-1.101032	0.538405	-2.044990	0.0588
GEXPT(-2)	0.761566	0.569929	1.336247	0.2014
GEXPT(-3)	0.259178	0.486983	0.532211	0.6024
GEXRT(-1)	-0.573656	0.654927	-0.875908	0.3949
GEXRT(-2)	0.835271	0.757499	1.102670	0.2875
GEXRT(-3)	-1.247048	0.737105	-1.691820	0.1113
ECM011(-1)	-1.063663	0.443495	-2.398363	0.0299
R-squared	0.588087	Mean deper	ndent var	0.371227
Adjusted R-squared	0.176173	S.D. depend	dent var	0.916546
S.E. of regression	0.831902	Akaike info criterion		2.776118
Sum squared resid	10.38092	Schwarz crit	terion	3.516240
Log likelihood	27.02982_	Durbin-Wate	son stat	1.836801

Table 4.4a: Over Parameterized Short Dynamic Model forExternal Debt Servicing Determinants

Table 4.4b: Over Parameterized Short Dynamic Model forExternal Debt Stock Determinants

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GTDS(-1)	-0.362539	0.327179	-1.108073	0.2966
GTDS(-2)	0.542128	0.284613	1.904789	0.0892
GTDS(-3)	0.561803	0.266253	2.110037	0.0641
GDSR(-1)	0.292689	0.220643	1.326526	0.2173
GDSR(-2)	-0.063607	0.161843	-0.393013	0.7035
GDSR(-3)	0.111651	0.141002	0.791838	0.4488
GSAV(-1)	0.096858	0.147645	0.656017	0.5282
GSAV(-2)	-0.084567	0.155848	-0.542623	0.6006
GSAV(-3)	-0.046410	0.236414	-0.196309	0.8487
GFDCT(-1)	1.011615	0.414973	2.437784	0.0375
GFDCT(-2)	0.475758	0.520352	0.914301	0.3844
GFDCT(-3)	1.157370	0.379163	3.052436	0.0137
GGDP(-1)	0.005588	0.242458	0.023049	0.9821
GGDP(-2)	-0.107607	0.153170	-0.702537	0.5001
GGDP(-3)	0.083980	0.140946	0.595835	0.5660
GEXTRES(-1)	0.037592	0.142032	0.264676	0.7972
GEXTRES(-2)	-0.134490	0.143325	-0.938352	0.3726
GEXTRES(-3)	0.175325	0.139494	1.256860	0.2404
GCCPI(-1)	-0.437225	0.903813	-0.483756	0.6401
GCCPI(-2)	-2.377540	1.547783	-1.536094	0.1589
GCCPI(-3)	2.864988	1.114457	2.570748	0.0302
ECM02(-1)	-0.092871	0.321376	-0.288980	0.7791
R-squared	0.726410	Mean dependent var		0.315443
Adjusted R-squared	0.088033	S.D. dependent var		0.422558
S.E. of regression	0.403530	Akaike info criterion		1.205460
Sum squared resid	1.465527	Schwarz crit	terion	2.223128
Log likelihood	3.315377	Durbin-Wate	son stat	2.474877

Evaluation of Results

Tables 4.5a&b presents the parsimonious estimates for models. Table 4.5a reveals that debt service payment depends on total debts stock growth and export and exchange rate significantly. The total debt stock and export are significant at 5 per cent level where exchange rate is significant only at 10% and this shows that they are the factors determining the growth of the debt service payment. It can be seen from table 4.5a that total external debt is positive as expected, the growth rate of export is negative as expected, which confirms the statement that export is a potential source of repaying the external debt, the level of exchange rate is only significant at ten percent and had negative effect. This shows that the higher the level of total debt stock, the higher the debt service payment, the negative effect of exchange rate implies that as exchange rate appreciates, the monetary value of the debt payment reduces. Thus suggesting that apart from a boosting export, a reduction in exchange rate is also another way of reducing the effect of external debt burden.

In table 4.5b where external debt servicing is regressed on total debt stock, interest rate on foreign loan, export and exchange rate as macroeconomic factors that probably have direct effect on external debt servicing, it is observed that after the parsimonious reductions the remaining significant determinant of external debt servicing are the previous level of debt servicing, lagged values of total external debt stock, export and exchange rates. Interest rate on foreign loans is not significant at any lag while exchange rate and total debt stocks were significant at their third lags. Export was only significant at the first lag. In the case of External debt stock model (Table 4.5b) where debt servicing, total national savings, fiscal imbalance, gross domestic product, external reserves, inflation were included as explanatory variables show that except national savings, debt servicing, and external reserve all others were significant in at least one of their lags. For instance, previous level of debt stock is

significant at second and third lags, fiscal deficit at first, second and third lags, and gross domestic product at only first lag and inflation is significant at second and third lags. The error correction terms were also significant in the two models. Indeed, it has the "a priori" negative signs and the size of the coefficients is high. For instance, the feedback effects for the debt serving model are about 89%. The behaviour of the individual variables relative size and sign of their coefficient were further explained using the relative sizes and sign of the coefficients.

Determinants of external debt stock in the parsimonious estimated results in Table 4.5b show that external debt stock is determined by fiscal deficit growth, economic growth, and inflation rate. They have positive effects as expected and significant at 5%. Fiscal deficit has longer effects than other determinants, all the three lags were significant, while inflation also is significant in second and third lags economic growth is only significant at third lag. This implies that the main determinant of the size and direction of external debt stock is the fiscal expansion. The more government spends, the more it resorts to external financing in presence of domestic resource constraints. The level of economic activity also has direct effect on external debt while inflation rate also compound the level of debt stock.

Therefore, in summary while external debt service payment is positively determined by existing external debt stock, negatively by export and exchange rate, total debt stock is affected positively by fiscal deficit, level of economic growth and inflation. In view of the external debt stock positive effect on external debt servicing payment, the external debt burden in Nigeria could be said to be reduced by export growth, real exchange rate, fiscal deficit, inflation and level of economic activity.

Debt bei vieling Deter minunts					
Variable	Coefficient	Std. Error	t-Statistic	Prob.	
GDSR(-2)	0.442758	0.182042	2.432177	0.0225	
GTDS(-3)	0.708901	0.288515	2.457071	0.0213	
GEXPT(-1)	-1.015551	0.378225	-2.685046	0.0127	
GEXRT(-2)	0.739791	0.458470	1.613610	0.1192	
GEXRT(-3)	-0.735695	0.411904	-1.786083	0.0862	
ECM011(-1)	-0.887094	0.207288	-4.279523	0.0002	
R-squared	0.454657	Mean deper	ndent var	0.371227	
Adjusted R-squared	0.345589	S.D. depend	dent var	0.916546	
S.E. of regression	0.741446	Akaike info	criterion	2.411557	
Sum squared resid	13.74356	Schwarz crit	terion	2.689103	
Log likelihood	31.37913_	Durbin-Wate	son stat	1.761357	

Table 4.5a: Parsimonious Short Dynamic Model for ExternalDebt Servicing Determinants

Table 4.5b: Parsimonious Short Dynamic Model for ExternalDebt Stock Determinants

Variable	Coefficient	Std Error	t-Statistic	Prob
Vallable	Occinicient		t Otatiotio	1100.
GTDS(-2)	0.478460	0.159675	2.996464	0.0074
GTDS(-3)	0.558419	0.159887	3.492578	0.0024
GDSR(-1)	0.096589	0.086993	1.110309	0.2807
GSAV(-1)	0.090601	0.066592	1.360526	0.1896
GFDCT(-1)	1.166653	0.262680	4.441356	0.0003
GFDCT(-2)	0.535885	0.259900	2.061888	0.0532
GFDCT(-3)	0.864241	0.228975	3.774385	0.0013
GGDP(-3)	0.167037	0.066026	2.529851	0.0204
GEXTRES(-2)	-0.148784	0.085145	-1.747418	0.0967
GCCPI(-2)	-1.628932	0.590863	-2.756870	0.0125
GCCPI(-3)	1.796665	0.501787	3.580533	0.0020
ECM02(-1)	-0.167742	0.123782	-2.355145	0.1913
R-squared	0.624339	Mean deper	ndent var	0.315443
Adjusted R-squared	0.406851	S.D. depend	dent var	0.422558
S.É. of regression	0.325438	Akaike info	criterion	0.877354
Sum squared resid	2.012285	Schwarz crit	terion	1.432446
Log likelihood	-1.598990	Durbin-Wats	son stat	2.685058
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Conclusion

The summary of main findings that emerged from this study is as follows:-The main determinant factors for the increasing profile of Nigerian external debt burden are; exchange rate, export, government fiscal deficit and inflation rate. While increases in export, inflation and exchange rate causes reduction in the debt burden, increase in government fiscal deficit result in increasing external debt burden. On the basis of finding of the study summarized above, the following policy implicates are drawn. The estimation results show that increase in external debt stock will lead to

increase in external debt service payment. Therefore it implies that embargo in new loans will reduce the size of debt to be repaid. The debt service ratio will fall resulting in greater growth if such fund realized from debt reduction is channeled into real productive sectors of the economy such as agricultural, manufacturing and even human development. This suggests that government should ensure that the gains from eighteen million debt cancellation and the payment of sixteen million debt repayment to Paris Club channeled in to economic infrastructure development. The insignificance of public investment in the model might be due to the infrastructural (such as electricity, water supply, transport facilities and security and political instability) decay in the country.. The fiscal responsibility policy and other debt reduction strategies (such debt buy back and outright payment of debts) currently embarked upon by government should be intensified and institutionalized. This will not only reduce debt profile but enhance other debt reduction but growth promoting factors.

The results showed further that export of goods and service has negative effect on debt servicing, this implies that government should attempt to ensure that export promotion strategies are further enhanced. The current Cassava initiatives and agricultural rejuvenation at increasing non oil export are likely to reduce the domestic resources constraint that usually causes the resort to external borrowing.

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