

AN ECONOMETRIC ANALYSIS OF DETERMINANTS OF EXTERNAL DEBT IN PAKISTAN

ABSTRACT

Present study examined macroeconomic determinants of external debt in Pakistan using annual time series data from 1976 to 2010. Cointegration technique has been used to find long run equilibrium relationship while short run dynamics have been analyzed using ECM. By applying ARDL model results depicted that Fiscal deficit, Nominal exchange rate and Trade openness are statistically significant determinants of external debt as they enhance the debt burden of Pakistan. Foreign aid is also positively related to external debt but statistically insignificant. In contrast Terms of trade are negatively related to external debt being statistically insignificant.

Keywords: External debt, ARDL, Fiscal deficit, Nominal exchange rate, Trade openness, Foreign aid, Terms of Trade

1. INTRODUCTION

Foreign indebtedness always has been a debatable issue for policy makers, researchers and analysts as it not only affects the growth of country but also in most of the cases plunged the country in deep debt trap. A general perception is that foreign loans are supportive to the developing countries suffering from scarce capital stock. When these countries cannot properly manage these loans then this external debt provokes further borrowings and creates vicious circle of external debt. This hampers the economic growth of country and raises debt obligations. Usually due to current account deficit and limited capital stock at initial stages of development these developing countries seek for financial assistance from donor countries in the form of loans and aid.

The need and possibility of borrowing results from the basic macroeconomic relationships in which the total production in the country is less than total consumption. Inability to achieve inner balance leads to increased demand for foreign goods resultantly there is negative trade balance. Negative trade deficit reduces inflow of foreign exchange from exports and its negative effect overflows and the central

government in the budget deficit. So this provides conducive environment for external debt to developing countries. External debt and foreign aid are considered to be an effective means of income for the emerging economies. External debt is effective for growth if it is to be managed properly and utilized in an effective manner. External debts supplement development up to a limit beyond which this supplement becomes hindrance for development (Fajana 1993).

Due to gap between saving and investment countries go for loans. The main reasons for high indebtedness of country are poor planning, uncertain political environment, weak terms of trade, current account balance of payments, misuse of borrowed resources, poor implementation of foreign aid projects, implementation of low economic priority development programs and projects, higher interest rates on loans, instability in exports earnings and non-development expenditures.

Irresponsible and corrupt government is also a key factor that increases the external debt burden of Pakistan. These types of governments, like in Pakistan spend money for their lavish activities, instead of investing foreign borrowing to improve the lives of great extent of poor people. Due to all these factors the mainly overdrawn countries suffered from manifold debt crises, these factors eventually forced them to asked for rearrangement and beg for debt reduction and relief. External Debt of Pakistan enlarged from 37.8 billion US dollar in 2000 to 55.87 billion US dollar end OF 2010. In 2011 external debt was 59.47 billion dollar. Currently this amount is even more than 60 billion dollars. Study analyzed factors of external debts in Pakistan examining long run as well as short run associations among the series.

Rest of the study has been organized as; section 2 gives literature review. Theoretical framework is in section 3. Section 4 illustrates methodology used. Econometric model and data are described in section 4. Section 5 is regarding results and discussions while last section 6 concludes the research article giving some policy recommendations.

2. LITERATURE REVIEW

Different researchers used time series, cross sectional and panel data with different econometric techniques adopted and results depicted from it. Review of literature helped me to make decent contribution in research.

Tiruneh (2004) examined the causes of international debt crises in 1980s and 1990s. Panel data from 1982 to 1998 for ratio of foreign debt to Gross Domestic Product, ratio of debt service to exports, Capital flight to export ratio, terms of trade, exports, ratio of imports to Gross Domestic Product, Gross Domestic Product, population and velocity of growth to Gross Domestic Product for heavy and non heavily indebted countries. By applying random and fixed effects models, the results depicted that payments of debt service, imports to Gross Domestic Product ratio, capital flight, income per capita, and rate of growth of Gross Domestic Product are the main responsible factors of external borrowings.

Asmaet *al.* (2011) examined the connection among external debt, fiscal deficit, rate of exchange and terms of trade for the case of Pakistan. Study used time series data from 1972 to 2008 for external debts,

terms of trade exchange rate in nominal form and fiscal deficits from Pakistan economic survey and Federal Bureau of statistics (FBS). Johansen approach was used in order to determine long run dynamics as well as short run associations. After the estimation of model results depicted long-run and one way causality among the variables were found operating from fiscal deficit to external debt and terms of trade and terms of trade to exchange rate in Pakistan.

Dimitrios (2011) examined macroeconomic factors in relation with national debt levels of Greece in the past. Time series data from 1998 to 2009 extracted from Euro-stat database on the variables general government gross debt at nominal value, national debt, government deficit, interest rate, country's contribution to the intra-EU27 trade of the Union and the country's contribution to the extra-EU27 trade of the Union. By applying VAR analysis study concluded that current national debt granger caused by intra and extra-EU trade balance and interest rate, moreover debt is responsible for the country's poor intra-EU balance of trade.

Stambuli (1998) examined the causes of debt crises, and investigates the LDC debt crises causes and consequences on Brower and lenders on the basis of previous data. Study concluded that the factors of debt crisis were poor capability of debt service of developing countries and the deflation in the product prices, rate of interest and appreciation in exchange rate.

John and Mojekwu (2011) examined the contact of external debt with the performance of Nigerian economy. Time series data from 1980 to 2008 on real GDP, total external debt stock and debt service ratio were generated from Federal Office of Statistics (FOS) – annual abstract of statistics and Digest of statistics, Statistical Bulletin, annual reports and statements of accounts and major economic and financial indicators; and Federal Government of Nigeria (FGN). Results depicted that debt reduction would enhance macro-economic performance in the Nigerian economy.

Paudel and Perera (2009) examined the association among trade openness, external debt and labor force on growth in Sri Lanka. Timeseries annual data from 1950 to 2006 were taken for the variables foreign debt, GDP, real total trade and labor force from Central Bank of Sri Lanka. By applying the Johansen cointegration approach results depicted that the connection of foreign debt with economic growth is negative in Sri Lanka.

Greenidge *et al.* (2010) examined the factors of external debt in CARICOM states. Panel data from 1987 to 2005 for export of domestic goods and services, cost of foreign borrowing in real term and income were taken from WDI database. Data on real effective exchange rate (REER) were taken from IFS. While the data on government expenditure and outputs as well as external debt were taken from Caribbean Development Bank's Social and Economic Indicators publication. By applying panel co-integration test and dynamic ordinary least square (DOLS) results depicted that divergence of government expenditure from its inclination value and external indebtedness positively related while gap of output, cost of foreign borrowing in real term, REER and exports were negatively associated to external debt.

Curtasu (2011) investigated the issue of public debt sustainability. Study used annual data from 1970 to 2012 for the advanced European economies on real public debts, non interest real government

expenditures, real government revenues, real interest rates. Cointegration test and Fiscal Reaction Function test were used in the analysis. Results depicted that it is quite difficult to assess public debt sustainability and that there is no proper way to follow, in order to depict an accurate conclusion.

3. THEORETICAL FRAMEWORK

Stewart's (1985) concept based on the debt of 1980s is called basic transfer. It is defined as the net foreign exchange inflow or outflow of country depending upon its borrowing. This is explained below.

Let the net capital flow N_F is the rate of accumulation of total external debt, D_t shows total accumulated external debt, d is the rate of increase in total debt. Then:

$$N_F = D_t d \dots \dots \dots (1)$$

i is the interest rate that must be paid every year on accumulated debt.

iD_t = total annual interest payment of the foreign debt.

So the basic transfer equation becomes

$$BT_t = D_t d - i D_t \dots \dots \dots (2)$$

$$BT_t = d (D_t - i) \dots \dots \dots (3)$$

Hence BT_t is the difference between capital inflow and interest payment on it.

If $d > i$ then positive basic transfer (BT_t) and country will gain from foreign exchange.

If $d < i$ then basic transfer (BT_t) turns negative and nation will lose foreign exchange.

There are some factors that cause " d " and " i " to rise and fall which are

- At the initial stages of debt borrowing most of the debt incurred at low interest rates and long maturity period. So " i " is quite low as compare to " d ". While using this debt for productive purposes then the rate of returns greater than " i ". Then new foreign exchange and increase in external debt have no effect on the borrowing country.
- When the external debt exceeds from a limit then d starts decline. Payment of external debt exceeds from new inflows.
- The country change borrowing from long term external debt on concessional rate of interest to short and medium term loans at market interest rate from private institutions which leads to increase in i .
- Due to balance of payment problem the price of exportable goods decline and results in poor terms of trade
- External shocks such as oil prices fluctuations, US interest rate or change in the value of dollar affect the debtor country badly.
- Due to poor ability to pay of country the international private lending institutions stop their new lending.
- Capital flight due to political or economic reasons, people transfers their capital to other developed countries.

All these factors together decrease d and raise i in basic transfer equation. And the result is negative basic transfer.

4. ECONOMETRIC MODEL AND DATA

In order to examine the factors of external debt, the log-log form for the variables of interest is specified. So the econometric model of study is as follows:

$$\ln ED_t = \alpha_0 + \beta_1 \ln FD + \beta_2 \ln TO + \beta_3 \ln TOT + \beta_4 \ln FA + \beta_5 \ln ER + \mu_t \dots \dots \dots (4)$$

Where

$\ln ED$ = Log of External Debt, $\ln FD$ = Log of Fiscal Deficit, $\ln TO$ = Log of Trade Openness, $\ln TOT$ = Log of Term of Trade, $\ln FA$ = Log of Foreign Aid, $\ln ER$ = Log of Nominal Exchange Rate and μ_t = Error term.

Study used annual data from 1976 to 2010 to analyze the determinants of external debts in Pakistan. The data were obtained from State Bank of Pakistan (SBP), Pakistan Economic Survey and International Financial Statistics (IFS).

4.1 METHODOLOGICAL FRAMEWORK

4.1.1 Unit root tests

This study assumed series used in this research are stationary. In order to check the stationarity of the series, study used Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) test.

4.1.1.1 Augmented Dickey-Fuller (ADF)

ADF test of unit root test based on the following equation:

$$\Delta Y_t = \beta_1 + \beta_2 T + \beta_3 Y_{t-1} + \sum_{i=1}^k \theta_i \Delta Y_{t-i} + u_t \dots \dots \dots (5)$$

Where

Y_t is the variable for which the integration order is examined, T was the time trend, k was the number of lags included and u_t was white noise residuals. The series y_t is considered to be stationary if it fulfills the following conditions

$$E(Y_t) = \mu \quad \text{(constant mean)} \quad (6)$$

$$\text{Var}(Y_t) = E(Y_t - \mu)^2 = \sigma^2 \quad \text{(constant variance)} \quad (7)$$

$$\text{cov}(Y_t, Y_{t+s}) = \text{cov}(Y_t, Y_{t-s}) = \gamma_s \quad \text{(covariance depends on } s, \text{ not } t) \quad (8)$$

The mean and variance of the series are constant over time as stated in equations 6 and 7. While the covariance among any two values of Y from the series (i.e., autocovariance) relies only on the duration of time of those two values (s) rather than on the real period (t) at which the series are practiced. So if covariance, mean and variance of a series were independent of time, then that particular series is considered as stationary.

So a stationary series has a trend to move in the direction of its average value and to moves in the region of mean with a constant range and variance, whilefor non-stationary series altering mean values at every points of time and the variance of such series changes with the intervalof time period. Non stationary series move upward or downward from their mean, with or without.

The ADF test for unit, the null hypothesis

$H_0: \rho = 0$ in opposition to the alternative to equation above equation is

$H_1: \rho < 0$

The most suitable lag length for the series will be chosen with the help of Schwartz Bayesian Criteria (SBC) and also with the help of Akaike information criteria (AIC).

4.1.1.2 Phillips-Perron (PP) test

While in Phillips-Perron (PP) test the same preceding equation used but in Augmented Dickey-Fuller (ADF) test the problem of high order serial correlation is tackled by making adjustment such that the adding variation of the lagged terms in the equation, the main advantage of Phillips-Perron (PP) test is it makes alteration to t-statistics.

4.2 Autoregressive Distributed Lag (ARDL) model

This techniquefor theestimation of cointegration analysis was presented by Pesaran and shin in 1999. This approach was further amended by Pesaran *et al.* ARDL approach is used when the order of integration of the variables are different like I (0) and I (1). Even the order of integration is same then this approach can be applied for the cointegration. This technique is more useful than the rest since it is more proficient for the small samples (Ghatak and Siddiki, 2001). In Autoregressive Distributed Lag (ARDL) model the problem of order of integration is avoided.

Through the ARDL model unbiased estimates of model are obtained. It is also more efficient than other VAR methods because ARDL approach is in particular attractive when estimating cointegration for small samples Banerjee *et al.* (1993). Due to these ARDL Model has advantages over the other models of cointegration.

The ARDL technique of Pesaran *et al.* (2001) and ECMversion of the Auto Regressive Distributive Lag is as follows:

$$DLnED = \alpha_0 + \sum_{i=1}^r b_i \Delta ED_{t-i} + \sum_{i=1}^s c_i \Delta ER_{t-i} + \sum_{i=1}^u d_i \Delta FD_{t-i} + \sum_{i=1}^q e_i \Delta TO_{t-i} + \sum_{i=1}^u f_i \Delta TOT_{t-i} + \sum_{i=1}^u g_i \Delta FA_{t-i} + \delta_1 ED_{t-1} + \delta_2 ER_{t-1} + \delta_3 FD_{t-1} + \delta_4 TO_{t-1} + \delta_5 TOT_{t-1} + \delta_6 FA_{t-1} + \varepsilon_t \dots (9)$$

Here;

D is the first difference operator.

The parameters such as: b_i , c_i , d_i , and f_i , symbolize the short run relationship. On the contrary the parameters δ_1 , δ_2 , δ_3 , δ_4 , δ_5 and δ_6 represent the long run relationship among the series. While ε_t is error term in the model. If long-run dynamic association is found amongst the series, then long-run model for estimation is:

$$\begin{aligned} \text{LnED} = & \alpha_0 + \sum_{i=1}^r \delta_1 \text{LnED}_{t-i} + \sum_{i=0}^s \delta_2 \text{LnER}_{t-i} + \sum_{i=0}^u \delta_3 \text{LnFD}_{t-i} + \sum_{i=0}^q \delta_4 \text{LnTO}_{t-i} + \\ & \sum_{i=0}^q \delta_5 \text{LnTOT}_{t-i} + \sum_{i=0}^q \delta_6 \text{LnFA}_{t-i} + \varepsilon_t \dots (10) \end{aligned}$$

If the long run association exists amongst the variables, the next step is to determine the short run relationship among the given variables of the model.

For this Error Correction Mechanism (ECM) Model is estimated. The following ECM model is used.

$$\begin{aligned} \Delta \text{LnED}_t = & \beta_0 + v_1(\text{ECM}_{t-1}) + \sum_{i=1}^r \beta_2 \text{LnED}_{t-i} + \sum_{i=0}^s \beta_3 \Delta \text{LnER}_{t-i} + \sum_{i=0}^u \beta_4 \Delta \text{LnFD}_{t-i} + \sum_{i=0}^q \beta_5 \Delta \text{LnTO}_{t-i} \\ & + \sum_{i=0}^q \beta_6 \Delta \text{LnTOT}_{t-i} + \sum_{i=0}^q \beta_7 \Delta \text{LnFA}_{t-i} + \varepsilon_t \dots (11) \end{aligned}$$

Error Correction Mechanism test is estimated for the analysis of short run dynamics among the variables. It tells us weather model is convergent towards equilibrium or divergent also the of adjustment speed of the model. For the determination of the goodness of fit and/or model adequacy, stability tests and diagnostic tests are further conducted in the ARDL approach. For the goodness of fit of ARDL model stability test and diagnostic test are carried out.

5. RESULTS AND DISCUSSIONS

The results of Augmented Dickey-Fuller (ADF) test and Phillips-Perron (PP) test are shown in the table 1. The results of Phillips- Perron test depicted that all the variables are stationary at the same order $I(0)$ at 1% significance level.

While the results of Augmented Dickey-Fuller (ADF) test depicted the both order of $I(1)$ and $I(0)$ integrated series; because of some advantages over other techniques of cointegration analysis, the present study proceeds with Autoregressive Distributive Lag Model (ARDL) testing.

Table 1: Unit Root Test Results

PP- Test			ADF-Test	
Variables	At level	At first difference	At level	At first difference
lnED	-	-4.711422*	-	-4.609937*
lnER	-	-5.552171*	-	-5.554610*
lnFD	-	-6.562520*	-3.309088***	-
lnTO	-	-7.346205*	-3.396498***	-
LnTT	-	-7.393189*	-	-7.297843*
lnFA	-	-7.276448*	-	-8.370534*

233 Note: *** significant at 10%. ** Significant at 5% level of significance and * significant at 1% level of
234 significance.

235 In unit root test the log of external debt is stationary at first difference at 1% significance level in
236 Augmented Dickey-Fuller (ADF), while on the other hand by applying Phillip-Perron (PP) test the series is
237 stationary at first difference and significance at 1%. In Augmented Dickey-Fuller (ADF) test the log of
238 nominal exchange rate is stationary at first difference and at the significance level of 1% and in Phillip-
239 Perron (PP) test it is stationary at 1% level of significance at first difference. In unit root log of consolidated
240 fiscal deficit is stationary at 1% significance level at first difference in Augmented Dickey-Fuller (ADF) test
241 and in contrast to Augmented Dickey-Fuller (ADF) test the Phillip-Perron (PP) test it is stationary at level.
242 The significance level is 1% at first difference in Phillip-Perron (PP) test and in ADF test stationary at 10%
243 at level. In unit root test the log of trade openness is stationary at first difference and significance level is
244 1% in Augmented Dickey-Fuller (ADF) test and in contrast to ADF test in in test at level. In Phillip-Perron
245 (PP) test the series is stationary at 1% level of significance at first difference and in ADF test stationary at
246 significance level of 10% at level. In unit root test log of terms of trade is stationary at first difference and
247 significance level of 1% in Augmented Dickey-Fuller (ADF) and but in Phillip-Perron (PP) test it is
248 stationary at first difference and significance level is 1%. In unit root test the log of foreign aid debt is
249 stationary at first difference in Augmented Dickey-Fuller (ADF) test the significance level is of 1% and
250 while in the Phillip-Perron (PP) test it is stationary at first difference and significance level is 1%. Before
251 applying ARDL model bound test (F-test) is conducted to test the existence of co-integration among the
252 variables. The results of bound test for the presence of co-integration show that the calculated F- Statistics
253 is 5.1214. The co-integration exists since the F-statistics is greater than upper bound tabulated value. In
254 next step the long run relationship among the variables are determined with the help of Auto Regressive
255 Distributive Lag (ARDL) econometric model. Akaike Information Criterion has been used as the value of F-
256 Statistics from Akaike Information Criteria is greater than Schwarz Bayesian Criteria.

257 **Table 2: Long Run Coefficients using the ARDL Approach at Model**

Estimated Long Run Coefficients using the ARDL Approach, ARDL (1,0,1,2,0,1) selected based on Akaike Information Criterion.			
Regressor	Coefficient	Standard Error	T-Ratio[Prob]
ER	1.0716	.20027	5.3506* [0.00]
FA	.010233	.10475	.097684 [.923]
FD	.39539	.14729	2.6844* [.014]
TT	-.093976	.10315	-.91109 [.372]
TO	.46425	.21334	2.1762*** [.041]

INPT	6.0512	.92072	6.5722* [.000]
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Note: * significant at 1% ** significant at 5% and *** significant at 10%.

The first column represents variables which are exchange rate, foreign aid, fiscal deficit, terms of trade and trade openness where INPT is intercept. In the second column the estimated coefficients were reported. On the basis of t- statistics following variables exchange rate, fiscal deficit and trade openness are statistically significant while foreign aid and terms of trade are statistically insignificant. The results of present study verified trade openness, fiscal deficit and exchange rate enhanced the external debt burden of Pakistan. This mainly shows that change in exchange rate, fiscal deficit and trade openness cause the increase in external debt of Pakistan. One percent raises in exchange rate causes 1.0716 percent increase in external debt burden at 1 percent significance level. Asmaet *al.* (2011) also concluded that one percent change in nominal exchange rate bring about 0.79 percent increase in external debt. Similarly one percent increases in fiscal deficit causes 0.39539 percent increase in external debt in Pakistan at one percent significant level. Folorunso and Falade (2013) also confirmed positive relationship between fiscal deficit and external debt. Trade openness was found positively related to external debt. One percent increases in trade openness causes 0.46425 percent increase in external debt at 10 percent significance level. While the variable terms of trade is negatively related with external debt but insignificant statistically. Similarly foreign aid is also insignificant statistically. The outcomes of Error Correction Mechanism are given in the table 3.

Table 3: Error Correction Representation for the Selected ARDL Model

Error Correction Representation for the Selected ARDL Model ARDL (1,0,1,2,0,1) based on Akaike Information Criterion			
Regressor	Coefficient	Standard Error	T-Ratio[Prob]
dER	1.0282	.15592	6.5944* [.000]
dFD	-.073017	.049897	-1.4634 [.156]
dFD1	-.073017	.054303	-2.8139* [.009]
dTT	-.047509	.048909	-.97137 [.341]
dTO	.23470	.13343	1.7589*** [.091]
dFA	-.071436	.038460	-1.8574 *** [.075]

dINPT	3.0591	1.1838	2.5841* [.016]
ecm(-1)	-.50554	.15598	-3.2410* [.003]
R-Squared	.99923	R-Bar-Squared	.99888
F-stat	F(10, 22) 2847.4[.000]	S.E. of Regression	.041336
Akaike Info. Criterion	54.0035	Schwarz Bayesian Criterion	45.7727
DW-statistic	2.0135	Durbin's h-statistic	-.087222[.930]

Note: * significant at 1% ** significant at 5% and *** significant at 10%.

The value of ECM is **-0.50554**. The negative sign shows that the model is convergent towards equilibrium and the value shows the speed of adjustment of the model. It means that adjustment speed of previous year's disequilibrium to current year is 50%.

5.1 Diagnostic tests

Diagnostic tests are conducted to observe the troubles of Autocorrelation, serial correlation and problem of absence of homoscedasticity shown in the table 4. The value of DW-statistics is 2.0135 therefore it was concluded that there is no problem of autocorrelation. The Diagnostic test clearly demonstrates no problem of serial correlation, functional form problem and existence of Homoscedasticity.

Table 4: Diagnostic Tests of model

Test Statistics	LM Version	F Version
A. Serial Correlation	CHSQ(1)= .087078[.768]	F(1, 21)= .055560[.816]*
B. Functional Form	CHSQ(1)= .35073[.554]	F(1, 21)= .22559[.640]*
C. Normality	CHSQ(2)= 3.6806[.159]	Not applicable
D. Heteroscedasticity	CHSQ(1)= .73595[.391]	F(1, 31)= .70712[.407]*

A: Lagrange multiplier test of residual serial correlation B: Ramsey's RESET test using the square of the fitted values C: Based on a test of skewness and kurtosis of residuals D: Based on the regression of squared residuals on squared fitted values

5.2 Stability Test

Parameters consistency is examined with the help of stability test. For the examination of structural stability of model Brown *et al.* (1975) introduced cumulative sum (CUSUM) and cumulative sum of

square (CUSUM) tests. Cumulative sum test is used for the systematic change in the parameters. On the other hand cumulative sum of square helps in showing sudden change in the regression coefficients. Graphs show that the model is stable, because the residual lies between the two straight lines showing 5% critical bounds. It means if a series is excluded from the model there is no effect on the rest of the series.

Figure 1: Cumulative Sum (CUSUM) Test

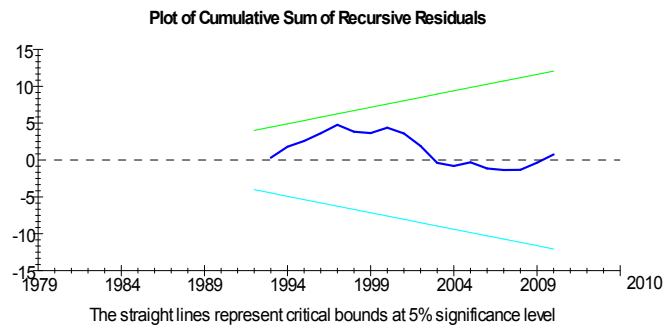
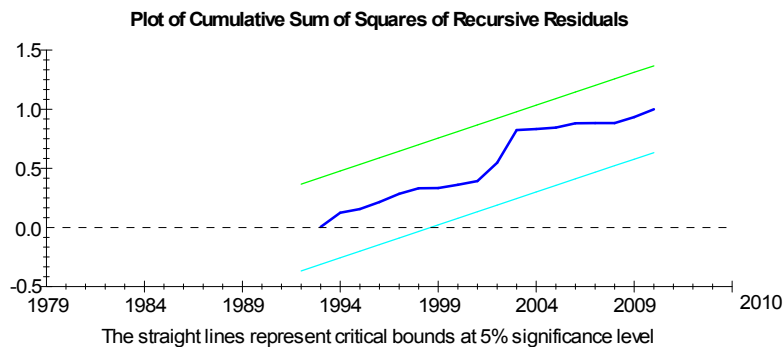


Figure 2: Cumulative Sum Square (CUSUM) Test



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7.

8. CONCLUSION AND POLICY IMPLICATIONS

Study examined macroeconomic determinants of external debt by applying Auto Regressive Distributive Lag (ARDL) model in long run for the case of Pakistan from 1976-2010. The results depict that fiscal deficit, trade openness and exchange rate are statistically significant factors that determine the external debt. The study finds the evidence of long run positive association between fiscal deficit and external debt. Nominal exchange rate too enhances the external debt burden of Pakistan. Foreign aid is also positively related to external debt but statistically insignificant while terms of trade are negatively related to external debt being statistically insignificant.

The value of ECM is negative and less than one. This shows there is disequilibrium in short run and it comes to the equilibrium in -.50554% time period. So the study concludes that consolidated fiscal deficit, nominal exchange rate and trade openness are statistically significant factors that affect the external debt in Pakistan.

On the basis of results the study has some policy suggestions:

- Appropriate debt management strategy should be adopted because while crossing the limits these foreign loans are harmful in achieving economic growth objective
- Government should use borrowing for productive and commercial purposes in order to generate sufficient resources to pay back easily.
- Policy makers should adopt those measures which minimize fiscal deficit so that the problem of severe external debt burden may be tackled.
- Suitable exchange rate policy should be devised to minimize the external debt burden.
- In order to reduce the debt burden the policy makers should adopt those policies that enhance the exports of country and reduce imports of luxuries items.

REFERENCES

- Afonso, A., Gomes, P., and Rother, P. (2011). Short-and long-run determinants of sovereign debt credit ratings. *International Journal of Finance and Economics*, 16(1), 1-15.
- Amasoma, D. (2013). Analysis of the Relationship between Fiscal Deficits and External Sector Performance in Nigeria. *Journal of Economics and Sustainable Development*, 4(11), 80-87.
- Awan, A., Asghar, N., and UrRehman, H. (2011). The impact of exchange rate, fiscal deficit and terms of trade on external debt of Pakistan. *Australian Journal of Business and Management Research Vol*, 1(3).
- Bouakez, H., and Kano, T. (2005). Terms of trade and current account fluctuations: the Harberger–Laursen–Metzler effect revisited. *Journal of Macroeconomics*, 30(1), 260-281.
- Buch, C. M., and Lusinyan, L. (2003). Determinants of short-term debt: a note. *Journal of International Financial Markets, Institutions and Money*, 13(2), 157-170.

Carroll, J. (2013). A Contribution to the Foreign Debt and Economic Growth Debate using Nigeria as a Case Study. *American Journal of Economics and Development*, 3(2), 48-54.

Chaudhary, M. A., &Shabbir, G. (2005).Macroeconomic Impacts of Budget Deficit on Pakistan's Foreign Sector. *Pakistan Economic and Social Review*, 185-198.

Culha, A. (2006). A structural VAR analysis of the determinants of capital flows into Turkey. *CBRT Research and Monetary Policy Department Working Paper*(06/05).

Domar, E. D. (1944). The" burden of the debt" and the national income. *The American Economic Review*, 34(4), 798-827.

Eichengreen, B., and Portes, R. (1986). Debt and Default in the 1930s: Causes and Consequences. *European Economic Review*, 30(3), 599-640.

Eicher, T. S., Schubert, S. F., and Turnovsky, S. J. (2008). Dynamic effects of terms of trade shocks: The impact on debt and growth. *Journal of International Money and Finance*, 27(6), 876-896.

Ezeabasili, V. N., Isu, H. O., and Mojekwu, J. N. (2011). Nigeria's External Debt and Economic Growth: An Error Correction Approach. *International Journal of Business and Management*, 6(5), p156.

Ezike, J. and Mojekwu, J. (2011). The impact of external debt on Macro-economic performance. *International Journal of Business and Management Tomorrow*, 1(2), 36-44.

Fajana, F.O. (1993). Nigeria debt crisis. *United National Economic Commission for African socio – Economi Research and Planning Division*, Addis - Ababa, Ethiopia.

Folorunso, B. A., and Falade, O. E. Relationship between Fiscal Deficit and Public Debt in Nigeria: an Error Correction Approach.

Georgantopoulos, A. G., &Tsamis, A. D. (2011). The Interrelationship between Military Expenditure and External Debt: Patterns of Causation in Northern Africa Countries. *Journal of Economics and Behavioral Studies*, 3(4), 264-273.

Govt. of Pakistan, Economic Survey of Pakistan (Various Issues), *Finance Division, Islamabad*.

Greenidge, K., Drakes, L., &Craigwell, R. (2010).The external public debt in the Caribbean Community. *Journal of Policy Modeling*, 32(3), 418-431.

Hasan, P., Chaudhri, F. M., and Ahmad, E. (1999). Pakistan's Debt Problem: Its Changing Nature and Growing Gravity [with Comments]. *The Pakistan Development Review*, 38(4), 435-470.

Kargbo, P. M. (2012). Impact of Foreign Aid on Economic Growth in Sierra Leone: Empirical Analysis.

Mohey-Ud-Din, G. (2006). Impact of Foreign Capital Inflows (FCI) on Economic Growth in Pakistan [1975-2004].

Ogunmuyiwa, M. (2011). Does external debt promote economic growth in Nigeria. *Current Research Journal of Economic Theory*, 3(1), 29-35.

Paudel, R. C., and Perera, N. (2009). Foreign debt, trade openness, labor force and economic growth: Evidence from srilanka.

Shrestha, M. B., &Chowdhury, K. (2005).ARDL modelling approach to testing the financial liberalisation hypothesis.

394 Tiruneh, M. W. (2004). An empirical investigation into the determinants of external
 395 indebtedness. *University of Munich, Empirical Research Group, Munich and Institute of Slovak and World*
 396 *Economics Slovak Academy of Sciences, Bratislava, Slovakia.*

397 Zafar, S., and Butt, M. S. (2008). Impact of trade liberalization on external debt burden: econometric
 398 evidence from Pakistan.

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