# Impact of Budget Deficit on Economic Growth of Pakistan (An Empirical Analysis)

Ghulam Mustafa\*

Keeping in view the everlasting influence of macroeconomic planning and management on economic growth and development, this study aims to address the effect of fiscal policy and budget deficit upon economic growth. Fiscal policy is a critical aspect of macroeconomic framework. For underpinning the empirical evidences ARDL approach is utilized for efficient and consistent upshots. Secondly, time series data from 1979 to 2013 is used for this study. Results clarify that fiscal shortage influences economic growth and development of nation antagonistically. There exists negative and noteworthy connection between spending shortfall and economic growth both in long run and short run. Exchange rate has negative relationship on fiscal development of Pakistan. Urbanization is significant and positive determinant of economic growth (GDP).

Keywords: Economic Growth, Budget Deficit, ARDL, Pakistan.

### Introduction

For proper management and working of the office of the government revenue and expenditures are required. Revenue policy and expenditure pattern are the best way of resource mobilization for an economy. Priorities of the government are determined by the pattern of budget every year presented by finance authorities. In this regard budget revenue targets and estimated expenditures are determined by the government. Revenue targets less than the estimated expenditures may disturb the indicators of macroeconomic variables. So macroeconomic policies such as public revenue policy, public expenditure and fiscal deficit policy can effect and hamper the economic growth of an economy at macro as well as at micro level too (Galor and Zeira, 1993).

The government of a country figures a fiscal plan each year which shows its normal incomes and uses in the coming budgetary year. Receipts of the Legislature are normal from various parts, for example, money related establishments, enthusiasm from advances given to different Governments, assess incomes, neighborhood bodies' and so forth. Cost of an administration comprises on various tasks... formative and non-formative ventures. In the event that income of the administration are equivalent to its uses, the spending will be adjusted. The spending will be in shortage if the cost of the administration is more than its receipts. The creating nations are confronting a vast spending

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<sup>\*</sup> PhD Scholar, Institute of Islamic Studies, University of the Punjab, Lahore – Pakistan.

shortfall. The developing countries are confronting an extensive spending shortfall; Pakistan is likewise one of them, which has confronted long and enormous spending deficiency amid last three to four decades. In Pakistan major economic problem is its huge fiscal deficits which is sometime double digit, high inflation and low growth rate.

Macroeconomic management has always played a crucial role and overlaid the path for economic up gradation mainly through fiscal reforms, monetary and poverty reduction indicators. Keeping in view the everlasting influence of macroeconomic planning and management on economic growth and development since 1999 policy makers have adopted numerous fiscal rigors under the line of reform program. This reform agenda is being undertaken under the rigid conditions imposed by the International Monetary Fund (IMF) because of fiscal indiscipline in developing countries like Pakistan.

For matching the expenditures of the government the powerful instrument in the hands of any government is revenue collection. Fiscal deficit effect economic growth directly and indirectly (Fatima et.al.2011). Rates of growth in the long run period can be affected through the policies adopted by the government. These policies may be endogenous or exogenous. Those policies which may be affected through revenue and expenditures are called endogenous. The models set under these policies are called endogenous growth models. Among those economists who presented the theoretical frame work for endogenous growth models are king and Rebelo, Lucas, Jones and Manuellio, Yuen and Mankiew and many others..

Islamic welfare states growth model consider that their first and foremost duty is to provide deficit free budget to its natives.In Islamic economic system, the concept of public expenditure is exemplary and its revenue side is unparalleled to any of the other revenue system of any economic systemof the world. Zakat is a compulsory religious duty on each and every Sahib-i-Nisab Muslim and once it is fully implemented, there is no possibility of fiscal deficit or revenue short fall. This has not only been a theoretical debate rather it has been practically implemented in the reign of the great Hazrat Umar (R.A.). The concept of bait-ul-mal in Islam is not unknown to anyone which is from public finance.

Incompetent and ineffective policies of the present economic systems implied the huge budget deficit and leading to never ending dependency of Pakistan on external resources in the form of foreign loans, liabilities. Faiz Balquees analyzed, "analysis of budget deficits, debt accumulation and debt instability". The findings of the study shows Budget deficit and debt have negative relationship (2003). Besides, debts are used to beat past advances with a specific end goal to benefit the obligations which at last increase the further spending shortages. Exchange rate is additionally being crumbled because of the reliable

exchange shortfall and spending deficiency at the same time. Amid the entire decade of 1990's very nearly nine percent of the Gross domestic product of Pakistan was dispensed and used for the obligation adjusting in light of the fact that the obligation overhauling was expanded up to 50 percent, amazingly, as the rate was under 1 percent amid the 1960's. (Economic survey of Pakistan various issues)

History of spending shortage in Pakistan is portrayed here forth: it was 6 percent of Gross domestic product amid the time of 1970s, 7.6 percent of Gross domestic product in 1980s. Pakistan is confronted an interminable spending shortfall in 1990s.In the half of 1990s this constant shortage was declined 6.4 percent of Gross domestic product by the utilization of decrease in formative consumption. Pakistan supported an expansive spending shortfall amid the 1990s attributable to the stagnation of monetary exertion in the course of the most recent fifteen years. Understanding the blemish of Pakistan's expense structure, a concentrated changes exertion was started in the mid-2000. Add up to income was from 13.3 percent of Gross domestic product in 2000-01, 14.2 percent of Gross domestic product in 2001-02. These expansions in incomes end up plainly conceivable in view of the judicious expense arrangement of the Administration. (Economic survey of Pakistan various issues)

Add up to use consistently fall in from fiscal year 2000-01. Rise in incomes and decrease in expenses lessened the hole amongst income and uses and financial shortage decreased to 3 percent of Gross domestic product in 2000-05 from 5.2 percent of Gross domestic product in 1990. To conceal the fiscal shortfall, the financial constriction has been embraced by diminishing the allotment for the formative exercises and the consumption consequently. The spending shortfall of Pakistan in financial year 2003-4 was around 4 percent of Gross domestic product which was diminished to 3.4 in the following year. The figure additionally diminished to 3.2 percent in 2005-06, however it expanded up to 4.2 percent in 2006-07. The financial deficiency came to its most elevated purposes of 7.3 percent in the 2007-08, yet marginally decreased to 4.7 percent of Gross domestic product in 2008-09. (Economic survey of Pakistan various issues). Furthermore, the detailed trend of fiscal deficit to GDP ratio is elucidated in table (1) below

Table 1
Different Type of Deficits (%age of GDP)

	Balance of			
		Current		
Years	Trade deficit	<b>Account Deficit</b>	Fiscal deficit	
1970-75	-6.79	-5.19	-8.3	
1975-80	-5.41	-3.54	-7.8	
1980-85	-4.47	-2.79	-6.1	

1985-90	-4.58	-3.14	-7.7
1990-95	-4.81	-4.07	-6.5
1995-00	-3.45	-1.05	-6.1
2000-05	-3.62	-0.02	-5.6
2005-10	-3.14	-1.42	-6.5
2010-13	-7.66	-1.75	-5.4

Source: Pakistan Economic Survey (various issues)

Low tax to GDP ratio, tax base is very small, tax system of Pakistan is inelastic, tax laws are very complex and heavy reliance on tariff and custom, exemptions of taxes are very large and incentives are boosting fiscal deficit. Low developmental expenditures, exchange rate depreciation and price instability also hamper economic growth through fiscal deficit.

Another reason of this shortfall is that in the event that we look the consumption side of economy, defense and foreign obligation overhauling are taking an extremely significant offer of the present income. Results additionally demonstrated that there is determined deficiency in adjustment of installments which at last makes fiscal shortage. Pakistan financed budgetary hole through outer obtaining. Every one of these sources again makes fiscal shortage circumstance in nation. Moreover, Inconsistency and unstable political circumstances are vital and basic issues of Pakistan.

In 1998 the external debt of Pakistan was about 30 billion dollars and counts about 40 percent of its national income. On the same years Pakistan was at highest external debt to GNP ratio in the whole south Asian region, overshadowing the external debt to GNP ratio of Sri Lanka. A reform agenda was formulated in 1999 by International Monetary Fund and World Bank. Thus keeping in view this burden, International Monetary Fund has tightened its rules and regulations. So for further loan availability Pakistan has to follow their reform agenda and policies which consist of diminishing deficit of balance of payment and price stability.

In the interim obligation adjusting as level of Gross domestic product additionally showing powerlessness of the reimbursement of credits and allows and furthermore a figure of expanding spending shortfall, current record deficiency and speculation hole for which the majority of the household assets (Gross domestic product) and outside assets in type of obligation is used.

Table 2

Years	Total debt service (\$ million)	Total debt service (% of GDP)
1970-75	673	2.5
1975-80	754	2.9

1980-85	869	3.5
1985-90	1487	3.9
1990-95	1901	2.9
1995-00	2468	3.5
2000-05	3215	2.2
2005-10	2354	1.1
2010-13	2260	1.0

Source: Pakistan Economic Survey (various issues) and World Development Indicators.

The impacts of the financing techniques i.e. expansion of the cash supply in the nation and this thing makes the inflationary weight in the economy. There are additionally unfriendly impacts of proceeds with outside obtaining loans. High and supported fiscal development with low expansion is the focal goal of the macroeconomic policymakers (Khan and Senhadji, 2010). The realities demonstrated that due to fiscal deficits there was an expansion of 3.8 percent in the joblessness level amid the period 1980 to 2001. These 30 years watched just about 4 percent swelling in the joblessness.

Government should take some remedial measures to correct these issues which will be useful to decrease financial shortage. Higher loan financing cost in Pakistan is main reason for higher deficits. Tax collection authorities of Pakistan should introduce revenue generating friendly policies. Government should fabricate the extent of direct costs, more evaluations from rich and less from poor.

This study aims to address the effect of fiscal policy mainly budget deficit on economic growth and regards fiscal policy as a critical aspect of macroeconomic framework. This study concentrates on Fiscal deficit of Pakistan and the simultaneous development in macroeconomic realm of the country from 1979 to 2013. If we specifically talk about the decade of 1990's various governments targeted and emphasized on fiscal reform and utilized numerous reform programs. The Fiscal policy of Pakistan has always remained important and influential for economic growth and performance as Pakistan is going through immense and budget deficit in current years.

This study is useful for different social scientists to approve this marvel in different nations. The model which was produced in this paper is additionally useful to show same investigation in different economies. The factors which utilized as a part of this examination to feature financial shortfall issues are likewise exceptionally valuable. In this setting arrangement creators can utilize these factors to expel fiscal deficiency issue. For instance it is demonstrated that conversion scale has negative impact on Gross domestic product in this way exchange rate devaluation ought to be monitored. Insecurity in conversion scale additionally impacts the venture and furthermore changes the obligation

trouble. Besides urban populace has beneficial outcome on development mirroring that more talented work yields higher returns. There are likewise suggestions for the scientists to apply the model in the distinctive timeframe to approve the consequences of this investigation.

The arrangement of the paper will resort to discuss the previous studies. In Section III theoretical frame is discussed. Estimation of the model and data sources is explained in section IV. Results of the model will be discussed in section V. Whole study is concluded in section VI and finally, appropriate policy suggestions are presented.

### **Review of Previous Studies**

Khan and Khattak (2008) examined in this article "an analysis of short-term effects of budget deficits on macroeconomics variables: evidence from Pakistan (1960-2005)". Annual data is used for this study for the period of 1960-2005. For short run analysis the model is estimated through error correction. The variables used in this model show mixed behavior as some has positive relationship while other has negative relationship with budget deficit. Qayyum et.al. (2008) analyzed, "crowding-in effect of budget deficit evidence from Pakistan (1960-2005). The period of this study is 1960-2005 by using annual data. A renowned simultaneous equation model is used for this study. Bank borrowing and domestic non-bank borrowing has significant relationship with budget deficit. Ageel and Nishat (2000) viewed "the twin deficits phenomenon: evidence from Pakistan". This study is analyzed from 1973-98 on the basis of annual data. They used error correction model (ECM) which explains the short run behavior of the variables and Granger causality test examines the causal relationship of the variables. The long run impact of budget deficit on trade deficit is positive and significant whereas budget deficit has negative impact on current account balance in short run.

Catao and Trroness (2003) analyzed, "fiscal deficit and inflation". Panel data from the year 1970-2000 is applied here for estimation along with co-integration technique. Results are coincide with the theory that fiscal deficit and inflation has positive impact in developing countries, whereas advanced countries have different phenomenon which is negative. Chaudhary and Ghulam (2005) examined, "macroeconomic impacts of budget deficit on Pakistan foreign sector". From 1965-99 is the period for this study. Two stage ordinary least square (2SLS) technique is used for estimation. Domestic credit and output growth has positive and significant affect. Faiz Balquees (2003) analyzed, "analysis of budget deficits, debt accumulation and debt instability". Data from the year 1980-2003 is used for the study and co-integration techniques for statistical analysis. The findings of the study shows Budget deficit and debt have negative relationship. Fatima et.al. (2011) examined "fiscal

deficit and economic growth: an analysis of Pakistan economy". From 1980-2009 data is used for the study. For empirical findings this study employees the simultaneous econometrics equation model and two stages least square method. Fiscal deficit effect economic growth directly and indirectly.

Siddiqi and Ilyas (2011) analyzed, "impact of revenue gap on budget deficit, debt burden and economic growth: evidence from Pakistan". The period of this annual study is 1980-2009. The econometric technique applied here is ARDL to co-integration. The findings of the study explain that revenue gap has short run and long run relationship with budget deficit and economic growth. Burney and Akhtar (1999) analysis, "government budget deficits and exchange rate determination: evidence from Pakistan". Annual data from the year 1971-1990 is used for the study. Ordinary least square (OLS) technique is used for this study. The findings of the study show that impact of budget deficit is significant in the real exchange rate of Pakistan. Mehmood and Ahmed (2007) analyzed, "an empirical investigation for the twin deficits hypothesis in Pakistan". For the period of 1975-2005 quarterly time-series data is used. Granger causality test and simultaneous equation model is used along with co-integration technique. Budget deficit has significant and positive effect on current account deficit in Pakistan.

Stated literature elucidates that mostly fiscal deficit influence economic growth negatively but most of the studies haven't affirmed it under the precision regarding econometric technique. Furthermore, this study utilizes analysis of deficit and economic growth by taking data from 1979- 2013.

## **Theoretical Foundations or Framework**

For theoretical implication of the effect of fiscal deficit on economic growth theory of twin deficit is inculcated. This study analyses the impact of budget deficit on economic growth of Pakistan. Mundell-Fleming model is used to check the impact of foreign sector through exchange rate which is also key variable along with budget deficit. Mundell-Fleming model represents open economy which is an extension of real sector (IS) and monetary sector (LM) model. In this framework this study finds that consumer spending and budget deficit can increase trade deficit.

Higher demand of imports may affect net exports and depreciation in exchange rate. On the other side due to the larger budget deficit loans become costly because of higher interest rate which has definitely negative impacts on exports and worsen the twin deficit. Volcker (1987) argues that deficit in budget lead to deficits in trade, the result of which

is twin deficit has negative impact on the growth of an economy in short as well as in the long run.

Increased interest rate is because of increasing budget deficits leading to crowding out. Interest rate and exchange rate also impact each other accordingly. Thus expensive exports and relatively cheaper imports generate a big gap on the balance sheet of trade and hence the income expenditure sheet of the government too. So for theoretical strength of the model we select very effective and related variables that are exchange rate and population along with fiscal deficit.

## **Data Collection and Methodology**

Secondary data is collected for this study from 1979 to 2013 and data sources are World Development Indicators (WDI), State Bank of Pakistan and various statistical year books. The variables employed are Gross Domestic Product (GDP), budget deficit (BD), urban population (UPOP), and exchange rate (EXC). So following Econometric model is constructed:

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\begin{array}{l} Ln\left(GDP\right)=\beta o+\beta_{1}ln\left(BD\right)+\beta_{2}ln\left(UPOP\right)+\beta_{3}ln\left(EXC\right)+u\\ GDP=Gross\ Domestic\ Product\left(GDP\right)\\ BD=Budget\ DeficitUPOP=Urban\ Population\\ EXC=Exchange\ Rateu=Stochastic\ Error\ Term \end{array}
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Where,  $\beta$ 0,  $\beta$ 1,  $\beta$ 2,  $\beta$ 3 are the respective parameters.

To obtain results appropriate econometric techniques have been used in the past. But in this study ARDL to c- integration proposed by Peasarn and Shin (1999, 2001) is employed due to the following appealing reasons:

This technique is used because of following advantages:

- 1. The selected variables for this study can be integrated at I (0) or I (1) and both.
- 2. Auto correlation or serial correlation is a big problem for time series studies by using this technique this can be minimized.
- 3. For short run effects of the model the technique is quite suitable for measuring the model through dynamic errors correction model.
- 4. Another big issue of endogeneity can be resolved effectively through this technique.
- 5. Un-Biasedness can effectively be estimated through ARDL.
- 6. Through this technique valid T- statistics can also be generated.

### The ARDL equation is given below:

$$\begin{split} \Delta\left(\text{GDP}\right)_{t} &= \beta_{0} \,+\, \beta_{1}\left(\text{GDP}\right)_{t-1} +\, \beta_{2}\left(\text{BD}\right)_{t-1} + \beta_{3}\left(\text{UPOP}\right)_{t-1} + \beta_{4}\left(\text{EXC}\right)_{t-1} \\ &+ \sum_{i=1}^{n} \delta_{i} \,\, \Delta\left(\text{GDP}\right)_{t-i} \,\,+\, \sum_{i=0}^{n} \, \theta_{i} \,\, \Delta\left(\text{BD}\right)_{t-i} + \sum_{i=0}^{n} \, \eta_{i} \,\, \Delta\left(\text{UPOP}\right)_{t-i} \\ &+ \sum_{i=0}^{n} \, \gamma_{i} \,\, \Delta\left(\text{EXC}\right)_{t-i} \,\,+\, U_{t} \end{split}$$

 $[\beta_1, \beta_2, \beta_3, \text{ and } \beta_4]$  are long run coefficients, whereas remaining are short-run coefficients.

# **Null Hypotheses**

$$\begin{array}{l} H_0: \ \beta_1 = \beta_2 = \beta_3 = \beta_4 = 0 \\ \text{Whereas alternative hypothesis:} \\ H_1: \ \beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq 0 \\ \text{(long run relationship exist)} \end{array}$$

## The error correction term:

$$\begin{split} \Delta \left( \text{GDP} \right)_t &= \beta_0 \, + \sum_{i=1}^n \delta_i \, \Delta \left( \text{GDP} \right)_{t-i} \, \, + \sum_{i=1}^n \, \theta_i \, \Delta \left( \text{BD} \right)_{t-i} \, + \sum_{i=1}^n \, \eta_i \, \Delta \left( \text{UPOP} \right)_{t-i} \\ &+ \sum_{i=i}^n \, \gamma_i \, \, \Delta \left( \text{EXC} \right)_{t-i} \, \, + \lambda \left( \text{ECM} \right)_{t-1} + \text{U}_t \end{split}$$

# **Empirical Results and Discussion**

In Table 1 ADF test is utilized to verify the stationary of variables at level and 1st difference with trend and drift assumption.

Table 1
Augmented Dickey- Fuller Test with Trend and with Intercept.

Variables	Level/ 1st	ADF test statistic		Conclusion
	Difference	Trend	Intercept	_
Ln (GDP)	Level	-2.073	-1.807	
$\Delta$ Ln (GDP)	First Diff	-3.237**	-2.946*	I (1)
Ln (BD)	Level	-1.395	0.369	
$\Delta$ Ln (BD)	First Diff	-3.717*	-3.740*	I (1)
Ln (UPOP)	Level	-1.907	-0.609	
$\Delta$ Ln (UPOP)	First Diff	-2.538	-1.617**	I (1)
Ln (EXC)	Level	-1.909	-1.742**	I (0)

Note: \* denote significance at 5% and \*\* denote significance at 10%

Augmented Dicky fuller (ADF) test is applied in order to determine the order of integration.

Prerequisite of ARDL is unit root without which it cannot be applied. ARDL Since variables used are integrated of different order I (0) and I (1)], therefore ARDL technique is employed.

The result of table 1 shows that urban population (UPOP), budget deficit (BD), and Gross Domestic Product (GDP) are stationary at 1<sup>st</sup> difference, while exchange rate (EXC) is stationary at level.

Table 2
Diagnostic Tests

LM Version	F Version
0.8905 [0.345]	0.73101 [0.400]
4.0531 [0.044]	3.6672 [0.066]
0.9085 [0.635]	
1.7955 [0.180]	1.7844 [0.191]
	0.8905 [0.345] 4.0531 [0.044] 0.9085 [0.635]

Source: Author

Table 2 shows that LM Version and F Version are used to verify various diagnostic tests. The above model is free from serial correlation and Hetro. The model is formulated with good functional form. The residuals of this model are distributed normally.

Table 3
Bounds Testing in ARDL Model

F-statistic	95% LCB	95	% UCB	90% LCB	90% UCB
20.8664	3.5619	4.8	3633	2.9480	4.0863
W-statistic	95% LCB	95	% UCB	90% LCB	90% UCB
83.4656	14.2477	19	.4531	11.7920	16.3451
LCB= Lower Critical Bound UBC= Upper Critical Bound			d		

In table 3, both calculated F-statistic and W-statistic are higher than upper critical bound (UBC) at 5 % level of significance. This implies that long run relationship exist among variables. Bound testing is the precondition to apply ARDL approach which confirms the existence of long-run relationship among variables by rejecting the null hypothesis of no long-run relationship.

Table 4
ARDL (1,0,0,1)selected based on AIC (Dependent Variable, ln GDP)
Regressor Coefficients Standard T Ratio Probability

**Error** 

<b>Ln GDP (-1)</b>	0.5082	0.0926	5.4899	[0.000]
Ln BD	-0.0125	0.0062	-2.0210	[0.053]
Ln UPOP	1.2009	0.1913	6.2780	[0.000]
Ln EXC	-0.1546	0.03791	-4.0792	[0.000]
<b>Ln EXC (-1)</b>	-0.0939	0.0478	-1.9645	[0.059]
Constant	-5.6126	1.0611	-5.2894	[0.000]
R-Squared	0.99	R-Bar-Squa	red 0.99	)
DW-statistic	2.1957 F-Stat. F(5,29)12359.9 [0.000]			

Table 4 shows the dynamic analysis of the variables. Dependent variable is ln (GDP), whereas independent variables are Ln (BD), Ln (UPOP) and ln (EXC). All variables are the statistical significance at 6% level of significance. There exist negative and significant relationship between budget deficit and economic growth (GDP). Increasing urbanization is helpful to boost economic activities by providing jobs to skilled and unskilled labour force of the economy.

Continuous increase in exchange rate hinders the pace of economic growth. Moreover, high exchange rate creates inflation and Pakistani government facing difficult to pay their debts to IFIs and other donor countries. The value of Durbin Watson is greater than the value of coefficients of determination which explains that model is free from serial correlation. The high value of coefficients of determination and significant variables shows that model is good fit and dependent variables are explained by the independent variables well.

Table 5
Estimated Long Run Coefficients for Selected ARDL Model (Dependent Variable lnGDP)

Regressor	Coefficients	S. Error	T Statistic	Prob.
Ln BD	-0.0256	0.0139	-1.8378	[0.076]
Ln UPOP	2.4422	0.1601	15.251	[0.000]
Ln EXC	-0.5054	0.0665	-7.5897	[0.000]
Constant	-11.4134	2.4621	-4.6356	[0.000]

Table 5 shows the long-run relationship between variables. The impact of budget deficit on economic growth is negative and significant in the long-run. Pakistan has been facing serious issues of budget deficit and macroeconomic imbalances: it is time to reconsider the fiscal and monetary expansion policy. Moreover, government gives priority to long-term private/public investment policies it can gain better results to increase economic growth, poverty alleviation and unemployment retardation. There exist negative relationship between exchange rate and economic growth in case of Pakistan. Urbanization is significant determinant of economic growth (GDP).

Table 6

Error Correction Representation for the Selected ARDL Model (Dependent Variable, ln GDP)

Regressor	Coefficients	S. Error	T Statistic	Prob. Value	
Δ Ln BD	-0.0125	0.0062	-2.0210	[0.053]	
Δ Ln UPOP	1.2009	0.1913	6.2780	[0.000]	
<b>ΔLn EXC</b>	-0.1546	0.03791	-4.0792	[0.000]	
<b>Δ Constant</b>	-5.6126	1.0611	-5.2894	[0.000]	
ECM(-1)	-0.4917	0.0926	-5.3117	[0.000]	
R-Squared	0.7673	R-Bar-Squared 0.7271			
DW-statistic	2.1957	F-Stat. F(4.30)23.904 [0.000]			

ECM = Ln GDP + 0.0256 \*Ln BD -2.4422 \* Ln UPOP + 0.50536 \* Ln EXC + 11.4134 \* Constant

Table 6 explains the results of short run by using ARDL approach. Both budget deficit and exchange rate are significant. The impact of urban population on economic growth is positive and significant. The coefficient of urban population is 1.2009 suggesting that 1 percent increase in urbanization leads to 1.2 percent increase in economic growth (GDP). While coefficient of exchange is -0.1546, indicating that 1 percent increase in exchange rate leads to 0.15 percent decrease in GDP. The coefficient of ECM is negative and significant which suggest convergence of model towards equilibrium. The result of this error correction model is trustworthy since it passes all diagnostic tests.

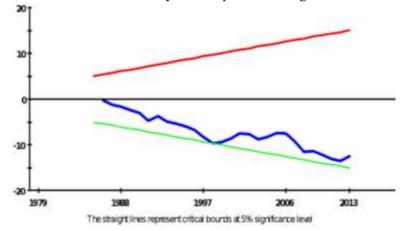


Figure 1: Plot of Cumulative Sum of Recursive Residuals.

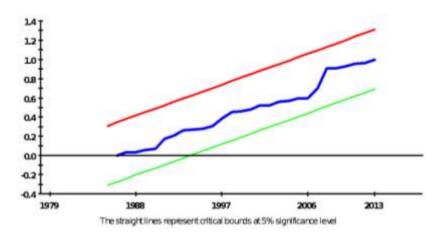


Figure 2: Plot of Cumulative Sum of Squares of Recursive Residuals.

Cumulative sum (CUSUM) and cumulative sum square (CUSUMSQ) test is employed to check the structural stability of short run and long run co efficient. According to the diagram above the model is stable structurally.

## **Conclusion and Policy Recommendations**

It is concluded from above results that fiscal deficit has severe effects on the economy of a country. In case of Pakistan, the fiscal deficit of a longer period of time leaving severely negative impacts on the economy and also creating heavy pressure on other macroeconomic indicators. The main cause of this fiscal deficit is poor implementing fiscal policies, inefficient authorities and no priority determined policies. There are many other reasons as tax base of Pakistan is narrow, its tax system is inelastic, tax laws are very complex and exemptions are large.

When we look into the expenditure aspect of public finance of Pakistan two important sectors are distinct. First one is defense and the second is debt servicing which is taking major share in expenditure side. This fiscal deficit is financed through internal and external sources as is in Pakistan. These internal and external sources worsening the situation increasing debt and debt servicing enhance pressure on fiscal deficit as is shown in results of this study. Due to the high interest rate loans are very costly which create hindrance in investment and result of which few employment opportunities as in Pakistan high population pressure and high unemployment rate

Strict remedial measures should be taken by the government and rationally target oriented policies should be formulated to overcome to these problem. There is a dire need of time to improve the tax system of Pakistan so that the revenue may increase. Tax structure of Pakistan

should be progressive which is regressive at this time. Public revenues should be allocated to those sectors which should help and grow the poor.

Balance of trade and its sustainability is a key to remove fiscal deficit. Heavy amount of foreign payments also put much pressure on public expenditure. Foreign loans and persistent debt servicing should be reduced for easing the pressure on public deficit. Debt rescheduling and more loans must be harmonized for controlling efforts of public deficit.

Moreover, fiscal decentralization may also check public deficit positively. Civil administration, parliamentarians, government divisions should reduce the expenditures to minimize the fiscal deficits. Proportion of developmental and non-developmental expenditure must be justified. Inflation and inflationary extended activities should be checked.

This empirical analysis and its results are of much significance for researchers and for developing countries like Pakistan. The variables as fiscal deficit, exchange rate and population are so much coherent that they validate the significance of the study. In this study it is estimated that exchange rate has negative influence on GDP, thus exchange rate depreciation should be kept under control. Instability in exchange rate also influences the investment and also fluctuate the debt burden. Furthermore urban population has positive effect on growth, reflecting that more skilled labor yields higher returns.

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