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IMPACT OF EXTERNAL DEBT ON ECOOMIC GROWTH OF PAKISTAN

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ABSTRACT*- The objective of this research paper is to study the impact of external debt on economic growth of Pakistan. For this purpose, we collected data from different sources for the period 1980-2017 and selected variables include GDP as dependent variable while external debt, imports, exports, population growth rate per annum, debt services and gross capital formation as independent variables. We used analytical techniques such as ADF's unit root Test, Bound Test, ARDL Model and Error Correction Model to check stationary and short run and long run relationship between variables. Our study results show that external debt and debt services and volume of imports and population growth rate had negative impact on GDP while export, gross capital formation and employed labour force participation had positive effect on GDP during study period. We suggest that Pakistan must reduce external debt level and generate resources through tax revenue, exports, efficiency and productivity.*

Key words*:* External debt, Debt services, Exports, Imports, Labour force.
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1.INTRODUCTION

1.1. Background of Study:

Since long external debt has become a major challenge for Pakistan. These are the debts that includes interest. Pakistan usually takes loans in the form of Dollar from IMF, World Bank, Asian Development Bank, U.S.A and from the other western and Arab countries. Pakistan ranks at the number 59th as borrowers in the list of external debts. Pakistan also ranked as the most developing countries in the world and is facing serious external debt problems. Around 70% of the tax revenue is consumed on debt servicing and remaining 30% is utilized for other purposes: (The News International, 2001) Pakistan's debt has been increasing since its inception in 1947 and it is increasing rapidly year after year due to heavy borrowing and continuous devaluation of currency. In spite of mobilizing resources from internal sources every Government has resorted foreign borrowing, which is the main cause of country's high debt volume. Pakistan has been borrowing from internal and external sources.

1.2. Local Debt:

A government which is borrowing requires a cost, regardless of its nature. The main objective which is accounted is to minimize the costs and the risks associated with borrowing for the whole economy. There is less risk of default on internal debt because it is payable in local currency. Pakistan's domestic debt in 2017 was Rs. 14,849 billion (Pakistan's Economic Survey,2018-2019).

1.3: External Debt:

External debt mostly seems more attractive for the government because of minor unsettling consequences for private venture and limiting dangers of inflationary pressure. Notwithstanding, a rising obligation of debt is weakening the economy. It is typically required by a nation to upgrade the development of country and its people by using borrowed money to complete development projects, to meet budgetary deficit, trade deficit, etc. But the use of external debt for unproductive purpose is dangerous for the country having low tax-to-GDP ratio.

1.4. Effects of external debt:

1.4.1. Positive effects:

It does not only provide foreign capital for development, but also provide technology, technical expertise as well as access to international markets.

1.4.2. Negative effects:

When external debt accumulated in past reaches at unsustainable level it will reduce the economic development because the country has no money to invest in development project. A clarification promoting this negative effect is so called debt overhang hypothesis which declares that high level of indebtedness discourages investment and negatively effect on the economy because it involves most of tax revenue in repayment.

1.5. Pakistan's external Debt:

World Bank classified Pakistan as severally indebted country of South Asia in 2001. Foreign debt situation was out of control in 2000 when debt services were as high as 290% of the official liquid reserve of the country. Pakistan's external debt was increased from Rs.86 billion in 1980 to Rs. 6,559

billion. The external debt in US dollar was around 56.4 billion and debt services (Principal and interest) was USD 6.4 billion in 2017. (Pakistan Economic Survey, 2018-2019). The debt in foreign currency always is vulnerable to exchange rate risk.

1.6. Objectives of Study:

The main objectives of study are given below:

1.To study the causes of high volume of Pakistan's external debt.

2.To determine the volume of Pakistan's external debt.

3.To explore the impact of external debt on the economic growth of Pakistan.

4.To suggest how to control growing foreign debt.

1.6. Research Questions:

The main research questions of this study are outlined as under: -

1.What are the causes of high volume of debt of Pakistan?

2.What are the effects of the external debt on economics growth of Pakistan?

4.How can we control growing foreign debt?

1.7. Scope of study:

It could be beneficial for economic policy makers to know about the negative effects of external debt and to reduce its volume by mobilizing resources through tax revenue.

1.8. Limitation of the study:

Due to time and resources constraints, the study is confined only to the period 1980 to 2017. We study the growth of foreign debit and debt services during this period and problems created as a result of it.

2. LITERATURE REVIEW:

Shah, Ahmad and Zahid (2005) showed that resources of Pakistan are much consumed on defense rather than production so optional utilization of foreign assistance is much important for repayment. Ali (2007) explored that external debt played an important role for enhancing productivity and accelerating economic growth. Awan and Aslam (2015) argued that domestic debt is more preferable than foreign debt because domestic debt is payable in local currency and the government face no pressure or conditional ties in its use and payment. Akram (2011) investigated that external debt showed negative effect on economic progress both in long and short term. Ali and Mustafa (2012) studied long run and short run effect of foreign debt on economic progress of Pakistan and stated that higher external debt discouraged economic growth. They emphasized such policies which discourage borrowing of external debt. Atique and Malik (2012) examined that bleak effect of foreign debt was stronger on economic progress. They suggested that revenue generated from exports could help avoid default. Jafri and Habib (2012) examined the effects of debt on economic growth and pleaded that despite of debt servicing pressure external debt had positive impact on investment. Awan and Mukhtar (2019) said that developing countries are suffering poor governance and they should focus on improvement of the productivity to reduce the stock of foreign debt. Rais and Anwar (2012) suggested that government should use external debt especially in production sector, health, education and industrial sectors. Umar (2014) highlighted Pakistan as a heavily debited country in the region and his results showed foreign debt did not improve state of FDI in Pakistan. Zaman and Arslan (2014) stated that foreign debt had positive relation with GDP but the problem

occurred when countries had to repay those loans in future. Asghar (2016) found the positive and negative impact of foreign debt towards the economy of Pakistan. He also suggested to expand the size of GDP. Hussain and Shirin (2016) studied condition of development countries and concluded external borrowing had adverse relation with economic growth. Hussain *et al* (2016) emphasized that trade openness and exports are the best source for financing developing countries rather than relying on external debt. Awan and Aslam (2017) stated that Pakistan must reduce dependence on foreign loans because it hurts its sovereignty and freedom to choose independent economic and foreign policies.

2.1 Research gap:

In previous studies, the researchers showed inverse effect of economic assistance on economic growth. They also considered foreign debt as a significant source for poor countries to finance their expenditures. In this work, we will study the impact of foreign debt on economy of Pakistan by classifying external debt into principal amount (original amount of debt) and excess amount (interest rates plus the effect of devaluation of Pak Rupee. Our study period (1980–2017) will make different this study from previous studies.

3. THEORETICAL FRAMEWORK:

We briefly discussed some economic theories relating to economic growth in the following: -

3.1. Solow Neo-classical Model of Economic Growth:

Firstly, Solow's growth model has been used as a base to investigate the impact of external debts on economic growth. According to Solow (1956) neoclassical model investment is a key for eco growth and for this purpose a

country can use its internal and external sources. Internal sources include taxes, fees, etc and external sources includes borrowing money from other countries.

The Solow growth model is built on a closed economy which uses labor and capital as means of production. Under this situation the effects of foreign debt on growth can be viewed by observing the effect of foreign debt on public saving which is used as investment as the Solow model is based on Cobb-Douglas production functions given as:-

$$Y = F(L, AK)$$

$$Y = AK^{\propto} L^{1-\propto}$$

Where

Y = Output

K = Capital input

L = Labor input

A = Technology

$\propto$ and $1-\propto$ are output elasticity of capital and labor respectively

As the technology level A is not an input of production so it is assumed to increase regularly and at constant rate. Similarly, size of labor is affected by population growth (n), so both technology and labor forces are assumed to be exogenous so we will focus on stock of capital K. The change in capital stock is dependent on three factors

$$K' = \delta Y - \delta K$$

Where

K' = Change in capital stock

δY = Gross investment

δK = Depreciation of existing capital

Now adding the factor of population growth we write as: -

$$K' = \delta Y - (\delta + n) K$$

This equation shows that the change in capital per worker is a function of investment per worker, depreciation per worker and population growth of these three variables only investment per worker is positively related to change in capital per worker. So based on above equation, Solow concludes that keeping other things constant, countries with higher savings and investments, accumulate larger capital and then ultimately produce more output per worker.

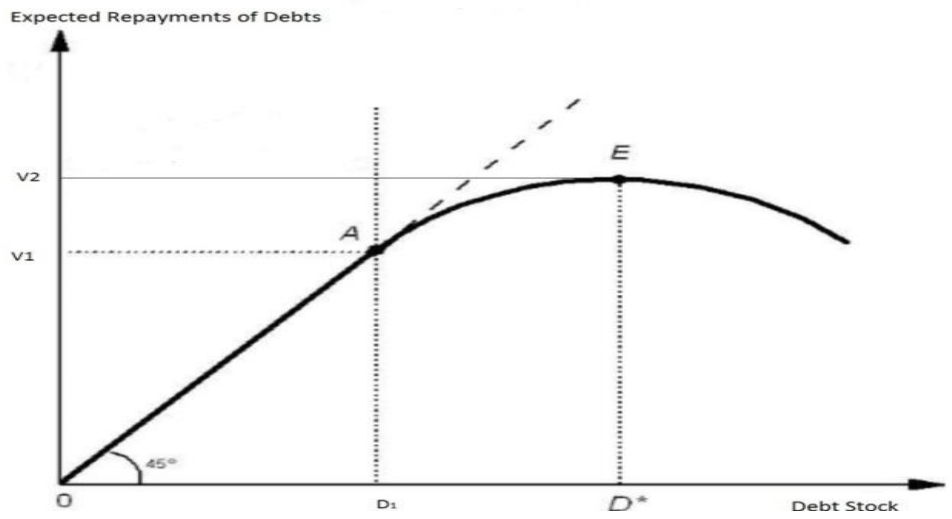
3.2. The Debt Overhang Theory:

This theory was developed by krugman (1988). The theory describes a situation, where the debt of the country exceeds its future capacity to pay it. This concept is more applicable to developing countries. According to this theory, the burden of external debt could be so large that all earnings goes directly to pay off existing debt rather than funding new investment projects in debtor country. Such situation is usually caused by the output gap or underemployment of resources in debtor country. Krugman (1988) narrates that higher debt stock changes the benefits of both creditor and debtor economy but the relief from debt could benefit both. The debt relief is the reorganization of debt terms so as to provide some measures of debt relief to the indebted country. Such measures include reducing the outstanding principal amount, lowering the interest rate on loans, revising term of loans to provide relief to the debtor country

3.3. The Debt – Laffer Curve:

Debt-Laffer curve suggests that it is in creditor's collective interest to forgive some of the debt of a heavily indebted country. It can further be explained with the help of Figure1:

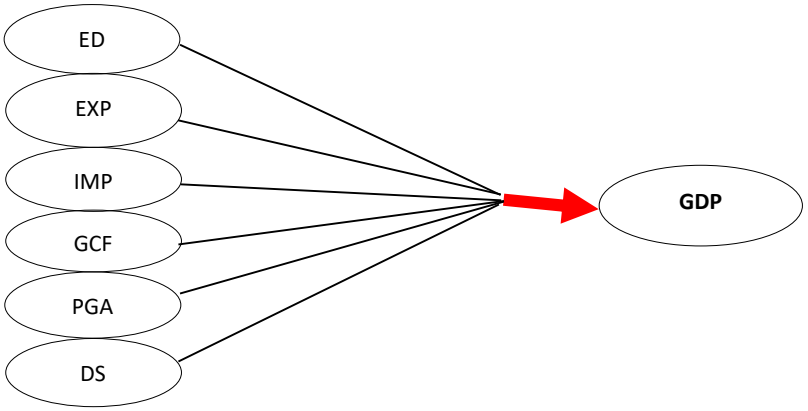
Figure 1: Expected payment of Debts



Here expected repayments of debt by the indebted country are measured along Y-axis and the debt rate is measured along X-axis. The graph indicated after level the divergence of 45 angle line depicts that further increase in debt rate leads to reduction in expected repayments of debt. This implies that an addition in debt impose a huge disincentive that the expected repayment decrease, making the curve negatively slopped. The maximum capacity of indebted countries is point is D* and exceeding this point will unable it to pay its debt and interest on it.

3.4 Conceptual Model:

Figure 2. conceptual sketch of model



The Figure 2 indicates that gross domestic product is not only effected by external debt but also exports, imports, gross capital formation, employed labour force and debt servicing also play an important role to determine GDP.

3.5. Hypothesis of Study:

We formulated the following hypothesis.

H_0=There is no relationship between foreign debt and economic growth.

H_1= There is relationship between economic growth and foreign debt.

4. RESEARCH METHODOLOGY:

Methodology of any research is important because it give the researchers the work plan and allow him to understand their research problem accurately. It also helps the researcher to solve his research problem by working systematically.

4.1. Nature of study:

This is quantitative study in which we have used time series data collected from different sources. The data describe the relationship between explained and explanatory variables.

4.2. Type of Data and Source:

Type of data being used in this study is secondary that will be collected from different sources such as World Development Indicators, Economic Survey of Pakistan, IMF and World Bank, Asian Development Bank,etc.

4.3. Sample of study:

The sampling period of our study is spread over from 1980 to 2017.

4.4. Selected Variables:

The selected variables of our study are shown in Table 1:

Table 1: Description of variables.

Dependent variables	Description of variables
Gross Domestic Product (out)	GDP
Independent variables	
External Debt	ED
Debt Services	DS
Exports	EXPR
Imports	Imp
Gross Capital Formation	GCF
Population Growth Annual as a proxy variable of employed labor force.	ELF

4.5. Explanation of variables:

4.5.1 Gross Domestic Product Output:

The market price of all legitimately documented final goods and services manufactured within a country in a year or a given period time is called GDP (output).

4.5.2 External Debt:

Foreign Debt is an obligation which is borrowed from foreign lenders and is redeemable in goods or services and currency. This payment and its interest is paid in same currency in which the loan was borrowed.

4.5.3 Debt Servicing:

Debt Servicing is an amount of money or the cost of interest payments on outstanding leans.

4.5.4 Gross Capital Formation:

Gross capital formation refers to any method for increasing the amount of capital for investment and production purposes.

4.5.5 Employed Labor Force:

Employed Labor force is defined as the portion of working people from total labour force which is capable and having necessary skill to work for earning wages.

4.5.6 Exports:

Exports are the goods and services manufactured in a country and are sold to other countries to earn foreign exchange.

4.5.7 Imports:

Imports are foreign goods and services shipped into our country. For example, many countries import oil, medicine, machinery because they cannot produce them indigenously.

4.5.8 Econometric Model:

Model used in this study is auto regressive distributed lag model (ARDL) in which GDP is dependent variable while ED, GCF, EXP, IMP, ELF and DS are independent variables. The model is given below.

$$Y=f(X_1, X_2, X_3, X_4, X_5, €)$$

Actual Model is:-

$$Y = B_0 + B_1 ED + B_2 Exp + B_4 IMP + B_5 GCE + B_6 ELF + B_7 DS$$

Where y is Real GDP and is dependent variable while external debit, exports, imports, gross capital formation and employed labour force are independent variables.

B_0 = Intercept or constant.

B_1, B_2, B_3, B_4, B_5, B_6, B_7 = B's are co-efficients.

€ is stochastic or random variable.

4.6. Analytical techniques:

Analytical techniques are applied to check the stationarity. For this purpose, Augmented Dickey Fuller (ADF) test is applied. It is a unit root test

to check stationarity. The results of stationarity test lead to apply either ARDL or CO-integration. Error Correlation Model is popular and essential because of its advantages. It measures the correlation of previous period disequilibrium which is good. It can fit easily in econometric model from general to specific approach. It implies that there is some adjustment process for those variables that has disequilibrium. It blocks the error in long run correlation.

5.EMPIRICAL ANALYSIS:

In this model, GDP annual growth rate is dependent variable while external debt, exports, imports, gross capital formation, population growth annual which is used as a proxy variable of employed labor force and debt servicing are used as independent variables.

$$GDP = \beta_0 + \beta_1(ED) + \beta_2(Exp) + \beta_3(IMP) + \beta_4(GCF) + \beta_5(ELF) + \beta_6(DS) + €_t$$

Where:

GDP = Gross domestic product annual growth.

ED = External debt

Exp = Exports

IMP = Imports

GCF = Gross Capital Formation.

ELF = Employed labor Force

DS= Debt servicing

$€_t$= Error term.

5.1 Descriptive Statistics:

Descriptive statistic is good way which is used to describe the behavior of different variables.

Table # 2: Descriptive statistics

	GDP	ED	Exports	Imports	GCF	ELF	DS
Mean	.20	38.35	14.31	18.88	7.40	.26	3.43
Median	.43	39.38	14.94	19.20	7.38	.12	3.73
Maximum	.71	54.69	17.36	23.37	20.81	.91	6.62
Minimum	.01	22.93	8.24	14.3	4.21	.95	1.31
Std. Dev	.81	11.15	2.38	2.45	.83	.26	1.59
Skewness	.19	-0.04	-0.87	-0.04	-0.02	.91	0.28
Kutrosis	.47	1.34	3.13	2.22	.90	.61	2.05
Jarque – Bera	.50	3.21	3.59	0.71	.40	.07	1.38
Probability	.78	0.20	0.17	0.70	0.50	.13	0.50

Author's calculation (E-Views 10)

Table 2 shows the descriptive statistics of selected variables. The average of GDP is 4.20 for the period under consideration with a standard deviation of 1.81. On average, the external debt is 38.35 with a standard deviation of 11.15. The mean of exports and imports are 14.31 and 18.88 with a standard deviation is 2.38 and 2.45. Similarly, the average values of gross capital formation and population growth rate are 17.40 and 2.26 with standard deviation is 1.83 and 0.26 whereas the mean value of debt servicing is 3.43 with 1.59 standard deviation. If we consider the skewness of the variables then all variables are little bit skewed GDP, PGA and DS are positively skewed while exports, imports, external debt gross capital formation are negatively skewed.

As for kurtos is concern, it relates the peakness and flatness of the data relative to normal distribution. In this table, the values of kurtosis indicate that

all the variables are platy kurtic. Jarque Bera is a test used to check or to confirm normality and provide joint hypothesis of skewness and kurtosis. This test is non-negative and if it stands for zero then data do not have normal distribution. The results in Table 2 show that all variables are normally distributed.

5.2 Correlation Analysis:

Correlation analysis is used to measure strength of relationship between different variables. To explore the relationship between different variables bivariate quantitative analysis is used. The results of correlation analysis are given in Table 3: -

Table # 3: Results of Correlation analysis

	GDP	ED	Exports	Imports	GCF	PGA	DS
GDP	1						
ED	-0.14	1					
Exports	0.11	0.80	1				
Imports	-0.16	-0.06	0.12	1			
GCF	0.15	0.46	0.54	0.49	1		
PGA	-0.01	0.78	0.67	0.34	0.56	1	
DS	-0.01	0.87	0.76	0.00	0.44	0.73	1

The values of correlation coefficient can be positive or negative. Correlation coefficient lies between -1 & +1. The diagonal of the table is a set of ones. It is symmetric in nature and it is a measure of linear dependence. However, there are some limitation of this analysis as it does not explain the

positive relationship between the variables but only there is a link between two variables. In this table, some variables are positively correlated while some other ones are negatively correlated with each other. External debt, imports. Employed labour force and annual debt servicing are negatively co-related with GDP while exports and gross capital formation are positively related.

5.3. ADF' s Unit Root Test:

A Unit root test is used to examine whether a time series data is stationary & non-stationary. Several tests have been developed to check the existence of Unit root but Dickey and Fuller is commonly used to check or test unit – Root. After that Dickey and Fuller stretched their test structure by constructing or by putting extra lagged terms of dependent variables in order to eliminate auto correlation. This extra term of lag length is predicted by Akaike information criteria (AIC).

Table # 4: Results of Unit Root test

Variables	Level		1st Difference		2nd Difference		
	Intercept	Trend intercept	Intercept	Trend intercept	Intercept	Trend intercept	
GDP	-3.80 * 0.00	-3.69 * 0.04	-6.14 * 0.00	-6.05 * 0.00	-9.03 * 0.00	-8.88 * 0.00	1(0)
ED	-0.74 * 0.81	-2.58 0.28	-4.24 * 0.00	-4.14 * 0.01	-5.53 * 0.00	5.40 0.00	I (1)
Exports	0.39 * 0.97	-2.13 * 0.50	-4.79 * 0.00	-4.92 * 0.00	-7.76 * 0.00	-7.59 * 0.00	1(1)
Imports	-3.03 * 0.04	-2.92 * 0.17	-6.74 * 0.00	-6.59 * 0.00	-8.85 * 0.00	-8.59 * 0.00	1(1)
GCF	-1.58 * 0.47	-2.24 * 0.44	-4.93 * 0.00	-4.83 * 0.00	-8.57 * 0.00	-8.43 * 0.00	1(1)

PGA	-3.67 * 0.01	-2.00 * 0.56	-1.51 * 0.51	-1.41 * 0.83	-4.55 * 0.00	-4.48 * 0.00	1(0)
DS	-0.63 * 0.84	-3.69 * 0.04	-8.02 * 0.00	-7.94 * 0.00	-8.47 * 0.00	-8.25 * 0.00	1(1)

* = Indicates P – values

In Table 4 shows that GDP is integrated at level (1(0) where co-efficient value is -3.80 with 0.00 probability value. External debt is integrated at 1st difference 1(1) where co-efficient value is -4.24 with 0.00 probability value. Exports are integrated at 1(1) and its co-efficient value is -4.79 with 0.00 probability value. In this way, imports are also integrated at 1(1) first difference with co-efficient value of -6.74 and 0.00 probability value. Gross capital formation is integrated at 1st difference 1(1) with -4.93 co-efficient value and has 0.00 probability value. Employed labour force is integrated at level 1(0) with -3.67 co-efficient and 0.01 probability value. Debt servicing is integrated at 1st difference 1(1) with -8.02 co-efficient value and 0.00 probability value. These results indicate that there is no co-integration and all variables are not at the same level of integration. All variables are integrated at different levels. So we can apply auto regressive distributed lag (ARDL) model.

5.4 Autoregressive Distributed Lag (ARDL) Approach.

Persearn et al (1996) developed the ARDL approach to check the association between different variables. It can be used when the variables are integrated in different orders. The variables can be assigned different lag length in the whole model.

5.4.1 Bound Test:

Bound Test is the first step in ARDL approach to check the presence of long run relationship between variables. The results of Bound test are shown in Table 5:

Table # 5: Results of Bound Test

Test Statistic	Value	Significant	1(0)	1(1)
		10%	1.99	2.94
F. Statistics	4.45	5%	2.27	3.28
K	6	2.5%	2.55	3.61
		1%	2.88	3.99

Table 5 shows the critical value of upper bound 1(1) and lower bound 1(0). The results show that the value of F. Statistics is 4.45 and it is greater than the upper bound value which is 3.28. If the value of Statistic is less than the critical value of lower bound, then there is no long run relationship and if the value of Statistic lies between the upper and lower bound then there is inconclusive evidence about the long run relationship. In this table, value of F.statistic is greater than upper bound so according to Pesarn et al (2001) and Nayaran (2004) the null hypothesis is rejected due to the critical value of F.statistic that is greater to the critical value of upper bound and alternative hypothesis is accepted. Thus, it proves that there is negative relationship between foreign debt and economic growth.

5.4.2 Long Run Relationship of ARDL:

Selected Model (1, 2, 1, 1, 0, 1).

Dependent valuable. GDP

Sample: 1990 – 2017

Table # 6: Results of ARDL Model

Variables	Co-efficient	Std. Error	T - Statistic	Prob
ED	-0.26	0.05	-5.06	0.00
Exports	0.69	0.21	3.28	0.00
Imports	-0.64	0.16	-4.02	0.00
GCF	0.60	0.19	4.51	0.00
ELF	4.93	2.09	2.35	0.03
DS	-0.05	0.22	-0.23	0.82
C	-5.22	2.64	-1.98	0.06

EC = GDP – (-0.2624 * ED + 0.6912 * Exports + 0.6020 * GCF – 0.6368 * IMP + 4.9347 * PGA – 0.0524 * DS –5.2228)

The long run relationship of ARDL model results the co-efficient values of external debt, imports and debt servicing have negative values which means there is a negative relationship of these variable with GDP in long run. The co-efficient value of external debt is -0.26 which means one-unit increase in external debt will cause 26 % decrease in GDP. This effect is strong and statistically significant. The co-efficient value of exports is 0.69 which means that one-unit increase in exports will result 69 % increase in GDP and this relationship is statistically significant. At the same time, one-unit increase in imports will cause 64% decrease in GDP and this is also statistically significant. The co-efficient value of gross capital formation is 0.70 which means one-unit increase in GCF will increase 60% in GDP and it is also statistically significant. The co-efficient value of employed labour force shows that one-unit increase in ELF will increase 4.93% in GDP and this variable is

statistically significant. The co-efficient value of debt service is -0.05 which means unit increase in debt servicing will decrease 5% in GDP. Almost all variables used in this model are statistically significant which shows they have strong relationship with GDP.

5.5. Error Correction Model: Short Run relationship:

Dependent variable D(GDP)

Selected Model = ECM (2, 1, 1, 0, 1, 0, 0)

Sample: 1990 – 2017

Included observations = 25

Table # 7: Results of Error Correction Model

Variables	Co-efficient	Std. Error	T – Statistic	Prob
D (GDP(-1)	0.52	0.18	2.94	0.01
D (ED	-0.20	0.07	-2.63	0.02
D (Exports)	0.29	0.21	1.36	0.19
D (IMP)	-0.86	0.14	-6.13	0.00
Coint Eq (-1)*	-1.82	0.24	-7.40	0.00
R^2 = 0.79 Adj R^2 = 0.75 S.E of regression 1.02		D.W. = 2.45 Prob (F. statistic) 0.01 F. Statistic 3.56		

Table 7 shows the short run results and relationship between dependent and independent variables. According to the results, the value of R-square is 0.79 and the value of adj R – square is 0.75. It means that there is 79% variation in dependent variable (GDP) due to independent variables. The value of ECM is -1.82. It suggests the speed of adjustment. The value of DW is 2.4 that indicates there is no relationship. The ECM coefficient shows how much time

variables will take in returning to equilibrium and it should have a coefficient with negative sign and it is statistically significant at 1% level ensuring that long run equilibrium can be attained.

5.6 Stability Test:

In order to check stability of co-efficient we plot the cumulative sum of recursive residual (CUSUM) and cumulative sum of recursive residual of square (CUSUM). The results show the stability of the model in the following Figures 3 and 4.

Figure 3: Plot of Cumulative Sum of Recursive Residuals

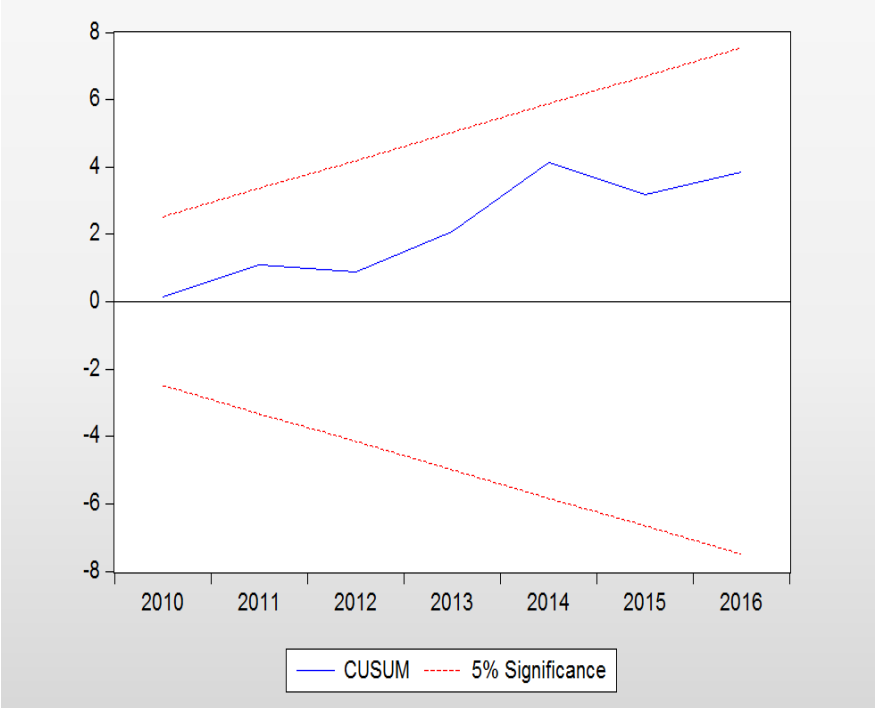
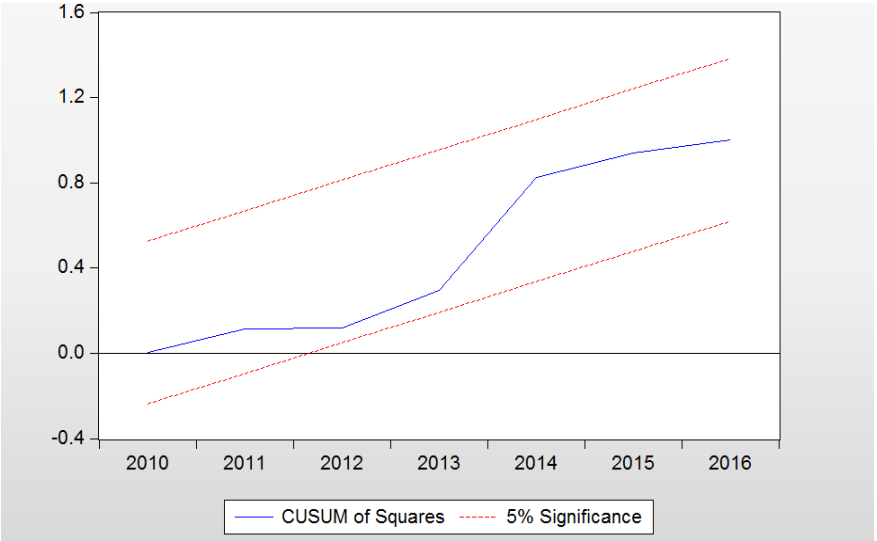


Figure 4: Plot of Cumulative Sum of Squares of Recursive Residuals



The cumulative sum recursive residual (CUSUM) model show the constancy in the co-efficient over the time period. The graphical representation shows the stability of model. These figures show that the model is stable, since the total sum of recursive residual graph and sum of the square of the recursive residual graphs are within range of the 5% significant level.

6.FINDINGS OF THE STUDY:

Now we will explain the results of empirical analysis of variables that affected Gross domestic product (GDP) in Pakistan, by using a time series data of 27 years from 1990 – 2017. For this purpose, Auto Regressive Distributive Lagged Model was used to explore the long run and short run effects of independent variables on dependent variable. The effects of each independent variable on economic growth are given below:

Following are the variables that affect economic growth of Pakistan. These are independent variables while GDP economic growth is dependent variable in this model.

► Our results show that external debt affects negatively economic growth of Pakistan in long run as well in short run because of repayment which are usually made in foreign currency.

► Exports are positively related to economic growth of any country because reports are a big component of aggregate demand. It helps increase aggregate demand and become reason for higher economic growth. We found that exports are positively related to the economic development both in long and short run and also accelerate economic growth.

► A country's balance of trade is calculated by its exports minus its imports when the value of exports exceeds from the value of imports that means a country produce more than consume. But mostly in developing countries like Pakistan balance of payment is negative because our consumption is more than production. Our imports are more than exports. As a result, we have to pay more than to earn. According to our analysis imports brings negative effect on economic growth of Pakistan.

► Gross capital formation includes investment, infrastructure developments and technical progress in a country. For the development of a country, capital formation is a key.In this study, we have found the positive effect of gross capital formation on Pakistan's economy and also suggest that Gross Capital formation is necessary for economic growth.

► Employed labor force is an integral part for the development of an economy. If a country provides high opportunity of employment, it will cause high economic development. Our results reveals strong association between productivity and labor force.

► Debt Servicing is the total amount of money which is required to repayment of interest and principal owed on debt for a specific period. The situation in Pakistan is worst because in Pakistan repayment is done in foreign currency. The results of our analysis show negative impact of debt servicing on Pakistan's economic growth.

7.CONCLUSIONS:

We conclude from the results that there is negative relationship between external debt and economic growth because a large amount of money has to be given as debt servicing payments and debt amount is slow down economic growth process and also enhance dependency of the country on foreign resources. The donor agencies and lending countries lend money keeping in view their political and strategic objectives and impose stringent conditional ties on the borrowing country. It is true that foreign loans help accelerate development process and meet twin deficit but it creates multi-dimensional problems if borrowed money is used for unproductive purpose or wasted through embezzlement and corruption. Pakistan's high foreign debt restrict its freedom of action at economic and foreign level and it cannot take independent decision. Thus, it is necessary to use foreign loans for productive purpose and it should be borrowed with minimum conditional ties.

8. RECOMMENDATIONS:

In light of this research following are some recommendation which can lead to improvement in GDP.

● Government of Pakistan should not rely just on external debt and should make productive policies to improve gross domestic product. Capital formation, Exports are main drivers to improve GDP.

● Government should encourage private investment. For this purpose, some subsidies may be given to certain potential sectors.

● Govt. should prefer to avail external financing having low interest rate and long period of repayment in order to reduce burden on economy and to keep exchange rate stable.

● Government should prevent wastage of resources, eliminate corruption and create efficiency in productivity. Agriculture section must be encouraged to boost yield by opting latest technology and seeds.

● Tax base must be expanded to mobilize more resources.

● Entrepreneurship must be encouraging in the country through financial incentives in order to reduce pressure on government to create employment for unemployed educated labour force.

● Overseas Pakistan must be provided incentives and security to invest in Pakistan rather than keeping their money in foreign banks or investing in other countries.

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CONTRIBUTION OF AUTHORS AND CONFLICT OF INTEREST

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