

## **TRADE LIBERALIZATION AND ECONOMIC GROWTH IN PAKISTAN**

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**ABSTRACT** -The main objective of this research paper is to analyze the trade liberalization and economic growth in Pakistan. Time series data was utilized for the period from 1990 to 2016. It was collected from World Bank and Pakistan Economic Survey. The dependent variable was Gross Domestic Product(GDP) while Foreign Direct Investment, Real Import, Real Export, Labor Force, and Gross Capital Formation were independent variables. The ADF's Unit Root Test was used to check the stationarity of variables. We used Auto Regressive Distributed Lagged (ARDL) Model to check long run and short run relationship between variables. The results show that export is positively is positively and import is negatively related to GDP in the short run while trade liberalization has positive relation with economic growth in the long run in Pakistan.

**Key Words;** Economic Growth, Trade Liberalization, Import, FDI, Exports.

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## **1. INTRODUCTION:**

### **1.1 Background of study**

Trading sectors considered major driver of growth in a country. In order to enhance growth of a country and provide necessities to the citizen of a country trade is very important. Foreign Direct Investment, labor force, Export and Real Import are major channels through which the trade can be regulated. If a country provides the employment opportunities to its labour force productivity will increase, which will lead to increase the export of a country and it will cover the growth or development of that country. We can say that the development of countries also depends on the labor force. After the independence of Pakistan in 1947 Pakistan followed different policies to develop its own industry. In 1970's Pakistan adopted export-led policies through technology change and capital formation. In 1983 Pakistan, the Government of Pakistan took different steps of import for liberalization to expand the investment and production as well as transfer of technology to enhance the economic growth of Pakistan. In 1990s and 2000s Pakistan opened its market and liberalize its economy by import tariffs cut that brought both positive and negative effect of Pakistan's economy.

#### **1.1. Main Research problem**

The main research problem of this study is to study relationship between trade liberalization and economic growth in the perspective of Pakistan's economy.

#### **1.2 Objective of research**

The objectives of our research are stated as under:

- To study causes of Pakistan's low international trade.
- To study the impact of trade liberalization on economic growth of Pakistan.

- To examine whether there is long-run relationship between economic growth and trade.
- To examine the causality relationship among economic growth, export and Import.

### **1.3 Scope of study**

The main purpose of the study is to highlight the role of trade in Pakistan economic growth. Our research is significance in term of its theoretical and practical contribution to the existing body of knowledge. A lot of work has been done on this topic but there is need to contribute further research on it. We do hope that our research will be helpful for the policy maker to manage the trade by enhancing the export and also helpful to increase the economic growth rate. Our study will also helpful for researchers.

## **2. LITERATURE REVIEW**

Din and Ghani (2003) analyzed that international trade and Economic growth are connected with positive relation and there are many elements or factors which effect the positive relation. These factors were liberal trade, greater access to world market, import of goods and productivity gain by adoption of new technologies According to the results, to check the short-run or long-run causality among the co-integrated variables a model used, named ECM estimated. They analyzed the F-Statistics and T-Statistics tests. The results explained that short run causality in either direction did not detect. They concluded from their study that there is bi-directional causality between Trade and Economic Growth and long run relation also exist. The work concluded the significant clear relation exists in relation of commerce and exchange,

Yasmin and jehan (2006) examined that what is relation exist between selling and buying system and development. They suggest that by eliminating

the tariffs, countries will have to impose large increase in taxes in order to keep their budgets in eliminating the tariffs and by imposed taxes. Trade liberalization has become the key element of any development policy. The analysis was based on time series data and time period was taken from 1959-60 to 2002-03. All variables measured in millions of rupees at constant market price with 190-91 as base year. They also reached at that point transaction has not reduced the poverty because of existence of weak institution framework political instability and macroeconomic instability.

Mahmood (2008) discussed Agriculture sectors in detail. The model covered broad concept of globalizing, free trade and its implications for agriculture sector. This study main focused on agriculture sector of Pakistan. There were three essential features of model dependence on tariff, incidence of illegal trade and dependence of intermediate goods. The policy adopted to run country towards development by reducing tariff and by lifting bans and restrictions. This study included long run policies instead of short run.

Umer (2014) reported that openness is main component for development of a country. The lag length selected from 0-2. He analyzed that trade, investment, year of schooling were positively related to Economic Growth and International Trade tax was negatively related with Economic Growth. Variables used in his model are GDP, Trade openness, Investment Average Tariff rate and Tax in Trade. By applying ADF test, all variables were stationary at constant and constant plus trend, ARDL approach used to control the structure of integration of elements.

Ali and Abdullah (2015) worked on “crush of trade openness on progression of Pakistan” and used Persian Person (PP) and ADF test. The study used the time series data. Data collection period was selected from 1980

to 2010. Data selected from Economic Survey of Pakistan plus WDI. He said that there was short run positive but far-off, negative association of trade openness and monetary Growth.

Hussain, Muhammad, Ali (2012) discussed on topic “The causal agreement among openness and development of Pakistan”. They said that trade is tool of trade openness but ignore FDI, which may also a part of open economy. It plays vital role to transfer technology from developed country to developing countries. The study used the secondary data. They collected data from Pakistan Economic Survey and WDI. The data is selected from 1970 to 2012. They used (ADF) and ARDL to prove the +v relation within system of openness and Growth.

Jawaid (2014) “trade openness and Economic Growth a lesson from Pakistan”. This study concluded that in Pakistan not only liberalization of sectors took place but there was substantial reform to improve domestic economy such as privatization of financial market. This model analyzed the secondary data from 1980 to 2008. He collected data from Pakistan Economic Survey. He used ADF and Johansen’s approach and proved that the long run but direct relation between openness and economic growth.

Hanif (2002) “Restructuring of Financial sector in Pakistan” said that financial sectors effected positively enhancement and trade in Pakistan. He worked on the restructuring history of financial sector. He concluded that by giving autonomy to central bank, fostering competition in financial system, development long-run capital market, developing foreign exchange market, the financial sector appreciated. The study explained that GDP and development have positive relation

Brussels (2006) worked on the topic of “why is trade free good for development?” He says that trade openness was necessary but not sufficient requirement for development and globalization played vital role for development.

Iqbal and Siddique (2005) worked on topic of “openness fallout on output growth”. They assigned (ADF), Johansen’s co-integration and (ECM) approaches. They said that trade was negatively but when turned into export-import has positively related with economic growth.

Hillman (2008) “trade openness and Globalization” says that trade liberalization was reverse process of protectionism and proved that positive contact of barter and Globalization. By introducing trade liberalization, the distribution of income become equalize, by this property personal income depend on capability of individual not on that property where they live. But there is another side that only trade liberalization is not the reason to reduce the employment of un-skilled person in richer countries ,a technology changes is a big reason behind this.

Khan (2005) worked on “Growth and Human Capital in Pakistan”. Khan used Cob-Douglass function to check equality of labor with the help of other variables like level of output labor inputs level of educational attainment and level of human capital also measured by level of health indicators such as life expectancy. This study used first hand scores 1980- 2002. Conclusions of (ADF) and (OLS) approach provided positive relationship, human capital and improvement of Pakistan.

Zakariya (2014) said that trade liberalization was effected by import, export and trade balance. He used monetary, elasticity and absorption approaches and concluded that trade had positive but foreign exchange had

negative effect on growth. He suggested that there was need to draw some attention on two new direction of trade strategy in Pakistan that was trade liberalization in service sector and regional free trade agreements.

Azhar (2007) worked on “trade liberalization effect on growth of Pakistan”. He used regression techniques and concluded that actual relation between trade and development. By applying multiple regression estimation technique, it was important to discuss the sign. The regression results showed that GDP was positively related with Labor Force, Capital Formation and Trade Liberalization.

Khalil and Ahmad (2007) worked on “Environmental effect of trade liberalization; A case study of Pakistan”. This study used Composition Effect which was captured by K/L where K was capital and L was labor. The second effect was Scale Effect measured in term of Real GDP per square Kilometer. Third effect was Technique Effect measured by Real Gross National Product. They used Time series data. He used ADF and Johansen’s approach. He also said that trade liberalization was perfectly related with Air and water pollution and adverse reflex on environmental indicators.

Shaheen, Ali and Ahmad (2013) worked on “barter policy reaction on evolvement of Pakistan”. They engaged (ADF) and Johansen’s technique. The long run relationship of independent variables with dependent variable was explained by VECM Equation. Error Correction model result was negative and significant. T- Statistics value is greater than 2. Trade shows positive sign and significant. The result shows that trade liberalization and Gross Fixed Capital Formation have positive and significant impact on economic growth. FDI and inflation have significant negative effect growth of economy

Jabeen (2015) worked on “Is trade liberalization, Economic Growth and energy consumption is good for environment?” They applied (ADF) unit root stationary and Johansen’s approach. The results indicate trade was positively related with grow but negatively related with energy consumption. He concluded that carbon dioxide has a positive relationship with income growth and energy consumption. Trade liberalization played positive role in improving environmental quality for developing countries like Pakistan.

### **3.RESEARCH METHODOLOGY**

#### **3.1Types of Data and Source:**

The research study is based on ‘Relation between Trade liberalization and economic growth; An evidence from Pakistan’’. We used secondary data for a period of 1990 to 2016.Gross domestic product was taken as a dependent variable and the explanatory variable were: Foreign direct investment, Real export, Real import, Labor force, Gross capital formation. Data of all economic variables was taken from Pakistan Economic Surveys, World Development Indicator.

#### **3.2 Selected variables: -**

The selected variables and their description are given in Table:1

**Table 1: Selected variables and their description**

| <b>Variables</b> | <b>Description</b>        | <b>Measuring scale of values</b> |
|------------------|---------------------------|----------------------------------|
| GDP              | Gross Domestic Product    | Annual percentage                |
| FDI              | Foreign Direct Investment | Percentage of GDP (net inflow)   |
| Ex               | Real Export               | Percentage of GDP                |
| Imp              | Real Import               | Percentage of GDP                |
| LBF              | Labor Force               | Total labor                      |
| GCF              | Gross Capital Formation   | Percentage of GDP                |

### 3.3 Econometric Model:

$$Y = \beta_0 + \beta_1(\text{IMP}) + \beta_2(\text{LBF}) + \beta_3(\text{F}) + \beta_4(\text{EX}) + \beta_5(\text{GCF}) + \mu$$

**Y**=GDP (growth rate)

**Imp**=real import

**Lbf** =labor force total

**FDI**=Foreign direct investment

**Ex**=Real Export

**GCF**= Gross Capital Formation

**In equation (1)**  $\beta_0, \beta_1, \beta_3, \beta_4, \beta_5$  are coefficients (estimators) which present that how much the dependent variable is expected to increase when that independent variable is increase by one unit. And this equation also contains residual term or Error Term ( $\mu$ ), the meaning of this error term is that the model is not completing accurate or the model does not fully represent the relationship between the independent and dependent variables.

### 3.4 Analytical Techniques:

In this study we used the following analytical techniques: -

1. Descriptive Statistics
2. Correlation Analysis
3. ADF Test
4. ARDL Model
5. Bound Test
6. Error Correction Model(ECM)
7. Stability test.

## 4. DATA ANALYSIS:

### 4.1 Descriptive statistics

The results of Descriptive Statistics are shown in Table 2

**Table 2: Descriptive Analysis**

| variables          | GDP         | IMP   | GCF   | FDI   | EXP  | LBF  |
|--------------------|-------------|-------|-------|-------|------|------|
| <b>Mean</b>        | 4.14        | 18.9  | 17.45 | 1.1   | 14.5 | 4851 |
| <b>Median</b>      | 4.40        | 19.4  | 17.54 | 0.8   | 15.2 | 4770 |
| <b>maximum</b>     | 7.70        | 23.4  | 20.81 | 3.6   | 17.4 | 6995 |
| <b>minimum</b>     | 1.00        | 14.6  | 14.1  | 0.3   | 9.1  | 3184 |
| <b>Std.Dev</b>     | 1.82        | 2.47  | 1.8   | 0.8   | 2.1  | 1181 |
| <b>Skewness</b>    | 0.27        | -0.10 | -0.08 | 1.8   | -0.6 | 0.1  |
| <b>kurtosis</b>    | 2.53        | 2.20  | 1.9   | 5.2   | 2.7  | 1.79 |
| <b>Jarque-Bera</b> | 0.59        | 0.75  | 1.37  | 20.7  | 2.02 | 1.78 |
| <b>probability</b> | <b>0.74</b> | 0.68  | 0.50  | 0.000 | 0.36 | 0.40 |

The descriptive statistics are shown in table 2 show that the average (mean) and standard deviation(std.dev) of each variable. The average of Gross Domestic Product is 4.14 with the standard deviation of 1.82, the average of import is 18.9 with the std dev of 2.47, The average of Gross Capital Formation is 17.4 while the std dev is 1.8, The average of Foreign Direct Investment is 1.1 with the std dev of 0.8, The average of exports is 14.5 with the std dev of 2.1 and the average of Labor force is 4851 with the std dev of 118. Export, Import, Labor Force, GCF and GDP is ordinarily dispersed because likelihood is superior to 0.05 and FDI is not normally distributed because value of probability is a smaller than 0.05. According to the Jarque-Bera test, residual of the variables FDI is not normally distributed while the residual of GDP, IMP, EXP, LBF, and GCF are normally distributed.

## 4.2 Correlation Analysis.

The results of correlation analysis are given in table 3

**Table 3: Correlation Analysis**

| <b>Variables</b> | <b>GDP</b> | <b>GCF</b> | <b>FDI</b> | <b>EXP</b> | <b>IMP</b> | <b>LBF</b> |
|------------------|------------|------------|------------|------------|------------|------------|
| <b>GDP</b>       | 1          | 0.15       | 0.10       | 0.08       | -0.15      | 0.02       |
| <b>GCF</b>       | 0.15       | 1          | 0.38       | 0.57       | 0.48       | -0.67      |
| <b>FDI</b>       | 0.10       | 0.38       | 1          | -0.13      | 0.36       | 0.17       |
| <b>EXP</b>       | 0.08       | 0.57       | -0.13      | 1          | 0.13       | -0.87      |
| <b>IMP</b>       | -0.15      | 0.48       | 0.36       | 0.13       | 1          | -0.15      |
| <b>LBF</b>       | 0.02       | -0.67      | 0.17       | -0.87      | -0.15      | 1          |

Correlation matrix estimates the strength of the relationship between the variables. In this table we can see that some variables are positively correlated while some variables are negatively correlated with each other. As we know that correlation values ranges between 0.2-0.4. Below 0.2 values show weak correlation above 0.4 shows strong correlation and between 0.2-0.4 show average correlation. As GCF and GDP has 0.15 correlation values it means they have positive but weak correlation. Meanwhile correlation value of GCF with FDI is 0.38 which indicate there is positive and an average relationship between them and relation of GCF with export is 0.5 which show that there is positive and strong relation and so on. The import and GDP has -0.15 it means that they have negative and weak relation is. While gross Capital Formation, foreign Direct Investment, export and Labor Force is positively related with GDP.

### 4.3 ADF Test

The most popular approach to unit root for single time series is Augmented Dickey Fuller(ADF) 1981 test. Two main results obtained from ADF test. First, variable has Unit Root called for acceptance of Null hypothesis  $H_0$ . Second variables don't has Unit Root called for acceptance of alternative hypothesis( $H_1$ ). The condition for stationary on level is  $I(0)$  and for stationary on  $I(1)$  which is called first difference. The results of ADF test are shown in Table 4.

**Table4: Results of Stationarity**

| Variable | Level     |                    | 1 <sup>st</sup> difference |                    |                  |                   | 2 <sup>ND</sup> difference |                   |  |  |
|----------|-----------|--------------------|----------------------------|--------------------|------------------|-------------------|----------------------------|-------------------|--|--|
|          | Intercept | Trend & intercept  | Intercept                  | Trend & intercept  | intercept        | Trend & intercept | intercept                  | Trend & intercept |  |  |
| GDP      | -3.705723 | 0.01*<br>-3.549130 | 0.05*<br>5.920856          | 0.00*<br>-5.828307 | 0.00*<br>8.67067 | 0.00*<br>-6.391   | 0.00*<br>0.00              |                   |  |  |
| FDI      | -2.746521 | 0.08*<br>-2.6743   | 0.25*<br>-3.26762          | 0.02*<br>-3.2148   | 0.10*<br>-5.801  | 0.00*<br>-5.666   | 0.00*<br>0.00              |                   |  |  |
| EX       | +0.100114 | 0.95*<br>-2.651822 | 0.26*<br>-4.774301         | 0.00*<br>-4.885811 | 0.00*<br>-8.1411 | 0.00*<br>-7.9532  | 0.00*<br>0.00              |                   |  |  |
| IMP      | -2.867689 | 0.06*<br>-2.792020 | 0.21*<br>-6.613726         | 0.00*<br>-6.440102 | 0.00*<br>-8.8483 | 0.00*<br>-7.3649  | 0.00*<br>0.00              |                   |  |  |
| TLB      | -2.0953   | 0.99*<br>-2.7100   | 0.24*<br>-3.9671           | 0.00*<br>-4.5112   | 0.00*<br>-6.2606 | 0.00*<br>-6.0966  | 0.00*<br>0.00              |                   |  |  |
| GCF      | -1.4843   | 0.52*<br>-2.2527   | 0.44*<br>-4.8638           | 0.00*<br>-4.7560   | 0.00*<br>-8.3102 | 0.00*<br>-8.1984  | 0.00*<br>0.00              |                   |  |  |

It is clear from the ADF Test results that there is mixture of variables that are stationer on level and first difference so there is no co-integration exist between variables because that all variables must be integrated at level. Now we can use “Auto regression distributed lag model ARDL”model for analysis because variables are stationery at different orders.

#### 4.4 optimum Lags

The results of optimum lags are shown in Table 5

**Table 5: Optimum Lags**

| “Variables”             | lags of Individual |
|-------------------------|--------------------|
| GDP                     | 2                  |
| FDI                     | 0                  |
| Exports                 | 0                  |
| Imports                 | 1                  |
| Total labor force       | 1                  |
| Gross Capital Formation | 1                  |

We in took different lag length to attain excellent results. The lag lengths of GDP, FDI, Ex, Imp, LBF, GCF are 2,0,0,1,1,1 respectively by using these lags. It can be determined by using proper lags selection criteria’s such as “Aikaik’s Information Criterion (AIC)(Akaike1973)”, Schwarz Bayesian criterion(SBC)(Schwarz 1978)”,Hannan-Quinn (HQC 1979)”etc. The results with smallest value of AIC,SBC and HQC estimates and high R square are much better.

#### 4.5 Bound Test for ARDL

**Table 6: Results of Bound Test**

| Test stat    | value | Signif. | I(0) | I(1) |
|--------------|-------|---------|------|------|
| F-Statistics | 6.27  | 10%     | 2.08 | 3    |
|              |       | 5%      | 2.3  | 3.3  |
|              |       | 2.5%    | 2.7  | 3.7  |
| K            | 5     | 1%      | 4.1  | 4.1  |

Calculated by Author through E-view

In ARDL approach, first of all Bound Test is used to see whether ARDL method is applicable or not to determine long term association between variables. We have two sets of critical bound values, one is value of lower bound represent by I (0) and other is upper bound value represented by I (1). Lower bound value show that variables have no co-integration and value of upper bound shows that variables have co-integration.

In table 6, we can see the critical value of upper I (1) and lower bound value I (0). The results show that F-Statistics is 6.2 and it is higher than value of upper bound value. We know that if F-Statistics value is less than the critical value than there is no long run relationship exist and in the second case if the F-Statistic value lies between the upper and lower critical value than there is inconclusive evidence about the long run relationship. If the F-Statistics value is greater than upper value this proves long run relation. In our research long run relationship are among dependent and independent variable because F-S value is larger than evaluated value and according to Pesern et al (2001) and Narayan (2004) null-hypothesis of co integrated is rejected due to critical value of F-statistics that is higher than the critical value of upper bound.

F-statistics that is higher than the critical value of upper bound.

**Table 7: Results of ARDL Model**

|                    |      |                     |      |
|--------------------|------|---------------------|------|
| R <sup>2</sup>     | 0.72 | D.W                 | 2.32 |
| Adj R <sup>2</sup> | 0.53 | Prob (F-Statistics) | 0.01 |
| S.E of regression  | 1.28 | F-Statistic         | 2.72 |

Calculated by Author through E-view

In the table 7 results are calculated by applying ARDL Model. When value of R square is close to 1 then model is taken as correct and when it close to 0 then model is not correct. According to the results of table R-Square value is 0.72 this is more than zero and near to 1 so our model is good and the value of Adjusted R-square is 0.53 it means that there is 73% variation in the dependent variable GDP due to the independent variables. The value of ECM suggests the speed of adjustment. When Durbin Watson value is 2 then there will be no auto correlation and when this value is less than 2 it considered positive auto correlation. In case of value higher than 2 then it took a negative auto correlation. In our model D.W value is 2.3 that indicate there is -ve auto-correlation.

#### **4.6: Long run relation of ARDL**

Selected model (2, 0, 0, 1, 1, 1), dependent variable is GDP

**Table 8: long run relationship between variables**

| <b>Variable</b> | <b>coefficient</b> | <b>Standard Error</b> | <b>T-statistics</b> | <b>Probability</b> |
|-----------------|--------------------|-----------------------|---------------------|--------------------|
| <b>C</b>        | -23.61             | 0.09                  | -2.44               | 0.02               |
| <b>IMP</b>      | -0.23              | 0.16                  | 4.74                | 0.00               |
| <b>GCF</b>      | 0.77               | 0.25                  | -0.77               | 0.44               |
| <b>FDI</b>      | -0.19              | 0.25                  | 2.58                | 0.02               |
| <b>EXP</b>      | 0.65               | 5.19                  | 3.96                | 0.00               |
| <b>LBF</b>      | 2.06               | 6.08                  | -3.88               | 0.00               |

Calculated by Author through E-view

Table 8 shows the long run results of ARDL. The long run ARDL model result indicates that if coefficient value is negative then it indicates the negative relation of that variable with GDP and positive coefficient shows the direct relation with GDP. The import is highly significant and value is 0.23 that means one-unit decrease in import cause 0.11 increase in dependent variable GDP. Therefore, FDI has negatively significant sign that one unit change in FDI will cause 19% decrease in GDP. Export value is 0.65, it shows that one-unit increase in Export cause 65% increase in GDP due to positive relation. The coefficient value of labor force is 2.06 and it is highly significant and indicate a unit increased in import cause 6% increase in GDP. GCF positively insignificant and value is 0.77 so, by increasing one unit in GCF there will be 77% increase in GDP.

#### 4.7: Short run relationship: ECM

**Table 9: Short run completion of ARDL**

Selected Model (2, 0, 1, 1, 0, 1), GDP is dependent variable

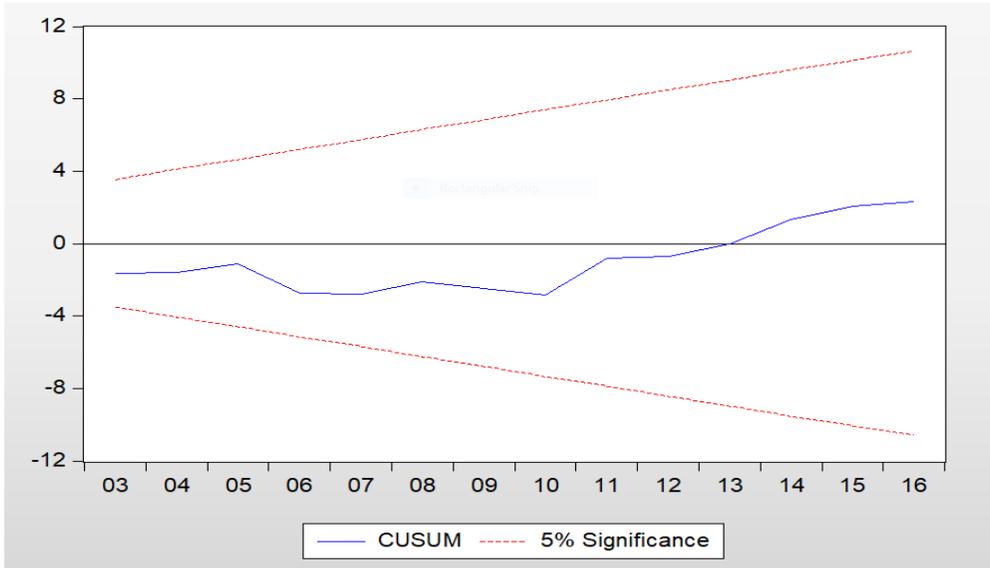
| Variables     | Coefficient | Std Error | t-statistics | Prob |
|---------------|-------------|-----------|--------------|------|
| D(GDP(-1))    | 0.63        | 0.17      | 3.64         | 0.00 |
| D(GCF)        | 1.58        | 0.30      | 5.25         | 0.00 |
| D(FDI)        | 1.46        | 0.46      | 3.14         | 0.00 |
| D(EXP)        | 0.27        | 0.25      | 1.06         | 0.29 |
| D(IMP)        | -0.47       | 0.16      | -2.98        | 0.00 |
| D(LBF)        | 0.10        | 0.19      | -3.44        | 0.00 |
| Coint Eq (-1) | 1.82        | 0.26      | -6.78        | 0.00 |

The ECM stands for velocity of adjustment. It exhibits that how much disequilibrium is being accurate: it means that any disequilibrium in the past year is being adjust in the present year. In other words; ECM depicts the long run velocity of adjustment that a variable takes how much time to come at equilibrium level. Positive coefficient of ECM shows divergence while negative sign of ECM shows convergence. Moreover, when  $ECM=1$ , It means 100% adjustment has taken place while  $ECM=0.5$  means that 50% has been adjustment take place and  $ECM=0$  means no speed of adjustment taken place. Table 5.9 presented Short run results of estimation of ARDL. According to table the error correction coefficient (ECM (-1)) is 1.82 which demonstrate that in the case of short run shocks divergence from the long run can be corrected in 1year and 8 months approximately. The results also show the strong significant association among dependent and independent variables.

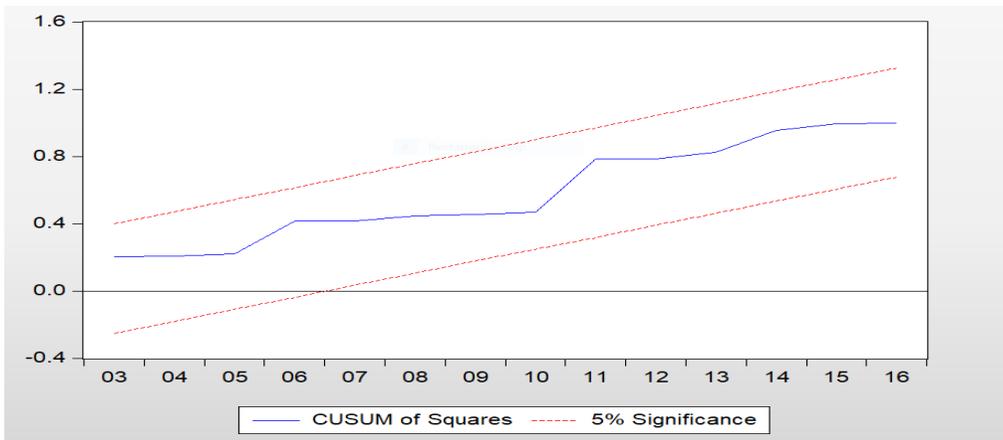
The value of GCF is 1.58 it means that increase 1 unit in GCF will increase GDP by 1.58 units this show positively and significantly relation of GCF with GDP in short run. The value of coefficient of FDI is 1.46 it also positive and highly significant related with GDP because increase 1 unit in FDI will increase GDP by 1.46 units. Export is insignificant and positively related with GDP because the coefficient value is 0.27 this show that 1-unit increase in export will increase the GDP by 0.46 units, the regression value of import is -0.27 which is highly significant and -vely related with GDP because increase 1 unit in import will decrease GDP by 0.27 units. Coefficient value of LBF is 0.10 it shows the strongly significant and positive relation with GDP increase 1 unit in labor force will increase the GDP by 0.10 units.

#### **4.8: Stability test**

The Cumulative Sum Recursive (CUSUM) Model shows the constancy in the model over the time period or stability. The graphical representation shows that the stability of the model is stable. The graph of CUSUM Statistics stands between critical bounds. It indicates the linearity of model in short and long run.

**Figure 1: CUSUM Test**

In this figure cusum test indicated the stability showing that our model is in stable form and residuals plot did not fall outside 5% of significant boundaries. The estimates are deemed stable over period.

**Figure 2: CUSUM Squared Test**

Author's calculation

Long run and short run consistency is measured by CUSUM of square. CUSUM Square is indicated by red line in graph. If the curve blue line which represents falls outside the given two extreme lines which represent the critical region then, residual is regarded as unstable. If curve line remains inside the two given line the model is taken as good. In our model the curve blue line is exists in between the two red lines so, our model is in good form or exact and proved perfect.

### **5: Conclusion**

The objective of the study was to analyze the “impact of trade and economic growth in Pakistan”. Dependent variable was GDP and independent variables were FDI, Export, Import, Gross Capital Formation and Labor Force. ARDL bound test was used to examines the long run association between the variables because variables are integrated at different level. Our results show that co-integration exists among variables in the long run. Foreign Direct Investment is positively significantly related to GDP in long run and negatively significant related with GDP in short run. Similarly, Export has strongly positively and significantly related with GDP in long run and short run. Labor force is positively and significantly related to GDP in long run and short run. Import has negatively and significantly impact both in long run and short run on GDP. GCF is significantly and positively related to GDP in both long run and short run. Natural resources are not utilized due to which GDP is low in Pakistan. The best strategy is to enhance the GDP as well as export; Government should Utilized the natural resources. When natural resources utilized it will increase the innovations and export of country will automatically increase and in such a way growth will occur in Pakistan. Foreign Direct Investment is also in bad condition in Pakistan. There is need

to be introduced policies to enhance it. The main cause of devaluation of Pak rupee is wild fluctuation in exchange rate and is the source of instability in growth.

## **6: Policy Recommendations**

Policy implications of our study are as follows:

- Government should introduce new way and reduce the volume rate of imports.
- We should setup industries and introduce new technology to produce the goods to enhance the export and reduce the imports.
- Pakistan Government should avail the opportunity of concession of tax duties on export by the European Union under G+ system.
- Government is spending a huge amount of tax on imported goods and policy initiative should be taken to decrease demand for important goods and people will move to the local.
- Government also should focus on the problems and challenges being facing by small and medium enterprises of country because it play main role in the trading sectors.

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## CONTRIBUTION OF AUTHORS AND CONFLICT OF INTEREST

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Both authors read the manuscript carefully and declared no conflict of interest with any person or institution.

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