Global Journal of Management, Social Sciences and Humanities 337
Vol 6 (2) April-June, 2020, pp. 337-359.
ISSN 2520-7113 (Print), ISSN 2520-7121 (Online)
www.gjmsweb.com. Email:editor@gjmsweb.com
Impact Factor value = 4.739 (SJIF).
DOI: https://orcid.org/0000-0001-5767-6229

TRADE WITH CHINA & ITS IMPACT ON ECONOMIC GROWTH OF PAKISTAN

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ABSTRACT- The objective of this research paper is to analyze trade with China and its impact on Economic growth of Pakistan. We used time series secondary data for the period 1976-2014 and applied ARDL approach to analyze it. We also used graphs to show the results that show that Pakistan's economy is improving in zig zag way. We conclude that trade openness is not a zero sum game means its benefits are not equalized but more than its shortcomings like trade openness dependency on foreign countries increases and sometimes balance of trade goes in deficit. But it causes a win-win situation, both countries get more benefits than the risks involved in trade but the condition is that both countries should have suitable strategy and bilateral trade.

Key words: trade openness, economic growth, zero-sum game, risk.

Type of paper: **Original Research paper**

Paper received: 08.01.2020
Paper accepted: 29.02.2020
Online published: 01.04.2020

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1. INTRODUCTION

1.1 Background of the study

Pakistan faces high barriers to international trade across its eastern as well as western and north-western borders. Historically important China trade routes connecting with central Asia and China passed though Pakistan. Expansion of China trade presents a great opportunity for Pakistan to increase its economic growth. There has been much interest in exploring the effect of trade liberalization with China. The recent China-Pakistan Economic Corridor (CPEC) project has also stimulated interest in the potential for trade expansion with China.

The exports considered as major source of the growth and development of an economy. Unfortunately, Pakistan despite of several industrial efforts has not gain momentum on that front. Our industrialization policies have not delivered in the past because of various reasons like lake of competitiveness, poor infrastructure, no product innovations and poor marketing of the Pakistani products in the international market. The situation further become worse when energy shortfall coupled with the deteriorating law and order situation create an environment of uncertainty and instability.

1.2 Bilateral Trade between Pakistan and China

Sustainable growth and development in China during the last four decades has assigned the country a special status in the world economy. The financial crisis of 2007-08 not only strengthened the Chinese economy but also enhanced its role and say in global governance. Though China has started re-defining its role in the 1990s, war on terror gave it an ample time to think and devise its strategies in accordance with the new world scenario. China–Pakistan Economic Corridor (CPEC) is a collection of infrastructure projects

that are currently under construction throughout Pakistan. Originally valued at $46 billion, the value of CPEC projects is now worth $62 billion. CPEC is intended to rapidly modernize Pakistani infrastructure and strengthen its economy by the construction of modern transportation networks, numerous energy projects, and special economic zones. On 13 November 2016, CPEC became partly operational when Chinese cargo was transported overland to Gwadar Port for onward maritime shipment to Africa and West Asia. China Pakistan Economic Corridor (CPEC) is a fresh breeze for Pakistan economy in the time period where we need foreign investment but instead observing capital flight. CPEC basically is an infrastructure driven project consists of roads/railways to connect Western China (Kashghar/Xinjiang) to Pakistan's coastal city (Gwadar). Its volume is estimated to be around US $ 59 Billion, where major portion is devoted to energy projects. It is considered to be the game changer by many, because of the connected projects like regional connectivity, energy and industrial up gradations and development.

1.3 Objective of the Study

The objectives of study are given below:-

1. To Study the volume of Pakistan's trade with China.
2. To analysis Sino-Pak Trade impact on Pakistan's Economy.
3. To make recommendations, how to improve bilateral trade between China and Pakistan.

1.5 Significant of the Research

In this study, we explore the Trade between china and Pakistan and define the Economic Growth of Pakistan. Economic and trade relations between Pakistan and China are boosting and growing at a constant level. The two countries are working hard to strengthen strategic coordination,

consultations over regional and international issues and focusing on bilateral strategic cooperative relations. The main focus of the two countries in order to make Pak-China relations more strong are cooperative projects. Moreover, China is providing Pakistan both economic and social development aid for a long time. Pak-China economic ties are mostly on government level; it should be moved to private sector or non-government level as well. In this study we explore trade relations between China and Pakistan and define its effect of Pakistan's economic growth. It will make the study more beneficial for policy makers, researchers and academicians.

2. LITERATURE REVIEW

Anwer and Sampath (1997) studied the relation and path of export and economic development of 96 countries by consuming unit root and co-integration methods, from the age of 1960 to 1992 and only 8 states exposed unidirectional or bidirectional connection from exports to GDP with positive relationship between the two variables.

Dimkpah (2000) analyzed the link between export and economic development of 107 countries. He took normal growth rate of the GDP as dependent variable between 1980 and 1990. The normal growth rates of investment, population, and export for the same period were independent variables. He used Investment as representation for capital while population for the employment force. He found that export growth is a positive indicator to economic development of low income nations as well as middle income nations. The influence is stronger in middle-income states than in low income states.

Quddus and Saeed (2005) have studied the interconnection between export and economic development in case of Pakistan for 1970-71 to 2003-04.

They had taken three variables spread, investment and GDP in real term and used the Unit Roots and Co-integration and Granger Causation for challenging. Granger Fundamental relationship successively from export to economic progression was proposed by the experiment consequences. Their study prohibited the hypothesis spreads and GDP are not co-integrated and that export Granger reason GDP development.

Bahamni et al (2007) originate the small run and extensive run relationship of trade and economic development for 44 states. They have used certain experiment technique and ECM for testing the outcome. They have found that majority of the countries have short run influence of export in economic development in both directions while in long run, 60% trade led hypothesis is maintained and 40% output led hypothesis is sustained in the above revealed study.

Temizet al (2010) studied the relationship of real export and economic development which was denoted by real GDP by using time sequence data for the period 1950-2006 for Turkey. This study uses famous ADF unit root test, Johansen co-integration test, VECM, and Granger interconnection test. The result revealed that there is a long run and short run interconnection relationship between the real export and the economic growth and the direction of the interconnection is from economic development (real GDP) to real export.

Awan and Umair (2020) examined the impact of globalization on poverty level in Pakistan and concluded that globalization has positive impact because it provided better opportunities Pakistan to enhance its export and import high tech products to improve its productivity.

3. DATA AND METHODOLOGY

3.1 Model of the study

The general model is presented by the following equation.

$$\mathbf{EPI=\alpha 0+a1TRD+\alpha 2TRS+\alpha 3POP+\alpha 4PRR+\alpha 5FCF+\alpha 6FDIN+\alpha 7GNE+\mu t}$$

To obtain econometric model of study we have taken log-log model by taking on both sides, so the model is rewritten as

$$\mathbf{LEPI=\alpha 1+\alpha 2LTRS+\alpha 3LTRD+\alpha 4LPOP+\alpha 5LPRR+\alpha 6FDIN+\alpha 7GNE+\mu t}$$

Where TRD, TRS,POP,GFCF,PRR,FDIN,GNE are independent variables and EPI is the dependent variable. a_1, a_2,a_3,a_4,a_5,a_6,a_7 are the coefficient elasticities. A 0 is the intercept.

LEPI= log of economic performance index

LTRD= log of trade openness

LTRS= log of total reserves

LFDIN= log of foreign direct investment

LGNE= Log of gross national expenditure

LPOP=log total of population

LPRR= log of workers remittances

Et is the error term

3.2 Source and Type the Data

The sources of the data are World Development Indicator, Pakistan Economic Survey, World Bank. Nature of data is secondary. The range of the data is form 1976-2014.

3.3 Selected Variables

The selected variables are the followings: -

Table 1: Description of Selected Variables

Variables	Description	Measurement Unit
EPI	Economic performance Index	Numerical figure
TRD	Trade openness	In US dollar
POP	Total population	In million
TRS	Total reserves	In us dollar
GFCF	Gross fixed capital formation	In US dollar
GNE	Gross national expenditure	In US dollar
FDIN	Foreign direct investment	In US dollar
PRR	Worker remittances	In US dollar

3.4. Analytical techniques

3.4.1 ADF Unit Root Test

The testing procedure for the ADF is the same as for the Dickey- Fuller test but it is applied to the model. ADF test includes the probability of serial correlation in the error term while ADF test uses mild assumption that error term is independent and normally distributed. ADF test is based on three regression equations. One is with intercept and trend, second is with intercept but no trend, and third is without intercept and trend. Our null and alternative hypothesis will be as:

Null hypothesis; Data is stationary

Alternative Hypothesis: Data is non-stationary

3. 4.2 Co-integration analysis

Co-integration means the existence of long run relationship among the variables that are not stationary at level from Gujrati (1995). A number of co-integration techniques are available to check the long run relationship among

variables. The most popular techniques are Johnson and Jeselius approach to co-integration (Johnson, 1990)

3.4.3 Auto Regressive Distributed Lag Approach

ARDL approach will be applied only on single equation. It will estimate the long run and short run parameters of model simultaneously. The estimated model obtained from the ARDL technique will be unbiased and efficient. ARDL approach to co-integration is useful for small sample Narayan (2004). Engel-Granger and Johens0n technique are not reliable for small samples. ARDL gives better results in sample rather than Johens0n co-integration approach.

3.4.4 Bound Test

The bound test is based on three basic assumptions that are; first, use ARDL model after identifying the order of integration of series Pesaran *et al*. (2001). Second, series are not bound to possess the same order of integration i.e., the repressors can be at I (0) or I (1). Third,this technique estimates better results in case of small sample size. The vector auto regression(VAR) of order *p,* for the economic growth function can be narrated as Pesaran *et al*. (2001);

$$\boldsymbol{Zt=\mu+\sum_{i=0}^{\rho} \beta i\, Z\, t-i+\ \varepsilon t}$$

Here X *t* and *Y t* are included in vector *zt*. Economic growth (RGDP) and agricultural output(AGRI) are indicated by *y t* and *t x* is the vector matrix which represents a set of explanatory variables such as [Xt = GFCF, TRD, FDIN, PRR, TRS,] and [Xt = TELF,RGFCF, TOC, TGC, TEC, ACRDT] for Model-1and Model-2 and *t denoted* time indicator.

Vector error correction model (VECM) is given as below:

$$\Delta Zt = \mu + \alpha t + \lambda Zt - i + \sum_{i=1}^{\rho - i} \gamma t Yt - 1 + \sum_{i=1}^{\rho - i} \gamma t Xt - 1 + \varepsilon t$$

Where Δ is the 1st difference operator.**λ** is the long run multiplier:

$$\boldsymbol{\lambda} = \begin{vmatrix} \lambda XX & \lambda XY \\ \lambda YX & \lambda YY \end{vmatrix}$$

The diagonal elements of matrix are unrestricted so the series will either be at I(0) or I(1). If **λ** YY = 0 then Y is at 1st Difference. In contrast if **λ** YY is less than 0 then Y is at bed aboveI(0).The vector error correction matrix procedure describe above are imperative in the testing of at most co-integration vector between dependent variable and a set of regressors Xt. To build the model we used study of [Pesaren et al.(2001)

4.4.5 Model Specification

$$\Delta(EPI)t = \beta 0 + \sum_{i=0}^{a} \beta 1i \Delta(TRD)t - i + \sum_{i=0}^{b} \beta 2i \Delta(PRR)t - i + \sum_{i=0}^{c} \beta 3i \Delta(TRS)t - i + \sum_{i=0}^{d} \beta 4i \Delta(FDIN)t - i + \sum_{i=0}^{e} \beta 5i \Delta(GFCF)t - i + \sum_{i=0}^{f} \beta 6i \Delta(POP)t - i + \sum_{i=0}^{g} \beta 7i \Delta(GNE)t - i + \beta 8(TRD)t-i + \beta 9(TRS)t-i + \beta 10(PRR)t-i + \beta 11(FDIN)t-i + \beta 12(GFCF)t-i + \beta 13(POP)t-i + \beta 14(GNE)t-i + \mu t$$

Where Δ shows the first difference and μt shows the disturbance term or the residua of the model. This model would estimate the impact of trade openness on economic performance Index. In which EPI is dependent variable and all other regressors TRD (trade openness),GFCF(gross fixed capital formation),PRR(workers remittances),GNE(gross national expenditures),POP(total population),FDIN(foreign direct investment),TRS(total reserves) are independent variables.

Equation also can be viewed as an ARDL of order (a,b,c,d,e,f,g). Equation indicates that EPI tends to be influenced by its past values. The structural lags are established by using minimum Schwarz information criterion (SIC).

In our model we used the lag values of first difference dependent variable for the short run and first lagged values for the dependent and independent for the long run. So this model is consistent with the short run and long run coefficient of the variables as well. Where β1,β2,β3,β4,β5,β6,β7 short run coefficient variables and β9,β10,β11,β12,β13,β14 are the long run coefficient variables and β0 is the intercept term.

3.4.6 The Wild test (F-statistics)

After regression of equation the Wald test(F-statistics) is computed to differentiate the long run relationship between the concerned variables. The Wald test can be carried out by imposing restrictions on the estimated long run coefficient EPI,TRD,TRS,PRR,POP,GNE,GFCF.

The null hypothesis is as follows

B7=β8=β9=β10=β11=β12=β13=β14=0 No long run relationship

The alternative hypothesis is written as follows

B7≠β8≠β9≠β10≠β11≠β12≠β13≠β14≠0 Long run relationship exist

If the calculated F-statistics does not exceed the lower bound, so we do not reject the null hypothesis and it is concluded that there is no relationship existence among the dependent and independent variables. On the other side if the F-statistics exceeds the upper bound value than we reject the null hypothesis and it is concluded that there is long run relationship among the variables.

3.4.7 The Time Horizon

To see the effect of explanatory variables both for Pakistan and China both for short run and long run. So we have to estimate the model for the given equation and with OLS (Bounce Test to co-integration) technique and normalize the resulting values. The ARDL model for the long run coefficient the model equation is to determine the long run effect of trade openness on economic performance of Pakistan and China.

$$\mathbf{(EPI)t} = \eta\mathbf{0} + \sum_{i=1}^{k1} \eta\mathbf{1i}(\mathbf{EPI})\mathbf{t} - \mathbf{1} + \sum_{i=0}^{k2} \eta\mathbf{2i}(\mathbf{PRR})\mathbf{t} - \mathbf{1} + \sum_{i=0}^{k3} \eta\mathbf{3i}(\mathbf{TRD})\mathbf{t} - \mathbf{1} + \sum_{i=0}^{k4} \eta\mathbf{4i}(\mathbf{GFCF})\mathbf{t} - \mathbf{1} + \sum_{i=0}^{k5} \eta\mathbf{5i}(\mathbf{FDIN})\mathbf{t} - \mathbf{1} + \sum_{i=0}^{k6} \eta\mathbf{6i}(\mathbf{POP})\mathbf{t} - \mathbf{1} + \sum_{i=0}^{k7} \eta\mathbf{7i}(\mathbf{TRS})\mathbf{t} - \mathbf{1} + \sum_{i=0}^{k8} \eta\mathbf{8i}(\mathbf{GNE})\mathbf{t} - \mathbf{1} + \boldsymbol{\varepsilon}\mathbf{t}$$

Now we will derive the short run coefficient of the model with error correction term. We will use the short run error correction estimates of the ARDL model. The difference between actual and estimated value is known as error correction. It is also defined as adjustment term showing the time required in the short run and to move toward equilibrium in the long run. The coefficient of error correction term has to be negative and significant numerical figure. The short run error correction model (ECM) OF first equation of the model is to find out impact of Trade openness on Economic performance in time adjustment framework to attain the long run equilibrium.

$$\Delta(\boldsymbol{EPI})\boldsymbol{t} = \boldsymbol{\rho 0} + \sum_{i=0}^{k2} \boldsymbol{\rho 2 i}\ (\boldsymbol{TRD})\boldsymbol{t} - \boldsymbol{i} + \sum_{i=0}^{k3} \boldsymbol{\rho 3 i}\ (\boldsymbol{PRR})\boldsymbol{t} - \boldsymbol{i} + \sum_{i=0}^{k4} \boldsymbol{\rho 4 i}\ (\boldsymbol{GFCF})\boldsymbol{t} - \boldsymbol{i} + \sum_{i=0}^{k5} \boldsymbol{\rho 5 i}\ (\boldsymbol{FDIN})\boldsymbol{t} - \boldsymbol{i} + \sum_{i=0}^{k6} \boldsymbol{\rho 6 i}\ (\boldsymbol{TRS})\boldsymbol{t} - \boldsymbol{i} + \sum_{i=0}^{k7} \boldsymbol{\rho 7 i}\ (\boldsymbol{POP})\boldsymbol{t} - \boldsymbol{i} + \sum_{i=0}^{k8} \boldsymbol{\rho 8 i}\ (\boldsymbol{GNE})\boldsymbol{t} - \boldsymbol{i} + \boldsymbol{\lambda ECM})\boldsymbol{t} - \boldsymbol{i} + \boldsymbol{\varepsilon t}$$

4. DATA ANALYSIS

4.1 Descriptive Analysis

The results of descriptive analysis of the following measures are drawn, mean, median, maximum, minimum, Std. Deviation, Skewness, Kurtosis, Jarque-Bera, probability Sum, Sum Sq. Dev. The mean, median, Mode are the simple measures of central tendency around which all the values circulates. Standard deviation shows a quantity expressing by how much the members of a group differ from the mean value for the group.

Table 1: Result of the descriptive analysis

	EPI	FDIN	GFCF	GNE	POP	PRR	TRD	TRS
Mean	98.10256	93672.82	1740000	44830.50	123.5863	176316.9	26.38651	867363.8
Median	98.00000	383000	8820000	463261.1	123.0000	62200.0	21.55154	242209.0
Maximum	128.0000	559000	6180000	1748389	185.0000	704000	55.54501	3250811
Minimum	78.00000	822.053	174000	17509.5	68.81847	6420.0	12.00868	37387
Std. Dev.	7.542144	1.38905	187387.9	433009.6	34.91475	222504.6	14.75481	113445.8
Skewness	0.945826	2.290013	1.308165	1.017001	0.082362	1.366265	0.801292	1.144860
Kurtosis	8.543689	7.621126	3.200374	2.835636	1.812372	3.432684	2.124460	2.596284
Jarque-Bera	55.75511	68.78860	11.18867	6.766791	2.336092	12.43764	5.419124	8.784428
Probability	0.000000	0.000000	0.003719	0.033932	0.310974	0.001992	0.066566	0.012373
Sum	3826.000	3.6500000	679001.2	239010.3	4819.865	688001.1	1029.074	3380000
Sum Sq. Dev.	2161.590	72301.9	13324.0	71124.0	46323.52	18822.0	8272.773	4834.0

and the minimum value is 1.74000 which shows the change in values of GFCF in different years. The std. Deviation value 1.87387.9 which shows the dispersion of values of GFCF around their mean. Probability value is 0.003 which show that GFCF is a significant variable. J-B test value is 11.18867 and the kurtosis value is 3.200 and the value of sum squared deviation is 1.3324.0

GNE has 44830.50 mean which is the average value. The value of maximum and minimum is 1748389 and 17509.5 which show the range or limit of change in values. The value of standard deviation is 433009.6 which show the dispersion of values from their average value. The probability value is 0.033 which show the significance if GNE for model.

4.2 Correlation Matrix

The primary objective of the correlation analysis is to measure the strength or linear association between the independent and dependent variables. Therefore, the correlation analysis implies no causality of the variables but refers of the type and degree of association.

Table 2 Correlation Matrix Results

	EPI	FDIN	GFCF	GNE	POP	PRR	TRD	TRS
EPI	1.000000							
FDIN	0.373713	1.000000						
GFCF	0.534515	0.619177	1.000000					
GNE	0.560174	0.613015	0.978832	1.000000				
POP	0.585221	0.630674	0.868310	0.940064	1.000000			
PRR	0.495295	0.586051	0.987905	0.981403	0.865556	1.000000		
TRD	0.530487	0.723383	0.953332	0.970588	0.929317	0.948370	1.000000	
TRS	0.544058	0.700689	0.984800	0.966059	0.859421	0.976403	0.961318	1.000000

The results of the correlation matrix of the variables are reported in the table. FDIN correlate with EPI is 37% and correlation between GFCF and FDIN is 67%. The positive correlation between GFCF and EPI is or 53%. Gross national expenditure is positive and 56% correlate with EPI and it is 61% correlated positively with FDIN also. Population and EPI are positively correlated and the degree of correlation is 58%. Correlation between

population and gross fixed capital formation is 63% and positive. The degree of correlation between trade and foreign direct investment and gross fixed capital formation and trade openness is 72% and 95% progressively and correlation is positive

4.3 Unit root test

In time series data first step is to conduct the unit root test. Results of the unit root test by applying ADF test shows that EPI at I (0), Pop I (1), TRD I (1) GFCF (1) FDIN I (1), PRR I (1) are stationary at these orders of integration. In a situation when one variable is stationary at I (0) and other are stationary at order I (1). It is the best to use ARDL model for analysis.

4.4 Bound Test and Wald-Test

After confirming the order of integration of variables we will conduct the bound test or Wald test to see whether the long run relationship exists among the variables or not. We will follow the bound testing approach and restrict all long run coefficients equal to zero in our null hypothesis.

Null Hypothesis: *B1=B2=B3=B4=B5=B6=B7=0* ***(no co-integration exist)***

Alternative Hypothesis: *B1≠B2≠B3≠B4≠B5≠B6≠B7≠0* ***(Co-integration exist)***

Bound Test results in the first step shows the existence of the long run relationship among the variables. The results are shown in Table 4.3

Table 4.3 Wald-Test (F-Statistics) for long run relationship.

Result of Bound Test for co-integration Equation	**F-statistic Calculated**	**Upper Bound Critical Value**	**Conclusion**
Regressors EPI (TRD,TRS,PRR, GFCF,FDIN,POP)	8.24 [0.0004]	2.73 (99%)	Co integration exists

4.5 ARDL Model-Long Run Relationship

In order to determine the long run relationship between the variables the following selection criteria is used. ARDL(0,0,0,1,0,2,0,0) selected based on Schwarz Bayesian Criterion.

Table 4 Long-run Results

Regressor	Coefficient	standard error	T-ratio	Probability
LFDIN	4.030508**	1.02106	3.9473	0.0413
LGFCF	5.075317**	2.062428	2.4607	0.0521
LGNE	3.51923**	1.3095	2.6874	0.006
LPOP	-1.3017	1.0779	-1.2076	0.238
LTRD	0.91266**	0.16113	5.6641	0.008
LTRS	0.084282**	0.039078	2.1567	0.041
LPRR	0.997636**	0.45503	2.19246	0.008
C	-5.1917	4.5221	-1.1481	0.262
T	-0.02137	0.017757	-1.2033	0.24

Source: calculated by the author.

Note. (The ** variables are significant at 1% and 5% level significantly).

The results in the table show the long run coefficient. The coefficient value of LFDIN is 4.030508 which show that in the long run one unit increases in FDIN will cause 4.030508 percent increase in EPI. Here the coefficient shows the elasticity as there is log on both sides so the coefficient becomes elasticity. The sign of the FDIN coefficient is positive which show that FDIN effect EPI positively. BY the probability and T-ration can also be observed that FDIN has a significant effect on EPI. All other variables have positive relationship with EPI in the long run except population growth rate.

5.6 Results of the short run:

The short run results of Autoregressive Distributed Lag Model are shown in Table 5.

Table 5 Autoregressive Distributed Lag Model Results

(Dependent variable is LEPI)

Regressor	Coefficient	s.error	T-ratio	Probability
LTRS	0.08428	0.039078	2.1567	0.041
LTRD	-0.05429	0.11306	-2.4816	0.063
LTRD(-1)	-0.30137	0.15134	-2.9914	0.057
LTRD(-2)	0.34299	0.13296	2.5795	0.016
LGFCF	-0.07532	0.062482	-1.2054	0.239
LGNE	1.8672	0.37277	5.0091	0
LGNE(-1)	-1.348	0.31509	-4.2781	0
LPOP	1.3017	1.0779	1.2076	0.238
LPRR	-0.09764	0.05503	-2.7742	0.088
LFDIN	-0.03051	0.02106	-1.4486	0.16
C	-5.1917	4.5221	-1.1481	0.262
T	-0.21368	0.017757	-1.2033	0.24
Results With Error correction model				
R-Squared	.89093	R-Bar-Squared	.79894	
S.E. of Regression	.018370	F-stat. F(11, 25)	8.5980[.000]	
Mean of Dependent Variable	1.9908	S.D. of Dependent Variable	.036073	
Residual Sum of Squares	.0084364	Equation Log-likelihood	102.6424	
Akaike Info. Criterion	90.6424	Schwarz Bayesian Criterion	80.9769	
DW-statistic	2.0288			

Source: Calculated by the author

The results of the short run may vary from the long run, but the purpose of our research is to study the long run relationship of the variables. The value of R-square and R-Bar –Square are significant as 0.89 and 0.79 respectively indicating that in the short run the independent variables affect EPI 89 % and 79% respectively. Where the value of F-statistics is 8.59 which also show significance of the model. So, as a whole overall performance is good in the short run also.

Table 6 (a) Results summery in the short run and long run Long run relationship (Dependent variable is EPI).

Variables	effects	Significant
TRD	Positive	Significant
TRS	Positive	Significant
POP	Negative	Insignificant
GNE	Positive	Significant
PRR	Positive	Significant
GFCF	Positive	Significant
FDIN	Positive	Significant

Table 6 (b). Short run relationship (Dependent variable is EPI).

Variables	effects	Significant
TRD	negative	Significant
TRS	positive	Significant
POP	positive	Insignificant
GNE	positive	Significant
PRR	negative	Significant
GFCF	negative	Insignificant
FDIN	negative	Insignificant

4.7 Stability Test

In order to check the stability of the coefficients we plot the cumulative sum of recursive residuals CUSCUM and cumulative sum of recursive residuals of square CUSCUMS. The results show that coefficients of our estimated model is stable as the graph of CUSCUM and CUSCUMS statistics lies in the critical boundary (Within the upper and lower boundary. The absence of divergence is CUSCUM and CUSCUMS graphs confirm in our ARDL estimation short run and long run estimates are stable.

Figure 1: Plot of Cumulative Sum of Recursive Residuals

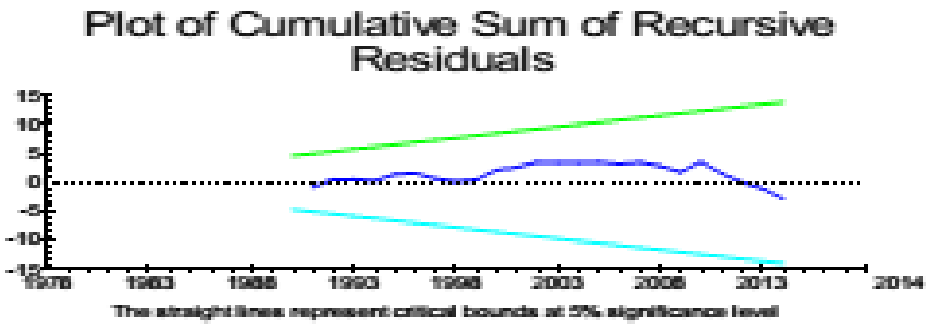
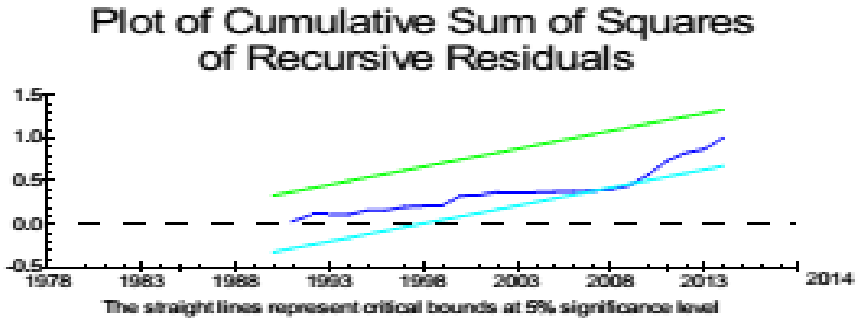


Figure 2: Plot of Cumulative Sum of Square of Recursive Residual



6. CONCLUSIONS

The results show that Pakistan and china sometimes play heavy duties on imports to protect their infant and established industries from the foreign product competition and to provide protection to the domestic industry from dumping. This is also true for the case of Pakistan if it relaxes its protections to domestic industry its economic conditions can be improved because indigenous industry will improve its competitiveness.

Exports diversification, elimination of trade barriers and access to other foreign markets can play an important role in export increment quality, lower prices efficient ways of production, export promotion and efforts like

more spending on research, employing of modern technological techniques, latest marketing ways, and government. role are some steps to be availed from free trade. Pakistan can improve trade via exports by establishing strong relations with rest of world. Thus, ultimately Pakistan will reap benefits of its advanced infrastructure built under China-Pak Economic Corridor.

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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.