

Does Trade Liberalization impact on economic growth of Pakistan?

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Abstract

The paper empirically analyzes the impact of trade liberalization on the economic growth of Pakistan over the period 1980-2016. Trade openness (proxy of trade liberalization), Real Effective Exchange Rate (REER) and Foreign Direct Investment (FDI) are important explanatory variables, while GDP growth is dependent variable used for the model specification. The study used Vector Error Correction Model (VECM) and Johansen Co-integration approach developed by Johansen & Jeslius (1990) for long run relationship.

Key Words: Trade Openness, Economic Growth, Vector Error Correction Model (VECM)

Jel Classification: Z10, P0, P1

1. Introduction:

In most of developing countries trade liberalization process started in 1980s with the implantation of structural adjustment program of IMF and world bank.

According to the WTO (2008), trade liberalization not only enhances a country's access to goods and services, and, knowledge and technologies, but also stimulates entrepreneurship in the private sector, attracts private and foreign capital, creates employment, reduces distortions in price relatives, promotes development of activities with comparative advantage and, increases foreign earnings. These factors eventually boost up economic growth.

In early nineteenth century theory of comparative advantage was developed by David Ricardo, in which he explained that trade between two nations can be possible if one nation cannot have absolute advantage in both commodities. Adam Smith and Ricardo both were in the favor of free trade. It was a positive belief since last zillions of years that positive association between trade liberalization and growth, in addition trade liberalization also a prominent component of policy advice in many developing countries.

A recent development in the trade policy literature focuses on the potential dynamic effects of trade liberalization in reducing rent-seeking behavior and speed up the flow of technical knowledge from the world market. The benefit that one country can derive is to greater access of new capital and intermediate goods, and advanced techniques (Romer, 1994)

Trade liberalization may further increased the capital inflow and reduce investment gap. Trade openness not only increased investment level in economy but also leads towards efficient investment that's eventually increased market size (Chuhday et al 2010). So the overall impact of trade liberalization process on growth is positive at theoretical framework.

Export promotion strategies have comprised a superior development policy for most developing countries. The main benefits from higher export growth are the positive externalities which result greater competition in world markets, greater efficiency in resource allocation, economies of scale, and technological advancement.

Pakistan and Trade Liberalization:

In 1980s, Pakistan restricted trade by applying high tariff rates and nontariff barriers. In a result of that imports were far away from local market. But in 1990s Pakistan has adopted the liberalization policy for trade and financial sector due to structural adjustment programs. Pakistan followed liberalization policy for its trade as well as financial sector. The major exports of Pakistan include cotton goods, leather and rice. The share of textile exports has been fallen in last decade or so. The share of this sector was above 65% in total exports of Pakistan which has been reduced to 52% in 2010-11 due to persistent energy shortage, which is still not resolved.

In 21st century Pakistan continues the policy of trade liberalization. For this purpose government is following the tariff rationalization policy, which is based on the concept of minimal tariff and non-tariff barriers and the market based exchange rate system which is in accordance with the industrial policy goals.

Pakistan export and import duty rates were high during the import substitution industrialization (ISI), and have not enough foreign exchange reserves, and workers' remittances were also low, to import high quantity of intermediate capital goods for industrialization. Moreover, Pakistan had not attracted enough foreign direct investment to equalize the trade deficit.

2. Literature Review:

Morgan and Kanchanahatakij (2008) studies explain the association of economic growth with increased levels of international trade. The impact of liberalization on growth focuses on two key issues: first, the reliability of data generally and liberalization indicators more specifically and secondly the degree of conditionality in the relationship; by using robust indicators of liberalization and testing the effect of policy change in a large sample of liberalizing developing countries, There would appear to be a correlation of the factors that explain the deviation of growth performance with GDP per capita in the pre-liberalization period. This suggests that the countries that were successful post-liberalization were those that were relatively successful pre-liberalization. Human capital and structure of trade are the factors that also appear important for explaining heterogeneity in the effect of liberalization on growth rates.

Focusing on liberalization and economic growth, Rodriguez and Rodrik (1999) reopened the debate in both developed and developing country settings. they argued that the case for a positive relationship between the two had been too strongly stated and the relationship was not robust.

Badamassi et.al (2014) investigate, the impact of the trade openness on the economic growth in Nigeria an under developed economy and found that the positive outcome between the variables, the relationship between the real economic growth rate (GDPGR), trade openness (TRDOP), real exchange rate (REEXR) and foreign direct investment (FDI), used time series data covering the period from 1980 to 2013. The results show that there exists a long term relationship between all the variables; the independent variable affects the economic growth in the short-run; only the trade openness and the real exchange rate influence economic growth unidirectional, moreover beside the foreign direct investment (FDI), all the variables have explanatory power on economic growth in Niger.

There are many studies based on the orthodox supply tradition which explain the impact of trade liberalization on export growth in developing countries. Some such investigations confirm that the countries that embarked on liberalization programs have improved their export performance (Thomas 1991; Weiss 1992)

Matadeen et al.(2011) This study empirically investigates the causal links between trade liberalization and economic growth in Mauritius during the years 1968-2010 through VECM Model, Significant positive links were revealed both in the long-run and the short-run, indicating that openness is an important engine of economic growth in the island. It is important to realize that the coefficients of the short run estimates were however smaller than the long run ones, thus suggesting that the absolute effect of trade liberalization would be seen later in time. In the long run, the results demonstrated that openness enhances growth. Trade liberalization thus proves to be an important ingredient for growth in the island.

Amelia Santos-Paulino (2000) proves that the reduction or elimination of trade policy distortions reduces anti-export bias, and therefore improves export competitiveness. by using two forms of panel data technique, first fixed-effects estimator, based on the inclusion of dummy variables to

account for factors that are specific to each country but constant over time, Secondly, dynamic panel data models based on generalized method of moments (GMM) estimators are also estimated

The main empirical findings in this paper are:

- ❖ Exports react negatively to an increase in relative prices as indicated by the calculated price elasticity
- ❖ External demand (i.e. world income growth) has a positive effect on export growth
- ❖ Export duties, as an indicator of trade distortions, appear to negatively affect export growth, although the magnitude of the effect is small
- ❖ Trade liberalization processes emerge as a positive and important determinant of export performance.

Salma et. al (2013) The paper empirically analyzes the impact of trade liberalization on economic growth in Pakistan over the period 1975-2010 by utilizing Johansen co integration technique followed by VECM(vector Error Correction Model) and ARDL method. Results reveal that trade liberalization, Gross Fixed Capital Formation exerted positive impact on real GDP while inflation and Foreign Direct Investment are negatively related to real GDP

Atif et. al(2015) divide the scenario in two models one is developed countries and other is underdeveloped countries; selected Asian countries for analysis as; lower income countries included (India, Indonesia, Pakistan and Sri Lanka) and higher income countries (Japan, Malaysia, Singapore and South Korea) used for comparative analysis. By using the fixed effect model, Autocorrelation, Contemporaneous Correlation and Heteroskedasticity to elaborate the relationship of four main channels which trade liberalization affects economic growth: capital accumulation, equality of factor prices among countries, knowledge transfers and technology transfers. Last two channels are related to the human capital of the country. The results show that both developed and developing groups of the countries enjoyed the trade lead growth for the selected period. The impact of trade openness on human capital has been positive for both groups but significant only for the developed countries due to well-trained human capital. The fruits of the trade openness to increase the productivity of human capital have not been achieved in developing countries due to less groomed and less skilled workers. The investment in human

capital is the dismal need of the time for the developing countries to enjoy more beneficial effects of trade openness.

Zakaria (2014) explains the three approaches to explore the effect of trade liberalization on trade balance of an economy namely the elasticity approach, the absorption approach and the monetary approach. The elasticity approach is mainly concerned with exploring the effects of trade liberalization on export and import price elasticity. However, this approach relegates other aspects of trade liberalization that do not involve price changes. According to the absorption approach the effect of trade liberalization will depend on how real income is affected relative to real absorption. Finally, in the monetary approach, the outcome of trade liberalization depends on how the real demand for money changes relative to the real supply. Generalized Method of Moments (GMM), Dummy Variable Model used to explain the examines the effects of trade liberalization on exports, imports and trade balance in Pakistan using data for the period 1981/82 to 2007/08, Elimination of export and import duties has significantly affected growth of exports and imports in Pakistan with the impact on imports being greater than on exports. Similarly, pure effect of trade liberalization is to raise import growth more than export growth. Thus, trade liberalization has worsened trade balance in Pakistan.

Hamad et. al (2014) finds out the gaps between the two time periods by taking the data of GDP as dependent variable and trade openness as independent variable, Results shows that trade openness had a positive and significant effect on economic growth in Tanzania. Overall period was subdivided into a closed economy period (1970-1985) and an open economy period (1986-2010). OLS technique was used to estimate the regression model twice, regarding the two sub-periods. However, this effect was relatively greater during the closed economy compared to the open economy period. It has been indicated that since late 1980s Tanzania experienced continuous trade deficit. the study recommended that there is a need for the country to put strong initiative on adding value on her exports so as to compensate for imports.

Faiza (2014) examines the impact of trade openness on economic growth of Pakistan by applying autoregressive distributed lag (ARDL) approach over the period 1960-2011. Empirical results show that trade volume, investment and human capital have positive and significant impact on

economic growth. Findings further reveal that trade restriction measures have negative and significant impact on economic growth in long run. Moreover, results show that the impact of trade openness on economic growth is not obvious in short run. The findings suggest that developing countries like Pakistan need to consider trade openness policy as a long term plan of the country. The policy direction of Pakistan should emphasize on more liberal policies to enhance economic growth which will eventually lead towards poverty reduction in Pakistan.

Yaya (2017) examines the impact of trade openness on economic growth for Cote d'Ivoire over the period 1965–2014 in a multivariate framework including capital stock, labor and trade openness as repressors. It uses the Autoregressive Distributed Lag bounds test to co integration and the Toda and Yamamoto Granger causality tests. The results show that trade openness has positive effects on economic growth both in the short and long run. Furthermore, they reveal a positive and strong complementary relationship between trade openness and capital formation in promoting economic growth.

3. Data and Methodology:

3.1. Data:

The Annual information was recovered from World Bank website for the year 1980 to 2016.

3.2 MODEL

We try to determine impacts of a Trade Openness, real effective exchange rate and FDI on GDP growth of Pakistan, so we take GDP as a dependent variable and Trade Openness, REER and FDI as effect on it.

$$\text{GDP} = \beta_0 + \beta_1 \text{TradeOpenness} + \beta_2 \text{REER} + \beta_3 \text{FDI} + \mu$$

3.3 METHODOLOGY

The goal of the study is to research the effects of GDP growth of Pakistan on trade openness, real effective exchange rate and FDI (foreign direct investment), by using annual data of Pakistan from 1980-210 for trade openness variable, we take the data of exports plus imports in % of GDP.

3.4 PROCEDURE

To check whether the series are stationary or not mostly 90% of time series variable are non-stationary because these concepts capture the idea of basic statistical properties of the model (*i.e.* means, variances, and covariance's) that's do not change over time. There are many unit root tests but here we used the Augmented Dickey-Fuller test and PP test for making the time series stationary. **The Johansen Co-integration test:** to check the existence of a long-run relationship between the variables **The Vector Error Correction Model:** to characterize the long-run and short-run dynamics; The VECM consists to observe long-term and short-term relationships among all variables. In order to characterize the long-run dynamics, **The Granger causality test:** to investigate the direction of the causality. It established the sense of causality between dependent and independent variables. Performing Granger causality test requires that all the variables are stationary. So, for this reason we transformed the variables to the first order difference before running the test.

4. Findings:

VAR Lag Order Selection Criteria

Endogenous variables: DGDGP DTRADE DREER DFDI

Exogenous variables: C

Date: 01/04/18 Time: 20:42

Sample: 1 38

Included observations: 34

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-285.9750	NA	300.6405	17.05736	17.23693*	17.11859*
1	-269.1957	28.62360*	289.6275*	17.01151*	17.90937	17.31771
2	-262.7943	9.413837	531.8046	17.57613	19.19228	18.12729

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

VAR Lag Exclusion Wald Tests

Date: 01/04/18 Time: 20:43

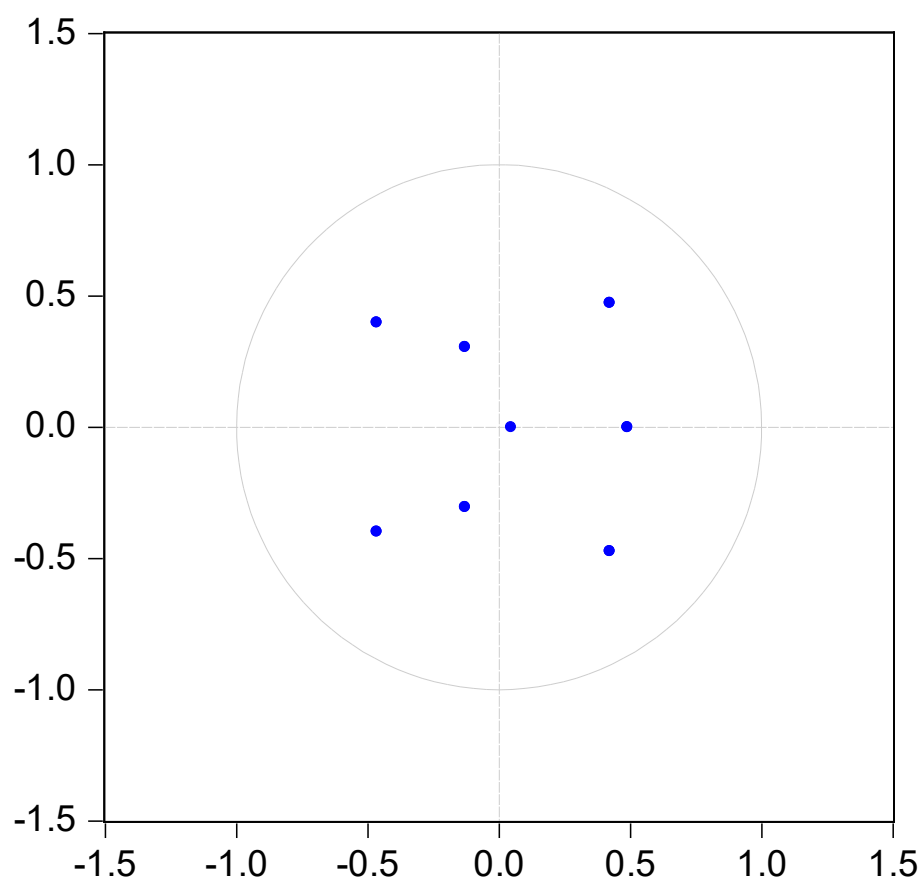
Sample: 1 38

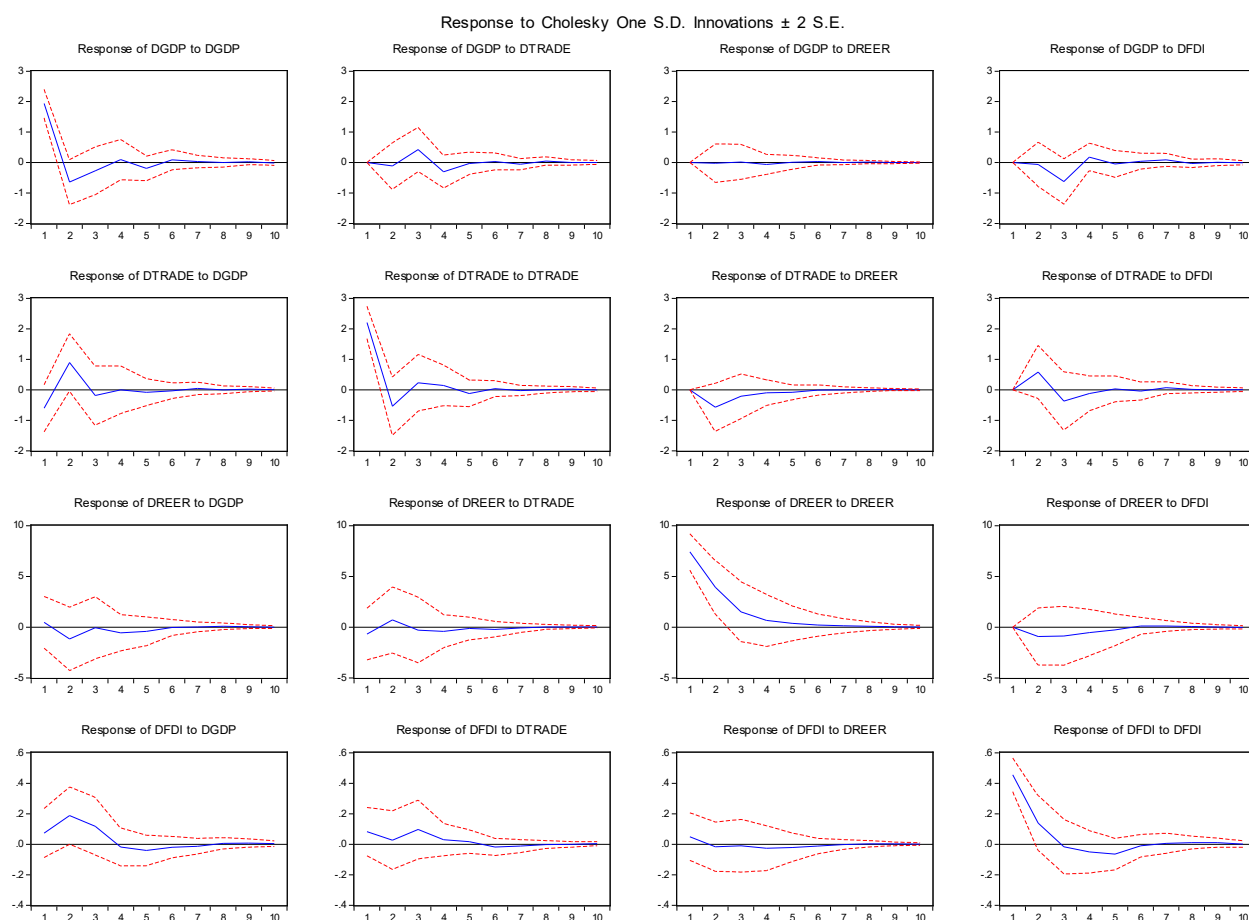
Included observations: 34

Chi-squared test statistics for lag exclusion:

Numbers in [] are p-values

	DGDP	DTRADE	DREER	DFDI	Joint
Lag 1	3.596518 [0.463355]	9.062534 [0.059555]	11.75219 [0.019292]	7.281247 [0.121751]	30.30288 [0.016494]
Lag 2	3.769266 [0.438132]	1.113322 [0.892153]	0.284112 [0.990817]	4.206563 [0.378772]	10.32477 [0.849126]
df	4	4	4	4	16

AR ROOT GRAPH:**Inverse Roots of AR Characteristic Polynomial**

IMPULSE RESPONSE:**VARIANCE DECOMPOSITION:****DGDP**

Period	S.E.	DGDP	DTRADE	DREER	DFDI
1	1.937072	100.0000	0.000000	0.000000	0.000000
2	2.045980	99.58138	0.310349	0.015606	0.092666
3	2.198295	87.79656	4.021268	0.019766	8.162405
4	2.229126	85.55492	5.758495	0.113772	8.572811
5	2.238470	85.61376	5.728892	0.113624	8.543728
6	2.241061	85.57077	5.739866	0.130969	8.558394
7	2.243549	85.39701	5.790853	0.130787	8.681353
8	2.244327	85.33789	5.833228	0.133217	8.695669
9	2.244463	85.33849	5.832537	0.133263	8.695706
10	2.244564	85.33666	5.832072	0.133530	8.697734

DTRAD

Period	S.E.	DGDP	DTRADE	DREER	DFDI
1	2.288956	6.987199	93.01280	0.000000	0.000000
2	2.643710	16.65548	73.85455	4.698071	4.791900
3	2.694614	16.53630	71.80701	5.147479	6.509215
4	2.702691	16.43762	71.64988	5.244701	6.667803
5	2.708327	16.46475	71.55646	5.326669	6.652122
6	2.709115	16.47308	71.52889	5.326309	6.671723
7	2.710360	16.48011	71.47613	5.321882	6.721881
8	2.710395	16.47976	71.47436	5.321752	6.724123
9	2.710515	16.48314	71.47198	5.321350	6.723532
10	2.710522	16.48316	71.47176	5.321451	6.723633

DRER:

Period	S.E.	DGDP	DTRADE	DREER	DFDI
1	7.455915	0.389838	0.854055	98.75611	0.000000
2	8.586999	2.147980	1.303103	95.39857	1.150346
3	8.767746	2.066956	1.359715	94.48910	2.084231
4	8.835563	2.437193	1.558166	93.59283	2.411809
5	8.858472	2.643530	1.576573	93.28239	2.497505
6	8.864327	2.642855	1.635185	93.20950	2.512460
7	8.866270	2.641754	1.641713	93.18993	2.526604
8	8.867127	2.647952	1.641840	93.17985	2.530353
9	8.867280	2.649568	1.641877	93.17785	2.530709
10	8.867367	2.649533	1.642444	93.17614	2.531878

DFDI:

Period	S.E.	DGDP	DTRADE	DREER	DFDI
1	0.470703	2.414159	3.021572	1.104544	93.45972
2	0.526214	14.59205	2.661582	0.990616	81.75576
3	0.548037	18.05697	5.526807	0.947262	75.46896
4	0.552032	17.90672	5.729276	1.161399	75.20260
5	0.558038	18.06881	5.692878	1.275752	74.96256
6	0.558910	18.13690	5.779186	1.321698	74.76222
7	0.559251	18.17450	5.823335	1.321989	74.68017
8	0.559400	18.17468	5.821999	1.323446	74.67988
9	0.559539	18.18261	5.819594	1.324017	74.67378
10	0.559562	18.18468	5.823458	1.324296	74.66757

JOHNSAN TECHNIQUE**Vector Error Correction Estimates**

Date: 01/04/18 Time: 20:56

Sample (adjusted): 3 37

Included observations: 35 after adjustments

Standard errors in () & t-statistics in []

Cointegrating Eq:	CointEq1
GDP(-1)	1.000000
TRADE(-1)	0.077718 (0.13059) [0.59515]
REER(-1)	-0.009558 (0.00945) [-1.01161]
FDI(-1)	-0.384801 (0.44244) [-0.86972]
C	-5.788048

Equation of VECM:

$$\text{GDP} = -5.788 + 0.0777\text{Trade} - 0.0095\text{REER} - 0.3848\text{FDI}$$

CO-INTEGRATION TEST:

Date: 01/04/18 Time: 21:00

Sample (adjusted): 3 37

Included observations: 35 after adjustments

Trend assumption: Linear deterministic trend

Series: GDP TRADE REER FDI

Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.465427	53.77154	47.85613	0.0126
At most 1 *	0.416236	31.85150	29.79707	0.0286
At most 2	0.299376	13.01246	15.49471	0.1144
At most 3	0.015874	0.560042	3.841466	0.4542

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigen value	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None	0.465427	21.92004	27.58434	0.2245
At most 1	0.416236	18.83905	21.13162	0.1016
At most 2	0.299376	12.45242	14.26460	0.0948
At most 3	0.015874	0.560042	3.841466	0.4542

Max-eigenvalue test indicates no cointegration at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

ECT1 values

Dependent Variable: DGDGP

Method: Least Squares

Date: 01/04/18 Time: 21:14

Sample (adjusted): 3 37

Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.148662	0.313641	-0.473989	0.6391
ECT1	-0.542517	0.207241	-2.617807	0.0139
DGDGP(-1)	-0.046368	0.179018	-0.259014	0.7975
DTRADE(-1)	-0.095482	0.138891	-0.687463	0.4973
DREER(-1)	-0.023497	0.032029	-0.733604	0.4691
DFDI(-1)	0.313518	0.733931	0.427176	0.6724
R-squared	0.293443	Mean dependent var	-0.062278	
Adjusted R-squared	0.171622	S.D. dependent var	1.941785	
S.E. of regression	1.767320	Akaike info criterion	4.131611	
Sum squared resid	90.57918	Schwarz criterion	4.398242	
Log likelihood	-66.30319	Hannan-Quinn criter.	4.223652	
F-statistic	2.408818	Durbin-Watson stat	1.929732	
Prob(F-statistic)	0.060623			

Dependent Variable: DTRADE

Method: Least Squares

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Sample (adjusted): 3 37

Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.551608	0.382865	-1.440736	0.1604
ECT1	0.175091	0.252981	0.692111	0.4944
DGDP(-1)	0.281072	0.218529	1.286201	0.2085
DTRADE(-1)	-0.345656	0.169546	-2.038714	0.0507
DREER(-1)	-0.080753	0.039099	-2.065378	0.0479
DFDI(-1)	0.747375	0.895917	0.834201	0.4110
R-squared	0.311041	Mean dependent var	-0.308961	
Adjusted R-squared	0.192255	S.D. dependent var	2.400440	
S.E. of regression	2.157387	Akaike info criterion	4.530477	
Sum squared resid	134.9752	Schwarz criterion	4.797109	
Log likelihood	-73.28336	Hannan-Quinn criter.	4.622518	
F-statistic	2.618498	Durbin-Watson stat	1.896043	
Prob(F-statistic)	0.045119			

Dependent Variable: DREER

Method: Least Squares

Date: 01/04/18 Time: 21:17

Sample (adjusted): 3 37

Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.181664	1.402737	-1.555291	0.1307
ECT1	-2.074399	0.926869	-2.238072	0.0331
DGDP(-1)	1.023582	0.800643	1.278450	0.2112
DTRADE(-1)	0.907918	0.621180	1.461602	0.1546
DREER(-1)	0.196636	0.143249	1.372689	0.1804
DFDI(-1)	0.554840	3.282448	0.169032	0.8669
R-squared	0.236082	Mean dependent var	-3.046737	
Adjusted R-squared	0.104372	S.D. dependent var	8.352073	
S.E. of regression	7.904203	Akaike info criterion	7.127471	
Sum squared resid	1811.816	Schwarz criterion	7.394102	
Log likelihood	-118.7307	Hannan-Quinn criter.	7.219512	
F-statistic	1.792439	Durbin-Watson stat	1.372034	
Prob(F-statistic)	0.145722			

Dependent Variable: DFDI

Method: Least Squares

Date: 01/04/18 Time: 21:18

Sample (adjusted): 3 37

Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
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C	0.011783	0.079740	0.147762	0.8836
ECT1	0.092454	0.052689	1.754717	0.0899
DGDP(-1)	0.021638	0.045513	0.475418	0.6381
DTRADE(-1)	-0.010974	0.035312	-0.310783	0.7582
DREER(-1)	0.000587	0.008143	0.072104	0.9430
DFDI(-1)	0.210885	0.186594	1.130185	0.2677
R-squared	0.265743	Mean dependent var	0.012419	
Adjusted R-squared	0.139147	S.D. dependent var	0.484276	
S.E. of regression	0.449322	Akaike info criterion	1.392650	
Sum squared resid	5.854811	Schwarz criterion	1.659281	
Log likelihood	-18.37137	Hannan-Quinn criter.	1.484691	
F-statistic	2.099143	Durbin-Watson stat	1.969157	
Prob(F-statistic)	0.094115			

GRANGER CASULTY MATRIX:

S.No.	Dependent Variables	DGDP	DTRADE	DREER	DFDI	ECT1
1	DGDP		2.2519	0.0352	3.36678	-0.5425*
2	DTRADE	2.21813		3.0243	2.1185	0.1750
3	DREER	0.50547	1.03304		0.76334	-2.0743*
4	DFDI	4.87238***	1.7484	0.20948		0.09245***

FDI --> GDP There is one co-integrating relationship between FDI and GDP.

5. Results:

The nexus between trade openness and economic growth in Pakistan is the main focus in this paper. A four variables model was built in order to investigate our main objective in which GDP growth rate as the dependent, Trade Openness, REER (Real effective Exchange rate) and FDI (Foreign Direct Investment) considered independent variables; import and exports in terms of % of GDP is recorded as Trade Openness variable.

The model represents the mix results between the variables, and initial stage method uses as Augmented Dickey-Fuller (ADF) has been applied followed by Vector Error Correction Model (VECM), Johansen co-integration tests and Granger Causality test.

we first check the stationary of each variable and then apply the Augmented Dicky Fuller Test (ADF) and PP test on each variable including dependent or independent variables, we observe that

at level all the variables shows the insignificant F and R^* probabilities but at first difference all the variables F and R^* probabilities showing Significant results. By selecting the correct lag length criteria on basis of yearly data carried out towards VECM model and then check the co-integration by applying Jhonsan Co-Integration Test with granger causality test, to investigate the direction of the causality.

The results of the econometric analyses reveal that:

- There is a long-run relationship between the variables GDP, REER and FDI
- Only GDP granger causes FDI, univariate relationship.
- Only FDI variables influence economic growth in the short-run.
- Results shows that at least 1 Co-integration exist in the model.
- Conclusively, in Pakistan, it appeared that FDI is the crucial factors to be considered with very much attention as far as the country wants to enjoy a long-run economic growth.

6. Conclusion & Recommendation:

The objective of this research to find the relationship between the Trade Openness, real effective exchange rate and FDI on GDP growth of Pakistan, both in the long and short run in Pakistan, throughout the research the variables shows the mix results by applying VECM Model, granger causality and Jhonsan co-integration test. The findings suggest that trade liberalization policies play key role to enhance economic growth in Pakistan. This is consistent with the prediction of most international trade theories that trade openness is an important engine for economic growth. The government should emphasize on the provision of adequate infrastructures to help in reducing the high cost and attract Foreign Direct Investment; the effect of trade volume on growth became significant from 1980 onwards when Pakistan gradually moves towards new tariff reform policy for industrial sector growth. Pakistani industries started importing raw materials and intermediate goods after tariffs reduction which increased labor productivity and consequently led to faster economic growth, Government should take action to enhance physical and human capital in order to promote economic growth of the country also rational decisions should take for low down the exchange rate and increased the exports goods.

7. References:

Trade Openness and Economic Growth: Evidence From Mauritius (2011) Jeevita Matadeen, Jay S Matadeen and Boopen Seetanah (University of Mauritius) (ICITI 2011)

Does Trade Openness Matter for Economic Growth in Niger?(2014) Badamassi Aboubacar, Deyi Xu, Amadou Maiga Oussein (Scientific research **Theoretical Economics Letters**, 2014, 4, 916-927) School of Economics and Management, China University of Geosciences, Wuhan, China

The Impact of Trade Liberalization on Economic Growth in Tanzania(May 2014) Hamad, Mayasa Mkubwa , Dr. Burhan Ahmad Mtengwa , Stabua Abdul Babiker (International Journal of Academic Research in Business and Social Sciences) *May 2014, Vol. 4, No. 5*

The impact of trade openness on economic growth: The case of Cote d'Ivoire (31 May 2017) Yaya Keho (Cogent Economics and finance) Keho, *Cogent Economics & Finance* (2017), 5: 1332820

Effects Of Trade Liberalization On Exports, Imports And Trade Balance In Pakistan: A Time Series Analysis(2014) Muhammad Zakaria (PRAGUE ECONOMIC PAPERS)

Impact of Trade Openness on Economic Growth of Pakistan: An ARDL Approach (June 2014) Faiza Umer (Applied Economics Research Centre (AERC)) *Journal of Business & Economic Policy Vol. 1, No. 1; June 2014*

Trade Liberalization, Human Capital And Economic Growth: Empirical Evidence From Selected Asian Countries (Summer 2015) Atif Khan Jadoon, Hafiz Abdur Rashid And Aamir Azeem (Pakistan Economic and Social Review)

Impact of Trade Liberalization on Economic growth in Pakistan (Sep 2013) Salma Shaheen, Mahnaz Muhammad Ali, Amina Kauser and Faqiha Bashir Ahmed (INTERDISCIPLINARY JOURNAL OF CONTEMPORARY RESEARCH IN BUSINESS)

Trade Liberalization And Export Performance In Selected Developing Countries (November 2000) Amelia U. Santos-Paulino (ISSN)

Trade Liberalization and Economic Growth(2008) C.W. Morgan and S. Kanchanahatakij (The World Economy)

Annexure A:

S: N o	Title & date of publication	Author(s) & source	Sample size (time period)	Methodology	Model (Depend ent variable)	Model (Independent variables)	Results
1	Trade Openness and Economic Growth: Evidence From Mauritius (2011)	Jeevita Matadeen, Jay S Matadeen and Boopen Seetanah (ICITI 2011)	1989-2009 Bi annual Data	Vector Error Correction Model (VECM) Augmented Dickey-Fuller (ADF) Johansen co-integration tests Granger Causality test	GDP Growth rate	Physical capital, openness of economy (sum of exports minus imports) ,private capital, quality of labour, financial development	positive links were revealed both in the long-run and the short-run, indicating that openness is an important engine of economic growth in the island
2	Does Trade Openness Matter for Economic Growth in Niger? (Dec 2014)	Badamassi Aboubacar, Deyi Xu, Amadou Maiga Ousseini(Theoretical Economics Letters-Scientific resarch)	1984-2013	Vector Error Correction Model (VECM), Augmented Dickey-Fuller (ADF) Johansen co-integration tests Granger Causality test	GDP Growth rate	Trade Openness, Real effective exchange rate, FDI	None of the explanatory variables influences economic growth in the short-run, variables have positive relationship in long run
3	The Impact of Trade Liberalization on Economic Growth in Tanzania (May 2014)	Hamad, Mayasa Mkubwa , Dr. Burhan Ahmad Mtengwa , Stabua Abdul Babiker (International Journal of Academic Research in Business and Social Sciences)	closed economy period (1970-1985) and a open economy period (1986-2010)	Ordinary Least Square approach, Heteroscedasticity Test, Correlation Matrix	Real GDP	Trade Openness	Trade openness has a positive and significant impact on economic growth in both time frame.
4	The impact of trade openness on economic growth: The case of Cote d'Ivoire (31 May 2017)	Yaya Keho (Cogent Economics and finance)	1965–2014	autoregressive distributed lag (ARDL) , Fully Modified OLS, and Dynamic OLS methods ,Unit root and cointegration tests, Granger causality tests and variance decomposition analysis	real economic output	Real capital stock per capita, labour force and real trade per capita	found that capital and openness to trade have positive impacts on economic growth both in the short and long run
5	EFFECTS OF TRADE LIBERALIZATION ON EXPORTS, IMPORTS AND TRADE BALANCE IN PAKISTAN: A TIME SERIES ANALYSIS (2014)	Muhammad Zakaria (PRAGUE ECONOMIC PAPERS)	Quarterly time-series data 1981/82 to 2007/08	Generalized Method of Moments (GMM), Dummy Variable Model	Imports/e xports	real exchange rate, Foreign income/ growth rate of real exchange rate, growth rate of domestic output	Import and export worsen the trade balance.
6	Impact of Trade Openness on Economic Growth of Pakistan: An ARDL Approach (June 2014)	Faiza Umer (Applied Economics Research Centre (AERC))	1960-2011	Cobb-Douglas production function/ Augmented Dickey Fuller (ADF), co-integration, Johansen framework, error correction model	GDP per capita	trade volume, human capital and investment	Positive growth in long run but negative impact on short run, labor and productivity has positive effect on economic growth.

7	TRADE LIBERALIZATION, HUMAN CAPITAL AND ECONOMIC GROWTH: EMPIRICAL EVIDENCE FROM SELECTED ASIAN COUNTRIES (Summer 2015)	ATIF KHAN JADOON, HAFIZ ABDUR RASHID AND AAMIR AZEEM (Pakistan Economic and Social Review)	1981- 2012	fixed effect model, Autocorrelation, Contemporaneous Correlation, Heteroskedasticity	Human capital/ Growth Rate	Model 1: Human capital, Trade liberalization, Dependency ratio, Per capita income Model 2: Growth Rates ,Gross Capital Formation ,Labour Force	Model 1 & Model 2 Positive results shows of variables on develop and developing countries
8	Impact of Trade Liberalization on Economic growth in Pakistan (Sep 2013)	Salma Shaheen, Mahnaz Muhammad Ali, Amina Kauser and Faqiha Bashir Ahmed (INTERDISCIPLINARY JOURNAL OF CONTEMPORARY RESEARCH IN BUSINESS)	1975-2010	OLS regression, Augmented Dickey Fuller test, Engel granger co integration test, Johansen Maximum Likelihood test, Vector Error Correction Model (VECM), ARDL	Real Gross Domestic Product	Real Trade Openness (export plus import as a share of GDP), Real Gross Fixed Capital Formation, Real Foreign Direct Investment, Inflation, White Noise Error Term.	trade liberalization, Gross Fixed Capital Formation exerted positive impact on real GDP while inflation and Foreign Direct Investment are negatively related to real GDP
9	TRADE LIBERALISATION AND EXPORT PERFORMANCE IN SELECTED DEVELOPING COUNTRIES (November 2000)	Amelia U. Santos-Paulino (ISSN)	1972-1997 Data of 22 Countries	generalized methods of moments (GMM), time-series/cross-section analysis for all the countries	Exports Growth	foreign GDP growth and relative price	<p>→ Exports react negatively to an increase in relative prices.</p> <p>→ Income growth has a positive effect on export growth.</p> <p>→ Export duties; appear to negatively affect export growth.</p> <p>→ trade liberalization processes emerge as a positive and determinant of export performance</p>
10	Trade Liberalization and Economic Growth(2008)	C.W. Morgan and S. Kanchanahatakij (The World Economy)	1970-74, 1975-79, 1980-84, 1985-89, 1990-94, 1995-98	HETEROGENEITY, Dummy variable, Regression Analysis	GDP Growth (15 countries data)	openness of the country (exports + imports /GDP)	increased imports of goods with high R&D levels experience higher growth

ANNEXURE B:

Years	GDP Growth	Trade Openess	FDI	REER
1980	10.2157	36.5872	0.26861	202.1249
1981	7.920764	35.32949	0.384635	229.146
1982	6.537487	31.71009	0.20775	209.8933
1983	6.778378	34.89608	0.102667	202.7382
1984	5.065206	33.69653	0.178192	207.0304
1985	7.592115	33.23753	0.421864	193.3727
1986	5.501654	34.56735	0.331453	159.5818
1987	6.452343	34.23846	0.387921	141.1055
1988	7.625279	35.25661	0.484737	136.788
1989	4.959769	35.63007	0.524258	128.1518
1990	4.458587	38.90949	0.612998	121.1893
1991	5.061568	35.55468	0.568544	118.6908
1992	7.705898	37.88786	0.691845	116.6268
1993	1.757748	38.74735	0.677095	115.202
1994	3.737416	35.32705	0.811304	114.3899
1995	4.962609	36.13275	1.191753	113.6496
1996	4.846581	38.33013	1.456056	110.6418
1997	1.014396	36.85227	1.147229	112.1618
1998	2.550234	34.01173	0.81361	113.7386
1999	3.660133	32.31996	0.844795	105.2495
2000	4.260088	28.12961	0.416484	103.2618
2001	1.982484	30.37153	0.522751	93.83778
2002	3.22443	30.53763	1.142354	97.18595
2003	4.846321	32.8445	0.641482	94.46478
2004	7.368571	30.30013	1.141075	93.78329
2005	7.667304	35.25329	2.010007	96.66486
2006	6.177542	35.68173	3.112978	99.39679
2007	4.832817	32.99043	3.668323	98.14518
2008	1.701405	35.5942	3.19736	94.50395
2009	2.831659	32.07185	1.390402	95.13071
2010	1.606692	32.86893	1.139753	100
2011	2.748403	32.93991	0.620823	102.8231
2012	3.507033	32.8055	0.382827	104.3887
2013	4.396457	33.3336	0.576511	102.3046
2014	4.674708	30.90124	0.764034	109.7392
2015	4.712458	27.60429	0.598045	119.8085
2016	5.741025	24.51587	0.819291	122.5102