International Journal of Innovation and Research in Educational Sciences
Volume 5, Issue 1, ISSN (Online) : 2349–5219

The Impact of Trade Openness, Investment and Human Capital on Economic Growth of Pakistan

Zaki Waseem Ullah
Corresponding author email id: farahullah777@gmail.com

Date of publication (dd/mm/yyyy): 23/01/2018

Abstract **– Trade Openness, Investment and Human Capital are the main factors and have a significant impact on the economic growth and the development of the country.**

In this article we have examined and analyzed the key factors for the impact of trade openness, investment and human capital on economic growth of Pakistan. These factors have a significant impact and play very crucial role for the economic growth and the development of the country.

Keywords **– Trade Openness, Investment and Human Capita, Economic Growth.**

I. INTRODUCTION

Trade liberalization is considered to the most significant tool for enhancing economic growth in all economies of world. Today, it becomes the important goal for any country to attain the highly desirable economic growth. Therefore, the factors that effect on growth is important to know for the economic policy makers. Trade liberalization has been discussed frequently be the economic planners for many years. Keynesian economists explain that by decreasing export duties under the effective trade liberalization policy, exports lead over the imports. Therefore, trade liberalization has considered as a major co9mponent of policy advice for any developing countries. Trade openness is the important component of globalization which has been explained as the increasing interaction of any economic systems with the growth in international trade and other economic variables. This integrated economic system is connected with the growing production, marketing of goods and services and the associated growing commercial activities.

Trade liberalization involves the dismantling of ask modes of tariff structures like export and import duties, tariffs and quotas and other restrictions if any for the free transfer of goods and services across the world. Trade openness includes the free mobility of capital and labor force across the country. World globalization process brought various fundamental changes in economic structural activities both in national and international level during past few decades. The most important feature of increasing interaction of world economy is the sharp movement towards the trade openness, therefore world economy cannot neglect the role of IMF, WTO and world bank is the regard (Ramphal, 2002). Trade liberalization process began in 1980s with the imposition of various structural adjustment program of IMF, negotiation framework of WTO and imposed conditionality by the World Bank.

The size of any country not only effect on the economic performance but also effects on the preferences for international trade and structural economic policies. The small nation need to inclined more free trade as compare to the large nation Alesina, spolaore and wacziarg (2005). However, the literature has been increasing the attention on economy's size in fact increasing return is not compulsory for the economic performance and market size, but the country size equilibrium come with the tradeoff between costs and benefits preferences. The cost and benefit of an economy is changed by the trade liberalization, the open economy decreases the size benefits as compare to the cost of heterogeneity. Small economies or the more homogenous countries and receive more advantage in free trade Alesina et all (2005). The production depends on the different market dimension; small economies can absorb the cultural and regional changes easily with trade liberalization. Moreover, trade liberalization moves towards economic growth when government expenditure freely effect on growth (Rodrik 1998). Then government role is more important for liberalized economies and for the market integration. However, the trade policy openness and trade volume to GDP ratios positively related with economic growth. Many developing countries are liberalizing their economies for foreign capital inflows and promote the investment and its efficiency and also can explore the market size in such countries.

During 1950s, the different strategies and policies followed by Pakistan economy to achieve excellent environment for industrialization, because the major contribution to the growth at that time was from agriculture sector. In 1960, Pakistan government encourage export by introducing different measure as government offered effective export bonus scheme and used export capability to increase foreign exchange. There has been considerable development in industrial trade reforms, turning from import strategies to export-promotion approach in the 1970. Government trade policy has been changing toward trade liberalization by removing tariff rules and quantitative restrictions. Government took many reforms to promote the free international trade liberalization flow especially after 1988. IMF structural adjustment and stabilization packages carry out in the country till 2003 (Zaidi, 2005). The important fact advised by the World Bank is to implemented economic reforms and policies by the Pakistan Government (Hussain, 2007).

Government of Pakistan facilitated the local business accessibility in the international markets by preferential trade agreement (PTAS) and foreign trade agreements (FTAS) with different countries. The major role of trade policy 2011-12 were to encourage and facilitate the export trade sector by allowing acknowledging import from India against the export oriented brown sugar industry, leather and textile sector.

However, investment is one of the important factors in leading the economic growth in the developed and developing country. Neoclassical growth models predicted that capital accumulation and growth will increase in poor countries when capital outflows from the rich to poor economy. Hence, capital flows have a significant effect on the economic growth (Mc Lean and sheathe, 2002). Moreover, the endogenous growth theories assume that a well-functioning financial system may positively effect on growth through investment. Such financial system will enhance the ability to build new investment projects which support economic performance (Chaudhary, 2007) on the other hand, human capital is the main determinants by increasing the labor force for the economic growth. The new growth model supposed that labor is the important source of economic growth and more population helps to create the scientific discovery and advance technology. In addition, population growth can improve the labor productivity and accelerate the real GDP (Parkin, 2011). The impact of human capital on the growth has received attention by the policy makers. There are two different theories that predict the effect of human capital on economic growth. The first theory introduces human capital as an input factor for the production process (Lucas, 1998). This expresses that prevail direct correlation between the labor and output growth. The second approach stated that human capital consider as a root of productive growth. The volumes of human capital find out the capacity of a economy to introduce and to implement on existing technologies. Sala-I martin, Doppelhofer and Miller (2004) have conceived the primary school enrolments as a definite quantity for human capital. Barro and lee (1993) have considered human capital as a proxy variable through the average years of schooling. The theories of endogenous growth stated that knowledge gained a fundamental position in the process of economic growth. In different human capital theories, education seems to be essential component of growth of an economy. Therefore, there are many potential channels by which exports can encourage the human capital accumulation and growth rate in developing countries. Human capital accumulation enhancing the labor quality, which in turn increases the production capacity of labor force and promote further exports and growth of economy (Chuang, 2000). It is widely acknowledge that knowledge and education is the fundamental factor contributing to reduce the poverty, increase employment and production. Human resource development acts a paramount role in growth and development of any country.

The neoclassical growth theories discovered that the association between the trade liberalization and growth performance is influenced by the number of factors including region, attributes and the country. Hence, the empirical literature observed that there exist no direct links with openness and economic growth (Krueger, 1998). Model explains the exclusive determinant of long-run economic growth is the exogenously total factor productivity, which explain that long-run economic growth is the exogenously total factor productivity, which explain that long-run growth cannot affected by the interaction with other economies. Rodrick (2001) and Brock and Durlauf (2001) described that geographical variables could have influence on economic growth which modify the sole effects of trade openness on the economic growth. Theoretical growth literature described more about the correlation between trade policies and economic growth as compare to trade volume and growth. Therefore, it determines from the correlation between trade barriers and growth cannot instantly comparable to the effects of trade volume and growth changes (Yanikkaya, 2003).

Pakistan tries to evaluate its economy to accomplish the maximum level of economic growth like any other country. The government has served to liberalize the trade, encourage the investment and improve the attribute of the human capital. Therefore, the government has worked to modify the infrastructure, investment climate and initiate industrial cities and to identify the other significant macro-economic factors that are liable for the economic growth. In addition to simplifying the export and import process, eliminating tariff and non-tariff barriers and establish new markets for country products by creating free trade zones with other countries. Furthermore, government has concentrate on the social development and it acted on to decrease poverty and improves the living standard by growing investment in infrastructure likewise education and health services (Dardari, 2008)

This study aims to empirically investigate the impact of trade liberalization, investment and human capital on the GDP growth rate of Pakistan by using time series analysis over the period (1990-2014), in order to measure whether the government policy for liberalizing foreign trade, supporting the investment and encouraging the standard of human capital was successful policy. This research can support the economic policy makers with the object to attain high primary evolution towards the liberalized state started in 1970s and there exist significant correlation between trade liberalization and economic growth in china.

Bajwa and Siddiqi (2011), explored that the relationship between trade openness and economic growth for SAARC and establish short run unidirectional causality of trade openness and growth but bidirectional causality found in long run relationship. Berg and Kruger (2003) explored that positive affect and prescribed trade policy and trade openness played significant role in economic growth. Zakari and Shakoor (2011), declared that external shock could contend with government policies and those trade and economic policies affected on healthier trade openness. Government policies could defend the state industries from external shocks.

Iqbal and siddiqi (2010), analyzed the relationship between trade openness, capital formation and economic growth in Pakistan. Export, import, investment and GDP growth are the important variables that are used for measuring the co-integration estimation which indicate that there exists positive relationship between the variables in long-run for achieving economic growth. Many other research described the effect of capital formation, trade liberalization on economic growth (Loncan 2007, Marican 2009, Adams 2009, Bond and shchianteralli 2010, Adhikary 2011 and Soliu and Ibrahim 2014) tested that

investment has significant effect on economic growth. However, Elboiashi, Noorbakhsh, Paloni and Azemar (2009) and Hooi and wah (2010) concluded that accretion in investment did not promote the GDP growth. Khan and khan (2012) investigate the effect of trade openness, capital growth and economic growth in Pakistan. The empirical results of the study showed a positive association between the financial liberalization and economic development. Jawaid (2014) employed GDP growth as dependent variable and capital formation and trade liberalization are on independent variables then concluded that there factors are positively supported for the growth-led financial development. Nath and Mamun (2006) analyze the causality between trade liberalization investment and growth in Bangladesh economy and fond that trade openness has promoted the capital formation in the economy that increases the economic growth.

Ramzan, Asif and Mustafa (2013) and Shaheen, Ali, Kauser and Bashir (2013) examined to show the effect of trade liberalization and macroeconomic variables on economic growth of Pakistan. The study used the Johansen co-integration test for variable estimation and then concluded that trade openness and Gross capital accumulation has significant effect on the economy that increases the economic growth of Pakistan.

On the other hand many researchers investigate the causality between populations (human capital) and economic growth. A positive association between the human capital and economic growth is supported by Savas (2003), Furuoka (2009) and Furuok and Munir (2011). However, Trang and Hieu (2011) describe that an increase in the rate of population growth causes a decrease in economic growth. Afzal (2009) found that there exist a negative association between the population growth and economic growth in Pakistan and the rapid growth in population leads to reduce in savings rate and investment growth, because resources are economic development in Pakistan. It is hypothesized in the paper that trade liberalization, investment and population does have a substantial effect on economic growth of Pakistan.

Johnson's co-integration tests and regression analysis are used to observe the effects and correlation between the variables. Augmented Dickey fuller (ADF) test is used to measure the stationary of date before applying measuring Johansen co-integration test to evaluate long term correlation between variables. Section 2 discusses the literature review with reference to trade liberalization, investment and human capital. Section 3 reviews the theoretical framework for date description with respect to economistic methodology section 4 briefly interprets the empirical analysis on variables and section 5 describes the concluding summery and policy implications originate from the study.

II. Literature Review

Trade liberalization can actually improve the growth prospects of an economy by influencing the different sources of growth. An open economy can acquire many factors easily from the abroad as compare to closed economy. Trade liberalization leads to significant allocation of resources. When economics forces affect positively on the comparative advantage to specialize in the production sector then the output of that sector increases, which consequently boosts the growth. Chuang ((2000) stated that trade liberalization increase competition that generates innovation, technological advancement and greater allocation of resources. Many researches including Greenaway, Morgan and wright (2001) Utkulu and Ozdemir (2004) and Buchler, Helm and Lechner (2011) described that trade openness has a significant effect on growth while monitoring and implanting on trade policies in the economy. Yavari and Mohseni (2012) initiate that the Iranian economy is modified positively by trade openness, human capital, labor force and investment. Goswami (2013) concluded that trade liberalization acts as a significant role in the economic growth for major south Asia Countries.

Theoretically and empirically literature on the impact of trade openness on economic growth is reviewed by Ferrantino, Michae, Babula and Ingersoll (1997). At theoretical level, trade openness significantly affected the growth of any economy but there are conflicts among the economist about the time lag which claim for complete impact of trade liberalization. While the empirical literature identified that there is strong relation between trade openness, capital accumulation and economic growth in the growing economies. The impact of service sector openness on output growth is investigated by Mattoo, Rathindram and Subramanian (2001.) the paper used per capital GNP growth, vectors affected on controlled growth and trade in services is the main variables. Finally, results show that services sector liberalization has significant effect on GDP growth. The impact of advance trade liberalization process on economic growth particularly in manufacturing sector in china is estimated by Lardy (2003). It analysis that the consumed by population instead of consuming in productive purposes. In addition to all, Mushtaq (2006) indicated that there exist no long run co-integration association between the human capital and economic growth of Pakistan.

Chudhary, Ali and Faridi (2010) introduced the causality between trade openness, population and GDP growth in Pakistan. The study revealed that there exists significant association between GDP groth, trade openness and human capital in long run while labor force significantly contribute to economic growth in the sort-run analysis.

Rabinson (2013) investigated that trade liberalization and human capital has substantial relationship with agriculture growth. Auto regressive distributed lag (ARDL) approach is used to check the long run association between the prescribed variables; granger causality test applied to evaluate the causal relationship between of trade liberalization, physical capital, human capital and Real Gross Domestic Agriculture Product. Shaheen and Kauser (2013) determined that trade liberalization, Gross fixed capital formation has important impact on the economic growth of Pakistan.

Different economic reforms are employed to remove major obstacles in the way of free trade. The economic effect of these reforms on growth of Pakistan is examined by Siddiqi and iqbal (2005). This study investigate

empirically trade liberalizations, fixed investment population and GDP growth and conclude that trade liberalization policies affect negatively on GDP growth in long run analysis but exports and imports have positive relationship with economic growth. Qayyum (2006) estimated and concluded that trade liberalization; investment and human capital have significant association with GDP growth.

Hye (2011); Arif and Ahmed (2012) investigated the effect of trade liberalization, capital formation and economic growth. The study concluded that there exist bidirectional significant relationship between the trade openness and GDP growth of Pakistan. Mustafa and Rizov (2012) empirically found that capital formation and human capital have significant association with economic growth; Trade liberalization has negative relationship with economic growth. Hosseini and Leelavathi (2013) determined that trade openness, gross fixed capital formation capital stock and population has positive and significant impact on economic growth of any country.

Theoretical Frame Work:

Theoretical framework specify the link between the prescribed variables through which can yield a substantial theoretical base to our hypothesis. Theoretical framework provides most relevant concepts which justify the research hypothesis.

Trade openness lead to GDP growth of an economy with other macroeconomics variable; is a most debated content among the many economist. Mercantilist, Adam Smith and Ricardo emphasized on the value and volume of international trade. Neoclassical theories which give a great deal of today's economic growth theories that trade openness has positive influence on GDP growth of an economy in the medium temp but cannot continuously impact on growth in long run (Ferrantin, et all, 1997).

Growth theories stated that trade openness has significant effect on the trade liberalization through various aspects. Trade openness increase capital inflow by promoting FDI in economy which is the important source of capital accumulation that fulfills the investment gape in the country. Therefore, increase in the investment level leads to rise in production and services that promote the market size and employ end level in the economy. Another important effect of trade openness manipulate through education and technology transmission. There exist strong evidence that trade openness improve the productivity and efficient through technology spillover. Impact of trade openness and the population gives another channel to enhance the economic growth. In long run trade liberalization significantly affect the labor formation in the economy by providing different employment opportunities, education, knowledge and technological transformation (Lardy 2003, Fieslas 2005; Akmal, Ahmad and Mohsin 2007; chudhary et all, 2010).

"Trade liberalization has positive and significant association with economic growth" different researchers have concurred the same results. Nevertheless, there are different evidences that this association is positive or negative. Mody (2007) determined that increase in the trade volume in japan sustained a significant effect on GDP growth and on the other side, increase in the trade volume in USA had negative impact on GDP growth of USA. Exchange rate has positive effect on GDP growth of any economy. When local currency becomes stronger, imports of goods and services become cheaper and value added exports causing more trade in international market which is positively influencing on the growth of any economy. Huang and Malhotra (2004), suggest that value of exchange rate depends on the level of growth of that country. The association between capital formation and GDP growth is very relevant to the economy's policy making with subject to international finance. More investment in the economy leads to enhance the income, which ultimately increase the economic growth of the country.

III. Description of the Variables

Gross Domestic Product (GDP)

Gross Domestic Product (GDP) is the total money value of all the finished goods and services produce in a state within a specific time period. GDP includes all the public and private consumption, physical capital, and exports minus imports that take place within a specific territory.

Trade Openness:

The Trade-to GDP is frequently used to measure the value of international transaction relative to domestic transactions. This indicator is evaluated for each country as the average of total trade (the sum of exports and imports) relative to GDP.

Trade openness is used as the proxy of trade liberalization. It is calculated us;

To = (Exports + Imports) / GDP X 100

Cross Fixed Capital Formation

It includes the total cost beard on land improve nets; Plants, machinery and equipment purchases; and construction of road, railways, and like, education instructions, offices, hospitals. It is the major part of GDP expenditure.

Human Capital

Human capital is a measure of economic value of an employee's skill. It recognize that all the labor is equal and the quality of the labor can be improved by investing in education, experience and abilities of employee's have economic value for employers and for the economy.

Description of Variables:

Variables	Description of Variables	Unit of Measurement	Sources
GDP	Gross Domestic Product	Current US$	WDI
TO	Trade Openness	As % to GDP	WDI
GFCF	Gross Fixed Capital Formation	Current US$	WDI
HCAP	Human Capital	School enrollment-SEC	WDI

Model Specification

I General specification of the model:

The model is determined with one regress and variable and the other regression variables are given below;

Y (X1, X2, X3, X4,……., Xi)

ii. Empirical speciation of the model:

GDP=f (TO, GFCF, HCAP)

Mathematical specification

GDP= B0 + B1 (TO) + B2 (GFCF) + B3 (HCAP) + u

The Model is;

LnGDP=B0+ B1 LnTo+ B2 LnGFCF+B3 LnHCAP+ u

Where

B0 is the intercept

B1, B2, B3 are the coefficient

LnGDP = the natural log of Gross Domestic product

LnTo = the natural log of Trade Openness

LnHCAP = the natural log of Human Capital

U = white Noise Error Term

IV. METHODOLOGY

The study is based on secondary data source of time series for Pakistan with the time period from 1980-2012 all the variables are in the real value and expressed in the logarithmic form. Arise in the trade openness is frequently determined the increase in the total volume of country's trade. The increase in the trade openness shoes the success of trade liberalization policies. Therefore, trade openness (exports plus imports) use as the percentage of GDP. The data on the trade liberalization, gross fixed capital formation. Human capital and GDP growth are taken from the world Development Indicators (WDI). The variables Gross Domestic product (GDP), Trade openness (TO), Gross Fixed Capital Formation (GFCF) and Human Capital (HCAP) as proxy for secondary school enrollment are determined for the empirical analysis depend on the modern economic growth theory.

In this study a slightly different method from Wang and Yao (2003) is employed in the construction of human capital index due to data limitation. The enrollment of secondary school education ratio is used instead of completed education due to some constraints in the data availability.

The vector Autoregressive (VAR) model will be used for this empirical study. The short run and long run dynamics between the trade openness, gross fixed capital formation, human capital and economic growth is finding by employing time series econometrics analysis, such as the Consecration analysis, Error Correction Model (ECM) and analysis of Granger Causality. According to Granger and Newbolt (1974) the OlS regression estimation in the occurrence of non-stationary variables yields spurious regression. Therefore, measuring the time series data for is of main importance for the reliable results.

The analysis of variables begins with the Unit Root test to specify whether the time series data are stationary at level or at first difference. The Augmented Dickey Fuller (ADF) developed a procedure for the Unit Root test to examine for the stationary of the variables. The optimal Lag Length procedure is determined by the Akaike's information criterion (AIC) and Schwarz's information criterion (SIC) or the more usefully by the necessary lag length to whiten the residuals. After determining the integration order of each time series and if the variables are any equilibrium or the long run relationship exists between the GDP and other repressors in the model. If the variables are cointegrated, the granger causality test will be directed on the vector error correction model (VECM) to find out the causality relationship among variables. While if there is no cointegration among the variables, then the VAR model will be used to test for the short run granger causality between the variables. Moreover, the VECM will be employed to the statistical diagnostic tests, namely, normality serial correction hetroskedasticity and Ramsey RESET tests of determine its statistical adequacy.

Results and Discussion

The primary analysis of data executed the significant role in understanding of the data. This provides the direct and simply summary of the data which make a positions in the mind of researcher for further clarification of the econometrics analysis. The descriptive statistics of our model concerned as following;

1. Descriptive Analysis

	LNGDP	LNTO	LNGFCF	LNHCC
Mean	24.87936	3.531959	23.07070	3.228559
Medium	24.85349	3.542910	23.01601	3.310249
Maximum	26.14000	3.661238	24.12377	3.600072
Minimum	23.88831	3.336823	22.15268	2.803645
Std. Dev.	0.653570	0.075428	0.609874	0.241240
Skewness	0.441068	-0.408414	0.390086	-0.412899
Kurtosis	2.090101	2.966672	1.999132	1.929548
Jarque-Bera	2.208361	0.918937	2.214308	2.5613241
Probability	0.331482	0.631619	0.330498	0.284614
Sum	821.0190	116.5546	761.3330	106.5424
Sum sq.	33	33	33	33

2. Correlation Analysis

	LNGDP	LNTO	LNGFCF	LNHCC
LNGDP	1.000000	-0.303123	0.990935	0.935916
LNTO	-0.303123	1.000000	-0.230018	-0.218279
LNGFCF	0.990935	-0.230018	1.000000	0.937302
LNHCC	0.935916	-0.218279	0.937302	1.000000

3. Unit Root Test

Variables	ADF statistics	Probability	Order of Integration
LNGDP	-5.343152	0.0001	I(1)
LNTO	-7.950091	0.0000	I(1)
LNGFCF	-4.517866	0.0011	I(1)
LNHCAP	-4.648374	0.0008	I(1)

4. Lag Length Criteria

Lags	AIC	SIC
0	-5.037081	-4.852051
1	-11.26300*	10.33785*

2	-11.23478	-9.569508

- Indicates lag order selected by the criterion

5 Johanson Contegration Test Results

5.1 Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value
None	0.451732	35.98933	47.85613
At most 1	0.308593	17.35859	29.79707
At most 2	0.151625	5.918765	15.49471
At most 3	0.026147	0.821357	3.841466

Trace test indicates no cointegration at the 0.05 level

5.2 Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value
None	0.451732	18.63074	27.58434
At most 1	0.308593	11.43982	21.13162
At most 2	0.151625	5.097408	14.26460
At most 3	0.026147	0.821357	3.841466

Max-eigenvalue test indicates no Cointegration at the 0.05 level.

6. Error Correction Model Results

Dependent variable: DGDP
Method: Least Squares
Date: 09/10/16 Time: 12:36
Sample (adjusted): 1981 12012
Included observation: 32 after adjustments

Variable	Coefficient	Std. Error	t-statistic	Prob.
C	-2.36E+11	1.38E+11	-1.709205	0.1003
DTO	-2.97E08	5.48E+08	-0.542770	0.5923
DGFCF	3.077026	0.669933	4.593038	0.0001
DHCC	3.36E+08	1.16E+09	0.289859	0.7744
LNGDP(-1)	5.89E+09	1.70E+10	0.346199	0.7322
LNTO(-1)	31.8E+09	2.13E+10	0.149359	0.8825
LNGFCF(-1)	5.52E+09	1.69E+10	0.327312	0.7463
LNHCC(-1)	-1.42E+10	1.27E+10	-1.118054	0.2746

R-squard	0.686215	Mean dependent var	6.30E+09
Adjusted R-Squared	0.594695	S.D. dependent var	8.77E+09
S.E. of regression	5.58E+09	Akaike info criterion	47.93595
Sum squared resid	7.48E+20	Schwarz criterion	48.30239
Log likelihood	-758.9752	Hannan-Quinn Criter	48.05741
F-statistic	7.497939	Durbin-Watson stat	48.05741
Prob(F-statistic)	0.000082		2.294192

7. Granger causality Tests Results

Pairwise Granger Causality Test sample:

Null Hypothesis	Obs	F-statistic	Prob.
LNTO does not Granger Gause LNGDP LNGDP does not Granger Granger Cause LNTO	25	4.38787 1.47520	0.0257 0.2976
LNGFCF does not Granger Cause LNGDP LNGDP does not Granger Cause LNGFCF	25	1.31498 0.96301	0.3539 0.5206
LNHCC does not Granger Cause LNGDP LNGDP does not Granger Cause LNHCC	25	0.56073 1.08420	0.7846 0.4559
LNGFCF DOES NOT Granger Cause LNTO LANTO does not Granger Cause LNHCC	25	9.85328 1.88940	0.0020 0.1935
LNHCC does not Granger Cause LNTO LNTO does not Granger Cause LNHCC	25	4.24075 1.05659	0.0283 0.4699
LNHCC does not Granger Cause LNGFCF LNGFCF does not Granger Cause LNHCC	25	0.68452 0.80941	0.5791 0.6139

V. Conclusion

This study analysis an attempt to describe the empirical evidence on the relationship among the trade openness, physical capital, human capital and economic growth. The empirical measurement based on Johansen Cointegration, Parsimonious ECM and granger causality for Pakistan time series data from 1980-2012. The significant results of time series econometric analysis are stated as:

1. The ADF unit root test indicates that all the variables are at stationary at their first difference, since the variables are integrated of same order, I(1)
2. Johansan Cointegration test shows that there exist a long run relationship between the trade openness, physical capital, human capital and economic growth……
……
3. The short run dynamic ECM results indicates that trade openness and human capital have significant effect on the GDP growth which explained the validity of exports led to economic growth hypothesis and modern growth theory for Pakistan.
4. This results indicated the importance of trade liberalization in order to increase the economic growth the study suggest that Pakistan should do more for effective trade liberalization policies to increase the more GDP growth.

Since, this study conclude that the trade liberalization and human capital are important factors for the Pakistan long term economic growth and development,

the following polices need to be adopted by the government for improving human capital and enhancing exports and GDP growth in Pakistan. Role of the trade liberalization and economic growth increased due to global recession of 2008-09 which indicate the positive link between trade openness and GDP growth; world GDP decreased due to fall in trade volume of world, then trade openness to be a significant contributor to GDP growth. Pakistan should focus on improving basic infrastructure, establishing entrepreneurship, Capital accumulation, favorable condition for investment and developing a secure macroeconomic framework.

To Accelerating the economic growth rate to more than the existing value, sustained macroeconomic stability in all the economic sectors particularly in agriculture and industry and introducing and investment-friendly business environment for Pakistan. At the same time, affective economic policies should be realized the dynamic economic functioning in the report-oriented policy environment.

5. The ADF unit roof test indicates that all the variables are at stationary at their first difference. Since the variables are integrated of same order, l(1).
6. Johansen Cointegration test shows that there exist a long run relationship between the trade openness, physical capital, human capital and economic growth……..……
……
7. The short run dynamic ECM result indicates that trade openness and human capital have significant effect on the GDP growth which explained the validity of exports led to economic growth hypothesis and modern growth theory for Pakistan.
8. This result indicated the importance of trade liberalization in order to increase the economic growth the study suggest that Pakistan should do more for effective trade liberalization policies to increase the more GDP growth.

Future

Since, this study conclude that the trade liberalization and human capital are important factors for the Pakistan long terms economic growth and development, the following polices need to be adopted by the government for importing human capital and enhancing exports and GDP growth in Pakistan. Role of the trade liberalization and economic growth increased due to global recession of 2008-09 which indicate the positive link between trade openness and GDP growth; world GDP decreased due to fall in trade volume of world, then trade openness to be a significant contributor to GDP growth. Pakistan should focus on improving basic infrastructure, establishing entrepreneurship, capital accumulation, favorable condition for investment and developing a secure macroeconomic framework.

To Accelerating the economic growth rate to more than the existing value, sustained macroeconomic stability in all the economic sectors particularly in agriculture and industry and introducing and investment-friendly business environment for Pakistan. At the same time, affective economic policies should be realized the dynamic economic functioning in the export-oriented policy environment.

REFERENCES

[1] Adams, S. (2009) Foreign Direct investment, domestic investment, and economic growth in Sub-Saharan Africa, 1850-1935. Journal of Policy Modeling, 31, pp. 939-949. Hyperion Economic Journal Year III, no. 2(3), June 2015.

[2] Adhikary, B.K. (2011) FDI, trade openness, capital formation, and economic growth in Bangladesh: a linkage analysis. International Journal of Business and Management, 6(l), pp. 16-28.

[3] Adams, S(2009). Foreign Direct investment, domestic investment, and economic growth in Sub-Saharan Afica, 1850-1935. Hiyrbak if Oikuct Nidekubgm 31, pp. 939-949. Hyperion Economic Journal Year III, no. 2(3), June 2015.

[4] Adhikary, B.K. (2011) FDI, trade openness, capital formation, and economic growth in Bangladesh: a linkage analysis. International Journal of Business and Management, 6(l), pp. 16-28.

[5] Afzal, M. (2009). Population Growth and Economic Development in Pakistan. The Open Demography Journal, 2, pp. 1-7.

[6] Bond, S., Leblebicioglu, A. & Schianterelli, A. (2010) Capital accumulation and growth; A new look at the empirical evidence Journal of Applied Econometrics. 25(7), pp. 1073-1099.

[7] Buehler, S., Helm, M., & Lechner, M. (2011) Trade Liberalization and Growth: Plant-Level Evidence form Switzerland. University of St. Gallen: School of Economics and Political Science.

[8] Elboiashi, H., Noorbakhsh, F., Paloni, A. & Azemar, C. (2009) the causal relationship between foreign direct investment (FDI), domestic investment (DI) and ecomoic growth (DGP) in North a frican non-oil producing countries: empirical evidence form contegration analysis. Advancs in Management, 2(11), pp. 19-25.

[9] Furuoka, F. (2009). Population Growth and Ecomoic Development, New Empirical Evidence from Thailand. Economics Bulletin, 29(1), pp. 1-14

[10] Furuoka, F., & Munir, Q. (2011) Can population Growth Contribute to Economic Development? New Evidence from Sigapore. Economics Bulletin, 31(4) pp. 3226-3239.

[11] Greenaway, D., Morgan, W., & Wright, P. (2001) Trade Liberalisation and Growth in Developing Countries. Journal of Development Economics, 67(1), pp. 229-244.

[12] Hoori, L.H. & Wah, T.B (2010) Linkages between foreign direct investment, domestic investment and economic growth in Malaysia. Journal of Economic Cooperation and Development, 32(4), pp. 75-96.

[13] Loncan, A.H. (2007) Infrastructure investment and Spanish economic growth, 1850-1935. Exploration in Economic History, 44, pp. 452-468.

[14] Merican, Y. (2009) Foreign direct investment and growth in ASEAn-4 nations.

[15] International Journal of Business and Management, 4(5), pp. 46-61.

[16] Mushtaq, K. (2006) Population Growth and Economic Development. Test for Causality. The Lahore Journal of Economics, 11(2), pp. 71-77.

[17] Saves, B. (2008). The Relationship between population and Economic Growth:

[18] Empirical Evidence from the Gentral Asian Economics. OAKA, 3(6), pp. 161-183.

[19] Soliu A. & lbrahim, O. (2014) Empirical analysis of trade openness, capital formation, FDI, and economic growth: Nigeria experience. The international journal of Social Sciences and Humanities Invention, l(1), pp. 36-50.

[20] Trang, P.T., & Hieu, T.H. (2011) Effects of Population Growth on Ecnomic Growth in Asian Developing Countries. Bachelor Project in Economics, Malardalen University.

AUTHOR'S PROFILE

Zaki Waseem Ullah
Is a high school student in his senior year at the International School of Choueifat in Lahore, Punjab, Pakistan. He will graduate from High School in June 2018. He is interested to pursue economics in his undergraduate degree.