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Analyzing the Role of Trade Openness in Economic Growth of Pakistan

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ABSTRACT

Trade openness is a vivid indicator of emerging economies & one of the most important determinants of growth. Therefore, quite a number of researchers have endeavored to analyze the significance & impact of trade openness on economic growth for various economies. Generally, the theoretical framework supports the constructive & positive impact of economic openness of a country for its overall economic development; however, there are mixed outcomes of empirical findings, especially for developing countries that experience fluctuations in their economic growth rate. This research work has employed trade to GDP ratio as a proxy variable for trade openness to examine its effect on the growth of Pakistan. The finding of this study does not reveal any considerable effect of trade liberalization during 1972-2016 on the growth of the Pakistan economy. The study concludes its premise based on empirical results that those economies that have a comparative advantage in trade with significant competitiveness usually benefit from liberalization, export promoting, and diversifying policies. The trading partners of Pakistan were and are mostly Western countries that have the comparative advantage of trade over Pakistan. Therefore, the government of Pakistan needs to promote & diversify its exports to those countries in which Pakistan has a comparative advantage in the international market.

JEL Classification: *F14, F00, F11*

Keywords: *Trade Openness, Economic Growth of Pakistan, ARDL Approach.*

INTRODUCTION

Trade Openness & Trade liberalization has progressive impacts on economic growth and development, such as technological diffusion, infrastructure, production, investment, employment, market exposure, and uninterrupted movement of factors of production. Trade openness provides access to a competitive environment for industrial investment & consequently encourages quality production and economic growth (Njikam, 2003). Trade openness created grounds for technological developments & effective utilization of factors of production. The theory is backed by vast literature supporting that trade openness has great significance in developed & emerging economies (Musleh-Ud Din, 2004). As a known factor that trade being a vital element of economic development, there should be lower export & import barriers to encourage free trade (Awokuse, 2007). Comparatively higher motivations in imports relatively than exports could be challenging for the balance of payment and subsequently detain the general economic growth level. Due to lake of capital facilities and infrastructural deficiencies, the phenomenon known as trade openness or liberalization is challenging in developing countries (Santos-Paulino & Thirlwall, 2004; Ju, Wu and Zeng, 2010).

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Policies supporting trade liberalization & open economies improved the production capacity of the economy and increased specialization by manufacturing commodities with comparative advantages. Moreover, diffusion of technology, information, and quality increases the competition and further production yield. By facilitating the free mobility of capital, trade liberalization can prove a huge potential to generate new investment opportunities (Yasmin, Jehan & Chaudhry, 2006).

From 1978 through 88, Pakistani Government implemented a trade liberalization policy aiming at reducing tariffs in order to encourage imports of capital & inputs to advance the industrial sector besides increasing exports (Shahbaz, Jalil, & Islam, 2011). Furthermore in 1988, few fundamental reforms were sanctioned to encourage trade liberalization through implementing the Structural Adjustment Program (SAP), succeeding an agreement with International Monetary Fund (IMF). Similar to other emerging economies Pakistan also anticipated to be aided through exports' exposure in world market under agriculture and textile agreements of World Trade Organization. With the expansion of trade liberalization in Pakistan, import duties were eventually reduced, and few subsidies were removed under the WTO agreements (Siddiqui & Iqbal, 2005).

Throughout Pakistan's economic history, frequent fluctuations troubled GDP growth. Moreover, the situation has been further accompanied by an inefficient performance of many vital macroeconomic factors, political instability, incompetent policy measures, domestic & external riots & war. Alongside these general problems, other considerable issues causing deterioration in economic growth are numerous unsolved structural issues such as narrow tax basis, stubborn public expenses, and a severe debt burden that contracted the fiscal potential for public sector investment.

Scope and Contribution of the Study

Current research work can be considerable support for evaluating the performance of trade liberalization & its impact on the economic growth of Pakistan. Significance of trade liberalization for an economy is a sizzling issue these days in emerging & developing economies. Since independence (with the exception of a few years), Pakistan is confronting a prolonged low GDP growth rate & trade deficit consequently to recover the situation, there is a profound need to investigate these fields thoroughly.

In the race of the development among world economies, Pakistan is a struggler & has to embrace liberalization police to gear up its development and grasp the gains from the free international market. However, simultaneously, it is a developing country with an inefficient industrial base and has to protect local industries through incentives such as protection in the form of import tariffs & quotas & subsidies for domestic producers. The study will concentrate on recommendations to cope with such issues by suggesting improved measures of trade openness & liberalization, which would promote home industries & economic development in free economic system so that economic output can be maximized in terms of both quantity and quality. It might also specify the potential sectors which can gain from trade liberalization and suggest some recommendations to those which will suffer from the strategy of an open economy. Therefore, this research piece is an empirical effort to recognize and answer the questions, whether openness of trade has an imperative role in the economy of Pakistan as well as that either trade policies is hindrance or assistance in balancing the trade of Pakistan?

The Objective of the Study

The core objective of this research work to evaluate the effect of trade openness on the growth of the Pakistan economy for the period of 1972-2016.

LITERATURE REVIEW

The government of Pakistan has taken numerous measures toward a more open & liberal economy right after independence and particularly from 1988 and onwards. Nevertheless, yet liberalization policies also have some destructive impacts on exports & economic growth. This study empirically examines that either on average, Pakistan has gained or lost by adopting trade labialization? Besides the active support of theoretical literature, the empirical findings show mixed and ambiguous effects of trade openness on economic development & growth. Some the past studies regarding the impact of trade openness on economic growth and their findings are briefly discussed below.

Liu, Song, and Romilly (1997) examined the connection between economic growth & trade openness for China for the period of 1983 to 1997 applied various analytical techniques. The bi-directional causality relation existed between economic growth & trade openness that leads to a considerable impact on the Chinese economy, increasing exports & economic development. Whereas, Lardy (2003) emphasized the role of policies supporting trade liberalization and its effect on the Chinese manufacturing sector and revealed that trade liberalization has a significant positive effect on the manufacturing sector of China during 1980-2002. Powell and Nourzad (2003) investigated the role of trade liberalization on the economic growth of 47 less developed economies and found positive role of trade openness on the economic growth of the selected countries during 1970-2002.

Georgios (2003) investigated the association between trade liberalization and economic growth. The study has two sections; in the first stage, he has used panel data of 156 economies from 1951-1998. In the next section, 105 countries have been observed for 1960- 1997, analyzing the data for a longer time period compared to the previous section and found a positive effect of trade openness on the GDP of countries under consideration. Rahman (2004) investigated the effect of trade liberalization on Bangladesh's economy using trade Gravity model with its 42 major trading partners and found a significantly positive effect of trade liberalization on the economic growth of Bangladesh during 1972-1999 moreover increases trade capacities towards trade partners. Hassan and Islam (2005) found the same results for Bangladesh from 1986-2002.

Some researchers found the immediate impact of trade openness on the economy of Pakistan, i.e. (Yasmin et al., 2006; Mohey-ud-Din, 2007; Akmal, Ahmad, Ahmad &Butt, 2007; Seemab, Safia, Roohi &Noreen, 2010; Hamid, 2013). However, these studies did not give conclusive outcomes. Yasmin et al. (2006) concluded that trade liberalization has a significant role in generating new opportunities for employment but inefficient in adjusting income distribution & discriminations in Pakistan for both long-run & short run.

Akmal et al. (2007) examined the effect of trade liberalization on poverty & economic growth of Pakistan for 1973-2003. The study has applied the headcount ratio & Error Correction Model (ECM), & Johnson co-integration approaches for estimating long run and short run association between the variables observed. The author concluded the significant effect of

trade openness on poverty reduction & economic growth in the long run in Pakistan. Afzal (2009) and Seemab et al. (2010) give ambiguous results for the short and long run. They have determined that trade openness has a less efficient role in poverty reduction in the short run while it has a significant impact in the long run. Trade liberalization has been ineffective in the case of income inequality in Pakistan.

However, few research studies found a negative impact of trade openness on the economic growth of Pakistan and some other countries. Jin (2003) investigated economic growth & trade liberalization for Korea. By using Vector Auto-Regressive (VAR) model for cross-sectional data of 1970- 1995 for determining the empirical association between the variables. The conclusion revealed the negative effect of trade liberalization on the economic growth of Korea under the influence of the crowding-out effect of local investment. Moreover, a negative impact of inflation on economic growth & international trade.

Greenaway, Morgan and Wright (2002) examined the impact of trade liberalization on the economic growth of emerging economies, and they found no significant impact of openness on economic growth. Freund and Bolaky (2008) empirically examined the effect of trade openness on economic growth employing cross-sectional data for more than a hundred (100) countries, and the study findings show that trade liberalization has no considerable role on the growth of the selected sample of countries.

Umer (2014) investigated the effect of trade liberalization on the economic growth of Pakistan, but this study did not shows any precise results regarding the effect of openness and concluded with doubt findings. The study used too long periods for analysis, and secondly, that period contains economic policy conflicts, especially before the 1970s, that might have affected the results for trade liberalization in the case of Pakistan. The research outcomes of (Amir & Iqbal, 2005) were also mixed and inconclusive. The results revealed a significantly negative association among economic growth & trade liberalization in the long run, however positive association between economic growth & investment. Critical analysis of this study shows unclear and ambiguous results, unable to give clear & significant results. Moreover, the findings supported significantly positive findings from the VAR regression & co-integration analysis while insignificant outcomes from the Granger Causality test. Therefore it can be analyzed that the researchers just run spurious regressions without reliable backup and produced biased outcomes.

After critically analyzing the various studies mentioned above, it is concluded that most of the studies that showed a significant role in openness on growth mostly suffer from misspecification problems that lead to inconclusive findings and results.

ECONOMETRIC MODEL AND DESCRIPTION OF DATA

Economic growth may be accredited to an increase in overall production in the economy that may owe to effective improvement and advancement of technological, capital, and human resources. However, some of the policymakers, academic researchers and economist were and are of the view that trade liberalization policies and openness is an essential element for the rapid growth of the economy and arbitrated it as "push to growth." The openness of trade and liberalization policies enriches the growth of economies that includes technological diffusion, improvement in the human capital, generating investment activities, exploring domestic and

international markets (Hamid, 2013). Various researchers are developing the theoretical framework of regarding the relationship between openness and growth postulates that openness of trade is unswervingly related to the growth of GDP, exports to GDP, imports to GDP as well as a sturdy balance of trade.

The general form of the model that will be regressed to evaluate the effect of openness as well as other supporting variables on the growth of Pakistan from 1972-2016 is

$$GDP\ t = \beta 0+\beta 1\omega t +\beta 2\varkappa t+\beta 3\ \phi\ t +\beta 4\ \theta\ t +\mu t \quad (1)$$

In the above model "ω" is used for growth variables, "ϰ" for dummy or proxy, "ϕ" signify the characteristics variables and "θ" characterizes the specification variables that are used in this study (Burger, Frank van & Gert-Jan, 2009; Santos, Joao, & Tenreyro, 2006; Kolstad, 2009; Mehlum, Moene & Torvik, 2006; Moulton, 1986).

This study is focusing to evaluate that either performance of trade openness and liberalization policies has any far-reaching effect on the economic growth of Pakistan. For openness, the Proxy {X+M/GDP} variable is used. The researchers, economists, and policymakers believed that trade openness affects the exports and trade of the country that may be augmented to the growth of economies. Therefore, this study takes exports as the essential growth variables. The exchange rate also affects the trade of one country with other countries, that is why the exchange rate and the error term is considered as specification variables. Now, the theoretical model developed for this study in light of the above brief discussion is as follows.

$$GDP = f\ (X, TOP, ER, TOT) \quad (2)$$

In the above theoretical model, (2) "GDP" denotes economic growth and is the dependent variable. The independent/ explanatory variables are exports of Pakistan (X), [3]Proxy variable for trade openness (TOP), the exchange rate (ER), and terms of trade (TOT). The regression model consists of the model (2) is;

$$GDP\ t = \beta 0+\beta 1Xt +\beta 2\ Top\ t +\beta 3\ ER\ t +\beta 4\ TOT\ t +\mu t \quad (3)$$

Data Description and Sources

In order to evaluate the effect of openness of trade as well as of openness policies on the growth of Pakistan, the time series data is regressed from 1972-2016. The data is taken from State Bank of Pakistan (SBP), Bureau Statistics, The Global Economy, International Financial Statistics (IFS), Ministry of Trade and Commerce Islamabad (Pakistan), Economic Affairs Division, and different issues of Economic Survey of Pakistan.

METHODOLOGY, RESULTS AND DISCUSSION

Testing of Unit Root

First of all, the data is checked for the level of stationary through Augmented Dicky-Fuller test, as the spurious relation and unit root was remains as a primary concern for the economist, researchers, and policymakers, especially in time analysis series. The data used in the current research paper is time series, that is why, before proceeding to further analysis, it has been

tested one by one to find out the order of integration within data for the proper and appropriate method that will be used as an analytical technique for further analysis.

Table 1:
Level of Stationarity of Variables

	t-values		Critical Values (at 5%)
	I(0)	I(1)	
Log(GDP)	-2.232829	-5.2900931	-2.951125
Log(X)	-0.946466	-5.554290	-2.951125
Log(TOP)	-4.065177	--	-2.951125
Log(ER)	-0.633123	-4.303871	-2.951125
Log(TOT)	3.798022	--	-2.951125

3 Iscan and Talan (1998), Sinha (2000), Wacziarg (2001) and Yanikkaya (2003) have also used

The variables used in this study to evaluate the effect of openness on growth shows the level of stationarity at I(0) and I(1). The variables "TOP" and "TOT" are stationary at I(0), "GDP," "X," and "ER" are stationary at I(1). Pesaran et al. (2001) suggested that to escape the complexities and order of integration for each variable, the Auto Distributed Lag Model is an appropriate method for regression analysis under such circumstances; therefore, the ARDL method is applied for further analysis in this study.

Regression Analysis and Interpretations of Variables Results

Many researchers evaluate the effect of openness on the growth of different economies, and they have found the assorted effect on the varied sectors of the economies as well as on growth. This ambiguous and uncertain effect may be off due to differences in liberalization policies, specialization of goods and services, production capacity, the substitution of capital and labor, technological advancement, and efficient allocation of resources (Hassan & Islam, 2005). In short, it is evident that without effective liberalization policies and trade, there is rapid growth and development, especially of emerging economies (Freund & Bolaky, 2008). The openness of trade and liberalization policies encourage the production, specialization and for investment through providing better opportunities and smooth the ways of domestic production to the international market that leads to income-generating activities through exports and reducing poverty by proving employment opportunities (Khan & Sattar, 2010; Hassan & Islam, 2005). However, the effect of openness remains very ambiguous, especially in developing countries. In order to examine the effect of openness on the economy of Pakistan, this study regressed the variable openness with support of exports and other variables to evaluate its effect empirically, and the results obtained from the analysis of variables data are incorporated in the table (2).

Table 2:
ARDL Analysis of Variables (variables are in logarithmic)

Variables	Estimators values	S. Error Values	t. Values	P. Values
C	-0.138378	0.065589	-2.109753	0.0493
Exports (X)	0.116241	0.043839	2.651485	0.0216
Openness (TOP)	-0.219408	0.069113	-3.174586	0.0004
Exchange Rate (ER)	-0.175308	0.079161	-2.214564	0.0244
Terms of Trade (TOT)	-0.132767	0.038843	-3.417969	0.0026
Adjustment Term (ECT)	-0.570458	0.132511	-4.304983	0.0015
Lag GDP ($GDP_{(-1)}$)	0.234721	0.049199	4.770822	0.0008
R^2 Value	0.873440	D.W Value		1.966224
Adj. R^2 Value	0.859178	P. (F-stat. value)		0.000000

The results integrated into the table (2) shows that the overall analysis of the model is proper, and the main estimator results (Prob. (F-stat), R2, and DW values) confirm the reliability, acceptability, and goodness of the model.

From the last few decades, exports are a vital component of policy advice for policymakers, especially in developing countries. Exports are considered an imperative component of globalization that also has a considerable role in improving the interaction between national economic systems as well as in different economies (Hamid, 2013). Exports are directly associated with the growth of international production, trade, employment, marketing of products, infrastructures, capital and industrial setup, modern technology, and development (Jin, 2003). Examining the impact of exports in the economic growth of Pakistan, the results indicate that exports have a hopeful and considerable effect on growth but, unfortunately, not that effective. Reason of low contribution of exports of Pakistan to its economic growth is that mostly the exports of Pakistan are few goods that mostly contains primary and low-quality value product.

There is a huge contrast that exists on the effect of trade openness. There were many studies that greatly support and found the influential role of trade liberalization, especially in the case of developing countries (Adebiyi & Ros, 2006). However, the role of liberalization policies remains very controversial in the case of developing countries. Akhter (1999) concluded that most of the developing countries that rely on the primary sector have inversely affected by trade openness. This study is an attempt to empirically investigate the effect of openness on the growth of Pakistan as nowadays most of the economics and policymaking researchers give much attention to the cited issue. The study does not find any significant effect of openness on growth and concludes that instead of fruitful contribution adversely affects the trade balance of Pakistan. If the facts and figures of Pakistan's economy are keenly observed, it shows that the imports of Pakistan increase more than its exports due to liberalization policies that may lead to a negative impact on the BOP of Pakistan. The imports shares in the foreign trade of Pakistan is about sixty-six (66) percent during 2014-15, and that of exports are thirty-four percent, while in 2013-14[4] the share of imports was approximately sixty-four (64) percent, and that of exports was about thirty-six (36) percent.

The policymakers and economists believe that the exchange rate and growth via exports are negatively associated with each other. That is why most of those countries whose exports are

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higher and also those countries whose aiming to increase growth via exports are frequently devalue their currency that leads to falling in the exchange rate, making their products cheaper (Gomes & Paz, 2005). The outcomes of this study showing the inverse relationship between the exchange rate and GDP of Pakistan as expected and illustrated by empirical and theoretical literature. The terms of trade have become the core issue for researchers, economists, and policymakers these days, especially in developing countries. The dramatic shifts towards liberalization policies and globalization of the economies have increased the prominence of terms of trade (Blattman, Hwang & Williamson (2003). The findings of the study indicate that terms of trade have statistically significant with negative sign divulges that a 1% decrease in terms of trade adds up to thirteen percent to GDP of Pakistan.

The inverse sign of ECT indicating that the model is reversible and adjustable with a speed of 56%.

ARDL Long Run and Co-integration Analysis

For co-integration and long-run relation of explanatory variables with the growth of Pakistan, the bounds testing, co-integration, and long-form tests are regressed, and the outcomes of these approaches are given in tables (3) and (4).

The outcomes of bound testing approach and long-run form verifies the long-run relation of some variables with the growth of Pakistan rejecting [5]Null hypothesis.

Table 3:
Bound Test Outcomes

	Value	I(0)	I(1)
F-stat. values	9.45059*	2.32	3.5

From table (4), it is clear that the variables are strongly co-integrated with each other as the co-integration value is significant at 5% having a negative sign. Further, the variables exports, exchange rate, and terms of trade have significantly affected the growth of Pakistan during the study period as these variables are significant at 5%, 1%, and 5% having positive signs. However, openness has not any significant effect in the long run.

Table 4:
ARDL Co-integrating and Long Run Form

	ARDL Co-integration			ARDL Long-form Coefficients		
Variables	Coefficient	t-statistics	Probability	Coefficient	t-statistics	Probability
Log(X)	-0.136918	-1.948512	0.0775	0.158149	2.799509	0.0421
Log (TOP)	-0.207194	3.921431	0.0052	-0.269705	-0.695117	0.9494
Log (ER(-1))	0.145036	0.724942	0.4851	0.248903	3.855824	0.0032
Log (TOT)	-0.117998	-1.693527	0.1212	-0.125067	-2.763655	0.0458
CointEq(-1)	-0.551176	-2.392349	0.0302	--	--	--

5- Null Hypothesis is β1= β2= β 3= β 4= β 5= β 6= 0 (there is no long-run relation

Stability Analysis

To examine the reliability, goodness, stability, constancy, and specification of the outcomes, different stability and diagnostic approaches are used. The Ramsey RESET test is regressed to check the stability and specification of the variables, Breusch-Godfrey, to examine the serial correlation and independence of error term for each year and Breusch-Pagan-Godfrey for heteroskedasticity. The results of these models are integrated into tables (5), (6), and (7).

The Ramsey RESET results integrated into the table (5), showing that the regression analysis is highly relevant variables and does not predict any chances of misspecification.

Table 5:
Results of Stability and Specification of Variables

	Test Values	P-values
F-stat. values	1.558699	0.4238
Obs* R-squared	3.546940	0.3922

To outline the serial correlation problem in residual as well for auto-correlation by applying BG LM Test results obtained from the residual diagnostic analysis of the model indicates that the model is not suffered from the problem of serial and auto-correlation nor any sort of spurious relation as the P-values are highly insignificant. Further, the outcomes of the Breusch-Pagan-Godfrey (BGP) test shows that the model does not affect the heteroscedasticity problem given in the below table (6).

Table 6:
BG and BGP Test Results

	For Serial Correlation		For Heteroscedasticity	
	Test values	P-values	Test values	P-values
F-stat. values	0.074007	0.7947	0.678205	0.7687
Obs* R^2 Value	0.328975	0.5663	14.99458	0.5959

CONCLUSION

An in 1983-88 trade liberalization policies initiated in Pakistan and were implemented with significant intensification after 1988. Aim of all foreign economic policies was to transformation of the structural system from scrape by eluding earlier policies related to industrial progress. Export-led industrialization being the primary policy determent and focus has been concentrated on the advancement of improved value-added manufactured products & exports. On the other hand, trade liberalization has been adopted mainly by lifting import duties & restrictions. The empirical results and findings of this study conclude that trade openness does not have a significant impact and role in uplifting economic growth in the case of Pakistan. Besides the scarcity of resources, Pakistan also does not have sufficient bargaining power in the international market, especially with developed countries because of non-membership primary free trading zone or custom unions. However, trade with individual countries, especially exports, is being constrained with bilateral trade agreement & thus subjected to numerous tariff & quota restrictions. Pakistan's exports are significantly concentrated on textile & cotton that has been vulnerable to protectionism and MFA

(Multi-Fiber Arrangements) by developed & developing countries; if not so, Pakistan would have more significant opportunities to export garments, textile & clothing to more diversify & demanding markets. Moreover, developed countries have imposed numerous obstacles & restrictions under the title of human rights, child labor, & environmental protection laws & regulations on exports of Pakistan, besides anti-dumping in markets of less developed countries.

The study concludes based on obtained results that those economies that have a comparative advantage in production as well as in international trade advantage usually benefit from liberalization, export promoting, openness, and diversifying policies. Since independence, Pakistan is mostly trading with developed and western European [6]Countries that have a comparative advantage over Pakistani goods and did not expand their access to domestic goods to new emerging and developing countries. Further, the industrial sector of Pakistan relies on unskilled labor and traditional ways due to which it is unable to succeed in controlling and minimizing the trade deficit up to the desired level.

The study suggests that Pakistan needs to explore its export markets in developed as well as in developing countries. Secondly, due to trade liberalization facts and figures as well as empirical findings show that imports of Pakistan have increased much as compared to exports, Pakistan needs to control their imports and rely on domestic goods. Further, focus also needs for quality and quantity of exports, technology and production, access to the foreign market, and utilization of domestic resources. In concluding remarks this study summarizes that both past outcomes and actual records of international trade doesn't show any fruitful and progressive effect of liberalization policies adopted in 1988 and were reformed after 1998 that leads to the conclusion that these reforms don't reflect the structural transformation of exports performance and production efficiency of both agricultural and manufacturing sector of Pakistan.

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