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Economic Growth, Financial Development and International Trade: The Evidence of Pakistan's Preferential Trade Agreements

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Abstract: This study analyzes the link between financial development, economic growth and international trade in case of Pakistan over period 1972-2016 by applying Johansen co-integration and granger causality. This study also checks the benefits of all free trade agreements of Pakistan by using panel regression analysis. The outcomes of the study suggest that there is great link exist between all economic indicators. Financial developments have an effect on the trade openness and afterwards such trade liberalization improves the GDP growth. All FTA/PTA have positive impact on Pakistan's trade and Pakistan economy. Both partners can get more and more benefits from these agreements.

Keywords: Financial Development, Trade, Economic Growth, integration
JEL Classification: F36, N70, F02

1. Introduction

The connection between economic growth, financial expansion and trade flows has become important issues for the developing countries. In the literature, these connections have not been commonly explored. Financial sector and trading activities is most important factors for growth of an economy. It has been recommended that policies for trade and financial openness enhances the production activities and boosts up economic growth. Globally more integrated economies have boosted up more (Mckinnon, 1973; Shaw, 1973; World Bank, 1989; Fry, 1995, 1997; Darrat, 1999; Levine, 1997; Jin, 2000).

Free trade is playing a significant role to raise trade flows between member countries. The concept of Free/Preferential Trade agreements among developed and developing countries has become more popular during the past decades. Since independence, Pakistan has faced large trade crisis, as imports of country have grown more rapidly than exports.

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The volume of exports can be affect on trade balance as it is a source of international payment for a country.
There are many studies which examine the export performance of a country under preferential trade agreements. The establishment of PTA needs the willingness of two countries. Grossman and Helpman (1995) argued that such trade agreements enhance the comparative advantages between the partner countries. However, the results are Pakistan's Export Performance inconclusive. There is a huge literature discusses the relationship between financial growth and economic expansion. Most of studies argued that financial developed countries grow economically through different channels; one of them is export growth (Rajan and Zingales, 1998; Hur and Riyanto, 2006; Shahbaz, 2009; Shahbaz and Rahman, 2014; Yuan et al., 2014,). Although, huge literature investigated the relationship of GDP growth, export and financial development but limited studies are available on Pakistan's economy. In this study, main objective is to examine the connection of economic growth, financial expansion and trade flow, and afterwards decide the causal direction for Pakistan. As we know that in recent world no single economy can survive. Need of interdependence has increased day by day. For this purpose, free trade agreements have played main role to full fill the needs of worldwide economies. Pakistan has also signs some free trade agreements with its trading partners. Afterwards, this study will explore the gains of Pakistan's FTA/PTAs for its economy and with which country's FTA is more beneficial for Pakistan's trade

The article organizes as follows: Second section reviews previous studies and section three defines data, model and estimation methodology. Results discussed briefly in Section four and next section concludes the paper.

2. Literature Review

The significant correlation between economic development, finance improvement and trade liberalization has been studied in the empirical and theoretical literature.

The relationship of trade flows and economic growth has considered more important in the literature. Smith (1776) and Robertson (1938) was first to highlight the direct impact of trade flow and economic development. Afterwards, many studies supported this view for many countries (Chow, 1987; Marin, 1992; Bahmani-Oskooee and Alse, 1993; Jin, 1995; Xu, 1996; Shan and Sun, 1998; Edwards, 1998). Yucel (2009) has investigated this correlation for Turkey and Loots (2000) has supported these findings in case of South Africa.

The literature on financial and economic growth is reviewed by many researchers. King and Levine (1993), Gregorio and Guidotti (1995), Levine and Zervos (1998), and Kenourgios and Samitas (2007) have found strong link for different countries. Demetriades and Hussein (1996), Utkulu and Ozdemir (2004) and Vuranok (2009) have supported the direct links for Turkey and Kilimani (2009) has found this relationship for Ugandan economy. But in few studies like (Shan et al. (2001); Shan and Morris, (2002); Gries et al. (2009), no relationship have not explored for OECD countries. Ahmad et al. (2004), Shirazi and Manap, (2004), Ullah et al (2009), Mahmood (2010), Rahman and Shahbaz, (2012) and Asghar and Hussain (2014) have reported the vital role of economic growth to attracting foreign direct investment for Pakistan.

However, the connection of financial development and trade has get less and limited interest in the literature. Kletzer and Bardhan(1987), Baldwin (1989), Beck (2002), Ribeiro de Lucinda (2003), Slaveryd and Vlachos (2005), Ju and Wei (2005), Wynne (2005) and Becker and Greenberg (2005), have considered the connection between these variables.

But, very few studies analyzed the correlation between financial developments, economic growth and international trade altogether. Khan and Qayyum(2008), Shaheen et al. (2011), Shahbaz and Rahman (2014), Gokmenoglu et al.(2015) and Chandio et al. (2017) have also found a long run relationship between economic growth, international trade and financial development in case of Pakistan. Yucel (2009) and Savrun (2011) have examined bidirectional causality between real income, financial development, and trade in Turkey. But, Hassan and Islam (2005) and Uddin and Chakraborty (2009) have found no relationship in case of

Bangladesh. Hanh (2010) has found a casual relationship for 29 developing economies of Asia . Gries et al. (2009) have explored unidirectional causality between financial development, economic growth and trade for Sub- Saharan countries. Katırcıoglu et al. (2007) have also examined this correlation in case of India, and Jenkins and Katircioglu (2010) have found this link in Cyprus. Rahman (2012) has found this relationship for Australian economy.

Few studies are examined the importance of free trade agreements on Pakistan's trade and economy. However, limited presence of intra-industry trade between Pakistan, India, Bangladesh and Sri Lanka is examined by Khan (2010). Pakistan’s export performance has examined by Alam (2012) under free or preferential trade agreements (PTAs). The SAFTA and PTAs has improved export performance of China and Iran. There is no evidence that the bilateral PTAs with Sri Lanka and Mauritius affect export performance of Pakistan. According to Irshad et al. (2014), China should focus on different regions by promoting free trade agreements. Hussain and Shah (2014) examined that under tariff reduction, china takes more benefit from FTA with Pakistan and china. Gul (2014) has suggested that proposed preferential trade agreement (PTA) between Pakistan and Turky would be beneficial by analyzing three different trade indices.

3. Data Collection and Estimation Methodology

This part has discussed data description and estimation methodology in detail.

3.1. Data Source

In this paper data has been used over the period 1972 to 2016 containing variables, Gross Domestic Product (GDP) in constant 2005 US$, financial development index and trade openness define as imports and exports to GDP ratio (TO). Control variables which are used in the model are: Exchange rate, inflation rate, budget deficit, Population rate, capital formation and foreign direct investment etc.

Data has been collected from WDI, International Finance Statistics and UN Comtrade.

3.2. Empirical Analysis

This empirical study determines the causality connection among economic development, trade openness, and financial liberalization in Pakistan and its major FTA/PTAs. The ADF unit root tests have been used to check stationarity of data. In order to investigate the co-integration association between dependent variable and independent variables, Johansen and Juselius (1990) co-integration test is applied. For direction of causality relationship between FD, TO and GDP Granger-causality test have been employed. Afterwards, panel regression has been done to check the impact of Pakistan's FTA/PTA. The following equation is estimated:

$$gdp_t = \beta_0 + \beta_1 fd_t + \beta_2 to_t + \varepsilon_t \qquad (1)$$

4. Results and interpretation

In this section overall results have been discussed in details.

4.1. Unit root tests

Stationary of the data has been investigated by ADF unit root tests. The estimated results are revealed that FD, GDP and TO are stationary at their level 1(0). All variables having same order of integration, so we have investigated the co integration. The results are given in Table 5.1 below.

Table 1: The ADF Test

Variables	ADF T-test (at Levels)	Critical Values
FD	-3.710368 (0.0073)	-3.5924 (1%),
GDP	-5.02349 (0.0002)	- 2.9314 (5%) & -2.6039 (10%)

TO	-6.94332 (0.0000)

4.2. Co integration Analysis

Next we examine the link between financial expansion, trade openness and GDP growth for Pakistan's economy. The outcomes of Co integration test are reported in Table 2.

Table 2: Johansen's Cointegration Test

Λ-Trace Eigen-value	H_0	H_1	Trace	5% level	Λ-Max H_0	H_1	Max	5% level
0.350649	r≤0	r>0	37.17326	29.79707	r≤0	r>0	38.56663	19.10162
0.258453	r≤1	r>1	18.60663	15.32471	r≤1	r>1	12.85773	14.26460
0.125143	r≤2	r>2	5.748900	3.841466	r≤2	r>2	5.748900	3.841466

Keeping in view the above, results suggested that there is significant long run correlation exist. These results are in favor with the outcomes of Khan and Qayyum (2008), Shaheen et al. (2011), Shahbaz and Rahman (2014), Gokmenoglu et al. (2015) and Chandio et al. (2017). The estimated equation is given by:

$$gdp_{pk} = 20.036 + 0.2477fd_{pk} + 1.205to_{pk} \tag{2}$$

4.3. Granger Causality

Next, direction of causality have examined by getting the evidence of the long run relationship between variables of interest. Table 3 shows the results.

Table 3: Granger Causality Test

Hypothesis	F statistics	P value	Conclusion
$GDP_{pk} \longrightarrow FD_{pk}$	1.92143	0.1732	No Causality
$FD_{pk} \longrightarrow GDP_{pk}$	0.13223	0.7180	No Causality
$TO_{pk} \longrightarrow FD_{pk}$	0.15997	0.0613	Causality Exists

FD_{pk} →	TO_{pk}	1.47831	0.0012	Causality Exists
TO_{pk} →	GDP_{pk}	0.76619	0.1024	Causality Exists
GDP_{pk} →	TO_{pk}	4.84951	0.0333	Causality Exists

Above mentioned result stated that there is no casual relationship has found between FD and GDP growth. But there is two ways causality has existed between FD and TO, and between GDP expansions and TO. So financial development has positive impact on trade openness and which ultimately has improved GDP growth.

4.4. Pakistan's Free/ Preferential Trade Agreements

Pakistan has signed more than ten FTA/PTA to achieve the benefits from trade.

1. Pak-China Free Trade Agreement (24th November 2006).
2. Pak-Malaysia Free Trade Agreement (8th November 2007).
3. Trade and investment framework agreement between USA and Pakistan (25th June 2003).
4. **Pak-Afghanistan Transit Trade Agreement** between Afghanistan and Pakistan **(28th October 2010).**
5. **Agreement on South Asian Free Trade Area (1st January 2006).**
6. **Pak-Sri Lanka Free Trade Agreement (12th June 2005).**
7. **Pak-Iran Preferential Trade Agreement (1st September 2006).**
8. **Pak-Mauritius Preferential Trade Agreement (30th November 2007).**
9. **Pak-Indonesia Preferential Trade Agreement (24th November 2005).**

Next we check the impact of FTA/PTA on Pakistan's economy.

Table 4: Panel Regression analysis

PTA/FTA	FD		TO	
Iran	0.351250 (0.1100)	4.415963 (0.015)	-0.386971 (0.006)	2.6262 (0.0009)
Malaysia	4.404328	2.872473	1.723202	2.013521

	(0.000)	(0.5462)	(0.000)	(0.000)
Sri Lanka	0.057601 (0.9556)	0.591911 (0.7554)	-0.269952 (0.0156)	0.528347 (0.6541)
USA	2.958673 (0.2114)	26.17397 (0.001)	-7.726019 (0.0000)	-14.36612 (0.004)
Mauritius	0.573741 (0.7144)	7.395295 (0.1345)	0.740989 (0.0000)	2.319117 (0.000)
China	19.25419 (0.000)	21.96789 (0.2115)	4.358337 (0.0065)	5.107254 (0.3373)
Indonesia	0.477964 (0.6547)	6.929028 (0.4256)	0.561344 (0.04554)	1.163835 (0.028)
SAFTA	4.165694 (0.0274)	0.906491 (0.7194)	0.550499 (0.0015)	1.882376 (0.0000)

Note: This table is constructed by applying regression on panel of countries having free trade agreements with Pakistan. In parentheses, t-statistics are given to check the significance of these free trade agreements.

All above mentioned results have supported the view that TO has direct and significant impact on GDP growth of Pakistan for every free trade agreements. Although, agreement with USA is enhanced finance development but agreement with USA have not positively affect on trade balance as imports are increased than exports in case of free trade agreements.

5. Conclusion

This study is examined the correlation and causation between economic growth, international trade and financial development. The results suggested co integration between variables and causality test results found that a change in trade volume and financial development leads a change in economic growth.

So, the Government of Pakistan should take steps to enhance the financial liberalization which accelerates the economic growth and to have a better trade condition. Trade barriers should also reduced for trading partners by signing free trade agreements. Both trading countries having such agreements can enjoy full benefits from trade activities. The Government and State Bank of Pakistan should cooperate with each other for better financial system. So, a better financial system of a country will promote export expansion which will lead better economic growth.

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