Pak-India Trade Relationship Based on Gravity Modeling: Issues and Challenges

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Abstract

This research explores the Pak-India Trade reforms and its impact on the economy of Pakistan. Economic integration is considered as a policy by which trade barriers should fall gradually or disappear fully among members of a trading block. The regional Block trade is gaining importance in the world to make economic cooperation more beneficial to the members in order to deepen their economic relations. In the current scenario the trade expansion and implementation of block trade between Pakistan in India. The data were collected from various secondary sources and data were analyzing by using GEN-STAT- software. It was revealed that Pakistan getting benefit on Trade with India in agriculture trade. Results of this study indicate that positive economic circumstances attract developing trade flows between Pakistan and selected blocs.

Keywords: Trade integration, trade blocs, gravity model, panel data

Introduction

Economic gains are behind the efforts to develop economic and political cooperative arrangements. Globalization of national markets has created a fully competitive environment in which those attaining efficiency could remain and continue. That is why national governments have turned to regionalism to protect their economy from adverse effects of globalization while

practicing how to reach extra border markets. Most literature have concentrated efforts in improve trade relationship by regionalism, particularly integration; for example Clearete *et al*. (2002) and Akbary & Moallemy (2002) are evidences on regional trade measures may increase investment and growth in partnering countries. Those countries entering into regional trade blocks try to find those existing and new relative advantages in order to manufacture products that could be marketed in the regional markets. This makes it possible to develop some new manufacturing skills in each participating

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country that have potential to be offered in international markets. Thus regional trade agreements may play a role in the international division of work. The research focus on how intra trade relation will boost the host countries economy (Clarete, *et al.* 2002). Regionalism and its Effects on Trade and its proper implementation and negotiation among regional agreement. Marzoghi (2003) found the trade intensity between 1721 pair of countries (72 percent of the total)are equal to zero and conclusion for only 361 pairs of the OIC member countries are more than one. The results interpret there are not much trade exchanges in among majority countries of OIC and confirm the weakness of trade intensity among the India. Many researchers have concentrate to regionalism and integration effects on trade flowes for example Villarreal (2005), Oyejide *et al.* (2003) Alaba (2006), Gilbert *et al.* (2002), Winters (1996), Quattara (1999), all of them found positive relation between trade integration and rising trade flows .

Moallemy (2001) emerged ASEAN bloc is the most economic convergence bloc in Asia. Khiabani *et al.* (2003) appeared implementing regional trade arrangements among India is possible for Saudi Arabia, United Arab Emirate, Turkey, Pakistan, Malaysia and Indonesia more than other India. Based on research of Tayebi (2007) regarding possibility of trading bloc implementation, the case of Pakistan and selected blocs, has been emerged D8, ASEAN, GCC, and EU b tensity of integration can lead to trade creation.

Overview of Pakistan's economy

The economic survey reaffirmed that a slight revival in large-scale manufacturing sector of 4.4 per cent pushed up industrial growth to 4.9 per cent. Robust growth in services sector of 4.6 per cent also played a contributory factor in the overall GDP growth ratio of the current year. Despite economic recession and ongoing global economic crisis the construction sector registered a high growth rate of 15 per cent. Somehow, agriculture slowed down to only 2.0 per cent in the current year. While the crops sub-sector declined 0.4 per cent over the previous year, livestock posted a healthy rise of 4.1 per cent. Per capita income was estimated at Rs 87, 810 ($1051).

The survey further projected healthy performance of the external sector. Workers' remittances and surge in the exports had a healthy impact on the overall GDP ratio and was instrumental In narrowing down current account deficit i.e. by $3.1 billion or 1.8 per cent of GDP during July-April, 2010 as compared to $9.0 billion 5.5 per cent of GDP for the same period last year.

According to the survey, consumer price index (CPI) decreased to 12 per cent from 20 per cent in the same period last year. It was an impressive achievement but seems not be sustainable. The overall CPI inflation accelerated to 13.3 per cent year-on-year in April, with food inflation at 14.5 percent. Core inflation registered an increase of 10.6 per cent year-on-year. On a period-average basis, overall inflation was recorded at 11.5 per cent for July to April. Furthermore, foreign exchange reserves reached $15 billion from $6 billion in October 2008. International credit rating agencies upgraded Pakistan from CCC+ to B- by S & P, while Moody's revised its outlook to stable [August 2009] (Economic Survey of Pakistan 2009-2010).

Data collection methodology

The data were collected from various secondary sources and data were analyzing by using GEN-STAT- software. To fulfill the objectives; we used stat level 10-years panel data between 1999 and 2013. Empirical estimate was done to measure trade creation or diversion among Pakistan and India and selected sub-blocs of OIC concern to economic integration effect. Unlike majority of studies which focused

mostly on investigate of economic variable directly, this study includes cross effect of variables to capture the specific role of them on trade relationship. State level data between 1999 to 2013 was used to examine the issue.

Table 1: Characteristics of the data (1999-2013)

Variable	Mean	Std.dev	Maximum	Minimum
Lxij	14.53	2.92	20.92	3.04
MultiG	17.16	1.21	19.62	13.70
MultiP	20.30	1.60	25.21	15.30
MultiE	10.84	3.32	23.23	-4.36
Ldis	8.40	0.75	9.62	6.27
Lins	136.87	22.32	189.35	11.95
Opdis	1112.58	5370.10	94435.71	16.47
PTAoic	5.21	7.71	20.60	0
PTAeco	0.86	3.52	17.38	0
PTAgcc	0.79	3.83	20.60	0
PTAd8	0.76	3.36	17.30	0
PTAamu	0.38	2.32	17.02	0
PTAasean	1.08	4.19	20.11	0
PTAsaarc	0.67	3.26	17.33	0
PTAtopfi	1.00	3.99	20.56	0
PTAtopse	1.46	4.61	20.60	0

Source: Author's calculated

In the following, we discuss rational of each explanatory variable. MultiG: the influence of market size, with real GDP per capita as proxy, has been robust in many trade literatures. High income indicates large market size of the host country. Higher income tables the country to absorb and produce rather productions, so it is expected to be positively related to trade flows.

Multip: this is a proxy of developing domestic market size and improving internal economic activities. The sign of cross effect of population is expected to be positive. MultiE: Exchange rate specifies income base on specific currency. Higher exchange rate, will seek higher income for producer and higher price for importer, anyway the sign is expected to be positive for cross effect.

Ldis: This factor involved time and transportation costs, the expected sign is negative.

Lins: Linder specify economy similarity on two trade partners. Lower differences of two markets make higher trade flows between countries, so the expected sign is negative.
Opdis: This ratio is taken as proxy for openness. If economy of any country is more open, that country will present in the international trade situation more than before, so the expected sign is positive. Openness is ration of trade to GDP per capita. At present paper will be used cross effect his proxy with distance. PTA*k:* we use nine dummy variables as proxy to the trade integration effect with Pak-India trade are GCC, ECO, D8, AMU, ASEAN, SAARC and two making blocs, TOPFI and TOPSE which are included the first 10 top of main Pakistan trade's partners and the second 10 top of main Pakistan trade's partners, the countries introduce in table 2. The expected sign will be unknown. Although PTA encourage to trade creation, also sometimes forward to trade diversion.

Estimation results discussion

Table 2: Recommendation regional block in OIC

Pakistan's export	Second 10 top Pakistan's trade partner related to export
Pakistan	India
	Saudi Arabia
	United Arab Emirates
	Srilanka
	Sudan
	Qatar
	Bangladesh
	Lebanon
	Bahrain
	Afghanistan

Resource: Pakistan's custom statistical, 2012

Table 3: The results of estimate gravity model with main variables and openness

Variable	Equation(1)	Equation(2)
α_{ij}	11.3	11.2
	(5.13)	(5.11)
MultiG	2.11	2.11
	(14.62)	(14.60)
MultiP	2.00	2.00
	(13.33)	(13.33)
MultiE	0.16	0.16
	(9.11)	(9.11)
Ldis	-2.26	-2.26
	(-14.25)	(-14.26)
Lins	0.005	0.005
	(1.35)	(1.35)
Opdis	0.674	-7.59e^-06
		(-0.47)
R^2		0.674
F	773.61	772.59

Note: t amount is in the parentheses
Source: Author's result

In the above table higher exchange rate, will seek higher income for producer and higher price for importer, anyway the sign is expected to be positive for cross effect.

Ldis: This factor involved time and transportation costs, the expected sign is negative.

Lins: Linder specify economy similarity on two trade partners. Lower differences of two markets make higher trade flows between countries, so the expected sign is negative.

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Conclusion

The objectives of this paper were analysis of economic and non-economic indices to

recommend the most favorable trade preferences between Pakistan and its trade partners. Also empirical estimate was done to measure trade creation or diversion among Pakistan and India and selected sub-blocs of OIC concern to economic integration effect. Unlike majority of studies which focused mostly on investigate of economic variable directly, this study includes cross effect of variables to capture the specific role of them on trade relationship. State level data between 1999 to 2010 was used to examine the issue. We used three scenarios to find effective variables on trade and investigate integration effect on trade .the data were fitted on a random effect panel regression model. Results of this study shows economy size and capacity of economic of bloc members, population, distance between member and exchange rate of partners are most effective factors on trade relationship between Pakistan and India and selected OIC's sub-bloc member. Linder and Openness are not effective on their trade flows, and finally was found Preferential Trade agreement lead to trade creation for OIC, ECO and TOPSE and lead to diversion for SAARC block.

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