*Muhammad Jamil**

*Rizwan Ahmed Satti***

*Musarat Sultana****

Impact of Trade Agreements on Exports: A Cross Country Analysis of Selected SAARC Countries

ABSTRACT

The present study explored the trade implications of SAPTA and SAFTA agreements for selected SAARC countries including Pakistan. The study highlights the importance of trade agreements for economic growth and welfare gains. Main objectives of the study are to find the potential role of SAPTA and SAFTA for member countries and implications for Pakistani exports. Using the gravity model and data from 1980 to 2010, results of the study show that SAFTA has potential to affect the trade of SAARC countries and its potential role is high for relatively big countries like India. Results also show that the impacts of bilateral trade agreements are negative for Pakistani exports but SAPTA and SAFTA contributes positively towards Pakistani exports.

* Assistant Professor, School of Economics, Quaid-i-Azam University, Islamabad, Pakistan.

** Lecturer, Department of Economics, Allama Iqbal Open University, Islamabad, Pakistan.

*** M.Phil Scholar, School of Economics, Quaid-i-Azam University, Islamabad, Pakistan.

Introduction

After the Second World War, trading blocs came into existence like European common market, custom unions, economic unions and free trade areas. Main purpose of these trading blocs is to increase the trade volume, best allocation of world resources, welfare gains and economic growth for all people. Free trade Area is a form of economic integration in which member countries remove trade barriers among themselves, but can impose import duties for the rest of the world individually. During last few decades, the concepts of free trade agreements become popular, with the sense that it would increase the welfare gains and economic growth.

Activities of regional trade agreement have extended all over the world especially in the Western Hemisphere and Asia Pacific. Examples of some of the well-established trading agreements are the European Community, Association of South East Asian Nation, North America Free Trade Area, European Free Trade Area, Closer Trade Relations Trade Agreements, South Asia Preferential Trade Agreement (SAPTA), South Asia Free Trade Agreement (SAFTA) etc. Number of preferential trade agreements and the share of world preferential trade have been rising surprisingly over the last two decades.

Like other Regional Trade Agreements (RTA), South Asian Association for Regional Cooperation (SAARC) form a regional trade agreement in 1993 called South Asia Preferential Trade Agreement (SAPTA) in Dhaka during a SAARC meeting and

came into force in 1995. Main purpose of this agreement is to provide a platform to the people of South Asia to work together, in a spirit of friendship, trust and understanding. It aims to faster the process of economic development in member countries.

Further, in 2004, SAARC countries (Bangladesh, Bhutan, India, The Maldives, Nepal, Pakistan, and Sri Lanka) signed South Asian Free Trade Agreement (SAFTA) in Islamabad, to gradually lower the tariffs within the region. Investigating the feasibility and potential of SAFTA is a highly desirable case study.

The main purpose of the present study is to examine the trade implications of SAFTA and SAPTA for member countries of SAARC in general and particularly for Pakistan. The study has used the gravity model because this model does not use the total trade flows comprising exports and imports, as exports of one country are the import of another country. When both exports and imports are measured for in trade flows, and if imports are registered much higher than exports, the volume of trade may seemingly be inflated. Second, this model does not include the exporting country's GDP as one of the regressors to avoid endogeneity problems, as exports from part of the exporting country's GDP (Billen *et al.*, 2005). Mainly, the study tried to explore potential role of SAFTA in increasing exports of Pakistan. Secondary data for the period of 1980 to 2010 has been used for the estimation of econometric model. The time period for which Pakistan started participating in China Pakistan Economic Corridor (CPEC) is not included in the analysis. This is because final impact of CPEC cannot be highlighted yet, however, inclusion of this short time period will affect the coefficients of the other trade agreements. In

this paper, we have used a panel dataset for five SAARC countries (Bangladesh, India, Nepal, Pakistan, and Sri Lanka)[1].

The plan of the paper is described as: after the section of introduction, section 2 reveals the literature review related to the topic. The construction and utilization of variables along with empirical methodology is presented in section 3. Results and their discussion are presented in section 4. The last section contains conclusion.

Literature Review

For detail review of literature, the present section is further divided into two sub-sections: first, we will discuss historical background about the SAFTA; second, we will highlight empirical studies regarding the issue.

Historical Background

When one nation has an absolute advantage in the production of one commodity, and has an absolute disadvantage in the production of second commodity, then both nations can gain by each specializing in the production of the commodity of its absolute advantage and exchanging part of its output with the other nation for the commodity of its absolute disadvantage. Absolute advantage, however, can explain only a very small part of world trade today, such as some of the trade between developed and developing countries. Most of world trade, especially trade among developed countries, could be explained by absolute advantage. It remained for David Ricardo, with the law of

---

[1]   Other SAARC countries like Bhutan and The Maldives are dropped from the analysis because of unavailability of data.

comparative advantage, to truly explain the basis for and the gains from trade.

In 1817, David Ricardo presented the law of comparative advantage: according to law of comparative advantage, even if one nation is less efficient than the other nation in the production of both commodities, there is still a basis for mutually beneficial trade. The first nation should specialize in the production of and export the commodity in which its absolute disadvantage is smaller and import the commodity in which its absolute disadvantage is greater.

According to classical economists, comparative advantage was based on the difference in the productivity of labor among nations, but there is no explanation for such a difference in productivity. The Heckscher-Ohlin theory goes much beyond that by extending the trade model states as: a nation will export the commodity whose production requires the intensive use of the nation's relatively abundant and cheap factor and import the commodity whose production requires the intensive use of the nation's relatively scarce and expensive factor. In short, the relatively labor–rich nation exports the relatively labor-intensive commodities and imports the relatively capital-intensive commodities.

Before 1990, member countries of SAARC were reluctant about employment of trade liberalizing policy. By the early 1990s, countries within the region started implementing liberalization policies, with the successive reduction of trade barriers. Main purposes of SAPTA is to achieve the economic benefits by increasing return to scale, expanding market size, increasing competition, technology transfer, comparative advantages and specialization in their products etc.

SAARC member countries comprising the People's Republic of Bangladesh, the Kingdom of Bhutan, the Republic of India, the Republic of Maldives, the Kingdom of Nepal, the Islamic Republic of Pakistan, and the Democratic Socialist Republic of Sri Lanka have signed South Asian Free Trade Agreement (SAFTA) on January 6, 2004.

Agreement was signed with the commitment of strengthen the inter-SAARC economic cooperation to maximize the realization of the regions potential for trade and development for the benefit of their people, in a spirit of mutual accommodation, with full respect for the principles of sovereign equality, independence and territorial integrity of all states. All member countries have agreed and signed the agreement.

It is revealed from different studies, that SAFTA is not as successful as other regional trade agreements like European Union 27, European Free Trade Area, U.S-CANADA, North American Free Trade Area etc. Das (2007) describes the facts and figures in their study that SAFTA share in inter-regional trade is minimum compare to other regional trade agreements. Share of East Asia and Pacific in inter-regional-trade is 26.5%, Europe and Central Asia is 15.3%, Latin America is 6.4%, Sub-Saharan Africa is 5.3%, Middle East and North Africa is 3.5%, while SAFTA is only 0.8%.

According to Krugman and Obstfeld (2000), trade agreements create competitions, enlarge the market size, increase the consumption, investment, production etc. and hence increase the welfare of people. Economic integration demands to liberalize the trade by reducing successively tariff barriers for the achievement of true gains from trade. Free trade agreements are considered as a fore step towards the trade liberalization. Free trade agreements, regional

trade agreements and preferential trade agreements are the major and perhaps the irreversible feature of today's multilateral trading system.

There are many reasons behind the failure of SAFTA; mostly member countries have similar trade commodities, political tension between the two largest countries Pakistan and India, limited trade markets etc. In literature a regional trade agreement with competitiveness, complementarities in goods, political harmony are the essence of a successful regional trade agreement.

The situation is opposite with South Asian countries, being the land of more than 1.5 billion people a largest region have the share in World trade is about 1% only. Half of the world's poor live in this region. There are detailed discussions, meetings negotiation conducted on the SAARC platform for expanding the trade volume and creation of trade among member countries. Main obstacles in the path of a smooth trade flow are trade diversion which makes the situation worse-off.

Panagariya *et al*. (2006) describes that the case for SAFTA is weak on qualitative grounds as well. The study points out that trade diversion under SAFTA is more likely because the levels of protection are high. The study point out that trade diversion under SAFTA is more likely because the levels of protection are high and the probability of the region to have the most efficient suppliers is slim.

SAARC members began to reduce tariffs and liberalize their trade patterns in the early 1990's.According to the United Nations Commodity Trade Database, while considerable tariff reduction did occur, the region has continued to rank among the most highly protected in the world. Both simple and weighted average tariff rates were

high in India and lowest in Sri Lanka. Other South Asian countries failed to liberalize their foreign trade policies until the early 1990's. In recent years, Pakistan's trade decrease with the world and increased in inter-regional area. India is relatively better in the region as its trade volume increases remarkably with neighboring countries Bhutan, Sri Lanka, Bangladesh, The Maldives, Pakistan and it became largest exporter in the region. Hence, export–oriented industries are also flourished.

India and Pakistan's exports are notably complementary to the imports of some South Asian economies, particularly those of Bangladesh and Sri Lanka. Other economies, however, show efficiency in only a small number of export areas, most of which are not complementary to India's imports. South Asian export markets compete in a narrow range of products, particularly in textiles, apparel, and other light manufactured goods. Bangladesh and Sri Lanka received 20% and 15% of their total imports from South Asian countries, as a share of total exports Indian trade flows to neighboring sub-regional economies did see a small increase in the 1990s, from 3% in 1990 to 5% in 2002.

When we see the trade pictures of SAARC member countries, it show that India as one of the most favored destination for FDI. Trade volume of Nepal increased in 1994, while Pakistan's export decreased with the region, whereas import levels have varied. India plays a leading role in this region, surprisingly increase its export and get a larger share of inter-regional market. South Asian economies have good potential for growth.

SAFTA would be a vehicle through which all participants can gain by exploring their competitive advantages. Integration of economies in south Asia would lead to the

emergence of a big market for investors. Delgado and Daniel (2007) examined using the gravity model that SAFTA can provide the highest increase for SAARC countries.

Empirical Literature

A number of studies have been done to capture the effect of SAARC, SAPTA and SAFTA agreements and role of RTAs on South Asian countries. Mostly available literature is qualitative but there is still lack of empirical studies on this era. Moktan (2009) explores the impact of exports on SAARC member countries using panel data for a time period 1971 to 2005, and estimated a generalized gravity model to check the influence of interregional trade and free trade agreements. The author explores the economic status, their trade pattern, and export potential for member countries. To achieve the goal of their study, the author designs the regression into five sub groups; pre-SAARC period, post-SAARC period, pre-SAPTA and post- SAPTA periods. Study finds a positive impact of trade agreement for post–SAARC and post-SAPTA periods. The study uses a number of dummy variables which influence the trade.

Hassan (2001) investigates the inter-regional cooperation in trade, finance and investment among SAARC countries with the perspective of Bangladesh. In this paper, role of regional economic cooperation and impact of free trade agreement has been discussed. The study uses the gravity model to examine whether the intra SAARC is lower or higher then what is predicted by economic model and to find the evidences for trade creation and trade diversion. Findings of the study reveal that negative sign of per capita GDP indicates that when income of a country increases, it trades less with its bloc members. Bangladesh's total export

to SAARC countries amount only US 102.66$ in 1998-99, which is only 2% of its total exports.

Bandara and Yu (2003) give a number of possible reasons for increased literature on the impacts of SAFTA and SAPTA. Firstly, this region have a very low share in world trade, so that researchers and trade analyst did not take interest. Secondly, lack of data for trade and other variables makes this region less attractive for research. Thirdly, mostly trade is informal and available data does not present the actual figures of trade. Lastly, there is main focus on nontariff barriers like many other regional agreements but to quantify the non-tariff barriers is difficult one.

Gul and Yasin (2011) estimates the trade potential of Pakistan by using gravity model in their study. Panel data of 42 countries for a period of 1981-2005 is used. The results of study show that Pakistan has the highest trade potential for ASEAN, EU and NAFTA countries but low trade potential for the ECO and SAARC countries.

Das (2008) describes the overall progress made by South Asian countries for enhancing and fastening the trade and economic development. The paper highlights the efforts and problems faced by the SAARC member countries in formation of a Free Trade Area, also addresses the incentives and progress of South Asia towards greater economic integration. These groups of economies are considered more protected groups in the global economy. These countries are also reluctant in relaxing trade barriers and attracting FDIs. These economies are presently at low level of per capita income and economic development. It is concluded that these economies are moving towards development, they have to develop complementarities and reduce mutual distrust to maximize their welfare gains.

Ali and Talukder (2010) explain the reason behind the limited trade gains from preferential trade agreements, by using secondary data. The study examines the opportunities and challenges faced by the preferential trade agreement due to political environment within South Asia. According to the study, political harmony is necessary for a successful FTA and bilateral trade agreement. Political tensions between trading partner like Pakistan-India, India-Nepal, India-Bangladesh and interference of India in Sri Lanka and Bhutan which affect the trade agreements. South Asia is the poorest region having one forth population of the world, failed to realize its potential for economic development.

Iqbal *et al*. (2010) describes the trade structure of South Asian countries under the SAFTA agreement and main focus of the study is on trade between Pakistan and India. The study analyzes the secondary data by using technique of micro simulation method. According to the study, before the formation of South Asian regional bloc, mostly European countries imposed restrictions on Pakistani goods due to quality and environmental issues. Such circumstances pressurize the south Asian countries to expand their trade within region and give the Most Favorite Nation (MFN) status to its neighboring countries by reducing tariff and non-tariff barriers, which definitely increase their welfare gains.

Wickramasinghe (2006) reveals that behind the working of SAFTA; inter-regional trade among South Asian countries is 4 % only. Share of smaller countries is significant but the share of India in inter-region is only 1% but its export to SAFTA members is about 3-5%.Pakistan's share in inter-regional trade is 2-3% only. GNP of entire South Asia is 2.15% only. The average per capita income of South Asia is

lower than Sub Sahara Africa. Conclusion of the study indicates that South Asia has to open the doors of engagement with other regional agreements.

Banik (2006) examines the challenges and options for a successful SAFTA. The study examines the factors required for a growing SAFTA. By exploring the different criteria's of member countries which include the economic characteristics, diversity of goods, difference of prices and intra-industry trade, these are essential for a successful FTA. It is concluded that member countries of SAFTA has potential to form a common market and economic union.

Raihan and Razzaque (2007) examine the features and prospects of different regional integrations and bilateral FTAs in South Asia and particularly in Bangladesh. It is extracted from the study that SAFTA is not as successful as other RTAs. The study describes that a full implementation of SAFTA will lead to higher welfare gains for India, Sri Lanka and rest of the South Asia, though Bangladesh suffers from welfare gains. Bangladesh's welfare loss is mainly because of trade diversion effects.

Mohantly (2003) reveals that the region has a substantial potential for trade and investment. The author rejects the hypothesis that South Asian countries compete for similar kind of export goods among themselves in the world market. The study evaluates a significant level of trade potential in the region to promote intra-regional trade.

Krueger *et al.* (2004) has highlighted the SAFTA, its rule and regulations and tariff reducing schedule set for member countries. According to optimistic group, study indicates that SAFTA has potential to increase the trade gains for member countries particularly for smaller countries. On the other hand, according to pessimistic predictions study shows that

SAFTA is not as successful because of political ties between member countries. The only country which has significant welfare gains from FTAs is India. Other countries have small proportion of welfare gains and even lose like Bangladesh. The study also describes that unilateral and bilateral trade agreements are more beneficial than the FTAs in South Asia.

The above reviewed literature gives us ambiguous results regarding the trade implications for SAFTA, SAPTA and other bilateral agreements. The present study tries to evaluate the effects of SAFTA on exports of member countries using data from 1980 to 2010. Cross country comparisons of the SAARC countries is the strength of the present study.

Data and Methodology

Data

The study has used the secondary data, for the period of 1980 to 2010. A panel of five countries of South Asia has been employed. Data for exports and imports of SAARC countries has been taken from various issues of the Direction of Trade Statistics.[2]Similarly, data for GDP, consumer price indices, and exchange rates has been taken from the World Development Indicator (data CD). Data on distance between the capitals of two countries is taken from the website of Great circle distance between two capital cities. Unit of measurement of distance is in kilometers. Data for other control variables such as landlocked, seaport, bilateral trade agreements and trading bloc has been taken from the CIA's

---

[2] Data for missing observations for some countries is taken from UNCTRADE, Bureau of statistics of SAARC countries, and from the SAARC'S official website.

Fact book and the SAARC's official homepage. Information regarding the status of the trade agreements among SAARC countries is presented in table 1.

Table 1: Status of trade agreements among SAARC countries

Date/Year	Contracting countries	Agreement type
January,1972 (Renewed on 12-03-1995)	India and Bhutan	Agreement on trade, commerce and transit between India and Bhutan
28-03-1972 (Renewed on 26, march, 2006)	India and Bangladesh	Trade agreement
02-04-1976	Nepal and Bangladesh	Trade and payment agreement
03-04-1979	Nepal and Sri Lanka	Trade agreement
00-00-1980 (Renewed on September, 2000)	Bangladesh and Bhutan	Trade and transit agreement
31-03-1981	India and the Maldives	Trade agreement
28-07-1982	Pakistan and Nepal	Trade agreement
06-12-1991	India and Nepal	Free trade agreement
11-04-1993 (Operational on 07-12-1995)	Seven member countries of SAARC	South Asian Preferential Trade agreement(SAPTA)
28-12-1998	India and Sri Lanka	Free Trade agreement
Jan,06,2004 (Operational on 01-07-2006)	Seven member countries of SAARC	South Asian Free Trade Agreement (SAFTA)
12-06-2005	Pakistan and Sri Lanka	Free Trade Agreement

Source: (Moktan, 2009)

Methodology

The present study employed the gravity model for analyzing the impact of bilateral trade agreements. Numbers of researchers have attempted to model the potential economy benefits of free trade in South Asia. The popular gravity

model and computable general equilibrium (CGE) model seems to offer significant insight. The gravity model is a commonly used tool to estimate the bilateral flows between member countries. Its concept is based on Newton's law of gravity and was firstly used by Tinbergen (1962). The gravity model postulates that the degree of trade between two countries is directly proportional to the product of their GDPs and inversely proportional to the distance.

Gravity model is chosen because it is a conventional empirical device most commonly and efficiently used to estimate a range of phenomena on international trade since the last 40 years. According to Rose and Stanley (2004), the gravity model is successful model for two reasons. First, the estimated effects of distance and output, i.e. the traditional gravity effects are "sensible, economically and statistically significant, and reasonably consistent across studies." Second, it is "reliable, explains most of the variations in international trade and fits the data well.

Although, gravity models have been criticized for its lack of theoretical foundations, Harris and Matyas (1998) notes that: "empirically they seem to perform particularly well and are therefore well suited for policy analysis". The following gravity model is a more generalized gravity model, also known as the 'unilateral export model'. This was employed in earlier works of Matyas *et al.* (2000) and Aristotelous (2001), and more recently by Baak (2004) and Billen *et al.* (2005).

Accordingly, the gravity model takes the following form:

$$\log(X_{ijt}) = \beta_0 + \beta_1 \log(GDPPC_{jt}) + \beta_2 \log(DREX_{ijt}) + \beta_3 \log(DIST_{ij}) + \beta_4 BORD_{ij} +$$

$$\beta_5 BTRG_{ijt} + \beta_6 FTA_{ijt} + \varepsilon_{ijt}$$

(3)

Where i, j, and t stands for exporting country, importing country and time, respectively. Variables description is as follow:

X_{ijt}:   Real export from country i to j at time t

$GDPPC_{jt}$:   Real gross domestic product of country j at time t

$DREX_{ijt}$:   Depreciation rate of the real bilateral exchange rate of i with respect to j at time t

$DIST_{ij}$:   Great circle distance between country i and j

$BORD_{ij}$:   Dummy variable which is one if i and j share a common border, and zero otherwise;

$BTRG_{ijt}$:   Dummy variable which is one for having bilateral trade agreement between i and j at time t, or zero otherwise;

FTA_{ijt}:   Dummy variable for free trading arrangements which is one if i and j are part of this common agreement (SAFTA or SAPTA) at time t, and zero otherwise

Whereas, ε_{ijt} is the error term or any other omitted influences assumed to be well-behaved. The parameters of interest are β_5, and β_6 i.e., the coefficient for trade agreement (BTRAG), and (SAFTA), respectively, Except for dummy variables; all other variables will take log values to narrow the range of variable and to make estimates less sensitive to outlying or extreme observations on the regress and and regressors. To estimate the above mentioned regression equation, the study employed Pooled Regression Model.

Before estimating the model, the study employed various tests to check presence of unit root in the data.

Results and Results Discussion

The study employed four types of panel unit root tests.[3]These are the Levin, Lin and Chu test, Im Pesaran and shin test, ADF Fisher chi square test and PP Fisher chi square test on level and by taking first difference to check the stationarity of data. The results of unit root tests indicate that all variables are integrated of order zero, hence, stationary at level.

Further, regression analysis is carried out for each country using the pooled data and methodology presented in previous section. Table 2 presents the results of pooled regression for Pakistan, India, Bangladesh, Nepal and Sri Lanka. Finding of the study shows the conventional and quite stable results. Coefficients of most of the variables are significant. Overall, values of R^2 and significance of F-statistics indicate good fit for each of the regression.

The coefficient of Real GDP per capita is significant for Pakistan, India, Bangladesh and Sri Lanka but insignificant in case of Nepal. This indicates that increase in foreign income leads to increase in the exports of home country for most of the cases.

Table 2: Results for effect of trade agreements on exports (pooled regressions)

Dependent Variable: $\log(X_{ijt})$

---

[3]   Results of the tests are presented in Appendix A.

Variables	Pakistan	India	Bangladesh	Nepal	Sri-Lanka
Constant	-34.264	43.601	-250.501	14.578	-108.679
	(-10.489)***	(4.066)***	(-9.569)***	(2.975)***	(-15.520)***
$log(GDPPC_{jt})$	0.588	0.327	0.454	-0.018	1.445
	(4.970)***	(3.471)***	(1.796)***	(-0.103)	(6.220)***
$log(DREX_{ijt})$	0.247	0.237	0.287	0.012	0.526
	(2.296)**	(2.018)**	(1.533)	(0.111)	(3.978)***
$log(DIST_{ij})$	3.465	-6.032	32.052	-1.723	10.342
	(8.044)***	(-4.316)***	(9.464)***	(-5.149)***	(12.822)***
$log(BORD_{ij})$	2.918	-1.138	-8.782	3.860	9.289
	(9.988)***	(-10.081)***	(-5.677)***	(12.158)***	(17.413)***
$log(BTRG_{ijt})$	-1.003	0.727	29.676	0.474	-0.828
	(-4.842)***	(2.750)***	(8.752)***	(1.254)	(-4.629)***
$log(FTA_{ijt})$	0.732	1.237	0.842	1.321	0.744
	(3.233)***	(4.012)***	(2.388)**	(5.434)***	(2.465)**
Cross-Section (n)	4	4	4	4	4
Time Period (t)	30	30	30	30	30
Total Observations (N)	120	120	120	120	120
R-Square	0.7352	0.6720	0.6385	0.7910	0.838
AdjustedR-Square	0.7212	0.6546	0.6194	0.7799	0.829
S.E.R	1.0416	0.9084	1.5211	1.1464	1.3017
F-Statistics	52.3042	38.5968	33.2782	71.2674	97.3628
P-Value	0.0000	0.0000	0.0000	0.0000	0.0000

Source: Author's own calculations

Note: In the parenthesis are the t-values of the coefficient estimates. The values significant with ***, **, and * refers to 1%, 5%, and 10% level of significance, respectively.

Similarly, coefficients of depreciation rate of real exchange rate of country i with respect to county j positively affect exports of Pakistan, India and Sri Lanka. For Bangladesh and Nepal, these coefficients are insignificant. The coefficients for the distance variable gave us ambiguous results. For Pakistan, Bangladesh and Sri Lanka it is positive and significant while for India and Nepal it is negative and significant. Contradictory results for Pakistan, Bangladesh and Sri Lanka may be due to political tensions with the bordered countries. The reasons behind the negative or insignificant effect of the bilateral trade agreements is that mostly member countries have similar trade commodities, political tension between the two largest countries Pakistan

and India, limited trade markets etc. A successful trade agreement require competitiveness, complementarities in goods, political harmony along with the agreement.

Coefficients of BTA for Pakistan and Sri Lanka are significant but negative, for India and Bangladesh significant and positive, and for Nepal it is insignificant. This indicates that India and Bangladesh are gaining from their bilateral trade agreements. On the other hand, bilateral trade agreements of Pakistan and Sri Lanka do not help them to increase their exports. Positive and significant coefficients of FTA indicates that SAPTA and SAFTA helped all the counties to increase their exports. Moreover, it can be observed that the gain is highest for India, lowest for Pakistan. The results of the study match with earlier studies which highlighted that trade agreements contribute positively for enhancement of the export, for example Krugman and Obstfeld (2000) and Krueger *et al.* (2004).

From the above results and discussion, we can conclude that bilateral trade agreements contributed negatively to Pakistan exports and FTA contributed positively to Pakistan exports. Reason of little potential for bilateral trade agreements for Pakistan is that Pakistan have only bilateral trade agreements with Nepal and Sri Lanka. Moreover, SAPTA and SAFTA has helped Pakistan to increase their exports but Pakistan is gaining too less as compared to other countries. The present study also concludes that big county impact exists in trade agreement as they are gaining more relative to small countries.

Conclusions

Focus of the present study was to estimate the effects of trade agreements in order to find the trade implications for Pakistan and rest of SAARC member countries. The study covered the period from 1980 to 2010 using the pooled data of five SAARC member countries. A cross country comparison of trade implications is the strength of the present study.

Results of the studies show that SAFTA has more potential to affect the trade of large countries. In case of Pakistan, SAFTA has implications but in a small proportion relative to other member countries. Results show that bilateral trade agreements do not help Pakistan and Sri Lanka to enhance its exports.

Hence, we conclude that signing of SAPTA and SAFTA agreement is as useful and help to increase exports of the member countries. Bordered countries has positive effect on the exports for Pakistan. The effect can be improved by developing the means of transportations, resolve cross border issues and reduce trade barriers. It is also suggested that the effects of SAFTA can be improved if AFTA form agreement with other trading blocs i.e., NAFTA. But complete effects can be explored in further research.

References

Ali, E. and D. Talukder (2010) Political Economy of the Preferential Trade Liberalizations and Regionalism in South Asia: Opportunities and Challenges. *Canadian Social Science*, Vol. 6(3) 16-25.

Aristotelous. (2001) Exchange Rate Volatility, Exchange Rate Regime, and Trade Volume: Evidence from the UK-US Export Function (1989-1999). *Economic Letter* 72(1), 87-94.

Baak. (2004) Exchange Rate Volatility and Trade among the Asia Pacific Countries. *Journal of International Economic Studies* 8(1), 93-116.

Bandara, J. S. and W.Yu. (2003) How Desirable is the South Asian Free Trade Area? A Quantitative Economic Assessment. *The World economy Wiley Blakewell*, Vol. (26),1293-1323

Banik, N. (2006) How Promising is SAFTA" *Asia-Pacific Trade and Investment Review*, Vol. 2(2) 143-150

Billen, D, M. M. Garcia and N. Khasanova. (2005) Is the Effect of Exchange Rate Volatility on Trade More Pronounced in Latin America than in Asia?"*Working Paper No.434.*

Das, K. D. (2007)South Asian Free Trade Agreement; Prospects of Shallow Regional Integration. *CSGR working Paper No:* 218/07, 42-43.

Das, K. D. (2008) The South Asian Free Trade Agreement: Evolution and Challenges. *MIT International Review.*

Delgado and Danial. (2007) SAFTA: Living in a World of Regional Trade Agreements. *IMP Working Paper No.07/2.*

Gul, N and H. M. Yasin (2011) The Trade Potential of Pakistan: An Application of the Gravity Model. *The Lahore Journal of Economics*, Vol.16 (1), 23-62

Harris and Matyas. (1998)The Econometrics Of Gravity Model. *Melbourne Institute Working Paper No.5/98*, The University of Melbourne, Australia.

Hassan, M. K. (2001) Is SAARC A Viable Economic Bloc? Evidence from Gravity Model. *Journal of Asian Economics*, Vol. (12), 263-290

Iqbal, M. Shahzad, K. Imamuddin, A. H. Shar and F. M. Shaikh.(2010) Analysis of Regional Trade Block and Agricultural Productivity: Impact of SAFTA (South Asian Free Trade Agreement) on Economic Growth of Pakistan by Using CGE Model *Asian Social Sciences*, Vol. 6(12) 1-7.

Krueger. (1990) Asian Trade and Growth Lessons. *The American Economic Review.*

Krugman and Obstfeld. (2000)*International Economics: Theory and Policy*, 9th Edition. Prentice Hall.

Matyas. (2000)The Gravity Model: Some Econometric Considerations. *The World Economy* 21 (3), 397-401.

Mohantly. (2003) Regional Trade Liberalization under SAPTA and India's Trade Linkages with South Asia: An Empirical Assessment. *RIS Discussion Paper No.48/2003, New Delhi.*

Moktan, S. (2009) The Impact of Trade Agreement on Export: Empirical Evidence from SAARC Countries. *Journal of International Economic Studies*, Vol. (23), 23-42

Panagariya, A. N. Pitigala and T. Baysan. (2006) Preferential Trading in South Asia. *World Bank policy Research Working Paper No. 3813*, Jan.2006.World Bank: Washington D.C.

Raihan and Razzaque (2007) Welfare Effects of South Asian Trade Area (SAFTA) Regional Trading Arrangements (RTAs) in South Asia: Implications for Bangladesh Economy. *The UNDP Regional Center Colombo.*

Rose, A and Stanley. (2004) A Meta Analysis of the Effect of Common Currencies on International Trade. *Journal of Economic Surveys.* Details

Tinbergen, J. (1962) *Shaping the World Economy: Suggestions for an International Economic Policy*. New Yark: The Twentieth Century Fund.

Wickramasinghe, U. (2006) Operationalizing SAFTA: Issues and Options. *South Asian Year Book of Trade and Development*, Vol.(2)389-414.

Appendix A: Results of Based on Panel Unit Root Tests

VARIABLES		Levin Lin and Chu	Im Pesaran and Shin	ADF Fisher Chi Square	PP-Fisher Chi Square	Decision
Log(X)	Level	-1.84** (0.0328)	-2.10** (0.0176)	21.66** (0.0169)	28.49*** (0.0015)	I(0)
Log(GDP)	Level	-2.29*** (0.011)	-1.81** (0.035)	18.84** (0.0423)	24.89*** (0.0056)	I(0)
DRXC	Level	-10.78*** (0.00)	-11.49*** (0.00)	110.36*** (0.00)	175.34*** (0.00)	I(0)

Source: Author's own calculations

Note: In the parenthesis are the t-values of the coefficient estimates. The values significant with ***, **, and * refers to 1%, 5%, and 10% level of significance, respectively.