

Pakistan's Trade Competitiveness & Complementarities in South Asia



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Abstract:

Over the past decade Pakistan remained involved in two major trade agreements with in the South Asia (Pakistan-Sri Lanka FTA and SAFTA). It is meaningful from an operational and policy perspective to evaluate Pakistan's trade performance in South Asia against its objectives of greater trade integration and suggest policy interventions to improve its effectiveness. In order to achieve this objective, current study evaluates Pakistan's trade performance with major South Asian economies for the last eight years (2003-10). This study has been disaggregated into two parts: In the first part of the study, an assessment of trade performance of major South Asian economies is carried out with respect to the rest of the world. Pakistan's trade performance vis-à-vis other major South Asian members is the focus of this part. In the second part Pakistan's trade performance in South Asia has been analyzed and policy interventions have been suggested to improve its effectiveness. Certain trade indicators like Trade Complementarity Index (TCI), Grubel Lloyd Index (GLI), Revealed Comparative Analysis (RCA), Bilateral Revealed Comparative Analysis (BRCA) and Revealed Market Access (RMA) have been employed to achieve the above objectives.

JEL Classification: F13, F15

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1. INTRODUCTION:

South Asia is an important region playing a significant role in world trade. The region comprises major economies of Bangladesh, India, Pakistan and Sri-Lanka (BIPS), whereas other economies include Nepal, Maldives, Bhutan and Afghanistan. All these eight countries are member of South Asian Association for Regional Corporation (SAARC). The proliferation of regional trade agreements along with liberalization of international trade in the 90s created a consensus to increase trade integration among SAARC countries. This led to signing of South Asian Preferential Trading Agreement (SAPTA) in 1993. SAPTA came into force in December 1995 after first round of negotiations was concluded in April 1995. In December 1995, it was also decided to create South Asian Free Trade Area (SAFTA). The SAFTA agreement was signed in January 2004 among its seven initial partners, i.e., India, Pakistan, Sri Lanka, Bangladesh, Nepal, Bhutan and Maldives, and came into force in January 2006. In addition to SAFTA other bilateral trade agreements (BTA) also came into being in the time period of 2003 to 2010 like Pakistan Sri-Lanka FTA (2005) and India Sri-Lanka FTA are the agreements between the major economies of South Asia. From multilateral trade agreement SAFTA to certain other bilateral trade agreements enforce between South-Asian countries, it is meaningful from an operational and policy perspective to evaluate Pakistan's trade performance with respect to South-Asian major economies against its objectives of greater trade integration and suggest policies and interventions to improve its effectiveness. At the outset, it should be mentioned that economic and non-economic impacts (whether they are small or large) of any type of trade agreements permeate the entire economy of partner countries. Trade performance as measured by various trade indicators is just one component of economy-wide impacts. Overall, sector level growth, employment, revenue and poverty impacts are few other factors that constitute the economy-wide impacts of any trade agreement.

The current study is comprised of the following sections. Section 1 explains the brief introduction, objectives of the study, literature review and data & methodology used for the current study. Section 2 highlights the South-Asian major economies including, Bangladesh, India, Pakistan and Sri-Lanka (BIPS) trade performance with the world and its comparison with their Intraregional trade. Section 3 shows the Pakistan's trade performance with South-Asian major economies like India, Bangladesh and Sri-Lanka based on share analysis of its exports and imports. Section 4 provides the commodity-wise shares analysis of Pakistan's exports and imports with major economies of South-Asia. Section 5 provides the results of certain trade indices calculated to evaluate the trade performance of Pakistan with the major economies in South-Asia. Section 6 concludes and provides certain recommendations for policy makers.

1.1. Objective of Study:

The study provides guidelines for the relevant stakeholders and government policy makers by providing a detailed import and export profiles of major products which are traded within the South Asian region by Pakistan, India, Sri Lanka and Bangladesh. The study utilizes various indicators of trade competitiveness and highlights all those major products where each member country has witnessed a positive or negative change in its trade share.

1.2. Data and Methodology:

Current study evaluates the Pakistan's intra-regional trade performance (merchandise imports and exports) for the years 2003 to 2010. The trade data utilized in the study is at chapter and 6-Digit product level, whereas GL-Index of major traded products is also calculated at SITC level for the years 2003 and 2010. The bilateral trade patterns are estimated for Pakistan, India, Sri-Lanka and Bangladesh.

The main data source used for current study is the online database of www.trademap.org along with certain other additional data sources of commerce and trade. The type of analysis done majorly comprised of shares analysis and calculation of certain trade indicators and indices.

1.3. Literature Review:

Regional Agreements are important frameworks to boost intra regional trade among member countries. There are many studies which look at South Asian region and prospects of intra regional trade among its members. For example, Mehta and Kumar (2004) argued that signing of SAFTA agreement was a landmark in the evolution of SAARC since its formation in 1985. SAARC would benefit from regionalism if its cooperation would extend beyond formal trade. Dhungel (2004) noted that actual progress and achievement in implementation of SAARC agendas were considered insignificant. Jhamb (2006) supported Dhungel's view and argued that it was primarily due to the tenuous political relations between India and Pakistan and a general environment of mistrust among member countries. However, by using the Gravity Model, Rahman, et al. (2006) showed that elimination of trade barriers and structural rigidities originating from adverse political relationship could lead to substantial increase in intra-SAARC trade. Pitigala (2005) found that the trade structures that evolved among the South Asian countries might not facilitate a rapid increase in intraregional trade due to weak trading relations among the SAARC countries. This view was supported by a study by Baysan, (2006). He argued that the economic case for SAFTA is relatively weak. Compared to the rest of the world, this region was tiny both in terms of economic size as measured by GDP (and per capita income) and the share in the world trade. Therefore, trade preferences to the regional partners would likely be leading to a consequence of trade diversion rather than trade creation. Similarly, Das (2007) argued that evidence of trade complementarity in South Asia is mixed, so preferential trading initiative was based on a weak proposition. Recently, New Farmer and Pierola (2007) found that the arrangements of preferential trading in South Asia including SAFTA fell short of their potential because of product exemptions, special arrangements for selected products and restrictive rules for point of origin. Though upside potentials for SAFTA were great, benefits from this trading arrangement were uncertain. So, the policy makers will require relentless determination to make it successful in future.

In the literature, there exists a debate on possible gains of SAFTA. Different studies use different methodologies and computed different results. Most of the studies have examined the impact of lowering tariffs to zero under SAFTA though few other studies also examined the affect of other scenarios as well. Krueger (2004) examined that the potential gains do exists in SAFTA but for successful trade agreements, it is necessary that South Asian region must meet the theory based criteria for large welfare gains. When the comprehensive study

on the regional trade is conducted, it concluded that SAFTA countries trade in similar goods with apparel and clothing being the major export item and crude oil being the major import item and large potential exists for increased trade. The study also concluded that SAFTA could lead to growth in South Asian region. The study takes a comprehensive look at the pessimistic and optimistic predictions relating to SAFTA. The study concluded that even though this agreement would lead to growth in the South Asian region but it has limited capability to increase intra-regional or extra regional trade for its members. Baysan and Panagriya (2006) analyzed the qualitative and quantitative arguments which make SAFTA weak. In the qualitative analysis, it is seen that the economic size of the region is small as compared to the world in terms of GDP with a contribution of only 2% to world GDP in 2009. If India is excluded than this size falls to only 0.4%. Therefore the possibility of most efficient member countries in the region is very small. Similarly the protection level given to the region is very high and if the country participates in the regional trade agreement than it must incur the welfare losses because of trade diversion. Another reason why SAFTA is weak is that the domestic lobbies want that the sectors which do not withstand competition must be entered in to sensitive list, so that no tariff reduction and other rules of SAFTA agreement are applied on them. Pigato (1997) & Shakur and Rae (2005) used CGE model to SAFTA and concluded that SAFTA gains are smaller than unilateral trade liberalization. Govindan (1994) examined liberalization will result in increased trade and welfare gains within the region. And in 1996, he concluded with Derosa (1996) that if liberalization is done on non-discriminatory basis than the welfare gains are larger. Raihan and Razzaque (2007) also used CGE model for the analysis and investigated if there is full implementation of SAFTA agreement than this will lead to welfare gains to Sri Lanka, India and other South Asian countries with the exception of Bangladesh because of negative trade diversion effect. Bangladesh and other LDCs in South Asia will have to increase their export share in Indian market to eliminate negative trade diversion. Kumar and Saini (2007) estimated different scenarios of SAFTA and its implications for the welfare of each economy within the region. They found that the SAFTA scenario does not result in welfare gains for all the economies in South Asia except Bangladesh. While the rest of South Asia gains about half a billion dollars, India gains by about \$204 million, Sri Lanka by \$89 million and Bangladesh has a welfare loss of \$225 million. Gains for India and Sri Lanka are mainly due to the gains in terms of trade.

2. SOUTH-ASIAN MAJOR ECONOMIES TRADE PERFORMANCE

(World and Intra-regional trade)

This section examines and estimates the trade performance of the South-Asian major economies like Bangladesh, India, Pakistan and Sri-Lanka (BIPS) as a group, excluding Nepal, Maldives and Bhutan because of their negligible trade with the World and regionally within the South-Asia. In this study a comparison of BIPS countries trade with the world and their intraregional trade performance is also carried out for the last seven years i.e. from the year 2003 to 2010. The main objective of this exercise is to examine whether there has been any change in the trade performance of the region major economies (BIPS) with the rest of the world over sample period of time. Whereas the second objective of the study is to make the cross-comparison of BIPS economies global trade performance vis-à-vis, their intraregional trade performance over the last seven years. The BIPS countries lagged behind in terms of openness to international trade in- spite of the fact that most of the countries have undertaken trade reforms in late 90s as compared to ASEAN countries. The intra-regional trade among South-Asian major economies was affected by political tension within the region, protectionist trade regime and large volume of informal trade. It is argued out that the region has limited complementarities that constrain expansion of intra-regional trade under free trade mechanism¹. Secondly it is argued that greater the extent of competitiveness among the major economies the lower is the probability of a regional agreement to succeed. Thirdly, these countries trade very little among themselves which may lead to substantial trade diversion than trade creation for some member countries within and outside South Asia region.

2.1. BIPS Exports Performance (World)

Despite showing good economic performance, South-Asian countries faces array of social and economic constraints ranging from poor infrastructure, weak institutional policies, poverty, poor health, poor education, unhygienic environment and unskilled labor etc.

Table 2.1 shows that South-Asian major economies Bangladesh, India, Pakistan and Sri-lanka (BIPS) as a group exports to world in terms of absolute value rise from \$ US 82.56 billion in 2003 to \$ US 211.14 billion in 2010, collectively contributing a share of about 1.11% in total world export in 2003, which rose marginally to about 1.53% in 2010. Whereas in terms of growth rates the BIPS countries annual percentage export growth rate decreased from 24.78% in 2003 to 1.16% in 2010. Since 2004, South Asia exports to the world experienced a sustained positive annual growth rate for all years except for the year 2009 when it abruptly declined by -3.75% is due to the affects of global financial crises.

Table: 2.1

BIPS Global Exports (US \$ billions)								
	2003	2004	2005	2006	2007	2008	2009	2010
Global Exports	7470.79	9100.72	10367.89	12013.92	13843.14	15981.79	12318.90	14464.84
BIPS Global Exports	82.56	103.02	131.89	156.59	184.54	227.13	218.61	221.14
% Share	1.11%	1.13%	1.27%	1.30%	1.33%	1.42%	1.77%	1.53%
% Growth		24.78%	28.03%	18.72%	17.85%	23.08%	-3.75%	1.16%

Source: Author's own calculations based on Trade Map Data

The Table 2.2 further elaborates at disaggregated level the major South-Asian economies (BIPS) contribution in global exports in terms of values, shares and growth rates. It is explored out that India is the major contributor among BIPS economies global exports with a highest share of about 71.90 % in 2003, which increased to about 77.96% in 2010 with an export growth rate more than 20 % with the exception of 2010 where it declined to about -2.47%. Similarly, Pakistan rank second contributing an export share of about 14.45% in 2003, which is now declined to about 9.68% in 2010, followed by Bangladesh with an optimistic export share growth from 7.76% (2003) to 8.61% in 2010. Whereas, Sri-Lankan export share declined to 3.76% in 2010 from 5.90% in 2003.

Table: 2.2

BIPS Global Exports (US \$ billions)								
BIPS Countries	2003	2004	2005	2006	2007	2008	2009	2010
Bangladesh Global Exports	6.40	8.27	9.33	11.70	13.14	16.82	17.16	19.03
% Share	7.76%	8.03%	7.08%	7.47%	7.12%	7.40%	7.85%	8.61%
% Growth		29.11%	12.87%	25.35%	12.36%	27.94%	2.07%	10.87%
India Global Exports	59.36	75.90	100.35	121.20	145.90	181.86	176.77	172.40
% Share	71.90%	73.68%	76.09%	77.40%	79.06%	80.07%	80.86%	77.96%
% Growth		27.87%	32.21%	20.77%	20.38%	24.65%	-2.80%	-2.47%
Pakistan Global Exports	11.93	13.38	16.05	16.93	17.84	20.28	17.55	21.41
% Share	14.45%	12.99%	12.17%	10.81%	9.67%	8.93%	8.03%	9.68%
% Growth		12.15%	19.97%	5.50%	5.35%	13.68%	-13.43%	21.98%
Sri Lanka Global Exports	4.87	5.47	6.16	6.76	7.66	8.18	7.12	8.30
% Share	5.90%	5.31%	4.67%	4.32%	4.15%	3.60%	3.26%	3.76%
% Growth		12.30%	12.68%	9.74%	13.33%	6.73%	-12.91%	16.61%
BIPS Total Global Exports	82.56	103.02	131.89	156.59	184.54	227.13	218.61	221.14

Source: Author's own calculations based on Trade Map Data

2.2. BIPS Exports Performance (Intra-regional)

Table 2.3 provides intraregional trends of exports among the South-Asian major economies during 2003 to 2010. The intraregional trade among the BIPS economies (*excluding Nepal, Bhutan and Maldives*) has been growing in absolute value terms from US \$ 3.73 billion in 2003 to about US \$ 10.69 billion in 2010. In 2009, BIPS countries intraregional exports were declined to about US \$ 6.90 billion as compared to the previous year is due to affects of global financial meltdown.

Pakistan and India are the two key players in South-Asian region intraregional trade, in 2010 the combined exports of both countries to South Asian countries stood at about US\$ 9.75 billion, which is about 91.22% of total intraregional exports among major economies of the south-Asian region. At disaggregated level India is major trading partner in the region and had 80.04% share among BIPS economies total intraregional exports in 2010, followed by Pakistan with 11.18%, followed by Sri-Lanka with 5.27% and Bangladesh with 3.51% respectively.

Table: 2.3

BIPS Intraregional Exports (US \$ Million)								
BIPS/Year	2003	2004	2005	2006	2007	2008	2009	2010
Bangladesh	82.61	160.08	270.90	324.30	638.17	424.78	325.12	375.05
% Share	2.21%	3.46%	4.62%	4.86%	7.73%	4.34%	4.71%	3.51%
% Growth		93.79%	69.22%	19.71%	96.79%	-33.44%	-23.46%	15.36%
India	3031.61	3535.42	4252.13	5007.87	6242.28	7854.18	5357.78	8557.49
% Share	81.16%	76.47%	72.49%	75.09%	75.63%	80.27%	77.55%	80.04%
% Growth		16.62%	20.27%	17.77%	24.65%	25.82%	-31.78%	59.72%
Pakistan	333.31	490.87	725.29	771.13	779.52	993.69	819.66	1195.66
% Share	8.92%	10.62%	12.37%	11.56%	9.44%	10.16%	11.86%	11.18%
% Growth		47.27%	47.76%	6.32%	1.09%	27.48%	-17.51%	45.87%
Sri Lanka	287.70	437.00	617.34	566.00	593.97	512.40	406.64	563.22
% Share	7.70%	9.45%	10.52%	8.49%	7.20%	5.24%	5.89%	5.27%
% Growth		51.89%	41.27%	-8.32%	4.94%	-13.73%	-20.64%	38.51%
Total BIPS Intraregional Exports	3735.23	4623.37	5865.66	6669.30	8253.94	9785.05	6909.20	10691.42

Source: Author's own calculations based on Trade Map Data

Table 2.4 provides destination wise data for each member country's exports among the South-Asian major economies for the period 2003. Being a South-Asian major trading economy of US \$ 3.03 billion, India's bilateral intraregional exports were mostly directed towards Bangladesh, which valued about US \$ 1.65 billions (54%), followed by Sri-lanka with US \$ 1.195 billion (39%) and Pakistan with US \$ 183.55 million (6%).

Similarly, in 2003 Pakistan's intraregional exports to South-Asia major economies worths about US \$ 333.31 million and most of the exported goods directed towards Bangladesh amounting US \$ 166.24 millions (49%), followed by India and Sri-lanka amounting US 83 million (25%) each respectively. While Bangaldesh & Sri-Lanka's major exports are also going to India. The data shows the domination of India in South-Asia's intraregional exports.

Table: 2.4

BIPS bilateral Intraregional Exports in 2003 (US \$ Millions)						
Reporters/Partners	Bangladesh	India	Pakistan	Sri Lanka	Reported by Exporting Country	% Share
Bangladesh	0.00	40.81	36.03	5.77	82.61	2.21%
India	1652.97	0.00	183.55	1195.09	3031.61	81.16%
Pakistan	166.24	83.55	0.00	83.53	333.31	8.92%
Sri Lanka	10.41	241.15	36.14	0.00	287.70	7.70%
Reported by Importing Country	1829.62	365.51	255.72	1284.39	3735.23	100.00%

Source: Author's own calculations based on UNComtrade Data

Comparative to 2003, India still enjoys intraregional trade with South-Asian major economies having an export share of about 80.04% of total intraregional exports in 2010, showing a trade diversion towards Sri-Lanka instead of being Bangladesh a major partner as were the case in 2003. In 2010, Indian exported about US\$ 8.5 billion of goods to South-Asian major

economies and its major exports destination is Sri-Lanka amounting about US \$ 3.3 billion (38%), followed by Bangladesh with US\$ 3.0 billion (35%) and Pakistan with US\$ 2.2 billion (26%).

While on the other hand in 2010, Pakistan's export in South-Asia majorly destined towards Bangladesh of amount US \$ 636.81 millions, followed by Sri-Lanka (US \$ 283.87 million) and India (US \$ 274.98 million). The table shows that major economies of South-Asia i.e. India and Pakistan have witnessed export gains within the region. Whereas Sri-Lanka & Bangladesh in the South-Asian region majorly exports its goods to India of valued US \$ 274.98 million and US \$ 288.53 million respectively.

Table: 2.5

BIPS Bilateral Intraregional Exports in 2010 (US \$ Millions)						
Reporters/Partners	Bangladesh	India	Pakistan	Sri Lanka	Reported by Exporting Country	% Share
Bangladesh	0.00	288.53	73.90	12.62	375.05	3.51%
India	3016.57	0.00	2235.79	3305.12	8557.49	80.04%
Pakistan	636.81	274.98	0.00	283.87	1195.66	11.18%
Sri Lanka	35.58	467.18	60.45	0.00	563.22	5.27%
Reported by Importing Country	3688.97	1030.70	2370.14	3601.61	10691.42	100.00%

Source: Author's own calculations based on UNComtrade Data

2.3 Comparison between BIPS World and Intraregional Exports Shares:

When compared to the economic performance of the South-Asian major economies global trade with respect to their intraregional trade, it is found that in terms of absolute value the intraregional trade among BIPS countries increased from US \$ 3.74 billion in 2003 to US \$ 10.69 billion in 2010 but in term of their percentage share to their global exports it is almost remain stagnant to about 4% since 2003 to 2010. The trade within the region is low when compared to its economic size in terms of GDP value and shares when comparing the BIPS economies trade with the world.

Table 2.6

Comparison between BIPS Global and Intraregional Exports Values & Shares (US \$ Billions)									
	2003	2004	2005	2006	2007	2008	2009	2010	
Global Export by BIPS Economies	82.56	103.02	131.89	156.59	184.54	227.13	218.61	221.14	
Total Intraregional Exports Among BIPS Economies	3.74	4.62	5.87	6.67	8.25	9.79	6.91	10.69	
% share of BIPS Intraregional Exports w.r.t Global Exports	4.52%	4.49%	4.45%	4.26%	4.47%	4.31%	3.16%	4.83%	

Source: Author's own calculations based on Trade Map Data

As shown in Table 2.6 in 2003, cumulatively about 95.48% of BIPS countries exports directed towards rest of the world, while only 4.52% of region's total exports are traded within the South-Asian region. While in 2010, this trend is more pronounced when 4.83% of

South-Asian region total exports took place within the region and 95.17% of the exports are made to rest of the world.

The table 2.7 explains the export shares of most South-Asian major economies to rest of the world (RoW) is almost above 90% but their contribution to intraregional export is in a single digit having a share below 5% since last seven years (2003-2010). In the South Asian region, Sri-Lanka stands at top contributing intraregional exports to about 5.91% of its total global exports in 2003, which now rose about 6.78% in 2010, respectively. India stands second in the South-Asian region, contributing intraregional exports to about 5.11% of its total export to world in 2003, which decreased to about 4.96% in the period 2010. While Pakistan is the only country within the South-Asian region, where its intraregional export contribution rise significantly from 2.79% in 2003 of its total export to world to about 5.58% in 2010. While the Bangladesh is the only country within the region where its export contribution intraregional in terms of percentage share of its total export to world remains almost stable which is below 2%.

Table 2.7

Comparison of % Share of BIPS Intraregional Exports w.r.t their Global Exports		
	2003	2010
Bangladesh	1.29%	1.97%
India	5.11%	4.96%
Pakistan	2.79%	5.58%
Sri Lanka	5.91%	6.78%

Source: Author's calculations based on Trade Map data

2.3. BIPS Import Performance (World)

Like developing nations, South-Asian major economies are also highly dependent on world to fulfill their needs of technology, machinery etc, which is elaborated in the Table 2.8 which shows that the BIPS countries total imports from the world amounted to about US \$ 102.18 billion in 2003 rising to US \$ 291.68 billion in 2010. The share of the South-Asia region imports against the global imports was about 1.33% in 2003 which rose to 2.59% in 2009 but in 2010 it declined to 1.94%. While in terms of region's import growth mostly remained above 20% since 2003, with the exception of last two years (2009 to 2010), the regions dependency on world imports decreased to about -16.58% and further to -10.48% respectively.

Table: 2.8

BIPS Global Imports (US \$ Billions)								
	2003	2004	2005	2006	2007	2008	2009	2010
Total Global Imports	7663.71	9417.883	10641.57	12273.21	14081.21	16384.49	12587.45	15027.76
BIPS Global Imports	102.14	136.15	186.90	233.50	280.25	390.55	325.81	291.68
% Share	1.33%	1.45%	1.76%	1.90%	1.99%	2.38%	2.59%	1.94%
% Growth		33.30%	37.27%	24.94%	20.02%	39.36%	-16.58%	-10.48%

Source: Author's calculations based on Trade Map data

The Table 2.9 shows how much BIPS countries are dependent on world for their needs, in terms of imports value, shares and annual growth rates from the period 2003 to 2010. Like exports, India has the highest share of world imports within the region, which was about US\$ 72.43 billion (70.91% of BIPS global Imports) in 2003, rose both in terms of value and share to about US\$ 220.29 billion (80.58% of BIPS global Imports) in 2010.

Pakistan ranks second among the major economies of South-Asia with global import value US\$ 13.05 billion (12.78% of BIPS global Imports), which rose to about US\$ 37.54 billion (12.87% of BIPS global Imports) in 2010. Similarly, the Bangladesh and Sri Lanka ranked third and fourth within the region with declining import share. The table 2.9 suggests that India has the highest global imports growth rate within the region, followed by Pakistan, Sri-Lanka and Bangladesh since 2003 to 2010.

Table: 2.9

BIPS/Year	BIPS Global Imports (dis-Aggregation) (US \$ Billions)							
	2003	2004	2005	2006	2007	2008	2009	2010
Bangladesh Global Imports	10.15	11.37	12.63	15.69	17.62	18.88	18.39	21.50
% Share	9.93%	8.35%	6.76%	6.72%	6.29%	4.83%	5.65%	7.37%
% Growth		12.09%	11.06%	24.21%	12.33%	7.14%	-2.58%	16.89%
India Global Imports	72.43	98.98	140.86	178.21	218.65	315.71	266.40	220.29
% Share	70.91%	72.70%	75.37%	76.32%	78.02%	80.84%	81.77%	75.52%
% Growth		36.66%	42.31%	26.52%	22.69%	44.39%	-15.62%	-17.31%
Pakistan Global Imports	13.05	17.95	25.10	29.83	32.59	42.33	31.58	37.54
% Share	12.78%	13.18%	13.43%	12.77%	11.63%	10.84%	9.69%	12.87%
% Growth		37.55%	39.82%	18.84%	9.28%	29.86%	-25.38%	18.85%
Sri Lanka Global Imports	6.51	7.85	8.31	9.77	11.39	13.63	9.43	12.35
% Share	6.38%	5.77%	4.44%	4.19%	4.06%	3.49%	2.89%	4.24%
% Growth		20.54%	5.79%	17.65%	16.50%	19.70%	-30.80%	30.98%
BIPS Total Global Imports	102.14	136.15	186.90	233.50	280.25	390.55	325.81	291.68

Source: Author's calculations based on Trade Map data

2.4 BIPS Imports Performance (Intra-regional)

In order to look the dependency of major South-Asian economies for their imports from the region since 2003 to 2010, the Table 2.10 shows that the cumulative intraregional imports among BIPS countries stood at US \$ 3.30 billion in 2003, which now rose to US\$ 9.12 US billion in 2010. The country wise analysis indicates that Bangladesh and Sri-Lanka are the bigger importers within the region and both cumulatively imports about 71.58% of total BIPS countries intraregional imports in 2010. Bangladesh imports about 40.42 % of intraregional imports, while Sri-Lanka by about 31.16%. While Pakistan and India are the least importer within the region and imports to about 18.49% and 9.93% of total intraregional imports respectively. Similarly in terms of import growth, Bangladesh and Sri-Lanka are highly integrated in intraregional trade as compared to Pakistan and India, who are highly integrated to external trade and full fill their demand from rest of the world as shown in the table.

Table: 2.10

BIPS/Year	BIPS Intra-regional Imports (Dis-Aggregation)						(US \$ Millions)	
	2003	2004	2005	2006	2007	2008	2009	2010
Bangladesh	1571.82	1430.66	1540.50	2047.22	2538.66	3688.81	2570.89	3688.97
% Share	47.63%	36.42%	33.16%	32.68%	32.30%	37.56%	39.41%	40.42%
% Growth		-8.98%	7.68%	32.89%	24.01%	45.31%	-30.31%	43.49%
India	262.68	481.43	838.14	1015.46	961.37	1250.42	835.34	905.95
% Share	7.96%	12.26%	18.04%	16.21%	12.23%	12.73%	12.81%	9.93%
% Growth		83.27%	74.09%	21.16%	-5.33%	30.07%	-33.19%	8.45%
Pakistan	312.40	545.14	703.96	1241.85	1388.35	1843.64	1212.31	1687.19
% Share	9.47%	13.88%	15.15%	19.82%	17.66%	18.77%	18.58%	18.49%
% Growth		74.50%	29.13%	76.41%	11.80%	32.79%	-34.24%	39.17%
Sri Lanka	1153.15	1470.65	1563.72	1959.69	2971.50	3037.12	1904.83	2844.17
% Share	34.94%	37.44%	33.66%	31.28%	37.81%	30.93%	29.20%	31.16%
% Growth		27.53%	6.33%	25.32%	51.63%	2.21%	-37.28%	49.31%
BIPS Intra-regional Imports	3300.06	3927.88	4646.33	6264.23	7859.88	9819.99	6523.37	9126.28

Source: Author's calculations based on Trade Map data

If we look at the imports among BIPS countries in base period (2003), the table 2.11 shows that the main importers among the South-Asia's intraregional trade were Bangladesh and Sri-Lanka. Bangladesh has the largest share in total intraregional imports which was about 47.63% (US\$ 1.57 billion), and within the region Bangladesh fully fills its domestic needs mainly from India of about US\$ 1.43 billion of goods and Pakistan with US\$ 124.51 million. Whereas Sri-Lanka comes second, who imports US\$ 1.15 billion (34.94%) of BIPS countries total intraregional imports and imports goods mainly from India amounting (US\$ 1.0 billion). While Pakistan mainly imports goods from India within the region.

Table: 2.11

BIPS/Year	BIPS Bilateral Intra-regional Imports in 2003				(US \$ Millions)	
	Bangladesh	India	Pakistan	Sri Lanka	Reported by Importing Country	% Share
Bangladesh	0.00	1437.88	124.41	9.54	1571.82	47.63%
India	71.50	0.00	68.05	123.13	262.68	7.96%
Pakistan	42.91	226.24	0.00	43.25	312.40	9.47%
Sri Lanka	5.63	1076.52	71.00	0.00	1153.15	34.94%
Reported by Exporting Country	120.04	2740.64	263.46	175.92	3300.06	100.00%

Source: Author's calculations based on Trade Map data

Comparing to the 2003 intraregional imports among BIPS countries, the Table 2.12 shows that in 2010 Bangladesh (40.42%) & Sri-Lanka (31.16%) are still the major importers within the region and had a cumulative share of about 71.58% of total intraregional imports among South-Asian major economies. Bangladesh, Sri-Lanka and Pakistan in the region mostly rely on Indian products to fully fill their domestic needs. While it is interesting to note that in 2010 Pakistan's intraregional import share has been increased to about two fold when compared to

the base period 2003 share. Whereas, india imports products majorly form Sri-Lanka of worth US\$ 368.99 million in 2010. Comparison of 2003 and 2010 time period shows that India & Pakistan had showed increase in imports shares, whereas Bangladesh and Sri-Lanka showed decline in its imports share.

Table: 2.12

BIPS Bilateral Intra-regional Imports in 2010					(US \$ Millions)	
BIPS/Year	Bangladesh	India	Pakistan	Sri Lanka	Reported by Importing Country	% Share
Bangladesh	0.00	3016.57	636.81	35.58	3688.97	40.42%
India	288.53	0.00	248.42	368.99	905.95	9.93%
Pakistan	73.90	1559.92	0.00	53.37	1687.19	18.49%
Sri Lanka	12.62	2549.44	282.11	0.00	2844.17	31.16%
Reported by Exported Country	375.05	7125.93	1167.35	457.94	9126.28	100.00%

Source: Author's calculations based on Trade Map data

2.5 Comparison between BIPS World and Intra-regional Imports Shares

The Table 2.13 explains that intra-regional imports among South-Asian major economies increased from US\$ 3.30 billion to US\$ 9.13 billion in 2010. The BIPS countries full fill about 3% of their domestic need through intra-regional imports, which is almost remained stagnant since 2003 to 2010. The BIPS countries for the sake of technology, machinery and value added goods to cater their domestic needs rely mainly on external trade and in 2010 BIPS countries imports about 96.87% of their total imports from rest of the world, which amounts about US\$ 291.68 billion. While in terms of BIPS import growth rate within the region increased from 19.02% in 2003 to 39.90% in 2010. The main reason behind these trends is increasing reliance of India and Pakistan on rest of the world for its imports.

Table 2.13

Comparison between BIPS Global and Intra-regional Imports Values & Shares (US \$ Billions)								
	2003	2004	2005	2006	2007	2008	2009	2010
Global Imports by BIPS Economies	102.14	136.15	186.90	233.50	280.25	390.55	325.81	291.68
Total Intra-regional Imports among BIPS Economies	3.30	3.93	4.65	6.26	7.86	9.82	6.52	9.13
% Share of BIPS Intra-regional Imports w.r.t their Global Imports	3.23%	2.88%	2.49%	2.68%	2.80%	2.51%	2.00%	3.13%
% Growth		19.02%	18.29%	34.82%	25.47%	24.94%	-33.57%	39.90%

Source: Author's calculations based on Trade Map data

The table 2.14 explains the performance of BIPS countries global imports at disaggregated level, India ranked top in importing goods from the rest of the world (excluding South Asia) both in terms of absolute values and percentage shares out of its total global import. India full fill its domestic need by importing only 0.4% of its total imports from South-Asia, which is lowest in the region from 2003 to 2010. Similarly, Pakistan imports only 4.5% of its total imports from the region to full fill its domestic need in 2010.

Table 2.14

Comparison of % Share of BIPS Intra-regional Exports w.r.t their Global Exports								
	2003	2004	2005	2006	2007	2008	2009	2010
Bangladesh	15.5%	12.6%	12.2%	13.0%	14.4%	19.5%	14.0%	17.2%
India	0.4%	0.5%	0.6%	0.6%	0.4%	0.4%	0.3%	0.4%
Pakistan	2.4%	3.0%	2.8%	4.2%	4.3%	4.4%	3.8%	4.5%
Sri Lanka	17.7%	18.7%	18.8%	20.1%	26.1%	22.3%	20.2%	23.0%

However, among South-Asian major economies Sri-Lanka is the major importer of regional, who full fill its domestic demand by about 23.0% from the South-Asian region in 2010, followed by Bangladesh who full fill its needs to about 17.2% from the region.

3. PAKISTAN'S TRADE PERFORMANCE WITH SOUTH-ASIA'S MAJOR ECONOMIES

This section highlights the Pakistan trade performance in South Asia with major economies of India, Sri-Lanka and Bangladesh from 2003-10. Examining the existing intra-regional trade flows of Pakistan not only help us to know more about the its partner economies but it also makes us aware of the challenges at present in the way for enhancing the trade flows among each other by way of finding out suitable policies for further deepening the trade integration. In this section, a brief analysis of the trade between Pakistan and major economies of South-Asian countries is undertaken highlighting export potential of Pakistan.

3.1. Pakistan's Exports Performance

The Table 3.1 shows that Pakistan's export to South-Asian major economies has been consistently increasing both in absolute value terms as well as in percentage share. Pakistan is one of the major trading partners within the region. The total export of Pakistan to Bangladesh, India and Sri-Lanka amounted to US \$ 333.31 million in 2003 which rose to about US \$ 1.19 billion in 2010. Pakistan exports to South-Asian major economies accounted 2.79% of its global export in 2003, which is now increased to about 5.58% in 2010. However Pakistan's export growth rate within the region was at 47.27% in 2004 which decreased to 45.87% in 2010.

Table 3.1

Pakistan Exports to South-Asian Major Economies (US \$ million)								
	2003	2004	2005	2006	2007	2008	2009	2010
Bangladesh	166.23	197.65	234.41	266.83	279.25	422.33	367.37	636.80
% Share	49.87%	40.27%	32.32%	34.60%	35.82%	42.50%	44.82%	53.26%
% Growth		18.90%	18.60%	13.83%	4.65%	51.24%	-13.01%	73.34%
India	83.54	158.49	33.72	326.70	291.69	354.63	235.32	274.98
% Share	25.07%	32.29%	4.65%	42.37%	37.42%	35.69%	28.71%	23.00%
% Growth		89.71%	-78.72%	868.82%	-10.72%	21.58%	-33.64%	16.85%
Sri Lanka	83.52	134.71	153.66	177.59	208.57	216.71	216.96	283.87

% Share	25.06%	27.44%	21.19%	23.03%	26.76%	21.81%	26.47%	23.74%
% Growth		61.28%	14.06%	15.57%	17.44%	3.91%	0.11%	30.84%
Pakistan's total exports to South-Asian Major Economies	333.31	490.86	725.29	771.13	779.52	993.69	819.66	1195.66
% Share	2.79%	3.67%	4.52%	4.55%	4.37%	4.90%	4.67%	5.58%
% Growth		47.27%	47.76%	6.32%	1.09%	27.48%	-17.51%	45.87%
Pakistan Global Exports	11930.07	13379.02	16050.20	16932.87	17838.41	20279.05	17554.70	21413.10

Source: Author's calculations based on Trade Map data

The table also elaborates that Pakistan's major export destinations within the region directed towards Bangladesh, where exports of Pakistani goods increased from US \$ 166.23 million in 2003, to a highest level of US \$ 636 million in 2010. Pakistan's other major export destination in the region is Sri-Lanka, who imports about US\$ 283.87 million of goods and followed by India who imported US\$ 274.98 millions of goods in 2010.

When we look over Pakistan's export share in South-Asia major economies with respect to its global export; Pakistan exports share to Indian and Sri Lanka markets had gone down from 25.07% and 25.06% in 2003 to about 23% and 24% in 2010 respectively. Whereas in case of Bangladesh market, Pakistan export share has increased from 49.87% in 2003 to about 53.26% in 2010.

3.2. Pakistan's Imports Performance

The below table elaborates that Pakistan's imports dependency from South-Asian major economies has increased over time, it was about US\$ 312.40 million in 2003 and it was increased to about US\$ 1.68 billion in 2010. Among the major economies of South-Asia, Pakistan imports goods majorly from India over the past seven years. In 2003 Pakistan's imports from India was US\$ 226.24 million, which accounts about 72.42% of Pakistan's total intraregional imports has increased about two fold in terms of value to US\$ 1.55 billion in 2010 accounting a share of about 92.46% of Pakistan's total intraregional imports from South-Asia.

Table: 3.2

Pakistan's imports from South-Asian Major Economies (US \$ million)								
	2003	2004	2005	2006	2007	2008	2009	2010
Bangladesh	42.91	45.08	68.09	55.89	62.34	85.95	76.12	73.90
% Share	13.74%	8.27%	9.67%	4.50%	4.49%	4.66%	6.28%	4.38%
% Growth		5.05%	51.04%	-17.92%	11.54%	37.89%	-11.44%	-2.91%
India	226.24	454.41	576.70	1114.99	1266.23	1691.48	1080.40	1559.92
% Share	72.42%	83.36%	81.92%	89.78%	91.20%	91.75%	89.12%	92.46%
% Growth		100.85%	26.91%	93.34%	13.56%	33.58%	-36.13%	44.38%

Sri Lanka	43.25	45.66	59.18	70.97	59.79	66.22	55.79	53.37
% Share	13.84%	8.38%	8.41%	5.72%	4.31%	3.59%	4.60%	3.16%
% Growth		5.57%	29.61%	19.93%	-15.76%	10.75%	-15.75%	-4.34%
Pakistan's total imports from South-Asian Major Economies	312.40	545.14	703.96	1241.85	1388.35	1843.64	1212.31	1687.19
% Share	2.39%	3.04%	2.81%	4.16%	4.26%	4.36%	3.84%	4.49%
% Growth		74.50%	29.13%	76.41%	11.80%	32.79%	-34.24%	39.17%
Pakistan's Global Imports	13048.609	17948.58	25096.58	29825.75	32593.94	42326.57	31583.72	37537.03

Source: Author's calculations based on Trade Map data

Similarly, Pakistan's imports from Bangladesh are negligible but showed an increased in terms of value from US \$ 42.91 million in 2003 to about US \$ 73.90 million in 2010. But in terms of import share from the region, Pakistan's import share declined in case of Bangladesh from 13.74% in 2003 to 4.38% in 2010. While in case of Sri Lanka, Pakistan imports in 2010 from its partner show an increase of US\$ 10 million since 2003.

4. COMMODITY WISE SHARE IN INTRA-REGIONAL TRADE: (Exports and Imports of Pakistan to Major South Asian Countries)

In this section, commodity wise export and import share of the three major economies of South Asia with Pakistan has been calculated. This analysis is done at HS 6 digit level; it will throw light on the new emerging products in the year 2010 as compared to period 2003. Similarly, it will also help to understand the increased shares of the products as compared to previous period.

4.1. Pakistan's Trade with India:

India and Pakistan are the two largest economies in South Asia. Together, they account for 90% of the gross domestic product (GDP) and 85% of the population of the region. The low level of Pakistan-India bilateral trade is the result of border disputes and political tensions, but also of inward-looking import-substitution growth strategies.

This has rendered South Asia among the least integrated economic region in the world. Between 1980 and 2005, intraregional trade as a share of total trade within South Asia only rose from 3 to 4%, whereas in East Asia (a region of comparable size in population and GDP) intraregional trade more than doubled from 6 to 11 %. It is striking that over the same period, South Asia's worldwide exports grew from only \$12 billion to \$126 billion (a 10-fold increase) while East Asia's jumped from \$48 billion to over \$1 trillion (a 20-fold increase).

Trade between India and Pakistan is tiny compared to the potential, which by estimates could be as high as US\$10 billion or 2% of the combined merchandise trade with the world. Starting from mid 1980's to late 1980's, economies of Pakistan and India introduced economic liberalization programs. This include, opening international Trade and Investment, deregulation of initiation of privatization, tax reforms and inflation controlling measures. As far as India is concerned, fruits of liberalization reached to the peak in 2007 as India recorded

highest GDP growth rate of 9% and as a result became the second fastest growing economy of the World. According to the World Bank India still faces challenges in public sector reforms, infrastructure, agricultural and rural development, reforms in lagging states, and in dealing with the impact of HIV/AIDS. There is also considerable room for more wide-ranging and deeper reforms in the trade and investment regimes as well.

While in case of Pakistan, due to economic liberalization, the average tariffs fell from 70% in 1980 to 30% in 2001 and 14.68% in 2010. Measures that have restricted trade were also eliminated by the Government which includes regulatory duties and para tariffs. The real GDP growth rate was 1.7% in 2008-09, which jumped to 3.8% in 2009-10 and again fell back to 2.4% in 2010-11.

Despite the overall economic liberalization and globalization in both India and Pakistan, the bilateral trade relations have been highly “managed”. When the two countries started the Composite Dialogue Process in January 2004, there has been a sizable increase in bilateral trade. Official trade between India and Pakistan reached US\$1.1 billion in 2005-06. According to our estimates for 2004-05, there was an additional \$545 million in unofficial trade. Thus, total bilateral trade stood at \$1.5 billion, or 3.4 percent of Pakistan’s total trade, in 2005-06. Total Indo Pak trade shows a mixed trend 2007 onwards. In 2007 total trade was valued at US\$ 1.5 billion which rose to US\$ 2.04 billion in 2008 but fell back sharply to US\$ 1.3 billion in 2009. And in 2010, this trade has increased to US\$ 4.3 billion. Pakistan’s exports to India in the period show a similar trend with 2007 exports reaching US\$ 291 million then rising to a peak of US\$ 354 million in 2008 before falling to US\$ 274 million in 2010. Pakistan’s imports also follow this pattern with 2007 imports from India valued at US\$ 1.2 billion, rising to their highest level of US\$ 1.6 billion in 2008 before falling back to US\$ 1.5 billion in 2010. Bilateral trade between Pakistan and India had been limited to a few goods with almost no trade in services. The composition of Indian imports from Pakistan before during 2000-2004 was limited to about six commodity groups, which on average accounted for more than 80 percent of total exports. These included edible vegetables and roots; sugar and confectionary; edible fruits; gum/resins and vegetable extracts (e.g. molasses); and products of milling industry. Since 2004, after Pakistan and India have begun wide ranging dialogue on political and economic issues, the composition of Pakistani exports to India has become more diversified. In addition to the traditional exports to India mentioned above, mineral fuels and oils; vegetable plaiting materials; organic and inorganic chemicals; raw hides and skins; lead and articles made of lead; and salt/sulphur/cement have also been exported to India. The composition of official exports from India to Pakistan is broader, reflecting India’s more diversified industrial base. Organic chemicals form the biggest share of Pakistani imports from India. Another major import to Pakistan from India has been of ores/slag (mainly iron ore). During the last five years (2004 to 2010) imports of pharmaceutical products; mineral fuels/oils; man-made filaments; plastic products; rubber products; leather; and copper and copper products have become important. Periodically, agricultural products (e.g. raw cotton, wheat, silk, and sugar) have accounted for one-time imports or exports to meet domestic shortages in either country. The percentage shares of the exported commodities to India from Pakistan have been calculated in table 4.1 at HS 6-digit level for the period 2003 and 2010.

Table: 4.1

Codes	Description	2003	Codes	Description	2010
'080410	Dates, fresh or dried	25%	'080410	Dates, fresh or dried	16%
'071339	Beans dried, shelled, whether or not skinned or split, nes	23%	'252329	Portland cement nes	10%
'071390	Leguminous vegetables dried,shelled,whether or not skinned or split,nes	15%	'271019	Light petroleum distillates nes	10%
'271019	Light petroleum distillates nes	7%	'290315	1,2-dichloroethane(ethylene dichloride)	4%
'520819	Woven fabrics of cotton,>/=85%, not more than 200 g/m2,unbleached, nes	3%	'291736	Terephthalic acid and its salts	4%
'071320	Chickpeas, dried, shelled, whether or not skinned or split	3%	'283620	Disodium carbonate	3%
'121190	Plants &pts of plants(incl sed&fruit) used in pharm,perf,insect etc nes	2%	'780110	Lead refined unwrought	3%
'130190	Natural gums, resins, gum-resins and balsam, except arabic gum	2%	'520932	Twill weave cotton fabrics,>/=85%, more than 200 g/m2, dyed	2%
'510121	Degreased shorn wool, not carded, combed or carbonised	2%	'390120	Polyethylene having a specific gravity of 0.94 or more	2%
'842641	Derricks/cranes o works trucks fitted w a crane,self-propelled on tires	2%	'390110	Polyethylene having a specific gravity of less than 0.94	2%

Source: Author's calculations based on Trade Map data

In this part of analysis, Pakistan's exports to India are compared between the two periods i.e. 2003 and 2010. Major export items of Pakistan to India in 2003 comprised of Dates, Beans, Leguminous vegetables, chick peas etc. But in 2010 we see that new products emerged as the major export items of Pakistan to India and these are Cement with the share of 10%, some organic and inorganic chemicals which include ethylene dichloride, terephthalic acid and disodium carbonate. Another major product is twill weave fabric with the share of 2% in overall exports to India from Pakistan. Our analysis also indicates that Dates are still the major export category but as compared to 2003, the share has been reduced to 16% from 25%. Similarly, the shares of the imported commodities by Pakistan from India has been calculated at HS 6-digit level in table 4.2 to see whether Pakistan is now importing more value added products or importing the primary commodities.

Table: 4.2

Codes	Description	2003	Codes	Description	2010
'290243	P-xylene	25%	'520100	Cotton, not carded or combed	20%
'260111	Iron ores&concentrates,oth than roasted iron pyrites,non-agglomerated	12%	'170199	Refined sugar, in solid form, nes	10%
'230400	Soya-bean oil-cake&oth solid residues,whether or not ground or pellet	8%	'230400	Soya-bean oil-cake&oth solid residues,whether or not ground or	8%
'401120	Pneumatic tires new of rubber for buses or lorries	6%	'290243	P-xylene	8%
'390210	Polypropylene	4%	'071320	Chickpeas, dried, shelled, whether or not skinned or split	4%
'090240	Black tea (fermented) & partly fermented tea in packages exceedg 3 kg	3%	'070200	Tomatoes, fresh or chilled	3%
'294190	Antibiotics nes, in bulk	3%	'090240	Black tea (fermented) & partly fermented tea in packages exceedg 3	2%
'293399	Heterocyclic compounds with nitrogen hetero-atom[s] only (excl. those	2%	'890800	Vessels and other floating structures for breaking up	2%
'320416	Reactive dyes and preparations based thereon	2%	'390210	Polypropylene	2%
'760611	Plate,sheet or strip,aluminium,not alloyd,rect or sq,exceedg 0.2mm thk	1%	'290241	O-xylene	1%

Source: Author's calculations based on Trade Map data

When we compared the major import items from India in 2010 as compared to 2003, we see that among the major import products, the share of P-xylene, polypropylene and black tea have reduced from 25%, 4% and 3% to 8%, 2% and 2%. Now cotton and sugar have also emerged as the major importing products by Pakistan from India. The share of soya-bean oil cake and solid residues remain the same in 2010. Now Pakistan has also start importing chickpeas and tomatoes from India as indicated in the top ten importing products by Pakistan. Earlier Pakistan was also importing antibiotics from India but the share has been reduced to 10% in 2010.

4.2. Pakistan's Trade with Sri Lanka:

Pakistan and Sri Lanka have good economic and trade relations. Exports of Pakistan to Sri Lanka increased from \$83 million in 2003 to \$ 208 million in 2007 to \$283 million in 2010. And the imports from Sri Lanka increased from \$43 million in 2003 to \$53 million in 2010. Trade expansion between the countries took place in agro-based products which includes sugar production, sea food processing, value added textiles and clothing, tea and plantation, electronics, metal fabrication and light engineering, pharmaceutical products, preservation and canning of fruits and vegetables. Currently Pakistan receives 0.6% of Sri Lankan exports and Sri Lanka receives 0.7% of Pakistanis exports. Pakistan is an important market for tea, copra, rubber, betel leaves and tamarind and Sri Lanka is an important market for textiles, pharmaceuticals, machinery and agricultural items.

Following FTA which came into operation on June 30, 2005, bilateral trade between both the countries has been strengthened through an increase in the number of products that they can now import from each other. Under FTA, both Pakistan and Sri Lanka have granted duty free access to each other on several tariff lines, agreeing to eliminate custom tariff on almost 90% of products by June 2010. Resultantly, Pakistan has now become the second largest trade partner for Sri Lanka in the South Asian region. Under FTA, both the countries have agreed to a 35% domestic value addition and change of tariff heading at a six digit level, which provides flexibility for Sri Lankan and Pakistani investors to source their inputs from third countries and export manufactured products to each other. Pakistan has granted TRQs to Sri Lanka, on an annual basis, on 10,000 metric tons of tea at zero rate of duty and 1,200 metric tons of betel leaves at a preferential margin of 35 per cent against the pre-2005 import duty of Rs.150 per kilo. Before 2005, Sri Lanka exported about 3,000 metric tons of tea to Pakistan and the annual TRQ of 10,000 metric tons enabled Sri Lankan tea trade to make a fresh start. Likewise, TRQ on betel leaves has resulted in enhancing the income of betel growers in the rural areas of Sri Lanka. Pakistan also granted Sri Lanka TRQs for 3 million pieces of apparel products, covering 20 categories where there was market potential without restrictions regarding the fabric's country of origin. The apparel categories also qualify for 35% preferential tariff margin. In addition, Sri Lankan ceramic tiles and tableware also enjoy 20% of preferential tariff margin. Sri Lanka has granted to Pakistan TRQs for duty free exports of Kino and 6,000 metric tons of long grade basmati rice, in addition to 1,000 metric tons of potatoes per annum. The percentage shares of the exported and imported commodities by Pakistan to Sri-Lanka have been estimated at HS 6-digit level for the years 2003 and 2010 in tables 4.3 and 4.4.

Table: 4.3

Codes	Description	2003	Codes	Description	2010
'520819	Woven fabrics of cotton, >=85%, not more than 200 g/m2, unbleached, nes	18%	'100630	Rice, semi-milled or wholly milled, whether or not polished or glazed	17%
'030559	Fish nes, dried, whether or not salted but not smoked	8%	'252329	Portland cement nes	6%
'521213	Woven fabrics of cotton, weighing not more than 200 g/m2, dyed, nes	7%	'070190	Potatoes, fresh or chilled nes	6%
'520512	Cotton yarn, >=85%, single, uncombed, 714.29 >dtex >=232.56, not put up	5%	'730690	Tubes, pipe & hollow profiles, iron or steel, welded, nes	5%
'100630	Rice, semi-milled or wholly milled, whether or not polished or glazed	4%	'520932	Twill weave cotton fabrics, >=85%, more than 200 g/m2, dyed	5%
'070190	Potatoes, fresh or chilled nes	4%	'520911	Plain weave cotton fabric, >=85%, more than 200 g/m2, unbleached	5%
'300490	Medicaments nes, in dosage	4%	'520942	Denim fabrics of cotton, >=85%, more than 200 g/m2	4%
'730610	Pipe, line, i or s, welded, riveted or similar, nes, for oil or gas pipeline	3%	'600622	Dyed cotton fabrics, knitted or crocheted, of a width of > 30 cm	4%
'521223	Woven fabrics of cotton, weighing more than 200 g/m2, dyed, nes	3%	'070310	Onions and shallots, fresh or chilled	3%
'630231	Bed linen, of cotton, nes	2%	'520939	Woven fabrics of cotton, >=85%, more than 200 g/m2, dyed, nes	3%
'390410	Polyvinyl chloride, not mixed with any other substances	2%	'520839	Woven fabrics of cotton, >=85%, not more than 200 g/m2, dyed, nes	3%
'520522	Cotton yarn, >=85%, single, combed, 714.29 >dtex >=232.56, not put up	2%	'252390	Hydraulic cements nes	2%
'080520	Mandarins (tang & sats) clementines & wilkgs & sim citrus hybrids, fresh/dried	2%	'300490	Medicaments nes, in dosage	2%

Source: Author's calculations based on Trade Map data

In Pakistan-Sri Lanka analysis, share of commodities like rice and potatoes have increased in the year 2010 as compared to 2003. New products have emerged in the year 2010 which Pakistan is exporting to Sri Lanka in the top ten shares which basically includes Portland cement (6%), twill weave cotton fabrics (5%), plain weave cotton fabrics (5%), Denim fabrics (4%), Dyed cotton fabrics (4%), Onions (3%), hydraulic cement (2%) and medicaments (2%). If we see the data, it is clear that Pakistan is now majorly exporting Cotton as among top ten list five products are of cotton. Now the shares have been calculated for the imported commodities from Sri Lanka by Pakistan for the years 2003 and 2010. The top ten shares have been mentioned in the table:

Table: 4.4

Codes	Description	2003	Codes	Description	2010
'120300	Copra	28%	'400121	Natural rubber in smoked sheets	25%
'090240	Black tea (fermented) & partly fermented tea in packages exceedg 3 kg	14%	'140490	Vegetable products nes	11%
'400121	Natural rubber in smoked sheets	14%	'400110	Natural rubber latex, whether or not prevulcanised	9%
'140490	Vegetable products nes	11%	'080119	Coconuts, excluding dessicated	6%
'400129	Natural rubber in other forms nes	7%	'090240	Black tea (fermented) & partly fermented tea in packages exceedg 3	6%
'080119	Coconuts, excluding dessicated	4%	'080111	Coconuts, dessicated	5%
'140300	Vegetable materials, such as broom-corn, piassava, couch-grass and ist	2%	'090411	Pepper of the genus Piper, ex cubeb pepper, neither crushed nor ground	4%
'080111	Coconuts, dessicated	2%	'400129	Natural rubber in other forms nes	3%
'441121	Fibreboard >0.5 g/cm2 <0.8 g/cm2 not worked or surface covered	1%	'120300	Copra	3%
'760410	Bars, rods and profiles, aluminium, not alloyed	1%	'400122	Technically specified natural rubber (TSNR)	2%
'550410	Staple fibres of viscose, not carded or combed	1%	'441112	Medium density fibreboard MDF of wood, of a thickness <= 5 mm	2%
'090810	Nutmeg	1%	'540110	Sewing thread of synthetic filaments	2%

Source: Author's calculations based on Trade Map data

In 2003, Copra was the major import item from Sri Lanka with the share of 28% but now in 2010, Natural rubber in smoked sheets has taken the top position. Copra is among the top ten commodities imported from Sri Lanka but its share has largely reduced to 3% from 28%. Share of natural rubber in other forms and Black tea has also decreased in the current scenario. On the other hand in case of Coconuts desiccated; share has increased from 2% (2003) to 5% (2010). Among the top ten commodities, rubber is playing the major role in 2010 as five products are of rubber which is being imported from Sri Lanka.

4.3. Pakistan's Trade with Bangladesh:

During the 8th meeting of Joint Economic Committee (JEC) held in Dhaka on 12-13 September 2005, Pakistan and Bangladesh both decided to increase the bilateral trade to US \$1 billion by 2007. It has increased from about US \$147 million in 2002 to US \$279 million in 2007 and by the end of 2010; the trade between the two countries was \$636 million. Major imports from Bangladesh to Pakistan include tea, jute, medical and pharmaceutical products. There is a duty free import of Bangladeshi tea by Pakistan. There are also prospects for the development and establishment of direct shipping service between the two countries in order to promote commercial and trade links. Efforts to expand technical cooperation in various fields were identified by Joint Working Group. In 2006, four MoUs on cooperation in areas of agriculture, tourism, promotion of trade, and product standardization and quality assurance were signed during the visit of Begum Khaleda Zia, Prime Minister of Bangladesh to Pakistan. There are MoUs signed between Pakistan Agriculture Research Council, Ministry of Food, Agriculture & Livestock and Bangladesh Agricultural Research Council. Both countries have also signed MoUs on tourism.

The percentage shares of the exported and imported commodities by Pakistan to Bangladesh have been estimated at HS 6-digit level in tables 4.5 and 4.6.

Table: 4.5

Codes	Description	2003	Codes	Description	2010
'520100	Cotton, not carded or combed	15%	'520100	Cotton, not carded or combed	13%
'520512	Cotton yarn, >/=85%, single, uncombed, 714.29 >dtex>/=232.56, not put up	11%	'520942	Denim fabrics of cotton, >/=85%, more than 200 g/m2	12%
'520819	Woven fabrics of cotton, >/=85%, not more than 200 g/m2, unbleached, nes	10%	'100630	Rice, semi-milled or wholly milled, whether or not polished or glazed	10%
'520532	Cotton yarn, >/=85%, multi, uncombed, 714.29 >dtex>/=232.56, nt put up, nes	8%	'520532	yarn, >/=85%, multi, uncombed, 714.29 >dtex>/=232.56, nt put up, nes	7%
'521213	Woven fabrics of cotton, weighing not more than 200 g/m2, dyed, nes	7%	'520932	Twill weave cotton fabrics, >/=85%, more than 200 g/m2, dyed	7%
'520859	Woven fabrics of cotton, >/=85%, not more than 200 g/m2, printed, nes	3%	'100640	Rice, broken	5%
'071320	Chickpeas, dried, shelled, whether or not skinned or split	3%	'520512	yarn, >/=85%, single, uncombed, 714.29 >dtex>/=232.56, not put up	5%
'540774	Woven fabrics, >/=85% of synthetic filaments, printed, nes	2%	'520939	Woven fabrics of cotton, >/=85%, more than 200 g/m2, dyed, nes	3%
'520522	Cotton yarn, >/=85%, single, combed, 714.29 >dtex>/=232.56, not put up	2%	'520544	yarn, >/=85%, multiple, combed, 192.31 >dtex>/=125, not put up, nes	2%
'521051	Plain weave cotton fab, <85% mixd w m-m fib, nt more thn 200 g/m2, printd	2%	'521223	Woven fabrics of cotton, weighing more than 200 g/m2, dyed, nes	2%

Source: Author's calculations based on Trade Map data

In Pakistan-Bangladesh analysis, it is seen that Cotton is the major export item in 2003 as well as 2010. 51% of the share among the top ten products is of cotton. The share of cotton, not carded or combed was 15% on 2003 which is reduced to 13% in 2010. Another product which has shown the major decline in the share of exports of Pakistan towards Bangladesh is Cotton yarn, uncombed. Share has reduced from 11% to 5% in 2010. Rice has also emerged as the major export item to Bangladesh. Share of Rice, semi milled and wholly milled is 10% and that of broken rice is 5%.

Table: 4.6

Codes	Description	2003	Codes	Description	2010
'530310	Jute and other textile bast fibres, raw or retted	65%	'530310	Jute and other textile bast fibres, raw or retted	76%
'090240	Black tea (fermented) & partly fermented tea in packages exceedg 3 kg	27%	'940600	Prefabricated buildings	7%
'140490	Vegetable products nes	2%	'240120	Tobacco, unmanufactured, partly or wholly stemmed or stripped	5%
'140110	Bamboos used primarily for plaiting	1%	'090240	Black tea (fermented) & partly fermented tea in packages exceedg 3 kg	2%
'300420	Antibiotics nes, in dosage	1%	'530720	Yarn of jute or of oth textile bast fibres,multiple (folded) or cabled	2%
'090220	Green tea (not fermented) in packages exceeding 3 kg	1%	'530710	Yarn of jute or of other textile bast fibres, single	2%
'230400	Soya-bean oil-cake&oth solid residues,whether or not ground or pellet	0%	'730890	Structures&parts of structures,i/s (ex prefab bldgs of headg no.9406)	1%
'300490	Medicaments nes, in dosage	0%	'520919	Woven fabrics of cotton,>=85%,more than 200 g/m2, unbleached, nes	1%
'960200	Workd veg/mineral carvg mat&art,carvd art nes;workd unhardend gelatin	0%	'520299	Cotton waste, nes	1%
'854590	Articles of carbon/graphite,of a kind usd for electrical purposes,nes	0%	'140490	Vegetable products nes	0%

Source: Author's calculations based on Trade Map data

In 2003, Pakistan was importing majorly 5 products from Bangladesh with Jute having the major share of 65% in Pakistan's imports from Bangladesh. Other products include Black tea (27%), Vegetable products (2%), Bamboos (1%), Antibiotics (1%) and green tea (1%). Now in 2010, Jute is again the major import item from Bangladesh and its share has also increased to 76% following prefabricated fabrics (7%), tobacco, black tea (2%), yarn of jute (2%), structures and parts of structures (1%), woven fabrics of cotton (1%) and cotton waste (1%).

5. TRADE INDICATORS ANALYSIS: (Competitiveness and Complementarities)

In this section the Pakistan's trade performance with major SAARC countries is analyzed. The analysis is based on certain trade indices used in the literature i.e. TCI, RCA, BRCA, RMA and GL-Index. The indices analysis is done at two digit chapter level for the years 2003-10.

5.1. Trade Complementarily Index:

In this section we calculated the overall Trade complementarity index for Pakistan with Bangladesh, India and Sri Lanka for the period 2003 to 2010. The indices are calculated on the basis of export and import profiles of selected major economies of South-Asia. The index tells us how well a country's export supply fits into the import demand of its trading partners. The higher TCI overtime indicates that the region is able to fulfill intraregional demand or supply of goods and indicates more favorable prospect for a successful trade cooperation arrangement between the countries. Trade complementarity index measures how well does the export profile of one country, or group of countries, match with the import profiles of others. Also, changes in the value of trade complementarity index over time can help determine whether the trade profiles of the countries (under consideration) are growing more or less compatible (Yeats and Ng 2003). Yeats and Ng (op.cit) had argued that similarities between the types of goods exported and the goods imported by East Asian countries was a strong factor underlying the expansion of their intra-regional trade. Some of the main proponents of this index, such as, Michaely (1994), had used the index to evaluate prospects for Latin American trade arrangements, whereas Yeats (1998) had applied the index to analyze the compatibility of intra- regional trade in Sub-Saharan African countries. Das (2007) finds that evidence of trade complementarily in South Asia is mixed, so preferential trading initiative was based on a weak proposition.

The Trade complementarity in simple words defined as sum of the absolute value of the difference between the import category shares and the export shares of the countries under study divided by two and multiplied by 100 converts the index into percentage form. In the present analysis of selected countries, Trade Complementarity between two countries or regions i and j (Cij) can be defined as,

$$C_{ikj} = [1 - \sum (|M_{ik} - X_{ij}| / 2)] \times 100 \quad (\text{eq 1})$$

$$C_{ijk} = [1 - \sum (|M_{ij} - X_{ik}| / 2)] \times 100 \quad (\text{eq 2})$$

Where k = a country or any region; j = SAARC country or region; i represents product category; X_{ij} is the share of product i in the exports of country j; and M_{ik} is the share of product i in the imports of country k. The Trade Complementarity Index is a measure of potential trade between two partners by comparing the export profile of country j to the import profile of country k. The index is zero when no goods are exported by one country or imported by the other/partner country and 100 when the exports and imports share exactly match. In the index logic, trade complementarity between two partners is considered to be

high, when the products imported by country k are the same than the ones exported by country j. However, the TCI has an inherent size bias, i.e. a sub-region whose export portfolio is limited (or smaller than other sub-regions) will end up with having a low TCI value.

5.1.1. TCI of Pakistan's Export to South-Asian Major Economies

The trade complementarity indices for Pakistan with selected South Asian countries are computed in two ways i.e. Pakistan with Bangladesh, India and Sri Lanka vis-à-vis of selected partners exports complementarity with Pakistan. This computation is based on Trade Map data at **HS-6 digit** level (99 chapters) for two time periods i.e. 2003 to 2010 in order to explore out that at what degree export of Pakistan should match with the imports of its partner country as a whole and the expansion of intraregional trade within South Asia region overtime. Also this analysis will give us an overview whether exports and import profiles within the region are growing more compatible over time or less compatible, or to appraise the change in the potential for intraregional trade in this region over the 2003 to 2010 period.

Table 5.1 shows that the trade complementarity indices (at HS-6 level) of Pakistan's supply (exports) very much complements to the import demands of Bangladesh and Sri-Lanka but to a lesser extent to India demands (Imports) of goods over the period from 2003 to 2010. In 2003, the calculated complementarity indices of Pakistan Supply (exports) to the demand (import) of Bangladesh was 12.41 percent, Sri-Lanka was 10.73 and India was 5.28 percent, which has now increased to about 20.52 percent, 17.37 percent and 6.09 percent in 2010 respectively. The result shows that Pakistan's exports match well to the import of all these countries except for India, where the index is almost remained stagnant. From this we can infer that trade liberalization between the countries with higher index value show that the partners is likely to create gain as their imports demand match exactly with the export supply of its partner country.

Table 5.1

Year	TCI of Pakistan's Exports to Bangladesh	TCI of Pakistan's Exports to India	TCI of Pakistan's Exports to Sri-Lanka	TCI of Pakistan's Exports Major Economies of South Asia
2003	12.41043	5.28051	10.73198	9.474306
2004	11.34675	6.462866	12.07867	9.962762
2005	10.902	7.19192	13.62137	10.57177
2006	8.719562	7.578243	15.00349	10.43377
2007	11.46905	9.609341	16.76853	12.61564
2008	21.1379	7.178462	17.10898	15.14178
2009	17.19384	6.218501	16.43739	13.28325
2010	20.52462	6.093693	17.37678	14.66503
Average	14.21302	6.951692	14.8909	12.01854

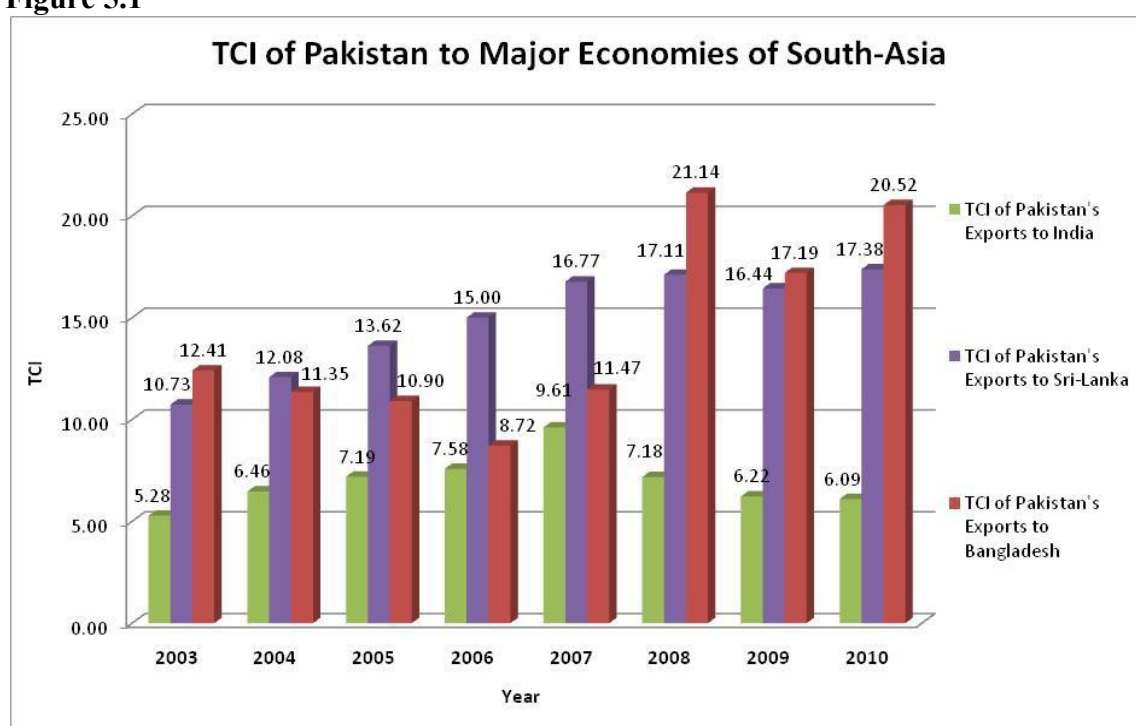
Source: Author's calculations based on Trade Map data

Figure 5.1 shows that there has been an inclining trend in Pakistan's complementarity indices as an exporter and other selected countries as an importer's during the last seven years (2003-2010). It is interesting to note that TCI of Pakistan's export to Sri-Lanka had a higher value

since 2004 to 2007 as compared to Bangladesh and India. Furthermore, in terms of average TCI value of Pakistan as an exporter to these countries in the region has improved and is highest for Bangladesh at 14.21 percent, followed by Sri Lanka at 14.89 percent and India at 6.95 percent. Similarly, Pakistan's average trade complementarity indices in terms of its exports with **Major Economies of South Asia** as a whole has also improved from 9.47 percent in 2003 to 12.01 percent in 2010.

From this analysis, it can be observed that Pakistan's exports show the maximum complementarity with the imports of other regional trading partners. Thus Pakistan's exports have an ability to fulfill to a certain extent; the regions imports demand of goods, in particular for those of Bangladesh and Sri Lanka.

Figure 5.1



Source: Trade Map "Author's own calculations"

5.1.1. TCI of South-Asian Major Economies Export to Pakistan:

Table 5.2 shows the picture other-way round, that Pakistan's import demands of goods from the region are highly complements with the export supply of goods from India, but lesser extent from Bangladesh and Sri-Lanka. The calculated index of complementarity of Pakistan's demand (imports) of goods very much match to the supply (export) from India show a higher value of about 22.45 percent, Sri-Lanka it was 7.36 percent and from Bangladesh the index has a value of about 2.07 percent in 2003, but in 2010 the value rose to 33.38 percent (India), 6.08 percent (Sri-Lanka) and 2.65 percent in case of Bangladesh.

The result shows that within the region Pakistan's import demand match well to the export supply of India, where the index value remained almost above 20 percent since last seven

years. But in case of Bangladesh and Sri-Lanka the complementarity compatibility in terms of supply (exports) to Pakistan is low. From this we can conclude that partners with higher value is likely to create gain as their export supply match exactly with the import demand of its partner country.

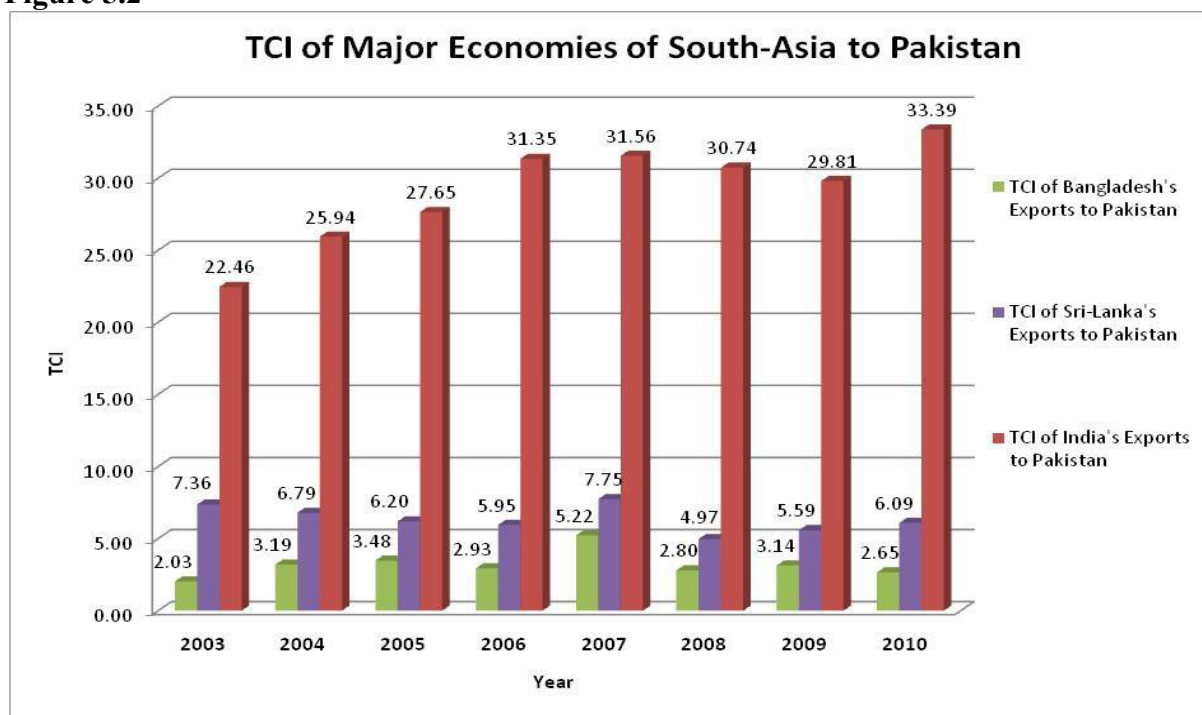
Table 5.2

Year	TCI of Bangladesh's Exports to Pakistan	TCI of India's Exports to Pakistan	TCI of Sri-Lanka's Exports to Pakistan	TCI of Major Exports Economies of South Asia to Pakistan
2003	2.027231	22.45979	7.361937	10.61632
2004	3.191409	25.94183	6.792571	11.97527
2005	3.477381	27.6514	6.195638	12.44147
2006	2.932618	31.34578	5.945783	13.40806
2007	5.222404	31.5563	7.745032	14.84124
2008	2.795656	30.73697	4.97165	12.83476
2009	3.136569	29.80769	5.586582	12.84361
2010	2.654127	33.38644	6.087998	14.04286
Average	3.179675	29.11077	6.335899	12.87545

Source: Author's calculations based on Trade Map data

The overall observed pattern of result might seem consistent due to the fact that impact of Pakistan's complementarity in imports from India is much higher than countries like Bangladesh and Sri Lanka's, where their exports show low complementarity with Pakistan's imports during 2003-2010.

Figure 5.2



Source: Trade Map "Author's own calculations"

Further, the increasing trade complementarity index (TCI) between the major economies of the region shows that there has been drastic change increase in complementarity indices of all

four major trading partners India, Pakistan, Bangladesh and Sri Lanka. The observed pattern of the analysis implies that Pakistan's trade complementarities with its selected trade partners in the South-Asian region has increased overtime although with comparatively low level¹. The low values of trade complementarity in the region are due to the fact that industrial structure of south-Asian countries more or less similar and most of the trade is based on raw materials especially in agriculture products, minerals and semi manufactured goods.

Pakistan's exports complementarity indices with Bangladesh and Sri Lanka increased with comparative advantage advocate that Pakistan's trade with these countries certainly has a potential to grow over time, but the converse is not true. But in the backdrop of Pakistan's low level of trade complementarity with its major trading partner in South Asia i.e. India with which Pakistan's exports complement is not reasonably well to its partner imports, although the degree has been rising overtime. However, in case of India's exports it complements rationally well with Pakistan's imports and the trade potential is in favour of India with significant comparative advantage overtime.

The trade complementarity analysis also conclude that the South Asian countries are at different stages of production within an industry, and the exports of one country complements reasonably well with the imports of other country, which results in strengthening the potential of intra-regional trade in South-Asia in future. In order to assess, which industry or sector is gaining potential in the South Asian trade, this issue is examined in the subsequent section of the paper using Grubel Lloyd Index or Intra-industry trade indices for the selected countries.

5.2. Revealed Comparative Advantage:

The Revealed Comparative Advantage (RCA) measure is:

$$RCA = \left(\frac{X_{i, world}^{Pakistan}}{\sum_i X_{i, world}^{Pakistan}} \right) \div \left(\frac{X_{i, world}^{world}}{\sum_i X_{i, world}^{world}} \right)$$

It gives us an indication of how much a country (Pakistan) is exporting a given good relative to how much the world is exporting that same good. A country is said to have a revealed comparative advantage when its share of export of a given good exceeds the equivalent share of export of the world. This is captured when the numerator is bigger than the denominator, or equivalently when the RCA is above 1, meaning that a given country exports, proportionally to its total exports, more than the share of exports of the world in that given product. An RCA below 1 indicates that a country does not have a revealed comparative advantage in a given good or equivalently that the world share of that given product is higher than that of the country under analysis. One always has to view this measure with certain degree of caution as it will invariably be affected by trade policy. RCAs tend to be calculated

¹ Comparative analysis of bilateral Export Trade Complementarity Indices of Pakistan with Bangladesh, India, Sri-Lanka and SAARC region are mentioned in the Annex I.

at the highest level of disaggregation possible, in our study at 6-digit level. This is done to try to capture product specific comparative advantages.

Table 5.2 shows top ten RCAs of Pakistan at 6-Digit product level in the years 2003 and 2010. Table shows that Pakistan had its highest RCA in Woven fabrics of cotton (520819) for the year 2003 that was 394; however RCA for same product decreased to only 70 in the year 2010. Table further shows that in 2010 Pakistan is having its highest RCA in Bed linen, of other textile material (630239) that is 501. The RCA of the same product was 291 in the year 2003. It is significant to mention that out of 1361 products that are exported by Pakistan in all the sample years Pakistan had RCA value greater than 1 in 423 tariff lines and in 2010 this number increases to 542 tariff lines.

Table 5.2:

Top 10 RCAs (2003)			Top 10 RCAs (2010)		
Code	Product label	RCA Value	Code	Product label	RCA Value
'520819	Woven fabrics of cotton	394.47	'630239	Bed linen, of other textile materials, nes	500.96
'521051	Plain weave cotton fab	373.72	'521051	Plain weave cotton fab	463.01
'540774	Woven fabrics	366.90	'630210	Bed linen, of textile knitted or crocheted materials	384.48
'521213	Woven fabrics of cotton	355.76	'610590	Mens/boys shirts, knitted	375.87
'540784	Woven fabrics of synthetic filaments	308.90	'521222	Woven fabrics of cotton	364.76
'521021	Plain weave cotton fab	300.45	'521021	Plain weave cotton	354.25
'521029	Woven fabrics of cotton	298.99	'520911	Plain weave cotton fabric	352.98
'630239	Bed linen, of other textile materials, nes	290.72	'521221	Woven fabrics of cotton	346.72
'630231	Bed linen, of cotton, nes	287.46	'610339	Mens/boys jackets and blazers, knitted	327.64
'540773	Woven fabrics	271.91	'520532	Cotton yarn	320.14

Table 5.4 reports the top 10 chapters that have achieved the highest positive RCA growth from 2003 to 2010. Table shows that product „411390 (Leather further prepared after tanning or crusting) has achieved the maximum positive growth in RCA and achieved the RCA value from 0.02 in 2003 to 131.97 in 2010. Table 5.5 reports the top 10 chapters that showed the maximum negative growth in RCA. The table shows that the maximum negative growth is achieved by product „550390 (Synthetic staple fibres, not carded or combed) and fall from the RCA value of 48.95 in 2003 to 0.01 in 2010. It is important to mention that the above given growths are presented for only those chapters that have RCA value in all the sample periods.

Table 5.4:

Chapters that achieved highest positive growth in RCA from 2003 to 2010			
Code	Product label	RCA Value (2003)	RCA Value (2010)
'411390	Leather further prepared after tanning or crusting "incl. parchment-dr	0.02	131.97
'520710	Cotton yarn (o/t sewing thread)>/=85% by weight of cotton, put up	0.00	4.24
'550810	Sewing thread of synthetic staple fibres	0.00	1.72

'610439	Women /girls jackets, of other textile materials, knitted	0.04	32.13
'620219	Women /girls overcoats & similar articles of other textile mat,not knit	0.01	8.71
'282720	Calcium chloride	0.01	4.60
'740821	Wire, copper-zinc base alloy	0.00	1.20
'391510	Polyethylene waste and scrap	0.00	1.62
'071090	Mixtures of vegetables, frozen	0.05	23.07
'920930	Strings, musical instrument	0.02	7.81

Source: Author's calculations based on Trade Map data

Table 5.5:

Chapters that achieved highest negative growth in RCA from 2003 to 2010			
Code	Product label	RCA Value (2003)	RCA Value (2010)
'550390	Synthetic staple fibres, not carded or combed, nes	48.95	0.01
'540794	Woven fabrics of synthetic filaments, printed, nes	27.85	0.01
'490210	Newspapers, journals & periodicals, appearing at least four times a week	2.85	0.00
'730719	Fittings, pipe or tube, cast, of iron or steel, nes	3.58	0.00
'581092	Embroidery of man-made fibres,in the piece,in strips or in motifs,nes	0.42	0.00
'071390	Leguminous vegetables dried, shelled, whether or not skinned or split,nes	53.79	0.07
'392119	Film and sheet etc, cellular of plastics nes	0.14	0.00
'540773	Woven fabrics,>/=85% of synthetic filaments, yarn dyed, nes	271.91	0.73
'640691	Parts of footwear of wood	7.12	0.03
'410411	Full grains, unsplit and grain splits, in the wet state "incl. wet-blu	0.45	0.00

Source: Author's calculations based on Trade Map data

5.3. Regional Revealed Comparative Analysis:

The measure that we use to analyze the trade flows is the Regional RCA of Pakistan with South Asian region. This measure is calculated using the following equation:

$$RCA_{BIL} = \left(\frac{X_{i, Pakistan}^{SA}}{\sum_i X_{i, Pakistan}^{SA}} \right) \div \left(\frac{M_{i, SA}^{World}}{\sum_i M_{i, SA}^{World}} \right)$$

The bilateral RCA can be seen as a modified RCA, where rather than having the world as the reference point, we compare the export shares of a given country (Pakistan) in a particular destination market (South Asia), to the export shares of the world in that same destination market, across all product lines. Hence the bilateral RCA gives us an indication of how much a given country is exporting to a given market relative to how much the world is exporting to that market. A bilateral RCA above one will tell us for that particular good that Pakistan has a revealed comparative advantage in the South Asian market.

The top 10 chapters with highest Regional Revealed Comparative Advantage (RRCA) of Pakistan with respect to South Asia for the year 2003 to 2010 are reported. The top 10 RRCAs are calculated on average basis for the sample periods. The table shows that Pakistan

has strong regional revealed comparative advantage in cotton ('52), fish ('03) and other made textiles ('63) in the pre period (average values 2003-06) with RRCA values of 29, 21 and 16 respectively. Whereas in the post period (average values 2007-09) Pakistan has high RRCAs in Cotton (',52), arms & ammunition (',93) and other made textiles ('63) with values of 48, 42 and 18 respectively. Chapter '93 (Arms and ammunition) is ranked at 2nd position for the post period because it has highest RRCA in the year 2008 that is 116. The given high value of RRCA for chapter ',93 is achieved by Pakistan's due to rising exports that account to 5 million to Sri-Lanka in 2008. Out of 97 reported chapters, Pakistan has RRCA greater than 1 in 30 chapters (List of chapters is given in Annex - III) during the pre period, whereas in the post period Pakistan has RRCA greater than 1 in 37 chapters (List of chapters is given in Annex - IV). The highest RRCA in both the pre and post period is achieved by chapter '52 (Cotton) with RRCA values of 29 in the pre period and 48 in the post period.

Table 5.6:

Top 10 average RRCAs in Pre-period (2003-06)			Top 10 average RRCAs in Post-period (2007-10)		
Code	Product label	RRCA	Code	Product label	RRCA
'52	Cotton	29.29	'52	Cotton	48.26
'03	Fish, crustaceans, molluscs, aquatic invertebrates nes	21.19	'93	Arms and ammunition, parts and accessories thereof	41.93
'63	Other made textile articles, sets, worn clothing etc	15.98	'63	Other made textile articles, sets, worn clothing etc	18.40
'07	Edible vegetables and certain roots and tubers	10.61	'03	Fish, crustaceans, molluscs, aquatic invertebrates nes	17.45
'08	Edible fruit, nuts, peel of citrus fruit, melons	10.47	'41	Raw hides and skins (other than furskins) and leather	12.13
'61	Articles of apparel, accessories, knit or crochet	8.45	'08	Edible fruit, nuts, peel of citrus fruit, melons	11.70
'13	Lac, gums, resins, vegetable saps and extracts nes	5.12	'20	Vegetable, fruit, nut, etc food preparations	8.64
'41	Raw hides and skins (other than furskins) and leather	4.90	'61	Articles of apparel, accessories, knit or crochet	8.15
'10	Cereals	4.61	'10	Cereals	7.96
'17	Sugars and sugar confectionery	4.15	'11	Milling products, malt, starches, inulin, wheat gluten	7.16

Source: Author's calculations based on Trade Map data

Table 5.7 reports the top 10 chapters that have achieved the highest positive RRCA growth from pre to post period. The RRCA values are calculated on average basis from 2003 to 2010. The table reports that the maximum positive growth in RRCA is achieved by chapter '43 (Furskins and artificial fur, manufactures thereof) from 0.04 in pre period to 5.63 in post period. Table 5.8 shows the top 10 chapters that have achieved the maximum negative growth in RRCA from pre to post period. The maximum RRCA negative growth is achieved by Chapter '53 (Vegetable textile fibers, paper yarn, woven fabric) from 0.15 in pre period to zero in the post period. The above given growths are presented for only those chapters that have RRCA value in all the sample period.

Table 5.7:

Chapters that achieved highest positive growth in RRCA from pre to post time period.			
Code	Product label	RRCA Value Pre (2003-06)	RRCA Value Post (2007-10)
'43	Furskins and artificial fur, manufactures thereof	0.04	5.63

'93	Arms and ammunition, parts and accessories thereof	0.39	41.93
'88	Aircraft, spacecraft, and parts thereof	0.01	0.19
'92	Musical instruments, parts and accessories	0.02	0.57
'75	Nickel and articles thereof	0.00	0.08
'25	Salt, sulphur, earth, stone, plaster, lime and cement	0.39	6.05
'05	Products of animal origin, nes	0.14	1.56
'22	Beverages, spirits and vinegar	0.72	6.79
'15	Animal, vegetable fats and oils, cleavage products, etc	0.00	0.00
'06	Live trees, plants, bulbs, roots, cut flowers etc	0.08	0.65

Source: Author's calculations based on Trade Map data

Table 5.8:

Chapters that achieved highest negative growth in RRCA from pre to post time period.			
Code	Product label	RRCA Value Pre (2003-06)	RRCA Value Post (2007-10)
'53	Vegetable textile fibers nes, paper yarn, woven fabric	0.15	0.00
'66	Umbrellas, walking-sticks, seat-sticks, whips, etc	0.04	0.00
'01	Live animals	0.03	0.00
'31	Fertilizers	0.01	0.00
'02	Meat and edible meat offal	0.00	0.00
'97	Works of art, collectors pieces and antiques	0.71	0.01
'91	Clocks and watches and parts thereof	0.14	0.00
'99	Commodities not elsewhere specified	0.04	0.00
'81	Other base metals, cermets, articles thereof	0.03	0.00
'18	Cocoa and cocoa preparations	1.04	0.10

Source: Author's calculations based on Trade Map data

5.4. Revealed Market Access:

This measure allows exploring market access issues by extension of RCA analysis and helps to assess by product that whether there is any evidence that the Pakistani access to the SAARC market is higher or lower than that suggested by its revealed comparative advantage. RMA measure (RMA1) is derived from the combination of the RCA and the bilateral RCA and is calculated as follows.

$$RMA1_{i,k} = \frac{RCA_{BIL}}{RCA}$$

Where i represent a tariff code (industry or product) and k represents the destination market. The intuition behind this is that the bilateral trade should follow global comparative advantage thus a country should gain entry into a given market following its comparative advantage and following the demand that there will be for the given good in that market. To calculate the RMA1, simply divide the bilateral RCA of a given country by the global RCA of that country. An RMA value below 1 shows that a given good is not entering the target market at the rate that would be expected according to its global revealed comparative

advantage. An RMA above 1 tells us that the market access for the given good is above that which would be suggested by the indicator of global revealed comparative advantage. Where the indicator is less than one, this could be an indication of market access barriers in the South Asia for Pakistani products, in comparison to other exporters to the South Asia. However, it could also be driven by other factors such as differences of tastes and preferences. Similarly, where the indicator is greater than one, then this suggests that relative to other exporters to the South Asia, and relative to its revealed comparative advantage Pakistan has better access. This could be an indication, for example, of deeper integration and niche specialization between Pakistan and the South Asia in that particular product, but equally it could be driven by other factors such as differences in tastes.

The top 10 Revealed Market Access (RMAs) values of Pakistan at 2-Digit chapter level for the sample period are given in the tables 5.9. The top 10 RMAs are calculated on average basis in each sample period. The table shows that Pakistan is having strong revealed market access in works of art ('97), vehicles other than railway ('87) and cocoa & cocoa preparations ('18) in the pre period with RMA values of 104, 25 and 22 respectively. In the post period Pakistan is having strong revealed market access in furskins and artificial fur ('43), arms and ammunition ('93) and live trees ('06) with RMA values of 202, 71 and 22 respectively. The results of RMA analysis show that out of 97 reported chapters Pakistan is having RMA greater than 1 in 48 chapters (List of chapters is given in Annex - V) during the pre period, whereas in the post period Pakistan is having RMA greater than 1 in 54 chapters (List of chapters is given in Annex - VI). The chapters that are having RMA results greater than 1 show that the market access for these chapters is above than that which would be suggested by the indicator of global revealed comparative advantage.

Table 5.9:

Top 10 average RMAs in Pre-period (2003-06)			Top 10 average RMAs in Post-period (2007-10)		
Code	Product label	RMA	Code	Product label	RMA
'97	Works of art, collectors pieces and antiques	104.06	'43	Furskins and artificial fur, manufactures thereof	202.07
'87	Vehicles other than railway, tramway	25.55	'93	Arms and ammunition, parts and accessories thereof	71.45
'18	Cocoa and cocoa preparations	21.74	'06	Live trees, plants, bulbs, roots, cut flowers etc	22.41
'30	Pharmaceutical products	17.79	'20	Vegetable, fruit, nut, etc food preparations	22.10
'19	Cereal, flour, starch, milk preparations and products	15.14	'87	Vehicles other than railway, tramway	11.76
'03	Fish, crustaceans, molluscs, aquatic invertebrates nes	12.59	'30	Pharmaceutical products	11.47
'20	Vegetable, fruit, nut, etc food preparations	11.07	'80	Tin and articles thereof	10.99
'91	Clocks and watches and parts thereof	10.09	'51	Wool, animal hair, horsehair yarn and fabric thereof	9.45
'80	Tin and articles thereof	9.16	'03	Fish, crustaceans, molluscs, aquatic invertebrates nes	8.75
'12	Oil seed, oleagic fruits, grain, seed, fruit, etc, nes	8.26	'12	Oil seed, oleagic fruits, grain, seed, fruit, etc, nes	8.51

Source: Author's calculations based on Trade Map data

Table 5.10 reports the top 10 chapters that have achieved the highest positive RMA growth on average basis from pre to post period, whereas table 5.11 reports the chapters that have

achieved the maximum negative growth in RMA from pre to post period. The highest RMA growth is achieved by Chapter ‘‘43 (Fur-skins and artificial fur, manufactures thereof) and maximum negative growth is achieved by chapter ‘‘66 (Umbrellas, walking-sticks, seat-sticks, whips, etc). It is important to mention that the above given growths are presented for only those chapters that are having RMA value in all the sample years.

Table 5.10:

Chapters that achieved highest positive growth in RMA from pre to post time period.			
Code	Product label	RMA Value Pre (2003-06)	RMA Value Post (2007-10)
'43	Furskins and artificial fur, manufactures thereof	1.73	202.07
'93	Arms and ammunition, parts and accessories thereof	1.69	71.45
'88	Aircraft, spacecraft, and parts thereof	0.03	1.28
'92	Musical instruments, parts and accessories	0.04	1.09
'05	Products of animal origin, nes	0.06	0.70
'89	Ships, boats and other floating structures	0.05	0.56
'22	Beverages, spirits and vinegar	0.60	4.75
'15	Animal, vegetable fats and oils, cleavage products, etc	0.00	0.00
'06	Live trees, plants, bulbs, roots, cut flowers etc	2.90	22.41
'11	Milling products, malt, starches, inulin, wheat gluten	0.51	3.30

Source: Author’s calculations based on Trade Map data

Table 5.11:

Chapters that achieved highest negative growth in RMA from pre to post time period.			
Code	Product label	RMA Value Pre (2003-06)	RMA Value Post (2007-10)
'66	Umbrellas, walking-sticks, seat-sticks, whips, etc	0.73	0.00
'53	Vegetable textile fibers nes, paper yarn, woven fabric	0.12	0.00
'01	Live animals	0.04	0.00
'31	Fertilizers	0.03	0.00
'02	Meat and edible meat offal	0.01	0.00
'91	Clocks and watches and parts thereof	10.09	0.43
'97	Works of art, collectors pieces and antiques	104.06	5.59
'19	Cereal, flour, starch, milk preparations and products	15.14	1.09
'71	Pearls, precious stones, metals, coins, etc	0.06	0.01
'13	Lac, gums, resins, vegetable saps and extracts nes	0.89	0.18

Source: Author’s calculations based on Trade Map data

5.5. Summary of RCA, BRCA and RMA:

Similar to the trends in Pakistan's overall exports to the world, Pakistan's exports to the South Asia region are dominated by the cotton industry. Table 5.12 and 5.13 shows Pakistan's top 10 exports to South Asia at 2-Digit Chapter level along with their RCA, BRCA and RMA values for the pre and post periods respectively.

Table 5.12:

Top 10 chapters on average share-wise in 2003-06 with their average indices values					
Code	Product label	Shares in SAARC	RCA	RRCA	RMA
'52	Cotton	46%	43.80	29.29	0.66
'27	Mineral fuels, oils, distillation products, etc	15%	0.28	0.51	1.76
'07	Edible vegetables and certain roots and tubers	7%	1.40	10.61	6.43
'08	Edible fruit, nuts, peel of citrus fruit, melons	5%	1.54	10.47	6.82
'10	Cereals	2%	13.38	4.61	0.39
'39	Plastics and articles thereof	2%	0.42	1.07	2.54
'54	Manmade filaments	2%	5.97	3.70	0.77
'63	Other made textile articles, sets, worn clothing etc	2%	58.56	15.98	0.27
'17	Sugars and sugar confectionery	2%	2.91	4.15	1.33
'29	Organic chemicals	2%	0.16	0.49	3.09

Source: Author's calculations based on Trade Map data

The table 5.12 shows that 46% of Pakistan's export to the South Asia in the years 2003-06 is covered by the cotton industry (Chapter „52). Whereas other major exports include Mineral fuels (Chapter „27), edible vegetables (Chapter „07) and edible fruits (Chapter „08) with shares in total exports to South Asia for the pre period are 15%, 7% and 5% respectively. The table further shows the average RCA, RRCA and RMA for the same top 10 products for the pre period. The RCA column shows that other than the chapter “27 (Mineral fuels, oils, distillation products, etc), “29 (Organic chemicals) and “39 (Plastics and articles thereof) all other chapters contain RCA that is greater than 1. The results reveal that chapter “27 (Mineral fuels, oils, distillation products, etc) has average RCA valued at 0.28 but it has a major share (15%) in Pakistan's exports to South Asia. Whereas chapter “63 (Other made textile articles, sets, worn clothing etc) and “10 (Cereals) have high positive RCAs of 59 and 13 but their shares account for only 2% and 2% in Pakistan's total exports to SAARC. This shows that in pre period globally Pakistan is not able to take advantage by exporting in those chapters that have high RCAs. The next column in the table shows that RRCA of the chapters “27 (Mineral fuels, oils, distillation products, etc) & “29 (Organic chemicals) is less than 1, whereas these two same chapters also had the RCA less than 1 during 2003-06. The last column shows the RMA of top ten chapters with maximum share in Pakistan's exports to South Asia. The results show that out of top 10 chapters six of them show RMA greater than one and the other show RMA lesser than one. In the top ten chapters highest RMA is achieved by chapter “08 (Edible fruit, nuts, peel of citrus fruit, melon) that is 6.82. The result implies that out of top 10 products six of them are entering the target market (South Asia) at the rate that is expected according to their global revealed comparative advantage where as the other four chapters fail to enter the South Asia region as suggested by their global revealed comparative advantage.

Table 5.13:

Top 10 chapters on average share-wise in 2007-10 with their average indices values					
Code	Product label	Shares in SAARC	RCA	RRCA	RMA
'TOTAL	All products				
'52	Cotton	49%	52.95	48.26	0.91
'27	Mineral fuels, oils, distillation products, etc	10%	0.34	0.29	0.83
'25	Salt, sulphur, earth, stone, plaster, lime and cement	5%	9.18	6.05	0.62
'08	Edible fruit, nuts, peel of citrus fruit, melons	5%	1.77	11.70	6.69
'10	Cereals	4%	16.28	7.96	0.49
'41	Raw hides and skins (other than furskins) and leather	2%	9.70	12.13	1.25
'07	Edible vegetables and certain roots and tubers	2%	1.08	2.46	2.41
'84	Machinery, nuclear reactors, boilers, etc	2%	0.10	0.20	1.91
'60	Knitted or crocheted fabric	2%	2.09	6.41	3.07
'39	Plastics and articles thereof	1%	0.46	0.69	1.46

Source: Author's calculations based on Trade Map data

The table 5.13 shows that 49% of Pakistan's export to the South Asia is covered by the cotton industry ('52) in the period 2007-10. Whereas other major exports include Mineral fuels (',27), Salt, sulphur, earth, stone, plaster, lime and cement (',25), edible fruits (',08) and cereals (',10) with shares equal to 10%, 5%, 5% and 4% respectively. The RCA column shows that other than the chapters '27 (Mineral fuels, oils, distillation products, etc), '84 (Machinery, nuclear reactors, boilers, etc) and '39 (Plastics and articles thereof) all other chapters from top 10 exports show RCA greater than 1. The results reveal that chapter '27 (Mineral fuels, oils, distillation products, etc) has average RCA of only 0.34 but it has a major share of 10% (although decreased from 15% in pre period) during the post period in Pakistan's exports to South Asia. Whereas chapters '10 (Cereals) and '41 (Raw hides and skins (other than furskins and leather) have RCAs of 16 and 10 but their shares are as low as 4% and 2% respectively in Pakistan's total exports to South Asia. This shows that Pakistan is not taking full advantage of its export potential by exporting in those chapters to South Asia where it has greater comparative advantage globally. The next column in the table shows that RRCA values for the top 10 exports of Pakistan to South Asia in the post period. The table shows that the RRCA of chapters '27 (Mineral fuels, oils, distillation products, etc), '84 (Machinery, nuclear reactors, boilers, etc) & '39 (Plastics and articles thereof) is less than 1, whereas these three chapter also had the RCA less than 1.

The last column shows the RMA of top 10 chapters with maximum share in Pakistan's exports to South Asia. The results show that out of top 10 chapters 4 of them show RMA greater than 1 and the other show RMA lesser than 1. In the top 10 chapters, highest RMA is achieved in chapter '08 (Edible fruit, nuts, peel of citrus fruit, melon) valued at 6.69 that was similar to pre period value. The result implies that out of top 10 products 4 of them are entering the target market (South Asia) at the rate that is expected according to their global revealed comparative advantage where as the other 4 chapters failed to enter the South Asia region as suggested by their global revealed comparative advantage.

5.6. Grubel-Lloyd Index:

An increase in the volume of trade can be caused either by changes in the pattern of comparative advantage (inter-industry trade) or by increasing product differentiation with scale economies (intra-industry trade). With many economies in the world following different paths of industrialization, it is likely that at certain point of time they specialize in different export items in accordance with what their comparative advantage dictates. However, it is also likely that, with “convergence” in their income level, trade patterns become increasingly complementary among the economies that compete with one another in similar export items. Trade due to product differentiation with increasing returns to scale (IRS) plays an important role in explaining trade between countries particularly when the differences in factor proportions are not very large. So any measure of intra-industry trade (or inter-industry trade) must somehow reflect how these two alternative forms of trade are combined to generate the actual trade data.

The GL index is a standard indicator of measuring the share of intra-industry trade from a data set composed of both homogeneous and differentiated goods. This index is calculated from the share of intra-industry trade in total trade. It measures the degree of intra-industry trade due to product differentiation with scale economies, which indicates how a country import and export simultaneously varieties of a particular product. Expressed as the ratio of intra-industry trade (two-way trade within industries) to total trade (sum of intra-industry trade and inter-industry trade). The Grubel-Lloyd (GL) index is a widely used indicator measuring the extent of intra industry trade as opposed to that of inter-industry trade. It is an aggregate indicator, summed up over every country pairs on all goods traded. The GL index sorts out the amount of trade flows a pair of countries simultaneously import and export. At the same time when the country exports or imports goods and services of similar type, then the Intra-trade arises.

There are two types of intra industry trade:

a. Horizontal Intra-Industry trade:

When the country exports or imports goods and services which are of the same sector and are at the same stage of processing, this is known as horizontal intra-industry trade.

b. Vertical Intra-Industry Trade:

When the country exports and imports goods and services which are of the same sector but at different stages of processing, this is known as vertical intra-industry trade.

Grubel Lloyd (1975) introduced an index to calculate intra-industry trade (IIT) and nowadays this is the most frequently used method. This index is named as Grubel-Lloyd Index. According to Grubel and Lloyd“, when there is a difference in level of technology and human capital in products with same input requirements then this type of trade takes place. The GL index has been formulated to measure global trading pattern between two countries. The GL Index is calculated as:

$$GL_{\text{sector } i} = 1 - (|\text{Export}_{\text{sector } i} - \text{Import}_{\text{sector } i}| / \text{Export}_{\text{sector } i} + \text{Import}_{\text{sector } i})$$

If the country only imports or only exports goods or services within the same sector, such that there is no intra-industry trade, the second term on the right hand side of equation is equal to 1, such that the whole expression reduces to 0. Similarly, if the export value is exactly equal to the import value, than the second term on the right hand of the equation is equal to 0, such that the whole expression reduces to 1. For simplicity we multiplied by 100, therefore GL Index varies between 0 and 100.0 indicates pure inter industry trade and 100 indicates pure intra industry trade. In calculating the GL index, individual observations on bilateral trade flows among countries are classified into two different data sets, the intra-industry and inter-industry sets. Some observations whose export and import values are identical are deemed to belong to the intra-industry trade set. Other observations whose export and import values are not identical are regarded as belong to the inter-industry trade set. We calculate the GL-Index between Pakistan and three major SAARC partners (India, Sri Lanka and Bangladesh) at the SITC 3 digit level 2010.

Our analysis reveals that the extent of intra industry trade between Pakistan and other major SAARC countries is low and that the production systems of the region are not as integrated as that of other trading blocs like ASEAN. In the case of ASEAN the economies are highly integrated as they are a part of the global supply chain for high technology products. Trade between SAARC and Pakistan is concentrated mainly in agricultural and semi processed products which are then used for local consumption.

5.6.1. Intra Industry Trade between Pakistan and India:

The GL Index identifies 8 chapters (at the SITC 3 digit level) that are having GL-Index values greater than 60% in 2010. These chapters are listed in the table 5.14:

Table 5.14:

SITC	Description	GL
058	Fruit, preserved, and fruit preparations (excluding fruit juices)	88%
278	Other crude minerals	81%
582	Plates, sheets, film, foil and strip, of plastics	89%
654	Other textile fabrics, woven	79%
657	Special yarns, special textile fabrics and related products	94%
663	Mineral manufactures, n.e.s.	99%
665	Glassware	75%
898	Musical instruments and parts and accessories thereof; records, tapes and other sound or similar recordings (excluding goods of groups 763 and 883)	80%

Source: Author's calculations based on Trade Map data

In Fruits preserved and fruit preparations, Pakistan is the major exporter of Jams, fruits and jellies, marmalades or nut puree to India and importing same product sub-category. Pakistan is exporting sodium chloride, crude minerals and asbestos to India and importing clays and other refractory minerals in the sub category 278. Similarly in Special yarn and special textiles fabrics, Pakistan is majorly importing twines, cordage, rope and cables and Rubber thread and cord and exports felt, coated covered or laminated, Textiles products coated or

impregnated, Textiles wadding, wicks, fabrics and articles used in machinery. Pakistan is also exporting manufactures of mineral materials and also importing this sub category. Other imports include Millstones, grinding wheels, Natural or artificial abrasive powder in the category Mineral Manufacturers. In the above mentioned table, Glassware has also shown intra-industry trade and the products in which both countries are trading includes Glass containers used for conveyance or packing of goods and also the Articles made of glass. Pakistan is exporting copper scrap to India and then imports copper sheets and plates. Pakistan is exporting pianos and other string musical instrument and parts and accessories of musical instruments and importing magnetic tapes for sound recordings.

5.6.2. Intra Industry Trade between Pakistan and Sri Lanka:

The GL Index identifies 14 sub sectors (at the SITC 3 digit level) that have GL-Index values greater than 60% in 2010. These sub sectors are listed in the table 5.15:

Table 5.15:

SITC	Description	GL
075	Spices	80%
081	Feeding stuff for animals (not including unmilled cereals)	98%
211	Hides and skins (except furskins), raw	86%
278	Other crude minerals	95%
598	Miscellaneous chemical products, n.e.s.	90%
635	Wood manufactures, n.e.s.	70%
658	Made-up articles, wholly or chiefly of textile materials, n.e.s.	87%
663	Mineral manufactures, n.e.s.	77%
726	Printing and bookbinding machinery and parts thereof	98%
752	Automatic data-processing machines and units thereof; magnetic or optical readers, machines for transcribing data onto data media in coded form and machines for processing such data, n.e.s.	74%
759	Parts and accessories (other than covers, carrying cases and the like) suitable for use solely or principally with machines falling withing groups 751 and 752	81%
848	Articles of apparel and clothing accessories of other than textile fabrics; headgear of all materials	82%
851	Footwear	93%
893	Articles, n.e.s., of plastics	87%

Source: Author's calculations based on Trade Map data

A detailed empirical analysis is carried out for the chapters which are mentioned in the above table, for which there are significant trade values. Flours, meals and pellets of meat and Hay and fodder (dry or grey) SITC 0811 & 0814 are exported and imported from Sri Lanka. In the category 075, pepper and spices are the main trading items. In sub category 278, Pakistan is exporting common salt and crude minerals and importing clays and other refractory minerals. Organic chemicals and chemicals used for production and preparations are being exported and imported by Pakistan and in addition to this; artificial and prepared waxes are also being imported in the category SITC Code 598. In wood manufacturers, Pakistan is exporting builders, wood joinery and carpentry and importing manufactures of good for domestic or decorative use (SITC 635). Detailed analysis of made ups also show that Pakistan is majorly

exporting and importing tarpaulins, awnings and sun blinds to Sri Lanka and the other products include blankets and rugs, linens for bed and curtains (SITC 658). In the category printing and book binding, printing machinery is exported to Sri Lanka and imports include parts of typesetting and typefounding machinery. This machinery is also exported and imported by Pakistan. Intra industry trade between these two countries is also seen in parts and accessories of machines and in this product category, Pakistan is exporting and importing parts and accessories of office machines. Articles of apparel and clothing accessories are both exported and imported by Pakistan showing the intra industry of 82%. Footwear is another important category in which Pakistan is importing footwear incorporating a protective sheet and exporting sports footwear, footwear with uppers of leathers, textiles.

5.6.3. Intra Industry Trade between Pakistan and Bangladesh:

The GL Index identifies 6 chapters (at the SITC 3 digit level) that are having GL-Index values greater than 50% in 2010. These chapters are listed in the table 5.16.

Table 5.16:

SITC	Description	GL
222	Oil-seeds and oleaginous fruits of a kind used for the extraction of "soft" fixed vegetable oils (excluding flours and meals)	97%
232	Synthetic rubber; reclaimed rubber; waste, parings and scrap of unhardened rubber	87%
292	Crude vegetable materials, n.e.s.	93%
654	Other textile fabrics, woven	74%
656	Tulles, lace, embroidery, ribbons, trimmings and other smallwares	97%
658	Made-up articles, wholly or chiefly of textile materials, n.e.s.	87%
723	Civil engineering and contractors' plant and equipment; parts thereof	98%
844	Women's or girls' coats, capes, jackets, suits, trousers, shorts, shirts, dresses and skirts, underwear, nightwear and similar articles of textile fabrics, knitted or crocheted (other than those of subgroup 845.2)	81%
848	Articles of apparel and clothing accessories of other than textile fabrics; headgear of all materials	79%

Source: Author's calculations based on Trade Map data

Pakistan is exporting Rape, colza and mustard seeds majorly to Bangladesh (SITC 2226) and importing ground nuts and sesame seeds (SITC 2221 & 2225). So in this product category, Pakistan has intra industry trade with Bangladesh. In sub classification 292, Pakistan is majorly exporting Arabic gum, resin vegetable materials used primarily for plaiting like bamboo etc (SITC 2923,2924,2925,2926) and importing plants and parts used in perfumery or pharmacy, seeds fruits and spores and cut flowers and foliage (SITC 2924,2923,2927). Pakistan is exporting woven fabrics of silk, carded wool to Bangladesh and importing woven fabrics of jute in the sub category 654. Pakistan is exporting narrow woven fabrics, labels and badges, tules and other net fabrics and embroidery in piece from Bangladesh in which Pakistan is showing intra industry with the value of 97%. Pakistan is exporting blankets and travelling rugs, curtains to Bangladesh and importing sacks and bags of textiles in this sub category 658. 87% of the intra industry trade is shown in the above mentioned category (SITC 844) Made ups articles. It includes exports of overcoats, blazers and jackets to Sri-Lanka and importing underpants and nightwear, pajamas etc. Pakistan is also importing blouses in this sub category, showing intra industry trade between the countries.

6. CONCLUSION

The Pakistan's regional economic relations in South-Asia have strengthened over the years, particularly after the Implementation of SAFTA. However, the current size of trade between the South Asian countries is low compared to the size and structural complementarities of the regional economies. In this context, the present paper analyses trade relations and future areas of co-operation between Pakistan and major South Asian countries. The merchandise trade increase only in absolute term within the South Asian region has been mainly because of the changing demand structures and comparative advantages of economies in complementary sectors. Pakistan's inter-regional exports in South Asia are dominated by basic foods and agricultural products. The import demand for these products fluctuates widely with domestic supply conditions, and the South Asian governments apply arbitrary policies to maintain stable domestic prices. The imports are allowed with domestic shortfalls, and restrictions are imposed on them when domestic supply is stable. With the exception of India, most other countries depend on a few products for export revenue, limiting the possibility of their export expansion. The import demand depends on the level of development, and the demand for agricultural products is subject to ad hoc policy changes depending on domestic supply changes and political circumstances. Exporting countries find it difficult to absorb the changed demand, and hence need careful scrutiny and negotiations at the regional level.

The analysis of competitiveness and complementarities of Pakistan with South-Asian major economies reveals that there has been a distinct change in trade patterns of Pakistan with its partners with respects to intraregional trade. Pakistan's exports mainly constitute low value-added industrial products and agricultural products, while Pakistan's imports from the economies largely consist of relatively raw material and low value-added products. Further, Pakistan's exports complementarity indices with Bangladesh and Sri Lanka increased with comparative advantage advocate that Pakistan's trade with these countries certainly has a potential to grow over time, but the converse is not true. But in the backdrop of Pakistan's low level of trade complementarity with its major trading partner in South Asia i.e. India with which Pakistan's exports complement is not reasonably well to its partner imports, although the degree has been rising overtime, so it becomes imperative to think that intraregional trade may have potential to expand in South Asia. The trade complementarity analysis also conclude that the South Asian countries are at different stages of production within an industry, and the exports of Pakistan's complements reasonably well with the imports of other countries in South-Asian region, which results in strengthening the potential of intra-regional trade in South-Asia in future.

The analysis of RCA Index at the level shows that Pakistan competitive basket changed overtime and has been specializing in a few products which are highly competitive as South-Asian major economies exports are less diversified. Moreover, Pakistan shows declining comparative advantage in South-Asian region mainly in Cereals, Ceramic Products, Fish, pharmaceutical products, precious stones (pearls) and photographic goods. The analysis of GL-Index at the disaggregated level shows that there are some industries where Pakistan has comparative advantage in different products, pointing to opportunities for intra-industry

trade. The intra-industry trade (IIT) analysis shows that IIT is low in the top traded product groups and high in some products where trading is low. This offers huge opportunity for intra-industry trade if sector-specific barriers are removed along with general barriers.

7. ANNEXURE:

Annex – I

Chapters having RCA value greater than 1 in pre period		
Code	Product label	Average RCA (2003-06)
'63	Other made textile articles, sets, worn clothing etc	58.56
'52	Cotton	43.80
'57	Carpets and other textile floor coverings	15.04
'10	Cereals	13.38
'42	Articles of leather, animal gut, harness, travel goods	11.47
'61	Articles of apparel, accessories, knit or crochet	8.93
'41	Raw hides and skins (other than furskins) and leather	7.13
'11	Milling products, malt, starches, inulin, wheat gluten	6.77
'54	Manmade filaments	5.97
'36	Explosives, pyrotechnics, matches, pyrophorics, etc	5.86
'13	Lac, gums, resins, vegetable saps and extracts nes	5.55
'62	Articles of apparel, accessories, not knit or crochet	5.51
'95	Toys, games, sports requisites	3.22
'55	Manmade staple fibers	3.03
'60	Knitted or crocheted fabric	3.01
'17	Sugars and sugar confectionery	2.91
'58	Special woven or tufted fabric, lace, tapestry etc	2.60
'14	Vegetable plaiting materials, vegetable products nes	2.54
'05	Products of animal origin, nes	2.19
'56	Wadding, felt, nonwovens, yarns, twine, cordage, etc	2.14
'25	Salt, sulphur, earth, stone, plaster, lime and cement	1.98
'03	Fish, crustaceans, molluscs, aquatic invertebrates nes	1.70
'08	Edible fruit, nuts, peel of citrus fruit, melons	1.54
'96	Miscellaneous manufactured articles	1.41
'07	Edible vegetables and certain roots and tubers	1.40
'15	Animal, vegetable fats and oils, cleavage products, etc	1.28
'64	Footwear, gaiters and the like, parts thereof	1.26
'53	Vegetable textile fibers nes, paper yarn, woven fabric	1.25

Annex – II

Chapters having RCA value greater than 1 in post period		
Code	Product label	Average RCA (2007-09)
'63	Other made textile articles, sets, worn clothing etc	54.74
'52	Cotton	52.95
'10	Cereals	16.28
'42	Articles of leather, animal gut, harness, travel goods	11.25
'57	Carpets and other textile floor coverings	10.25
'41	Raw hides and skins (other than furskins) and leather	9.70
'25	Salt, sulphur, earth, stone, plaster, lime and cement	9.18
'61	Articles of apparel, accessories, knit or crochet	8.00
'55	Manmade staple fibres	7.94
'62	Articles of apparel, accessories, not knit or crochet	5.84
'36	Explosives, pyrotechnics, matches, pyrophorics, etc	5.47
'13	Lac, gums, resins, vegetable saps and extracts nes	5.41
'14	Vegetable plaiting materials, vegetable products nes	4.03
'17	Sugars and sugar confectionery	3.20
'11	Milling products, malt, starches, inulin, wheat gluten	3.01
'05	Products of animal origin, nes	2.58
'60	Knitted or crocheted fabric	2.09
'03	Fish, crustaceans, molluscs, aquatic invertebrates nes	2.05
'08	Edible fruit, nuts, peel of citrus fruit, melons	1.77
'95	Toys, games, sports requisites	1.75
'54	Manmade filaments	1.56
'22	Beverages, spirits and vinegar	1.53
'58	Special woven or tufted fabric, lace, tapestry etc	1.47
'78	Lead and articles thereof	1.35
'15	Animal, vegetable fats and oils, cleavage products, etc	1.30
'56	Wadding, felt, nonwovens, yarns, twine, cordage, etc	1.12
'53	Vegetable textile fibres nes, paper yarn, woven fabric	1.11
'07	Edible vegetables and certain roots and tubers	1.08
'89	Ships, boats and other floating structures	1.08
'64	Footwear, gaiters and the like, parts thereof	1.07
'82	Tools, implements, cutlery, etc of base metal	1.02

Annex – III

Chapters having RRCA value greater than 1 in pre period		
Code	Product label	Average RRCA (2003-06)
'52	Cotton	29.29
'03	Fish, crustaceans, molluscs, aquatic invertebrates nes	21.19
'63	Other made textile articles, sets, worn clothing etc	15.98
'07	Edible vegetables and certain roots and tubers	10.61
'08	Edible fruit, nuts, peel of citrus fruit, melons	10.47
'61	Articles of apparel, accessories, knit or crochet	8.45
'13	Lac, gums, resins, vegetable saps and extracts nes	5.12
'41	Raw hides and skins (other than furskins) and leather	4.90
'10	Cereals	4.61
'17	Sugars and sugar confectionery	4.15
'12	Oil seed, oleagic fruits, grain, seed, fruit, etc, nes	3.94
'54	Manmade filaments	3.70
'09	Coffee, tea, mate and spices	3.36
'57	Carpets and other textile floor coverings	3.32
'30	Pharmaceutical products	3.21
'20	Vegetable, fruit, nut, etc food preparations	2.92
'11	Milling products, malt, starches, inulin, wheat gluten	2.77
'42	Articles of leather, animal gut, harness, travel goods	2.67
'60	Knitted or crocheted fabric	2.53
'19	Cereal, flour, starch, milk preparations and products	2.50
'95	Toys, games, sports requisites	2.14
'64	Footwear, gaiters and the like, parts thereof	2.07
'62	Articles of apparel, accessories, not knit or crochet	2.00
'58	Special woven or tufted fabric, lace, tapestry etc	1.87
'51	Wool, animal hair, horsehair yarn and fabric thereof	1.78
'78	Lead and articles thereof	1.58
'14	Vegetable plaiting materials, vegetable products nes	1.40
'39	Plastics and articles thereof	1.07
'18	Cocoa and cocoa preparations	1.04
'73	Articles of iron or steel	1.00

Annex – IV

Chapters having RRCA value greater than 1 in post period		
Code	Product label	Average RRCA (2007-09)
'52	Cotton	48.26
'93	Arms and ammunition, parts and accessories thereof	41.93
'63	Other made textile articles, sets, worn clothing etc	18.40
'03	Fish, crustaceans, molluscs, aquatic invertebrates nes	17.45
'41	Raw hides and skins (other than furskins) and leather	12.13
'08	Edible fruit, nuts, peel of citrus fruit, melons	11.70
'20	Vegetable, fruit, nut, etc food preparations	8.64
'61	Articles of apparel, accessories, knit or crochet	8.15
'10	Cereals	7.96
'11	Milling products, malt, starches, inulin, wheat gluten	7.16
'22	Beverages, spirits and vinegar	6.79
'60	Knitted or crocheted fabric	6.41
'78	Lead and articles thereof	6.40
'12	Oil seed, oleagic fruits, grain, seed, fruit, etc, nes	6.06
'25	Salt, sulphur, earth, stone, plaster, lime and cement	6.05
'43	Furskins and artificial fur, manufactures thereof	5.63
'17	Sugars and sugar confectionery	5.29
'09	Coffee, tea, mate and spices	4.44
'55	Manmade staple fibres	3.19
'51	Wool, animal hair, horsehair yarn and fabric thereof	3.16
'30	Pharmaceutical products	2.84
'62	Articles of apparel, accessories, not knit or crochet	2.67
'57	Carpets and other textile floor coverings	2.56
'07	Edible vegetables and certain roots and tubers	2.46
'70	Glass and glassware	1.92
'42	Articles of leather, animal gut, harness, travel goods	1.81
'05	Products of animal origin, nes	1.56
'64	Footwear, gaiters and the like, parts thereof	1.42
'16	Meat, fish and seafood food preparations nes	1.39
'95	Toys, games, sports requisites	1.34
'54	Manmade filaments	1.26
'24	Tobacco and manufactured tobacco substitutes	1.19
'34	Soaps, lubricants, waxes, candles, modelling pastes	1.13
'56	Wadding, felt, nonwovens, yarns, twine, cordage, etc	1.12
'74	Copper and articles thereof	1.10
'14	Vegetable plaiting materials, vegetable products nes	1.06
'21	Miscellaneous edible preparations	1.03

Annex – V

Chapters having RMA value greater than 1 in pre period		
Code	Product label	Average RMA

		(2003-06)
'97	Works of art, collectors pieces and antiques	104.06
'87	Vehicles other than railway, tramway	25.55
'18	Cocoa and cocoa preparations	21.74
'30	Pharmaceutical products	17.79
'19	Cereal, flour, starch, milk preparations and products	15.14
'03	Fish, crustaceans, molluscs, aquatic invertebrates nes	12.59
'20	Vegetable, fruit, nut, etc food preparations	11.07
'91	Clocks and watches and parts thereof	10.09
'80	Tin and articles thereof	9.16
'12	Oil seed, oleagic fruits, grain, seed, fruit, etc, nes	8.26
'08	Edible fruit, nuts, peel of citrus fruit, melons	6.82
'07	Edible vegetables and certain roots and tubers	6.43
'51	Wool, animal hair, horsehair yarn and fabric thereof	6.09
'09	Coffee, tea, mate and spices	4.44
'79	Zinc and articles thereof	4.27
'70	Glass and glassware	3.95
'73	Articles of iron or steel	3.75
'33	Essential oils, perfumes, cosmetics, toiletries	3.48
'83	Miscellaneous articles of base metal	3.28
'37	Photographic or cinematographic goods	3.25
'21	Miscellaneous edible preparations	3.18
'84	Machinery, nuclear reactors, boilers, etc	3.16
'75	Nickel and articles thereof	3.09
'29	Organic chemicals	3.09
'06	Live trees, plants, bulbs, roots, cut flowers etc	2.90
'34	Soaps, lubricants, waxes, candles, modelling pastes	2.78
'38	Miscellaneous chemical products	2.72
'39	Plastics and articles thereof	2.54
'32	Tanning, dyeing extracts, tannins, derivs, pigments etc	2.47
'99	Commodities not elsewhere specified	2.24
'78	Lead and articles thereof	2.24
'24	Tobacco and manufactured tobacco substitutes	2.13
'48	Paper & paperboard, articles of pulp, paper and board	1.94
'28	Inorganic chemicals, precious metal compound, isotopes	1.93
'74	Copper and articles thereof	1.82
'27	Mineral fuels, oils, distillation products, etc	1.76
'43	Furskins and artificial fur, manufactures thereof	1.73
'93	Arms and ammunition, parts and accessories thereof	1.69
'49	Printed books, newspapers, pictures etc	1.68
'64	Footwear, gaiters and the like, parts thereof	1.62
'35	Albuminoids, modified starches, glues, enzymes	1.58
'94	Furniture, lighting, signs, prefabricated buildings	1.39
'85	Electrical, electronic equipment	1.35
'17	Sugars and sugar confectionery	1.33

'72	Iron and steel	1.28
'81	Other base metals, cermets, articles thereof	1.24
'60	Knitted or crocheted fabric	1.11
'76	Aluminium and articles thereof	1.05

Annex – VI

Chapters having RMA value greater than 1 in post period		
Code	Product label	Average RMA (2007-09)
'43	Furskins and artificial fur, manufactures thereof	202.07
'93	Arms and ammunition, parts and accessories thereof	71.45
'06	Live trees, plants, bulbs, roots, cut flowers etc	22.41
'20	Vegetable, fruit, nut, etc food preparations	22.10
'87	Vehicles other than railway, tramway	11.76
'30	Pharmaceutical products	11.47
'80	Tin and articles thereof	10.99
'51	Wool, animal hair, horsehair yarn and fabric thereof	9.45
'03	Fish, crustaceans, molluscs, aquatic invertebrates nes	8.75
'12	Oil seed, oleagic fruits, grain, seed, fruit, etc, nes	8.51
'75	Nickel and articles thereof	7.75
'70	Glass and glassware	7.13
'18	Cocoa and cocoa preparations	6.92
'08	Edible fruit, nuts, peel of citrus fruit, melons	6.69
'79	Zinc and articles thereof	6.54
'29	Organic chemicals	5.87
'38	Miscellaneous chemical products	5.76
'97	Works of art, collectors pieces and antiques	5.59
'09	Coffee, tea, mate and spices	5.48
'24	Tobacco and manufactured tobacco substitutes	5.24
'22	Beverages, spirits and vinegar	4.75
'33	Essential oils, perfumes, cosmetics, toiletries	4.62
'21	Miscellaneous edible preparations	4.39
'78	Lead and articles thereof	3.91
'34	Soaps, lubricants, waxes, candles, modelling pastes	3.84
'74	Copper and articles thereof	3.80
'32	Tanning, dyeing extracts, tannins, derivs, pigments etc	3.73
'11	Milling products, malt, starches, inulin, wheat gluten	3.30
'28	Inorganic chemicals, precious metal compound, isotopes	3.26
'48	Paper & paperboard, articles of pulp, paper and board	3.13
'60	Knitted or crocheted fabric	3.07
'73	Articles of iron or steel	2.93
'16	Meat, fish and seafood food preparations nes	2.54
'07	Edible vegetables and certain roots and tubers	2.41
'83	Miscellaneous articles of base metal	2.12
'49	Printed books, newspapers, pictures etc	1.96

'35	Albuminoids, modified starches, glues, enzymes	1.91
'84	Machinery, nuclear reactors, boilers, etc	1.91
'46	Manufactures of plaiting material, basketwork, etc.	1.81
'76	Aluminium and articles thereof	1.69
'39	Plastics and articles thereof	1.46
'37	Photographic or cinematographic goods	1.43
'64	Footwear, gaiters and the like, parts thereof	1.42
'88	Aircraft, spacecraft, and parts thereof	1.28
'41	Raw hides and skins (other than furskins) and leather	1.25
'23	Residues, wastes of food industry, animal fodder	1.25
'85	Electrical, electronic equipment	1.10
'92	Musical instruments, parts and accessories	1.09
'59	Impregnated, coated or laminated textile fabric	1.09
'19	Cereal, flour, starch, milk preparations and products	1.09
'17	Sugars and sugar confectionery	1.08
'56	Wadding, felt, nonwovens, yarns, twine, cordage, etc	1.07
'72	Iron and steel	1.06
'61	Articles of apparel, accessories, knit or crochet	1.01

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ⁱ “Competitiveness and Complementarities” ADB (2008)