

**INDIA'S TRADE WITH SAARC COUNTRIES WITH SPECIAL
REFERENCE TO SRI LANKA**

By

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**Submitted in Partial Fulfillment of the Requirement of the Degree of Master of
Philosophy in Economics of Mizoram University, Aizawl**

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CERTIFICATE

This is to certify that **Vanlalkhumbiri Chhangte** has worked under my supervision and guidance on a research topic entitled, '**India's Trade with SAARC Countries with Special Reference to Sri Lanka**' for the degree of the Master of Philosophy (M.Phil) in Economics, Mizoram University, Aizawl. The work embodies a record of original investigations and no part of it has been submitted for any other degree in other universities.

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DECLARATION
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I, **Vanlalkhumbtiri Chhangte**, hereby declare that the subject matter of this dissertation is the record of work done by me, that the contents of this dissertation did not form basis of the award of any previous degree to me or to the best of my knowledge to anybody else, and that the dissertation has not been submitted by me for any research degree in any other University/Institute.

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ACKNOWLEDGEMENT

First and foremost, I acknowledge with deep sense of reverence, my gratitude to God Almighty, for his endless blessings and bestowing me with good health to complete the research successfully.

I am ineffably indebted to my supervisor, Dr. James L.T Thanga for his unwavering support, valuable guidance, expertise and conscientious encouragement throughout the course of my research.

I would also like to extend my gratitude to Dr. Lalhriatpuii for her valuable comments and all the faculties and staffs of the Department of Economics, for their help and support to complete this research.

I sincerely thank my family, especially my parents, for their patience, relentless encouragement and for their moral and emotional support throughout this study.

I would also like to give special thanks to my friend Lallawmzuala for his help, prayers and assistance throughout this pursuit.

The success and final outcome of this research required a lot of guidance and assistance from many people and I am extremely privileged and grateful to have people who supported and journeyed with me all along the way.

(VANLALKHUMTIRI CHHANGTE)

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LIST OF ABBREVIATIONS

ADB	:	Asian Development Bank
ADF	:	Augmented Dickey- Fuller test
AL	:	Arab Leagues
ARF	:	ASEAN Regional Forum
ASEAN	:	Association of Southeast Asian Nations
BIMSTEC	:	Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation
CARICOM	:	Caribbean Community
CECA	:	Comprehensive Economic and Cooperation Agreements
CEFTA	:	Central European Free Trade Agreement
CEPA	:	Comprehensive Economic Partnership Agreements
CGR	:	Compound Growth Rate
COE	:	Committee of Experts
COP	:	Committee of Participants
CTH	:	Change of Tariff Heading
DOTS	:	Direction of Trade Statistics
DVA	:	Domestic Value Addition
EFTA	:	European Free Trade Association
EU	:	European Union
FDI	:	Foreign Direct Investments
FEM	:	Fixed Effect model
FTA	:	Free Trade Agreements
GATS	:	General Agreement on Trade in Services
GATT	:	General Agreement on Trade in Goods
GDP	:	Gross Domestic Product
GEMPACK	:	General Equilibrium Modeling Package
GNP	:	Gross National Product
GTAP	:	Global Trade Analysis Project
HDI	:	Human Development Index
IMF	:	International Monetary Fund
ISFTA	:	Indo-Sri Lanka Free Trade Agreement
JETRO	:	Japan External Trade Organization
LDC	:	Least Developed Countries
MERCOSUR	:	Mercado Comun del Sur
MFN	:	Most Favored Nation
NAFTA	:	North American Free Trade Agreement
NTB	:	Non-Tariff Barriers
OECD	:	Organisation for Economic Co-operation and Development
PAL	:	Port and Airport Development Levy
PCGNP	:	Per Capita Gross National Product
PIF	:	Pacific Islands Forum

RCA	: Revealed Comparative Advantage
REM	: Random Effect Model
ROO	: Rules of Origin
RTA	: Regional Trade Agreements
SAARC	: South Asian Association of Regional Cooperation
SAFTA	: South Asian Free Trade Agreement
SAPTA	: South Asian Preferential Trade Agreement
SCL	: Special Commodity Level
SDT	Special and Differential Treatment
SMC	: SAFTA Ministerial Council
SRL	: Social Responsibility Level
TCI	: Trade Complementarity Index
TII	: Trade Intensity Index
TRIPS	: Trade Related Aspects of Intellectual Property Rights
UK	: United Kingdom
UN	: United Nations
UNASUR	: Union of South American Nations
UNCOMTRADE	: United Nations Commodity Trade
UNCTAD	: United nations Conference on Trade and Development
US	: United States
USMCA	: United States Mexico Canada Association
WB	: World Bank
WITS	: World Integrated Trade Solutions
WTO	: World Trade Organizations

Chapter 1

INTRODUCTION

Chapter 1

INTRODUCTION

1.1. Trade as an Integrating Force

Trade occupied important position in the economic studies, and in fact, trade theories had evolved with the emergence of economic subject. The first trade theory has been propounded by Adam Smith (1776) who advocated free trade as the best policy for trade between countries where a country with an absolute advantage will export the goods to another country having absolute disadvantage. David Ricardo, a British economist introduced the concept of comparative advantage in 1817. According to him international trade is solely due to the difference in the productivity of labor(Sodersten, 1980), and two countries will still engage in trade even if one has an absolute advantage over the other in all the goods but not a comparative advantage in all of the goods. Later, two Swedish economist Eli Heckscher and Bertil Ohlin propounded one of the most influential theories in international economics called Heckscher-Ohlin theory (1933) also known as factor-proportions theory or factor price equalization theory which emphasizes the interplay between countries endowment of resources and the proportions in which they are used in producing different goods for determining trade. Further studies and extensions to the Heckscher-Ohlin theory is given by Stolper-Samuelson Theorem (1941), Metzler Paradox (1949), Leontiff Paradox (1953) and Rybczynski Theorem (1955).

Trade is one of the most powerful forces of economic integration. According to Paul Samuelson(1941), “Foreign Trade offers a Consumption possibility frontier that can give us more of all goods than can own domestic production possibility

frontier”. In the recent US-China trade war, Chinese Premier Li Keqiang (2018) said ,“ The fundamental principles of free trade should be upheld, the interests and concerns of all parties be accommodated, and the broadest possible consensus on reform be built up. It is essential that we uphold the basic principles of multilateralism and free-trade”.

1.2. Multilateralism Vrs. Regionalism

Trade can be traced along two broad dimensions namely multilateralism and regionalism. Both multilateralism and regionalism stems from the same concept and refers to the transformation of a particular region from relative heterogeneity to increased homogeneity mainly along four dimensions: culture, security, economic policies and political regimes.

The start of multilateralism can be traced back to the signing of GATT (General Agreement on trade in goods) which was later expanded to include trade in services, investment, agricultural products and intellectual property rights under WTO regime whereby GATS and TRIPS were signed accordingly. The total number of members under WTO in 2017 is 164 and 23 observers with Afghanistan being the newest member which joined in 29 July 2016(wto.org, 2019). The most essential feature of multilateralism is non-discrimination whereby MFN (Most Favored Nation) status is given to all members which automatically extends bilateral agreements to all the members of WTO. Regional Trade Agreements or RTAs on another hand is guided by the opposing principle of multilateralism where more favorable treatment is provided with each other amongst the member of the agreements and not to the rest of the world. Regionalism in the modern world can be defined as a phenomenon where

two or more countries form economic arrangements for the purpose of trade and mutually reduce barriers to trade like tariffs, quotas and other non-tariff barriers. Attempts have also been made to coordinate monetary and fiscal policies to increase transnational flows of goods, capital, services and people across international borders.

There have been a number of studies and debates surrounding the efficiency of multilateralism verses regionalism in improving trade relations between countries. Studies such as Bhagwati (1992) & Krueger (1997) , Krishna (1998), Panagaria (2000), McLaren (2002) shows deep apprehensions towards the increasing regionalism which they belief to be diverting focus from multilateral trading regime and lowers welfare for the member countries. The broad prospect of trade liberalization is substituted by a biased and a narrower objective of liberalization under regionalism B&K. Their studies conclude that regionalism create its own demand and might cause disintegration of international trading regime and favor formation of closed trading blocs across the world(Winters, 1996).

On the other hand, studies such as Baldwin (1997), Ether (1998) and Lawrence (2000) considers regionalism to be a building block for multilateralism rather than a stumbling block and that regionalism supports multilateralism by means of a 'domino effect'. Pal (2005) traced the causes behind profound growth of regionalism and found that unreliability in the international trading system to be the root cause of the downfall of multilateralism. Nataraj (2006) found that both regionalism and multilateralism have similar approach in achieving trade and investment integration and that they are complementary and not substitutes of each other(Goel and Handa, 2018).

Therefore, the debate is endless with some economists considering regionalism to undermine multilateralism as it defies MFN while some considers it complementary since the principle objective is similar which is to increase trade among countries. It has been suggested that if member countries forming regional trade agreements lowers their MFN tariff for the non-member countries then it will be possible to enhance the overall trade thereby achieving the objective of improving trade globally (Goel and Handa, 2018).

1.3. Emergence of Regional Cooperation

One of the primary features of the global trade scenario since the establishment of the WTO has been the concomitant rise in the number of RTAs. In the last few decades, there has been an increased incentive towards improving regional integration for deriving greater benefits from globalization. The two best precursor being the European Union and NAFTA. Even though the General Agreements on Tariffs and Trade (GATT) came into effect in 1948, the first RTA came into effect only in 1958. In the beginning the signing of RTAs was a sluggish matter but it was only after the establishment of WTO in 1995 through the Marrakesh declaration, which the RTAs really started to proliferate. Between 1948-1994, the total number of notifications received by GATT was only 46 RTAs which increases to 317 RTAs by 2010 and as of 1st September, 2019, the total number of cumulative notifications of RTAs is 481 out of which 302 RTAs are in force (wto.org, 2019).

India looks favorably upon regional trading agreements (RTAs), such as Free Trade Agreements (FTAs), Preferential Trade Agreements (PTAs), Comprehensive Economic Partnership Agreements (CEPAs), and Comprehensive Economic

Cooperation Agreements (CECAs). Table 1 shows the list of major trade agreements that India has undertaken. The agreements which are undergoing negotiations currently are excluded from the table.

Table 1.1: Major Trade Agreements of India

Sl.	Groupings	Countries	Type	w.e.f.
1	Asia-Pacific Trade Agreement (APTA)	5	PTA	2006
2	Global System of Trade Preferences (GSTP)	43	PTA	1989
3	SAPTA	7	PTA	1997
4	India-Afghanistan	2	PTA	2003
5	India-Chile	2	PTA	2007
6	MERCOSUR	4	PTA	2009
7	India- ASEAN (AIFTA)	11	FTA	2010
8	SAFTA	7	FTA	2006
9	India- Sri Lanka FTA (ISLFTA)	2	FTA	2000
10	India- Malaysia (IMCECA)	2	CECA	2011
11	India-Singapore	2	CECA	2010
12	India-Korea(IKCEPA)	2	CEPA	2010
13	India-Japan(IJCEPA)	2	CEPA	2011

Source: Ministry of Commerce and Industry, Government of India, accessed on 01.12.2019

Some of the important regional economic integrations (trade blocs) across the world include Arab League (AL,1945), European Free Trade Association (EFTA,1960), Association of Southeast Asian Nations (ASEAN,1967), Pacific Islands Forum (PIF,1971), Caribbean Community (CARICOM,1973), South Asian Association for Regional Cooperation (SAARC, 1985), MERCOSUR(1991), Central European Free Trade Agreement (CEFTA,1992) European Union (EU,1993), North American Free Trade Agreement (NAFTA,1994) which is replaced by USMCA in 2018, BIMSTEC(1997) and Union of South American Nations (UNASUR,2008).

The reasons often cited for the increasing rise of RTAs is the complexity of the multilateral trade agreements evident from the consecutive failure of WTO round beginning with the Doha round in 2001. It was slowly felt that the multilateral trading framework was time-consuming, complex and gives undue advantage to giant multi-

nationals at the cost of emerging market economies and thereby could not address the needs of the member states effectively and speedily.

1.4. Regionalism in South Asia

The rapid emergence of regional organizations in different parts of the world amply indicates the growing awareness of regionalism as an effective approach for cooperation and economic growth. Regional cooperation in South Asia has not gained momentum until recently with SAARC being a latecomer amongst the RTAs. Regionalism has been deliberated as one of the idealistic features of foreign policies as it has been realized that development objectives can be best pursued through collective efforts among the South Asian countries.

It was only in the late 1970s and early 80s that South Asian states made concerted effort to reduce tensions and infuse cooperation which begins with the late President Zia-Ur-Rahman of Bangladesh who made the first concrete proposal for establishing a framework for regional cooperation in South Asia in 1979.

South Asia comprises of 8 countries according to World Bank definition namely Afghanistan, India, Bhutan, Bangladesh, Nepal, Maldives, Pakistan and Sri Lanka. The South Asian economy is highly heterogeneous characterized by political disharmony and lack of shared interest. Regionalism arises out of geographic contiguity, cultural affinity, economic interest or shared security concerns and the case for cohesion among the South Asian countries is mainly due to mutual colonial heritage. In the post-colonial history South Asia is characterized by conflict, religious tensions which stems from the colonial rule due to partition of subcontinent and lack

of proper demarcation of state boundaries causing territorial dispute and strained bilateral relations. Another major problem faced amongst the South Asian countries is the presence of ethnic minority who have their origin in another country of the region. Eg: Tamils in Sri Lanka, Biharis in Nepal, Hindus in Pakistan and Bangladesh, Nepalese in Sikkim and Indians in Burma to name a few. The presence of ethnic distinction causes the problem of stateless person leading to religious and linguistic minority. The difference in the freedom struggles and the different strategies adopted for the social, economic and political development among the South Asian countries reiterated the necessity of having cooperation (Jiali, 2012).

South Asian economies adopted import substituting industrialization after the second world war due to protectionist sentiment and maintained a strong anti-export bias, a massive public sector with private sector only working at the periphery and trade especially intra-regional trade was highly limited which is demonstrative from the exceptionally high pre-1990 tariff levels in Bangladesh , India and Pakistan . Sri Lanka was the first country among the South Asian Countries to liberalize its economy in 1977 and others followed suit mostly in 1990s where tariffs are slashed and domestic trade regimes are slowly liberalize. Despite the considerable tariff liberalization, the United Nations Commodity Trade Database has ranked the region among the most highly protected states in the world (Taneja, 2001).

1.5. Formation of SAARC

The idea of South Asian regional cooperation was mooted by the late President Zia-Ur-Rahman in the year 1979. A working paper identifying areas of cooperation for mutual benefits was prepared by Bangladesh Government and

circulates it to the countries of the region in November 1980. Preliminary meetings regarding the cooperation were held in Colombo (1981), Islamabad (1982) and the South Asian Association for Regional Cooperation was formally launched in August 1983 at Dhaka, Bangladesh(Iqbal, 2006).

The seven founding members of SAARC are Bangladesh, Bhutan, India, the Maldives, Nepal, Pakistan and Sri Lanka and Afghanistan joined as an eighth member state later on in 3rd April, 2007. SAARC came to force after being ratified by all the member states in December 1985. The SAARC Secretariat is based in Kathmandu, Nepal which is headed by the Secretary General Amjad Hussain B. Sial from Pakistan is the current Secretary General since 1st March 2017. 8th December is observed the SAARC secretariat and the Member States as the SAARC Charter Day.

1.5.1. Organizational Principles and Objectives

The head of states of the seven member countries agrees to meet every year for achieving the fundamental objectives of the cooperation namely promotion of welfare, improvement of quality of life, acceleration of economic growth, social progress and cultural development, promoting co-operation among the member countries and with other developing countries, strengthening 'collective self-reliance' among countries of the region, active collaboration in various fields and also co-operating with each other at the international forums on matters of common interests and with international and regional organizations having similar aim and purposes.

The member countries committed themselves to observe and follow the principles of sovereign equality, territorial integrity, political independence, non use

of force, non-interference in the internal affairs of the other member states and peaceful settlement of all disputes. Moreover, it is expected that regional co-operation would complement and not substitute other forms of bilateral or multilateral co-operation.

The major organizational principles of SAARC as laid down in the SAARC charter includes promotion of peace, stability, amity and progress in the region, respect for the principles of sovereignty, territorial integrity, independence, maintaining peace and non-interference in the internal matters of other States and cooperation for mutual benefit. All decisions undertaken should be made unanimously with only multilateral issues to be discussed without any bias.

1.5.2 Organizational Structure of SAARC

In order of hierarchy, the organizational structure of SAARC can be framed as below:

1. **Summit meetings**—It is a meeting which is deemed to be held once a year or more often as and when considered necessary and consists of the Heads of State or Government of the Member States. It is the highest authority of the association of SAARC organ.
2. **Council of Ministers** – It is a meeting which is to meet twice a year and consists of the Foreign Ministers of the Member States. Extraordinary session of the Council may be held by agreement among the Member States. It is responsible for policy formulations, viewing of progress, deciding on new areas of cooperation,

establishing additional mechanism as necessary and deciding on other matters of general interest to the association .

3. **Standing committee** – The Committee comprises of the Foreign Secretaries and is deemed to meet as often as necessary by the Member States. The Standing Committee shall submit periodic reports to the Council of Ministers for making decisions on policy matters. It is vested with the responsibility of overall monitoring and coordination of programmes and modalities of financing, determining inter-sectoral priorities, mobilizing regional and external resources, and identifying new areas of cooperation. This committee is assisted by a programming committee, an adhoc body, comprising senior officials, to scrutinize the secretariat budget, finalize the calendar of activities and take up any other matter assigned to it by standing committee.
4. **Technical committee** - Technical Committees comprises of the representatives of Member States and are responsible for the implementation, coordination and monitoring of the programmes in their respective areas of cooperation. The Technical Committees are required to submit periodic reports to the Standing Committee. Technical committee comprise of representatives from the member states. These committees formulate programmes and prepare projects in their fields, which make up the integrated programme of the action under SAARC.
5. **Action Committees:** Action Committees comprising of the representatives of the member states concerned may be set up by the Standing Committee for implementation of projects involving more than two but not all Member States.

Article III of the SAARC Charter envisages summit meetings, which is the highest authority of the association consisting of the Heads of States or Governments of the member states to meet once a year or as often as required. So far till date, 19

summit meetings had been held within a span of 34 years which depicts the lack of consistency and the trend of postponements plaguing the summit.

The Chairmanship of the Summit is held by the member states hosting the summits. The key outcome of the summit which is adopted at the concluding session of the summit is called a declaration. It consists of the decisions and the directions of the leaders while it also approves and considers the reports of the Council of Ministers. The summit is also addressed by the Secretary General and the heads of the observer delegation.

1.6. Socio Economic Status of SAARC Countries

Table 2.1 shown below shows the socio-economic status of SAARC using major indicators such as Land area measured in kilometer per square, GDP in current US dollar , population size in millions, per capita GDP in current US dollar and HDI of the member countries.

Table 1.2: Socio Economic Status of SAARC countries

Country	Land Area in sq. km	GDP(current US\$)	Population in Mn	Per Capita GDP in current US\$	HDI
India	29,73,190	27,26,322.62	1,352.61	520.9	130
Bangladesh	1,30,170	2,74,024.96	161.35	1698.3	136
Pakistan	7,70,880	3,12,570.06	207.8	1472.9	150
Sri Lanka	62,710	88,900.77	21.67	4102.5	76
Nepal	1,43,350	28,812.49	28.08	1025.8	149
Bhutan	38,144	2,534.97	0.75	3360.3	134
Afghanistan	6,52,860	19,362.97	37.17	520.9	168
Maldives	300	5,272.29	0.51	10223.6	101

Source: World Bank

India is by far the largest country among South Asia, whether we consider it in terms of geographical size, GDP, or population. India accounts for 76 percent of the region's population, 72 percent of the region's landmass, and 76 percent of the region's national income in dollar terms. The size of the region is a vital geopolitical factor determining its relative significance. India occupies the largest area with 29,73,190 sq kms followed by Pakistan with the second largest area of 7,70,880 sqkms while the lowest area is that of Maldives with 300 sqkms. Evidently, India accounts for 72 percent of the total of the region. SAARC countries, which occupies a total of more than 5 million sq kms, thus becomes an important area for regional study on the basis of size alone.

According to The Human Development Index calculated for 174 countries in 2018, comprising life expectancy, educational attainments and income indicators to give a composite measure of human development , SAARC countries were ranked as 76(Sri Lanka),94(Maldives), 130 (India), 136 (Pakistan), 150 (Nepal), 134 (Bhutan) and 168 (Bangladesh). India ranked third among the SAARC countries following Sri Lanka and Maldives. For measure of GDP per capita, it may be stated that India ranked at the bottom alongside Afghanistan while Sri Lanka is far ahead of India. The disparity is even more marked if comparison of the same indicators is made with Maldives. Even Pakistan's per capita income in dollar terms is higher than that of India. This implies that India's largeness in size is not relatively matched in terms of its capabilities.

The two main characteristics of South Asian economy is that it is Indo-centric as India is central to the region geographically and its dominant power in terms of socio-cultural and economic infrastructure of the region and is highly unbalanced with asymmetric power structure attributed to its size, population, resource base, military

strength, economic growth etc. It also needs to be stated that among the seven countries in the South Asian region, five are among the least developed viz., Bangladesh, Bhutan, Maldives, Nepal and Afghanistan. Nepal and Bhutan are land locked with India. All the South Asian countries share a common boundary with India. Therefore, the focus should be on economic development through greater co-operation and collaboration. Infrastructure forms the back bone for economic growth and as such regional co-operation is imperative and vital for the development of these regions (Iqbal, 2006).

Despite its dominant position among South Asian countries, India is highly influenced by views of prominent leaders in its journey towards regional integration such as Gandhi's concept of maintaining a good relationship with the neighboring countries where conflict should be accepted as the integral part of integration and to be managed by peaceful means, the policies of non-alignment and peaceful coexistence associated with Jawaharlal Nehru and "Gujral doctrine" of maintaining trust without seeking reciprocity for maintaining cordial relations with the smaller neighboring countries(Rajan, 1985).

1.7. India's Trade Relation with Sri Lanka - Overview

Sri Lanka is the most important trading partner of India among the SAARC countries. The trade relations between the two neighboring countries dates back as far as 4th century and continued till colonial times. However, formal trade agreement started in 1977 when Sri Lanka embarked on a path of comprehensive economic policy reforms and became the first country in South Asia to adopt the export-driven growth strategies. In the 1980's the Indian economy also went in for partial

liberalization and following its macroeconomic crisis in 1991 the economy witnessed long term structural reforms in the industrial, trade and financial sector of the economy. As a consequence of this gradual opening up of both the economies, trade between India and Sri Lanka picked up significantly (Balasuriya and Silva, 1988).

India and Sri Lanka signed the India-Sri Lanka Free Trade Agreement (ISFTA) in December 1998, which has come into force in March 2000. The ISFTA covers only trade in goods. It provides either duty free access (zero duty) or duty preferences for products that are not under the Negative list (Harilal and Joseph, 1999).

According to the record of International Trade Statistics of Sri Lanka, India's export to Sri Lanka has increased significantly from \$601 million in 2001 to \$3827.5 million in 2016, while imports have increased from \$70.1 million to \$551.2 million during this period. It is notable that India has achieved positive trade balance with Sri Lanka throughout the years (International Trade Statistics of Sri Lanka, 2017).

1.8. Significance of the Study

The analysis of trade among countries is an important phenomenon with the increasing globalization and greater integration of the world. One of the prominent features of global trade scenario is the concomitant rise in the number of RTAs around the globe. Regional cooperation started gaining momentum in South Asia only since the formation of SAARC in 1985 and consequent trade cooperation initializes with the signing of South Asian Preferential Trade Agreement (SAPTA) and South Asian Free Trade Agreement (SAFTA) in 1995 and 2006 respectively. A study to

analyse the effectiveness of trade agreements within SAARC is important as India has been signing increasing number of FTAs and recently, there has been an ongoing negotiation for signing of FTA among BIMSTEC member countries including India for greater economic integration. Hence, it is imperative to find the viability and the problems plaguing the signing of regional free trade agreements.

Trade with Sri Lanka has always been significant due to the close proximity of the country being India's closest maritime neighbor and the deep historical and cultural ties it shares with India. Sri Lanka is also the largest trading partner of India among the SAARC countries and with India being the largest import partner of Sri Lanka in the world. India's relationship with Sri Lanka has deteriorated in recent years due to the growing hegemony of China in the South Asian countries with increasing economic influence and huge investments made by China as part of Maritime Silk Route. A study to find out the weakness and challenges of trade between India and Sri Lanka and analyze the potential trade areas to counter the growing trade relation with China is the need of the hour.

1.9. Statement of the Problem

SAARC has been under operation for 34 years but it has often been cited by many as a failure. Certain doubts have been raised regarding the effectiveness of regional trade agreements in improving economic integration. In recent years, there has been a global trend towards bilateral agreements with India signing more bilateral FTA with neighboring countries. Therefore, the effectiveness of RTAs needs to be reiterated.

Despite India being the largest trading partner of Sri Lanka, the percentage share of India in Sri Lankan imports has been declining. Another problem with Indo-Sri Lanka trade is that while considerable gain has been realized under ISLFTA, it is at the expense of an increased trade deficit. Therefore, bridging the trade deficit is crucial for sustaining the bilateral FTA.

1.10. Objectives of The Study

- To analyse the trade agreements within SAARC and the various instruments for its implementation.
- To examine the trends of India's bilateral trade with the SAARC countries.
- To estimate the compound annual growth rate of India's bilateral trade with SAARC countries and the export and import Intra-SAARC trade.
- To evaluate the stationarity and the presence of structural break in the bilateral trade series.
- To measure the impact of trade agreements on India's exports and imports empirically.
- To assess the dynamics of trade policies and agreements between India and Sri Lanka and their impact on both countries.
- To estimate the trade complementarity, trade intensity and revealed comparative advantage between India and Sri Lanka on selected group of commodities.

1.11. Hypotheses

- SAPTA and SAFTA have significantly improved trade between India and the SAARC countries
- There is low trade complementarity between India and Sri Lanka.
- India-Sri Lanka Free Trade Agreement (ISFTA) has a positive impact on the bilateral trade between India and Sri Lanka.

1.12 Methodology

1.12.1 Data source:

The dataset for the present study has been obtained from various sources to analyse the bilateral trade performance between India and the seven SAARC countries from 1980 to 2018. Data on Gross Domestic Product (GDP at current US\$ in thousand), GDP per capita(at current US\$ in thousand), population has been taken from World Development Indicator, World Bank 2018. These three variables are expected to have a positive impact on the trade performance. Population is used as an estimator for market or economic size of each country. Data on exports and imports between India and the SAARC countries are obtained from Direction of Trade Statistics (DOTS), IMF Database, 2018. Distance is calculated in km by using Great circle distance calculator which calculates the shortest distance between two points on the surface of the sphere which is New Delhi (capital city of India) and the capital cities of the respective trading partners for our study. This variable is used as an estimator for transportation cost between countries and is expected to have an adverse impact on trade flows because transportation cost would be proportional to the distance between the two countries.

Exchange rate has been included as the explanatory variable in the gravity model since studies such as (Deardorff, 1998) and (Bergstrand, 1985) has argued that the inclusion of such variable has helped to explain the trade variation among participating countries. Data on exchange rates of countries are acquired from the World Bank. An increase in exchange rate means that India's currency devalued, as a result imports would be more expensive and exports would be cheaper. We also include some control variables in this model to reflect the impact of the trade agreements on trade flows between the countries for which two dummies are used, SAPTA for the year 1995 and SAFTA for the year 2006 to analyse the impact of the trade agreements on trade. The value is set to 1 from the year the country has adopted SAPTA and 0 for remaining years. And similarly dummy variable is obtained for SAFTA from the year in which the countries signed SAFTA. The trade agreement variable is expected to be positive.

The study on India's trade with Sri Lanka relies mainly on secondary data collected from various publications and sources such as World Bank Reports, International Monetary Fund (IMF), issues of Economic Survey of India, Ministry of Commerce and Industry and International Trade Statistics of Sri Lanka. The item wise trade data will be generated from Direction of Trade Statistics (DOTS), United Nation Commodity trade (UNCOMTRADE) Database and World Integrated Trade Solution (WITS). WITS, which gives access to major international trade, tariffs and non-tariff data compilation, is a software developed by the World Bank in close collaboration with various international organization (UNCTAD, WTO, etc.). In addition data will also be collected from various journals, books, publications, articles, working papers, reports, individual research, etc.

1.12.2. Analytical Tools

To examine the general trends and pattern of the data collected for estimating India's bilateral trade with SAARC member countries, various statistical tools such as percentages, Compound annual growth rate, Augmented Dickey Fuller (ADF) test, and Zivot-Andrews test are used. For further estimating the impact of trade agreements on exports and imports of India, a Gravity model has been applied which is explained below.

This study adopted a variation of gravity model propounded by Krugman and Obstfeld (2005) where the model is enhanced from the original gravity model which has only two independent variables, GDP and distance by adding the variables such as population, trade agreements which could affect the bilateral trade between India and the partner countries. The gravity model is estimated in logarithm form as follows:

$$\log X_{ij} = \alpha_0 + \alpha_2 \log Y_{jt} + \alpha_3 \log N_{jt} + \alpha_4 \log EX_{ij} + \alpha_5 P_{ij} + \alpha_6 F_{ijt} + e_{ijt} \quad (1)$$

$$\log M_{ijt} = \alpha_0 + \alpha_1 \log Y_{it} + \alpha_2 \log N_{it} + \alpha_3 \log EX_{ij} + \alpha_5 P_{ij} + \alpha_6 F_{ijt} + e_{ijt} \quad (2)$$

Where:

$i = 1$ (India)

$j = 2, 3, 4, \dots, 7$ (partner SAARC countries)

$t = 1991, 2001, 2002 \dots 2018$

X_{ijt} : India's export trade with country j in year t

M_{ijt} : India's import trade with country j in year t

Y_{it} : India's GDP in year t

Y_{jt} : GDP of country j in year t

N_{it} : India's population in year t

N_{jt} : Population of country j in year t

D_{ij} : Distance in kilometers between India and country j

$EX_{ijt} = (\text{Annual average of the national currency unit of India per US dollar}) / (\text{Annual average of the national currency unit of country } j \text{ per US dollar})$

P_{ijt} : Trade dummy variable for inclusion of India and country j in SAPTA in year t

F_{ijt} : Trade dummy variable for inclusion of India and country j in SAFTA in year t
 e_{ijt} : Error term

To study the dynamics and implication of India's bilateral trade with Sri Lanka, three major indices have been calculated, to estimate the comparative advantage, trade complementarity and trade intensity between India and Sri Lanka on sixteen major groups of commodities at 2 digit level HS-classification. They are estimated using the following formula:

a) Revealed Comparative Advantage

The Revealed Comparative Advantage (RCA) index of country 'i' for product 'j' is measured by the product's share in the country's exports in relation to the products share in world total exports (Benedictis and Tamberi, 2001). RCA is defined as:

$$RCA_{ai} = \frac{x_{ij} X_{it}}{X_{wj} X_{wt}} \quad (3)$$

Where x_{ij} and x_{wj} are the values of country i's exports of product j and world exports of product j and where X_{it} and X_{wt} refer to the country's total exports and world total export.

According to the RCA calculated, following observations can be made:

- When $RCA \geq 1$, a country is said to specialize in exports of the product, and is said to have revealed comparative advantage in the product with respect to world trade.

- When $0 < RCA < 1$, it indicates that the country has a comparative disadvantage in exports of the product with respect to the world trade.

Further observations can be made using the division made by the Japan External Trade Organization (JETRO) based on Balassa's criteria(Weihong, Qiannan and Huibin, 2017):

- When $RCA > 2.5$, it means that the product has a very strong competitive advantage;
- When $1.25 < RCA < 2.5$, it means that the product has a strong competitive advantage;
- when $0.8 < RCA < 1.25$, it means that the product has an average comparative advantage.
- When $RCA < 0.8$, it means that the product has no competitive advantage.

b) Trade Complementarity Index

Trade complementarity index (TCI) measures the degree to which the export pattern of one country matches the import pattern of another. A high degree of TCI indicates that a large share of exports of one country to be the import share of another country. Therefore, high TCI is assumed to indicate stronger trade complementarity and hence more favorable prospects for a successful bilateral trade arrangement.

TCI may be defined as

$$TCI_{ab} = 100 * [1 - \frac{m_{ij} - x_{ik}}{2M_j X_k}] \quad (4)$$

Where m_{ij} is the total values of imports of good i of country j and x_{ij} is the total values of exports of good i of country k . And M_i and X_k being the values of country i 's and country k 's total imports and exports.

The value of TCI ranges from 0 to 100. A score of 0 indicates null trade complementarity between partner countries where none of the export products of one country forms the import share of the another country. Low TCI is found for countries with similar RCA profiles making both the countries perfect competitors. A score of 100 denotes that the export of one country and import of the partner country exactly match and the countries are ideal trading partners. A high value of TCI found for countries with contrasting RCA profiles and is desirable for effective bilateral trade.

c) Trade Intensity Index

The trade intensity index (TII) is used to determine whether the value of trade between two countries is greater or smaller than would be expected on the basis of their importance in world trade. It is defined as the share of one country's exports going to a partner with respect to its total trade divided by the share of world exports going to the partner with respect to the total world trade(Chandran, 2010). It is calculated as,

$$TII = \frac{x_{ij} X_{it}}{x_{wj} X_{wt}} \tag{5}$$

Where x_{ij} and x_{wj} are the values of country i 's exports and of world exports to country j and where X_{it} and X_{wt} are country i 's total exports and total world exports respectively. An index of more than one indicates an intense bilateral trade flow that is larger than expected, compared with its trading pattern with rest of the world.

Whereas, TII less than one indicates a bilateral trade flow that is smaller than expected, compared with its trading pattern with rest of the world.

1.13. Scheme of Chapterisation

The present study is presented in five chapters. The first chapter consists of the introduction, significance of the study, objectives, methodology adopted for the study and the corresponding chapter scheme. The second chapter presents the review of various literature. The third chapter analyses the trade agreements within SAARC and their implications on India's Trade with member countries. The fourth chapter estimates the nature and patterns of Indo-Sri Lankan Trade using commodity wise analysis. The last chapter presents the summary of findings and conclusion.

Chapter 2

REVIEW OF LITERATURE

Chapter 2

REVIEW OF LITERATURE

There has been a plethora of studies on India's trade relations with SAARC countries and Sri Lanka in particular. Studies have covered diverse areas such as bilateral relationship between countries, trade relations between regional blocs, changing dynamics of trade policies among the countries and their impacts on the trading volume, impact of trade agreements, etc. Attempt is made in this chapter to give an outline of the related studies to chalk out a strong base for the formulation of empirical models, to decide the appropriate tools of analysis and to identify the area of literature gap where the study has been found to be lacking or has not been adequately covered. It would also help in understanding the trends, scope and means of trade relations amongst SAARC countries and impact of trade agreements between India and Sri Lanka. Further, some literature related to regional blocs, other than SAARC are also examined to enhance better understanding of trade relations among the SAARC countries.

Bhattacharjea (1985) in his study tries to find out the course of liberalization, expose its limitations and examines the results of liberalization in an economy like India. The study found that the course of liberalization in India does not stem from the IMF conditionalities that was imposed but rather was initiated much earlier and there are certain endemic problems to trade liberalization in India which is not explained by traditional trade liberalization theories. The study concluded that trade liberalization success stories are mainly found under authoritative regime where trade unions are highly curbed and cannot be easily extended to a democratic country like India.

Meyer (1996) studied the comparative history between India and Sri Lanka during the period between the 15th century and independence and found certain similarities between the two countries such as natural and climatic features, the society, culture and religion with the Sinhala community being an amalgamation of the different settlers of the island. Despite the similarities there are certain distinguishing factors due to the impact of the colonial rule imposing plantation system in Sri Lanka whereas peasant agriculture was dominant in India and the growth of nationalist movement in Ceylon which led to a growing consciousness among the Sinhala people and enhanced the distinctiveness of the island from India. The study found that even though there are a lot of similarities between the two countries in terms of natural, climatic features, cultural and ethnic linkages, the differences lay in the evolution of the growth structure caused by the difference in the length and depth of the impact of the colonial rule and the lack of strong nationalist movement towards independence as India.

Hariharan (1998) investigated the factors responsible for problems of trade cooperation among the SAARC countries and found that lack of effective information, unhealthy competition, lack of financial co-operation, neglect of non-tariff barriers, inadequate tariff advantages, fear of economic domination by India and political instability among the member nations as the main barriers to effective regional cooperation.

Harilal and Joseph (1999) focus on the varying impact of the Preferential Trade Agreements (PTA) under the India-Sri Lanka Free Trade Accord on different sectors as well as regions within the community in the two countries with the study period covering from 1991 to 1998. The study found that the export structure of Sri Lanka is highly volatile due to instability in policies such as devaluation, changes in

international market demand and other external sector developments. India- Sri Lanka trade has highly improved since 1970s but only accounts for a negligible share of their total trade. Another important aspect is that Sri Lanka has high trade deficit with India mainly caused by the preferential access extended by the new accord which is more advantageous to Indian exports. There is high variation of impact of the accord on different sectors and regions with low skill/technology manufacturing sector benefitting the most and the southern states of India bearing the major adverse consequence since it will have to compete with Sri Lankan imports.

Chauhan (1999) in his research analyse the trend of trade relations, degree of trade and investments, examine product concentration and diversification, identify potential trade, impact of currency crisis, quality standardization, role of NRI's and growth rate of selected high valued products of imports and exports due to liberalization of India's policy of foreign investment respectively in Singapore and Malaysia. It was found that the immediate impact of liberalization was an increase in import growth rate which grows above the export growth rate. Product diversification, improved infrastructure and quality standardization leads to increase in the exports of Indian goods to the region. Liberalization of foreign investment causes expansion of business ventures and increased the flow of FDI. Main failure of the government policy is lack of adaptability to the change in demand, efficient marketing, public expenditure on infrastructures etc.

Karemera *et al.* (1999) evaluate the determinants of trade flows of selected commodity in the Pacific Rim countries by employing both time series and cross-sectional data from 1984 to 1993. A modified form of gravity model derived from a general equilibrium model of international trade is used by including variables representing, environmental or socioeconomic factors to examine both the effects of

cultural similarity and level of development on trade in the area under study, dummy variables representing trade flows among the Association of South East Asian Nations (ASEAN) and NAFTA countries to capture trade creation effect, another dummy variable representing trade flows among members and non-ASEAN members and another representing trade between a NAFTA country and a non-NAFTA country to identify the extent of trade diversion is used. The traditional adjacency dummy variable is retained since it is assumed that trade between countries with common borders is greater than trade between countries without common borders.

The findings shows that the traditional gravitational variables such as incomes of importing and exporting countries, prices of the traded commodity, environmental factors and distance between trade partner are found to be statistically significant and in conformity to other studies. Furthermore, the study finds the effects of sub-regional trade pacts on trade flows between countries to be highly commodity-specific. The results also shows that regional blocs such as ASEAN and NAFTA has both trade creation and trade diversion effect because while it enhanced trade among its member countries, it also increased trade among the non-members countries. In conclusion, the study has showed the importance of incorporating economic, free trade, and environmental factors into the traditional gravity framework when modeling the determinants or effects of trade flows on the Pacific Rim countries. The findings suggest that if sub-regional trade groups enhanced trade in a region, then regionalism should enhance the benefits of economic globalization and that economic regionalism is complementarity to economic globalization.

Sarvananthan (2000) in his study had reviewed the indo-Sri Lanka Free Trade agreement of 1998 where 76% of the importable goods from Sri Lanka are entitled to 'free trade' in India whereas only a meager 13% of the importable goods from India

are entitled to 'free trade' in Sri Lanka. India has placed 24% i.e. 428 out of the total 1788 goods in the negative list whereas Sri Lanka placed almost 50% i.e. 1183 out of total 2391 goods in the negative list respectively. Despite the impressive concessions by India he argued that Sri Lanka will not be able to reap much of the benefit due to resource and production constraints, price non-competitiveness, imperfect mobility of capital, non-involvement of main stakeholders and imposition of rules of origin clause in the agreement. Even though the negative list of India seems lesser in number, many items consist of the goods in which Sri Lanka has a comparative advantage. Another major disadvantage of the Agreement is its inclusion of only trade in goods.

Weerakoon (2001) studies the origin of SAFTA which was due to lack of entry points for the South Asian countries into any regional trade blocs at the time and the various negotiations under the agreement to try and understand the underlying constraints that South Asia faces in regional integration. The study tries to answer certain questions such as the implications of pursuing bilateral agendas for promoting economic integration, whether negative lists needs to be negotiated before or after signing the agreement and whether customs authority's intervention is needed for dealing with multiple trade agreements. The study found that political obstacles are deeply ingrained which often led to a standstill in the negotiations. There has been an increase in bilateral agreements which can undermine the large support for the formation of SAFTA and these agreements are often signed without much negotiation for circumventing discussions. The increase in bilateral agreements thereby led to a spaghetti bowl of agreements where it raises the issue of whether they will be incorporated into the SAFTA process or will operate as an independent agreement. Problems arises when Sri Lankan exporters are eligible for tariff reductions under

SAFTA but falls within the ambit of negative lists where no concessions are available under Indo-Sri Lanka Free Trade Agreement.

Taneja (2001) studied the extent to which SAFTA can bring about a shift from informal to formal channel by evaluating the magnitude and composition of trade flows in the south Asian region. An analysis of the trade flows in the region reveals that India has a trade surplus with all the south Asian countries in the official trade account whereas on the unofficial trade account it has a surplus with Bangladesh, Pakistan and Bhutan; a deficit with Nepal and an almost balanced trade with Sri Lanka. The study also found that majority of the informal imports into India comprise of the third country goods which are largely unaffected by removal of trade barriers it might not lead to shift to formal channels due to SAFTA. Informal exports from India, on the other hand, mainly comprises of essential goods and mass consumer items, which is likely to shift to formal channels thereby worsening the existing trade imbalance that India has with the south Asian countries on the official account. Informal trade which existed due to domestic policy distortions like different tax regimes, price policy and also trade caused by traditional, cultural and ethnic links are unlikely to be affected by the imposition of SAFTA or other WTO agreements.

Weerakoon (2001) looked at the prospects and challenges of bilateral trade between India and Sri Lanka which initiates from the signing of South Asian Preferential Trade agreement (SAPTA) and the slow transition to South Asian Free Trade Area (SAFTA) initially proposed in 2001 among the SAARC member countries. Supporters of FTA has reiterated that Sri Lankan exporters will be able to have “first-mover” advantage to the large Indian consumer market but opponents are of the view that Sri Lanka will not be able to absorb the excess export demand. India having the advantages of a relatively solid industrial and agricultural base and greater

economies of scale in its trade relationship with Sri Lanka, it would find it difficult to compete even in its emerging industries. It was found that India's exports to Sri Lanka are highly diversified while imports from Sri Lanka are fairly limited. It was further found that most of export interests to India are subjected to Sri Lanka's negative list and only a small percentage of goods traded are free of import duties or under tariff reductions.

Reghunathan (2002) looks at the export structure of Sri Lanka and its implication on Kerala. The study found that Indo-Sri Lanka Free Trade Agreement will have a positive impact on the overall bilateral trade between the two countries while the biggest opposition will be from the southern states especially Kerala. Since Kerala has similar ecological features and produce similar crops with Sri Lanka it can hamper its export structures especially in cash crops such as tea, cardamom, rubber and coconut production.

Pohit *et al.* (2003) analysed the characteristics of formal and informal trading between India and Sri Lanka. The study is conducted through a survey of list of informal and formal traders in both India and Sri Lanka. While the main determinants of formal trade are costs for complying rules and regulations and for transactions, risk and mitigation costs gain importance for informal trade analysis. Number of variables such as transaction costs, time taken for transactions, education, awareness of FTA, ethnic ties, time taken for first trade deals, time taken for current trade deals, average number of transactions per year and average value per transactions are taken and Wilcoxon-Signed-Rank Test was used to test the hypothesis whether transaction costs in formal trading are significantly higher than in informal trading. The study shows that transaction costs in formal trading are higher than for informal trading and transactions are speedier in informal trading owing to quick payments, easier

procedures, lack of education, lack of resources, unawareness of FTAs, ethnic linkages etc. The study also shows that the value of trade per transaction is higher for formal trade while volume of trade per transaction is higher for informal trade.

Bandara & Yu (2003) in their study uses standard GTAP model to quantify the impact of SAFTA to examine whether it is a desirable Preferential Trade Agreement or not by performing two policy simulations using version 5 of GTAP database which has 1997 as its base. The simulations are performed in order to make a comparison for the differential impact of unilateral and preferential trade liberalisations on South Asian Countries. The first simulation considers the unilateral trade liberalisations where all the four trading partners of South Asian countries (India, Bangladesh, Sri Lanka and the rest of South Asia) remove all barriers to trade while the second simulation assumes preferential trade liberalisations only among the four trading partners in South Asia. The simulation results show that NAFTA and EU are the main trading partners of South Asia's major exporting goods and not the South Asian countries themselves. Also the biggest gainer in both the simulations in welfare terms is India. Due to its large size, India would gain the most even in case of SAFTA. Since EU and NAFTA are the main trading partners of South Asia, they would be benefitting the most from unilateral trade liberalisations while ASEAN and rest of South Asian export market are expected to lose since they are the main competitor for the market. The preferential trade liberalization leads to low efficiency gains for Sri Lanka and Bangladesh while the unilateral trade liberalization leads to higher efficiency gains especially for India. In case of industry output levels, unilateral trade liberalization leads to decline in output in most industries except wearing apparels and textiles while preferential trade liberalization does not lead to any major change in output structures. Under the SAFTA scenario, the impact will be marginal for small

countries with Bangladesh even expected to lose and the sole earner will be that of India. The study concluded with a remark where it suggested regions to put more effort in liberalizing its own trade regime due to the economic and political constraints that plaque SAARC as a whole.

Kelegama (2003) looks at the outcome of ISFTA and the various impediments to it during 1998-2002. The study found that a large portion of Sri Lanka's exports to India consist mainly of intermediate goods and needs further processing for final consumption. The main impediments found are non-tariff and para-tariff barriers in the form of sanitary and phyto-sanitary standards, licensing, custom checks, imposition of discriminatory sales tax, port development charges, customs valuation procedure and imposition of rules of origin criteria. The study suggested expansion of the scope and inclusion of more goods under the FTA while simplifying the customs procedures to be undertaken. An Economic Partnership Agreement (EPA) which includes broader areas of services and investments seems to be best way ahead.

Bhattacharya (2004) studies the impact of preferential trade on Bangladesh with India by using gravity model used by Srinivasau and Conovero. The analysis is undertaken using four hypothetical scenarios of differing tariff cuts i.e. 25%, 50%, 75% and 100 % respectively. For the study India and Bangladesh exports and imports data of 2001-2002 has been taken with the base period being 1998. Indo-Bangladesh trade has been highly lopsided towards India over the years and both countries have been trying to reduce the gap but has not been successful so far. It has been suggested that following Indo-Sri Lanka Free Trade agreement, Bangladesh should too head towards preferential trade agreements to boost trade. Patterns of trade with Bangladesh have been highly erratic with heavy concentration on some items. The gravity model used for this study has taken both countries Gross National Product

(GNP), per capita Gross National Product (PCGNP), distance, tariff rates, real effective exchange rates as the independent variable. The study found that any move towards reduction of tariffs at equal proportions would increase India's imports from Bangladesh more than its exports to Bangladesh therefore would benefit Bangladesh more than India. But this evaluation is in percentage terms and not in absolute value terms. The largest beneficiaries are found to be textiles and clothing sectors of India. Under full liberalization by Bangladesh on its imports, imports were expected to increase by 108.11% from India while 100% tariff cuts by India will cause 115.56% increase in imports from Bangladesh according to the study. The study also highlights that gains that may accrue from liberalization of non-tariff barriers are not taken into considerations. For furthering trade between India and Bangladesh, suggestions had been made for allowing free flow of FDI and possibility of joint ventures to bridge the gap of poor production base amongst the SAARC countries.

Chirathivat and Mallikamas (2005) in their article aims to study the origins and patterns of China's involvement in regional multilateral institutions, as well as its characteristics and implications for China's ASEAN policy in the post-Cold War era. To this end, the study focuses on China's participation in three ASEAN-initiated and driven multilateral institutions, namely the ASEAN Regional Forum (ARF), ASEAN-China cooperation, and the ASEAN Plus Three (APT) process. The study shows that China's perceptions and policies toward multilateral institutions have been going through significant changes, from caution and suspicion to optimism and enthusiasm. Instead of perceiving multilateral institutions as malign arrangements that might be used by other states to challenge China's national sovereignty and to limit its strategic choices, Beijing now views multilateral institutions as useful diplomatic platforms that can be utilized to advance its own foreign policy objectives. Such perceptual

changes have slowly but significantly led to a greater emphasis on multilateral diplomacy in China's ASEAN policy. It can be argued that multilateralism now plays a complementary, rather than a supplementary role to bilateralism in the conduct of Chinese foreign policy towards ASEAN in the new era.

Elango (2007) in his research gives an analysis of the intra-regional trade, intra-industry and inter-industry trade among SAARC countries to find the interdependence of one over the other. The period of study is taken between 1985-2005 which is further divided into two phase: 1985-1991 as the pre-liberalization era and 1992-2005 as the post liberalization era. Based on the estimated trade elasticity matrix, the income elasticity of Indian imports was found to be the highest for Sri Lanka followed by Pakistan.

Strutt (2008) uses GTAP model to analyse the potential impacts of a BIMSTEC-Japan Free Trade Agreement (FTA). The study suggest that if the FTA is extended to include Japan, significant gains are likely for both the BIMSTEC region as a whole and for Japan with substantial variation in the impacts on individual BIMSTEC member economies with Thailand gaining the most. Three scenarios has been taken which shows the projected impact on real GDP for each economy with implementation of the BIMSEEC FTA, the projected changes in real GDP for each economy when Japan is included in the FTA in the second scenario, and thirdly, what happen to these projected changes in real output when some sectors are categorized as 'sensitive' and not liberalized, for which no tariff concessions are required. By using simulation the study found that when the sensitive sectors are not liberalized, gains accruing to most of the economies are lower. While there may be terms of trade losses, the allocative efficiency effects are expected to be positive, as is the overall impact on India's GDP. In the longer-term, BIMSTEC countries also experience a

further increase in exports when Japan joins the FTA, however, there may be some shorter-term negative impacts on exports, particularly for Bangladesh and Thailand (Hossain, 2013). The model is solved using GEMPACK software using the RunGDYN interface.

Perara (2009) investigates the impact of SAFTA and other policy options on trade and welfare on the Sri Lankan economy using Computable General Equilibrium model where five simulations are undertaken. The first simulation is where full implementation of SAFTA is considered by reducing all the existing tariffs to 5% uniformly, second simulation considers SAFTA plus 15% uniform external tariff to all other countries, third simulation considers the Indo-Sri Lanka Free Trade Agreement both with and without negative list, fourth simulation is where Sri-Lanka Bangladesh full liberalizations is considered and the fifth simulation considers full multilateral trade liberalizations. The database is taken from GTAP and reference year of 2001 is used. The simulation result shows that multilateralism is the best trade policy option followed by SAFTA for improvement in GDP while it is followed by South Asian Customs Union for improvement in welfare. It is surprising that the proposed Sri Lanka-Bangladesh FTA did not yield significant welfare improvement to both countries. The results also show that sectoral impact is highly specific where manufacturing sector is found to benefit the most under all trade policy options especially the metal product industry. The result also indicates that formation of SAFTA does not lead to much trade diversion therefore should be implemented by Sri Lanka and that trade creation effect is higher under SAFTA than under bilateral trade. The study also highlights that the future possibility of furthering SAFTA which would be the creation of South Asian Custom Unions.

Dwarakan (2009) studies the trade relationship between India and Sri Lanka on selected 10 commodities during the period 1994-1995 to 2003-2004. Using the semi-log model the study concluded that the import of agricultural products and raw materials & intermediates, gold and silver, spices, essential oil and cosmetic preparation, and petroleum & crude products have made a significant contribution to the growth of India's import market during 1994-95 to 2003-04. Whereas for Sri Lanka's import, durables goods had the highest growth rates of 14 per cent per annum, followed by the import of petroleum and textiles during 1994-95 to 2003-04.

Pursell (2011) analyses the complex structure of Sri Lanka including para-tariffs and its implications on the economy and its partners. In 2004 Sri Lanka suddenly reversed its initial open policy by imposing para-tariffs which are known as Commodity Export Subsidy scheme (cess). The other import taxes imposed in addition to VAT are Social Responsibility levy (SRL), Port and Airport Development Levy (PAL), Special commodity Levy (SCL) etc. since its inception in 2004, there has been a declining trend in the share of trade as measured by the trade/gross domestic product ratio. It has been argued that para-tariffs are not for revenue creation but for protection of domestic industries which can have serious impediments where capital and land are largely diverted towards manufacturing inefficient import-substituting goods. The study does not find any formal objections to Sri Lanka's use of para-tariffs from none of its PTA partners.

Kabir and Salim (2011) investigates ASEAN-EU trade potential by analysing three main issues such as level of trade integration between the two blocs, untapped trade potential by comparing the actual trade to the estimated potential trade and the possibility of future trade integration between the two regions. Four countries from European Union namely Germany, France, Spain and Italy while six countries from

ASEAN members namely Singapore, Indonesia, Malaysia, Thailand, Philippines and Vietnam were been selected for the study. The untapped trade potential was estimated from the ratio of potential trade to actual trade which is the amount of trade that could be achieved by ASEAN if they achieve the same level of integration as EU. This assessment comes from comparison with a benchmark created from intra-EU trade integration obtained from a gravity model structured for the EU-members for the year 1995-2008. The empirical results of this study indicate that there exist a substantial undiscovered potential trade between ASEAN and the EU. And while the gap between potential ASEAN exports and the actual ASEAN exports towards the EU has substantially decreased over time, the decrease in the gap between potential EU exports and the actual EU exports towards ASEAN has been significantly slow.

Hosein and Khadan (2011) in their study investigated the potential benefits that can be derived from the proposed CARICOM-Canada FTA for CARICOM countries by using trade complementarity approach and a partial equilibrium model approach. They tried to identify the potential gains from FTA which were computed for a selected group of CARICOM countries with Canada for the years 1998-2008 using the standard international trade classification (SITC) 2-digit level from the UN Comtrade database. The trade complementarity index shows that three of the five CARICOM countries selected for the study have relatively low levels of trade complementarity with Canada while the other two exhibited no trade complementarity. The welfare effect is captured by the partial equilibrium model which is based on an imperfect substitution framework which shows that there will be a significant fall in tariff revenues and welfare for each of the listed CARICOM member states with the extent differing for all the members.

Jiali (2012) highlights the development and progress of SAARC in recent years which are establishment of food banks, development funds, South Asian University, telemedicine network, establishment of free trade agreements (SAFTA), consensus on climate change, counter terrorism, environmental protection, maintaining traditional values etc. It also studied the new challenges that is facing SAARC mainly due to internal tensions and mistrust among the member countries. The other reason for low trade found in the region is due to heavy burden of external debts and low foreign exchange reserves. Further bilateral disputes, scarce development funds, inadequate assistance and widespread poverty are the main impediments towards furthering cooperation.

Neogi and Chawdhury (2017) conducted a study to find whether India-BIMSTEC economic integration has helped in increasing India's trade in the region by using a panel data where base shifting index has been used to standardize GDP (at Constant US\$) of BIMSTEC countries. The study has taken GDP of 2010-11 as base and the impact of GDP, Distance, Exchange rate, Economic Recession, tariff rate on India's trade with BIMSTEC countries and Regional Integration is evaluated using Fixed Effect Model for which Hausman Specification Test is conducted to evaluate the appropriateness of using fixed effect model or random effect model for which random effect model is found to be more appropriate. The study found that economic integration through Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation has positive and significant impact on India's exports to the entire region of BIMSTEC.

Gudgin *et.al.*(2017) studied the impact of Brexit on trade and FDI by analysing the predictions made by the Treasury, OECD and IMF. These predictions include both the long term and short term forecast and also impact on migration has

been taking into account. The treasury has estimated economic impact of Brexit by taking the GDP of both countries, population of both countries, dummy variables for common language, shared colonial history, common borders and whether both countries in trade pair belongs to EU or whether only one is or membership of an FTA with the EU has been taken as independent variable. The data for the study spans from 1948-2013. The coefficient on EU membership of 0.766 indicates that trade in goods between EU members increased by 115% while no significant trade diversion is found to on average for EU members. The OECD analysis has taken into account an additional factor of potential change in regulation and restrictions in migration to estimate the trade openness using the gravity model and found that there will be a decline in trade openness as a result of Brexit by 10-20%. The data for this study covers only OECD members for the years 1990-2012 and include country fixed effect only for the member countries and not for each trade pair of countries. The gravity model analysis conducted by IMF confined itself to UK trade partners data from 2004-2014 to isolate the impact of Brexit on UK alone. The IMF study found that EU membership raises exports by 103% and services by 84%. IMF estimates that the long term effect would be negative and substantial.

Replicating the estimates made by IMF, Treasury and OECD, the authors generated their own study using a gravity models by estimating ordinary least squares equations with time and country pairwise fixed effects where the estimates of the impact of EU membership on exports are found to be variable and are lower than the estimates made by the Treasury but are always positive and significant for all EU countries. It can also be concluded that the negative impacts of Brexit can be substantially offset by using appropriate monetary and fiscal policy in the long run.

Kadam and Ravindranath (2018) analysed India's trade relationship with SAARC countries by using the Compound Growth Rate (CGR) to compare India's total Export to and Imports from three SAARC member countries namely Bangladesh, Nepal and Sri Lanka during the period 2000-01 to 2016-17. The study found that India's imports from and exports to SAARC countries has continuously increased during the period while the overall trade was surprisingly negative. The trade deficit of India has contracted significantly during the last few years. India's relationship with SAARC countries is highly significant due to its dominant position in terms of size, population, military strength, technological developments etc. The study found India's trade with the three countries under study are highly volatile due to certain reasons and in recent years India has the highest trade balance with Bangladesh followed by Nepal and Sri Lanka respectively.

Binh *et al.* (nd) in their paper uses gravity model to analyze bilateral trade activities between Vietnam and selected 60 countries in the period from 2000 to 2010. The gravity model is estimated in logarithm form where population (to measure market size), exchange rate, culture and strategic partner (dummy variables), GDP as a measure for economic size and geographical distance (measure of transportation cost) are used as independent variable to measure trade flows. A pooled model and random effect model is used for estimation where a Breuch-Pagan test is then applied to select the most appropriate for interpretation of results. The test shows random effect model to be more reliable therefore had been used for interpretation of results. The estimation results indicates that economic size, foreign market size, geographical distance and national culture affects the bilateral trade flows between Vietnam with other countries. Vietnam's market size and strategic partner variables are found to be insignificant and has no impact on bilateral trade. Growth in economic size especially

the partner economic size (GDP) has a significant positive impact on the bilateral trade. While foreign market size and cultural similarity has a positive impact, geographical distance has a negative impact on the trade value. Exchange rate is also found to have a positive impact but its effect on trade is insignificant. Further, trade potential is measured by estimating speed of convergence where potential trade is measured with the actual trade to consider whether the bilateral trade between the two countries is overused or underused. Estimation shows that 31 countries out of 60 under study has a convergence in trade which means that Vietnam has high potential for developing bilateral trade with these 31 countries. The study also highlights the overtrade situation between Vietnam and some countries such as United States, Ireland and Switzerland.

Concluding Notes

The area coverage of different studies on trade relationship between India and SAARC countries, and Sri Lanka in particular, may be summarized as follows. *First*, study by Bhattacharjea (1985), Pursell (2011) and Meyer (1996) trace the course of liberalization in broad spectrum, the complex structures of tariffs in Sri Lanka and the comparative history of India and Sri Lanka respectively. *Second*, analysis on the institutional development of SAARC, trade amongst countries, and challenges faced by SAARC are found in the studies of Elango (2007), Kadam and Ravindranath (2018), Jiali (2012) and Hariharan (1998).

Third, bilateral trade between India and Sri Lanka which are mostly confined to policy implications analysis nature outlining the development of trade between India and Sri Lanka, examining the impact of various trade agreements, the challenges

and the opportunities which lies ahead for deepening trade relations, Weerakoon (2001), Kelegama (2003), Harilal & Joseph (1999), Sarvananthan (2000), Reghunathan (2002), while commodity trade specific study was found in the study of Dwarakan (2009). *Fourth*, there are also studies related to formal and informal trading between India and Sri Lanka and SAARC region Pohit *et al.* (2003), Taneja (2001). *Fifth*, Weerakoon (2001) studies the origin of SAFTA and analyses the future sustainability of the agreement, while Perara (2009) and Bandara & Yu (2003) looks at the impact of SAFTA empirically using GTAP model.

Lastly, the main tools for analysing the impact of several trade policies and agreement at bilateral and regional blocs are compound growth gate, semi-log model, gravity model, GTAP analysis. The data for the study are mainly generated from United Nations (UN) trade database, Direction of Trade Statistics, International Monetary Fund (IMF), World Bank (WB), Asian Development Bank (ADB), Reserve Bank of India (RBI), Annual Government Reports and Economic surveys, United Nation Comtrade Database and World Integrated Trade Solutions (WITS).

In fact, there are large number of studies on policy implications and descriptive literature on trade relations between India and Sri Lanka. At the same time, estimation of trade intensity, product concentration, revealed comparative index and identifies areas of trade deficiency and trade potential are hardly found in the existing literature.

Chapter 3

TRADE AGREEMENTS WITHIN SAARC AND THEIR IMPLICATIONS ON INDIA'S TRADE WITH MEMBER COUNTRIES

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3.1. Formation of SAPTA

Till the sixth SAARC summit, there has not been any comprehensive agreement on trade within SAARC. The first step towards liberalization of trade among the SAARC countries was initiated by Sri Lanka at the sixth summit of SAARC in Colombia in December, 1991. But it was only in the seventh SAARC summit held in 1993 at Dhaka that SAPTA was finalized. The agreement on SAARC Preferential Trading Agreement (SAPTA) was signed on 11th April 1993 which came into force in December, 1995. The signing of SAPTA was seen as a stepping stone towards greater trade liberalization and further economic cooperation's among the SAARC countries and the first step towards transition to SAFTA which is a free trade agreement. The first round of trade negotiations to exchange trade concessions among member states and necessary steps to be taken for ratifications by all members under SAPTA was completed in the Eighth SAARC summit, 1995 (Elango, 2007).

For negotiations on Schedule of Concessions, an Inter Governmental Group on Trade Liberalization (IGG) was setup. IGG on its sixth meeting in Kathmandu, 1995 agreed that under SAPTA, national Schedule of concessions to be granted by Individual members to other members according to its own pace and can select the items they offered to liberalize (Akram, 2014). Four rounds of negotiations were held under SAPTA where each round of negotiations leads to increased in product coverage and reduction in tariff concessions.

Under SAPTA, the member countries were free to liberalize trade at their own pace by extending concessions on tariffs, non-tariff and para-tariffs measures in successive stage. A Committee of Participants (COP) which consists of representatives of all the contracting states was formed to act as the monitoring body of SAPTA and also acted as the dispute resolution body of SAPTA. COP reviews all the progress made by SAPTA, ensures proper allocation of gains from trade to all the contracting states and also redress and dispute that can arise among the member countries (Raihan, 2008).

SAPTA agreement gives special treatment to members among the least Developed Countries (LDCs) which includes Nepal, Bhutan, Bangladesh, Afghanistan and Maldives by the Non-LDCs consisting of India, Pakistan and Sri Lanka in the form of setting up industrial and agricultural projects in the areas of LDCs which could serve as the production base for exports to other states. India offered the largest number of concessions followed by Bangladesh and Pakistan with majority of the concessions being offered to the LDC states (Raihan, 2008).

Despite the large number of concessions provided under SAPTA, there are inherent problems in using preferential trade agreements as a tool for increasing trade volume. The number of concessions offered by the member states to each other can seem very generous but what is more important is the relevancy of the concessions offered. For Eg: India has offered concessions on nearly 2900 products out of which non-LDC are eligible for 484 products. And out of the 484 products, only 30 items are actually being exported from Sri Lanka to India which clearly illustrates the irrelevancy of majority of the goods on which concessions are offered under SAPTA and also the concessions are both limited in depth of tariff cuts and coverage of traded

items to have significant impact on the volume of trade among the South Asian economies (Weerakoon, 2001).

3.2. Transition from SAPTA to SAFTA

Four rounds of trade negotiations were held under SAPTA and the last round focused on further liberalization of trade by formation of a South Asian Free Trade Agreement. It was during the Ninth SAARC summit held in Male (1997) that the head of states recognized the importance of achieving free trade by 2001. It was then reiterated in the 10th SAARC summit at Colombo (1998) where it was decided to constitute a Committee of Experts (CoE) to draft the framework treaty. At the 12th SAARC summit held at Kathmandu (2002), the Leaders agreed to accelerate cooperation for realizing the goal of an integrated South Asia and directed the Council of Ministers to finalize the Draft Treaty by 2002. The agreement on South Asian Free Trade Area or SAFTA was reached under “The Islamabad Declaration” on 6th January, 2004 at the 12th SAARC Summit and SAFTA agreement came into force on 1st January, 2006 (Elango, 2007).

There are certain reasons for the transition from SAPTA to SAFTA such as the inclusion of only goods for tariff concessions which was even limited to few products under SAPTA. The tariff cuts under SAPTA were low and despite the reduction, tariffs among SAARC countries still remain among the highest relative to the rest of the world. Also preferential trade agreement only cause reduction in the tariff but does not abolish them. SAPTA was also unable to handle trade related disputes stringently as more powerful members are often unwilling to accept the legal mechanisms for dispute settlement. There was also lack of many measures such as

harmonization of custom clearance, import licensing and banking procedures and the stringent rules of origin acts as a blockade to efficient transaction of trade(Akram, 2014).

There was a lot of irrelevancy in the products of items offered for concessions which were not the trade interest of the other member states due to which the intra-regional trade among the South Asian countries did not register any noticeable growth despite the tariff concessions. Therefore, it was felt that a tariff concessions alone could not generate any significant gains in intra-regional trade and hence SAFTA was formed. The main objectives of SAFTA were elimination of trade barriers, promotion of fair conditions for competition among the member states, creation of effective and stringent dispute settlement mechanism (Taneja, 2001).

SAFTA is more stringent towards anti-dumping and safeguard provisions than SAPTA. It also deals with a broader range of trade related issues including customs clearance procedures, certification and harmonization of standards, product classification, transit and transport facility and foreign exchange liberalization. Hence, it can be said that SAFTA offers a better prospect for greater trade liberalization and cooperation between the SAARC member countries than SAPTA. (Akram, 2014)

3.3. South Asian Free Trade Agreement (SAFTA)

SAFTA came into effect on 1st January, 2006 and it encompasses greater economic integration and trade liberalization in comparison to SAPTA by specifying time-bound tariff reductions for each member countries. The main objective of SAFTA was to create a free trade area to increase the level of economic cooperation

and trade among the seven nation of SAARC countries comprises originally of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka, and Afghanistan was added to it at the behest of India and became a member on 3rd April 2007.

There has been number of attempts to prune the list of sensitive lists where countries are allowed to maintain higher tariffs for their products under the list. Reduction of sensitive list as well as non-tariff barriers to trade under SAFTA and harmonization of standards and custom procedures were reiterated in the 17th summit. There are instances where changes in the operational sensitive lists do not get reflected in the notified sensitive lists. Eg: duty free grant of access to ready-made garments up to a limit of 8 million pieces which do not get reflected in the notified lists since the concessions is in the form of tariff quota, hence needed to be reconstructed. But countries are allowed to maintain higher tariffs for their sensitive lists of commodities and are also allowed to pull out from the agreements at any time if chooses to do so. (Chowdhury, 2011).

3.3.1. Instruments

As per the agreement, SAFTA would be implemented through various instruments such as :

- 1) Trade liberalization program using time-staggered tariff reductions for each member countries,
- 2) Rules of Origin,
- 3) Sensitive List,
- 4) Non-Tariff and Para-Tariff barriers,
- 5) Institutional Arrangement and Consultation/ Dispute Settlement procedure

1) Trade Liberalization Program (Article 7 of the SAARC Charter)

Non-LDC countries in SAARC are India, Pakistan and Sri Lanka while LDCs are Afghanistan, Bhutan, Bangladesh, Nepal and Maldives. Afghanistan became Eighth Member of SAARC from April, 2007 and tariff concessions to Afghanistan have been extended under SAFTA with effect from 7th August 2011. SAFTA agreement gives special and different treatment to members among the least Developed Countries(LDCs) from the Non-LDCs in terms of extent of reduction in tariff lines and longer periods of time for the reduction. The contracting States agreed Schedule of tariff reductions given in Table 3.1:

Table 3.1: Schedule of Tariff Reductions under SAFTA

Countries	Reduction of tariff to	Time limit	Reduction of tariff to	Time limit
Non-LDC Countries	20%	2006 - 2007	0-5%	2008-2012
LDC countries	30%	2006 - 2007	0-5%	2008-2015

Source: SAFTA Agreement

The reduction of tariff lines are proposed to be achieved in two phases as follows:

Non-LDCS:

First phase (2006-2007)

- The tariff reductions for the existing tariffs higher than 20% to be reduced to 20% within two years. The contracting states are encouraged to adopt reductions in equal annual instalments
- The tariff reductions for the existing tariffs lower than 20% to be reduced by 10% annually for two years.

Second phase (2008-2012)

- The subsequent tariff reduction from 20% or below to 0-5% to be done within a time frame of 5 years i.e 2008-2012. However, the subsequent tariff reduction timeframe for Sri Lanka will be for six years i.e. 2008-2013.
- The contracting states are encouraged to adopt reductions in equal annual installments with a margin of not less than 15% annually.

LDCs:

First phase (2006-2007)

- The tariff reductions for the existing tariffs higher than 30% to be reduced to 30% within two years. The contracting states are encouraged to adopt reductions in equal annual installments
- The tariff reductions for the existing tariffs lower than 30% to be reduced by 5% annually for two years.

Second phase (2008-2015)

- The subsequent tariff reduction from 30% or below to 0-5% to be done within a time frame of 8 years i.e. 2008-2015.
- The contracting states are encouraged to adopt reductions in equal annual instalments with a margin of not less than 10% annually.

The above schedules of tariff reductions will not prevent Contracting States if it wishes to immediately reduce their tariff to 0-5% or from accelerating their schedule of tariff reductions.

2) Sensitive lists:

Sensitive lists also known as negative lists is a list of items where tariff concessions are not offered by the country. It includes the list of products which are not covered by SAFTA to protect the domestic countries from foreign competition for various reasons. The number of products in the list shall be subject to a maximum ceiling which is to be mutually agreed among the Contracting states for the Non-LDCs while LDCs have flexibility. The member states especially the Non-LDCs are required to have two lists with more relaxation given to the LDCs. The sensitive lists has been revised by each countries and has slowly reduced with time with drastic reduction for some countries.

Table 3.2: Number items under Sensitive List under SAFTA

Member Countries	Number of products in the original Negative lists in 2006 for NLDC	Number of products in the Negative items for LDC in 2006	Number of products in the Negative items for NLDC Phase II- 2012	Number of products in the Negative items for LDC (Phase II) 2012	% of tariff lines under sensitive lists for NLDC in 2012	% of tariff lines under sensitive lists for LDC in 2012
India	868	480	614	25	12.28	0.5
Bangladesh	1241	1233	993	987	19.86	19.74
Pakistan	1169	1169	936	936	18.72	18.72
Sri Lanka	1079	1079	963	837	19.26	16.74
Nepal	1295	1257	1036	998	20.72	19.96
Bhutan	157	157	156	156	3.12	3.12
Maldives	671	671	154	154	3.04	3.04
Afghanistan	1072	1072	858	858	17	17

Source: SAARC Database (accessed on 19.10.19) & Selim Raihan (2008)

As shown in Table 3.2, India, Bangladesh and Nepal have two separate negative list for LDC and Non-LDC with Nepal and Bangladesh having the largest number of items in the negative lists. India has the highest reduction rate for the items in the negative lists for LDCs which reduces from 480 items to just 25 item between 2006 to 2012. Bhutan has the lowest number of items in negative list and 2012 list has

only reduction of one item from 2006 list. The negative lists of Maldives reduce drastically from 671 items in 2006 to 154 in 2012. If one analyse in percentage terms, Nepal accounts for 20.72% of tariff lines under sensitive lists while Maldives only accounts for 3.04% for NLDC in 2012. Even for LDC, Nepal accounts for the highest percentage of tariff lines under sensitive list with 19.96% while India has the lowest item with merely 0.5% tariff lines under sensitive lists for LDC in 2012.

3) Non-tariff Barriers (NTBs)

SAFTA has divided NTBs broadly into infrastructural, procedural, Standardization and Para-tariff barriers. According to Article 7.5 of the SAARC Charter, the contracting parties are required to eliminate all quantitative restrictions in respect of the products included in the trade liberalization program which are not compatible under GATT 1994. Article 7.4 also states that the contracting states are required to notify all the existing non-tariff and para-tariff annually to the SAARC Secretariat which will then be reviewed by the Committee of Experts in their regular meetings to check their compatibility with the WTO provisions and to make recommendations for their elimination to facilitate intra-SAARC trade and make it least restrictive.

4) Institutional Arrangements

Article 10 of the Charter provided for the establishment of SAFTA Ministerial Council (SMC) to be the highest decision-making body of SAFTA. It consists of the Ministers of Commerce/Trade which shall be responsible for the administration and implementation of the Agreement. SMC will be supported by a Committee of Experts (COE) which will also act as the dispute settlement body under the Agreement. The dispute settlement under SAFTA is similar to that of SAPTA with a Committee of

experts (COE) and SAFTA Ministerial Council (SMC) to deal with various trade disputes(Akram, 2014).

5) Rules of Origin

It is also called the rules of determination of Origin of Goods under SAFTA. Under this rule, a product is deemed to be the produce of the contracting states if it is wholly or partially produced in the territory of the contracting states and will be eligible for tariff concessions. A product considered to be wholly produced includes raw or mineral products extracted from its soil or the ocean bed, agriculture, vegetables and forestry grown in the soil, products from animals raised and born in the territory, products procured from hunting, fishing etc. within the territory. Not wholly produced goods include operation undertaken during transport and shipment such as removal of dust, sorting, classifying, painting, repackaging, assembling etc.

According to this rule, even if the product is not wholly produced in the contracting states, it will be eligible for tariff concessions under SAFTA if products has at least 40% domestic value addition. Also, there is special and differential treatment provided for the products of LDCs i.e. only 30% value addition is required for LDCs to qualify for tariff reductions and for products originating in Sri Lanka, 35% value addition is required to be admissible for tariff reductions (SAARC Charter)

3.4. Problems and Failure of SAFTA

The disintegration of SAARC started with the breach of the policy of non-interference as clearly mentioned in Article 2 of the Charter which states, “Cooperation within the framework of the Association shall be based on...non-

interference in the internal affairs of the other States and mutual benefit” and the biggest breach of this clause was the Kargil war (1999). The lack of efficient dispute settlement mechanism aggravated the problem which led to postponements of talks and several issues hindering the growth of SAARC as a whole. It has also been observed that most of the decisions taken in SAARC depend more on geopolitical equation rather than cooperation on certain issues.

The slow progress of SAARC is due to internal constraints, continuing terrorism, heavy burden of debts among the South Asian countries and strained bilateral disputes among the member countries pertaining to ethnicity, religion, water disputes and cross-border issues. Another stumbling block is the political tension between India and Pakistan (Jiali, 2012).

Despite the large number of tariff concessions offered, there is a high irrelevancy in the products offered for the majority of the goods having significant trade values are under the negative lists. The support for SAFTA can also raise the issue of how the bilateral agreements can adversely affect the SAFTA negotiations since there could be a clash in the tariff concessions offered under the two agreements.(Weerakoon, 2001). According to some studies, the main reasons why SAFTA is ineffective in boosting regional trade are that it is a commodity-by-commodity approach and has not ensured adequate trade coverage. The tariff concessions are too limited and does not ensure adequate coverage to have a significant effect on trade volume. Bilateral agreements seems to be more fruitful and evidence suggest that informal trade is rampant since the costs of transaction through informal channel is easier and cheaper than the formal ones (Taneja, 2001).

Many of the factors hampering trade lies outside the domain of SAFTA such as domestic policy distortions, including tax regimes, subsidies, the administered price mechanism which causes price to differ across borders and an inadequate transit and transport systems is another distinctive feature of the south Asian countries hindering trade which cannot be corrected simply by implementing SAFTA. Apart from the tariff concessions, there is a high presence of non-tariff barriers, mostly in the form of quantitative restrictions. India had 72% of a NTB coverage on primary goods and 59% of NTB coverage in manufactured goods. The stringent rules of origin also leads to higher flow of trades towards informal channels (Taneja, 2001)

3.5. Trends of India's Bilateral Trade with SAARC Countries

As noted above, the trade agreements do not seem to have a significant impact on trade amongst the SAARC countries. So, it may be worthwhile to analyse the trends of bilateral trade between India and the seven SAARC countries individually including Afghanistan which joined later in the year 2007. They are presented in Figure 3.1 to Figure 3.7. The trends of bilateral trade between India and SAARC countries show incredible insight into the dynamics of trade in South Asia. Figure 3.1 shows India's bilateral trade with Afghanistan which indicates that exports picked up from 2003 while imports also increase at the same time but to a lesser extent. Trade balance declined from 2012 till 2017 but stayed positive almost throughout the study period i.e from 1960-2018.

Figure 3.1: Trends of bilateral trade between India and Afghanistan

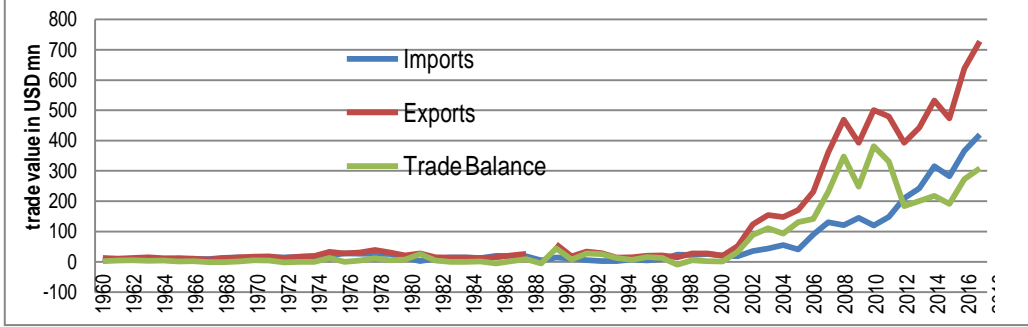


Figure 3.2: Trends of bilateral trade between India and Bhutan

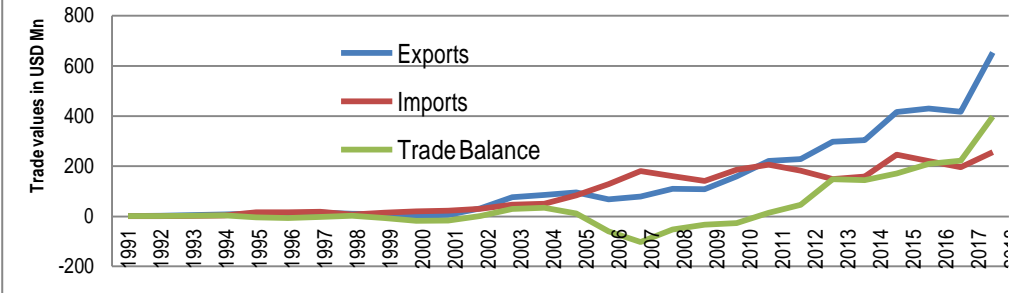


Figure 3.3: Trends of India's Bilateral Trade with Sri Lanka

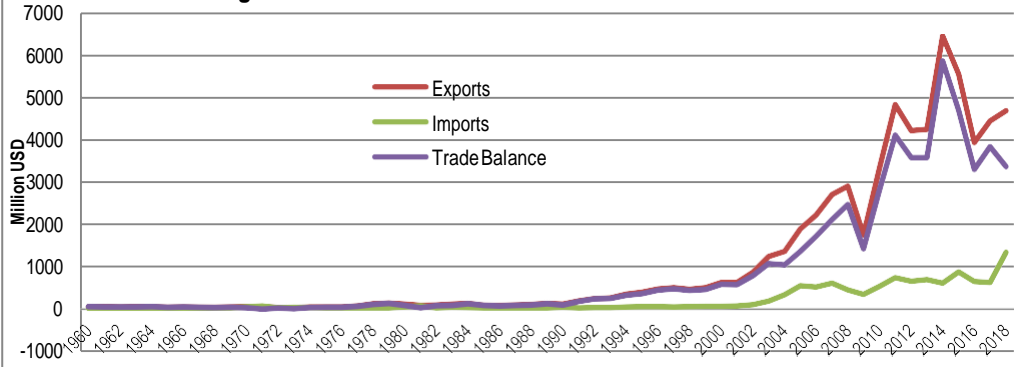
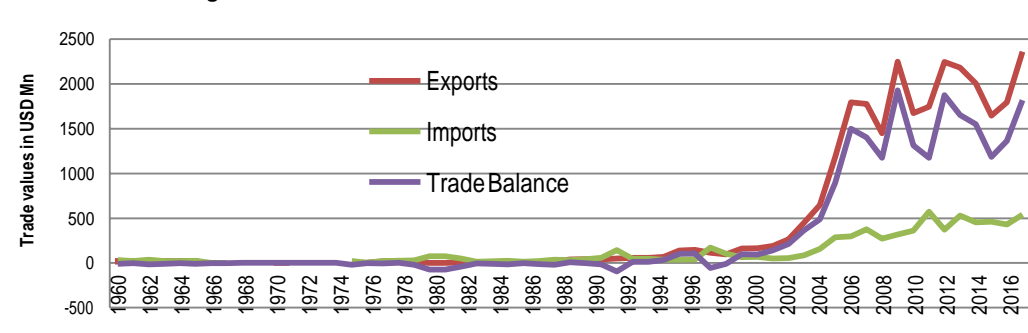


Figure 3.4: Trends of Bilateral Trade between India and Pakistan



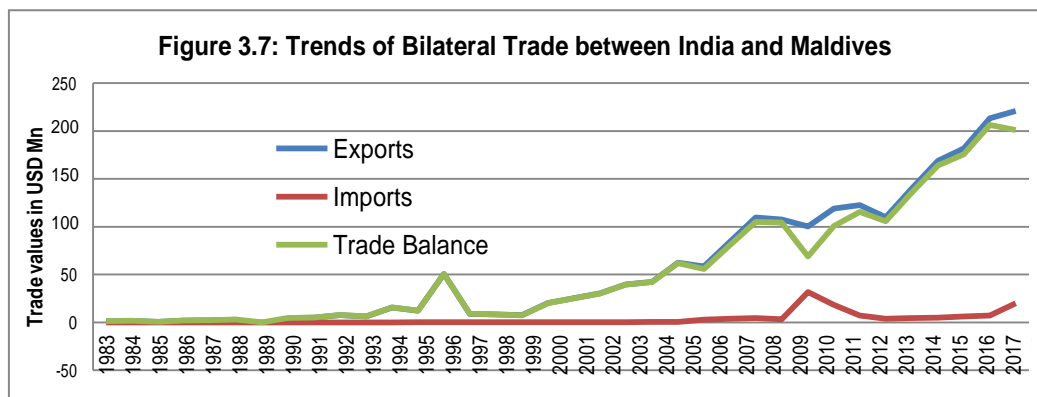
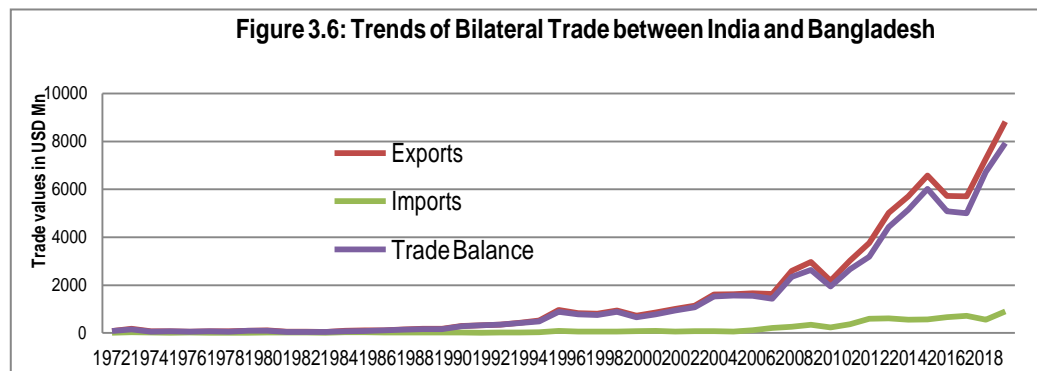
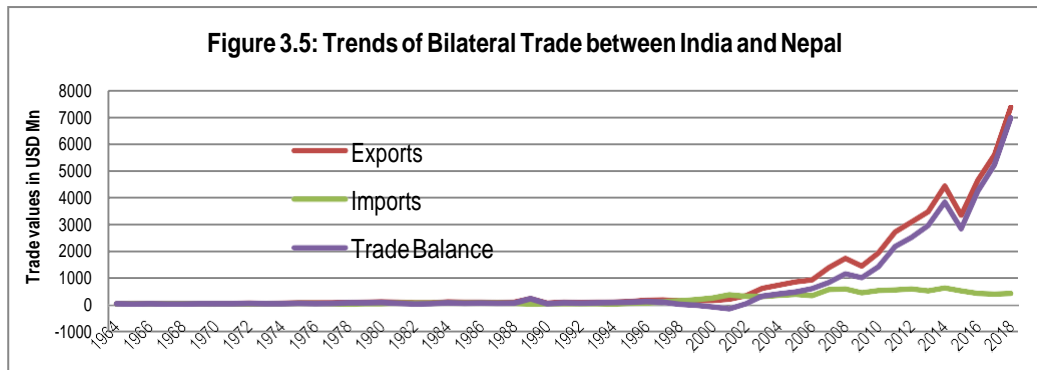


Figure 3.2 shows the trends of India's bilateral trade between India and Bhutan which shows imports to be increasing significantly around 2005-2011 causing trade balance to be negative while exports started out racing imports from 2011 turning the trade balance to be positive. The bilateral trade between India and Sri Lanka is shown in figure 3.3 where trade balance is shown to improve greatly since 2003 mainly since exports and imports both picked up from 2003 and 2004 respectively.

Figure 3.4 shows a lot of fluctuations in the trends of bilateral relationship between India and Pakistan. Data are found to be missing for the years 1967-1974 for imports and 1966-1969 and 1972-1975 for exports supposedly due to the war and bilateral disputes between the two countries at this time. Imports do not show significant improvement throughout the study period while exports shows increase from 2005-06 onwards. India's trade with Nepal is shown in figure 3.5 which shows that trade picked up from 2000 onwards mainly due to the increase in exports while imports does not show significant jump in numbers. Trade balance remains positive throughout.

Bilateral trade with Bangladesh shows significant improvement from 1995 onwards owing to the jump in exports while imports shows improvement only from 2005 onwards. Trade balance is shown to be positive throughout according to figure 3.6. Figure 3.7 shows trends of bilateral trade between India and Maldives which shows a continuous and steady increase prominently from 2000 onwards. Imports show a significant jump in 2010 which causes a dip in the trade balance but remains positive throughout the study.

After analyzing the trends of the bilateral trade between India and the SAARC countries, we try to estimate the compound annual growth rate of trade to study the growth rate of exports and imports between India and the SAARC countries that would be required for trade to grow from the starting year to the end year under observations. Table 3.4 shows the compound annual growth rate (CAGR) of bilateral trade between India and individual SAARC countries.

Table 3.3: Compound Annual Growth Rate of India's bilateral trade with SAARC countries in percentage

Countries	Exports	Imports	Trade Balance	Period
Afghanistan	6.95	5.37	9.80	1960-2018
Bhutan	23.89	21.60	23.95	1991-2018
Bangladesh	12.49	12.94	12.60	1972-2018
Maldives	14.85	25.86	14.47	1983-2018
Nepal	10.23	8.25	11.48	1964-2018
Sri Lanka	11.18	11.87	11.37	1960-2018
Pakistan	18.13	8.82	22.05	1976-2018

Source: Computed

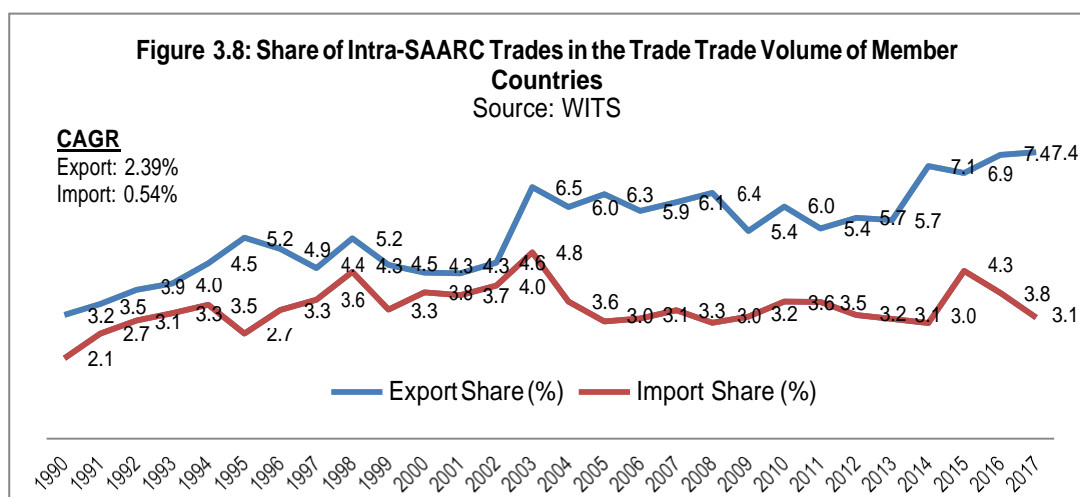
It is observed from Table 3.3 that Bhutan shows the highest rate with 23.89% for exports and 21.60% for imports. The reason could be that the data extends for lesser periods in comparison to the other countries data i.e 1991-2018. Pakistan shows grave difference in the rates for exports and imports with 18.13% and 8.82% respectively with export growth far outweighing import growth rate. The same could be of Maldives which shows weighty difference between the import growth rate of 25.86% and export growth rate of 14.85%, but in this case import growth rate far outweighs export growth rate. Bangladesh shows almost even compound growth rate for exports and imports which is 12.49% and 12.94% respectively. Nepal and Afghanistan shows the lowest growth rate with export growth rate of 10.23% and 8.25% while import growth rate is even lower with only 8.25% and 5.37% for the two countries respectively.

The above analysis of the trends of bilateral trade between India and SAARC countries and the compound growth rate of trade for the member countries shows that there has been an improvement in trade since 1995 i.e implementation of SAPTA agreement and further significant improvement has been indicated since 2005 i.e the implementation of SAFTA both for exports and imports even though the extent of

growth differs from country to country. Hence, we can conclude that there has been significant improvement in trade since the liberalization and the implementation of the trade agreements.

3.6. Share of Intra-SAARC Trades

In order to observe whether the improvements of bilateral trade amongst the SAARC countries translates to overall improvement in intra-SAARC trade or not is analysed by computing the export and import shares of SAARC countries with member countries of SAARC which is shown in Figure 3.8.



Therefore, if one analyse the intra-SAARC trade which is the percentage of exports and imports of SAARC with SAARC member countries from 1990-2017 where SAARC trade with the world is shown to be 100% , the share of export and import trade among the SAARC member is meager as compared to other intra-regional trade agreements. The export share of SAARC to SAARC countries is only 3.21% in 1990 which increases to 4.91% after the implementation of SAPTA and a minute rise to 5.90% after the implementation of SAFTA. At the same time, the

import share of SAARC to SAARC countries is only 2.08% in 1990 which rises slightly to 3.33% after the implementation of SAPTA and even experience a fall to 3.11% after the implementation of SAFTA. The export of SAARC to SAARC member countries increases from 3.21% in 1990 to 7.42% in 2017 and the overall imports of SAARC from SAARC member countries as a percentage with the total imports of SAARC from the rest of the world increases from 2.08% in 1990 to only 3.13% in 2017.

Therefore, we can conclude that the increase in bilateral trade among the SAARC countries even though significant is does not translate to the increase in the intra-SAARC trade nor is consequential to the increase in intra-SAARC trade. The increase in the trade among the member countries can be a result of bilateral free trade agreements, infrastructure development and economic growth and other trade negotiations among the member countries bilaterally and not owing to regional trade agreements under SAARC.

3.7. Empirical Analysis of the Trends India's Bilateral Trade

Though the study trend diagrams of India's bilateral trade with SAARC nations have given us general idea on the general direction and patterns of India's, it is an academic interest to do further empirical exercise to chalk out a more factual and concrete information using the same trade data set. It is decided to examine these time series data using unit root test and structural break tests. The details of the model are already elaborated in Chapter 1.

3.7.1. Unit Root Test

Unit root testing is critical for a time series data because if the means and variances are non-stationary, the computed t-statistic under the OLS regression fail to converge to their true values rendering the hypothesis testing redundant and the conventional confidence interval invalid since it might lead to acceptance of wrong hypothesis (Bhaumik, 2015). In this study, we try to examine the unit root properties of bilateral trade between India and the rest of the SAARC nations. We first develop the conventional unit root tests that do not account for any break in the series and then compare it with the unit root test that incorporates the structural break in the data. For determining the unit root test with structural break, a Zivot and Andrews test (1992) is used to test the null of unit root against the break-stationary alternative hypothesis.

We begin with the conventional testing of a unit root without accounting for the structural break by using the Augmented Dicky-Fuller (1979) test. The Dickey Fuller test is used for testing of non-stationarity of the variables while ADF is simply an augmented form of a Dickey Fuller test by including k lags of the dependent variable to correct any serial correlation in the disturbance term. Eviews software is used for computation of the variables and maximum lag length(k) is determined using the Schwarz Info Criterion. We examine the unit root properties for bilateral trade relation between India and the seven SAARC countries using annual data of exports and imports in US thousand dollars. All variables are extracted from IMF's Direction of Trade Statistics (DOTS) and the sample period for each variable differs from one country to another depending on data availability.

Unit Root test results without structural break using ADF are reported in Table 3.4. It is found that all test fails to reject the presence of unit root in each time series at

5% level of significance implying that all the variables of exports and imports are non-stationary at levels. Majority of the variables including exports of India to Afghanistan, Nepal and Bangladesh and India's Imports from Bhutan and Sri Lanka are significant at second difference at 99% level of confidence while India's imports from Bhutan, Nepal and Pakistan and exports to Pakistan are stationary at first difference order at 1% level of significance

Table 3.4 Results of Unit Root Test for Bilateral trade with India using ADF

Country	Order	Variables	k	Intercept	k	Intercept and Trend	k	None
Afghanistan	2	Exports	1	-12.04**	1	-12.00**	1	-12.09**
	2	Imports	9	-1.45	8	-5.26**	9	-1.00
Bhutan	2	Exports	5	-3.37***	6	-4.06***	1	-8.05**
	1	imports	1	-6.5**	1	-6.60**	2	-2.19***
Sri Lanka	2	Exports	10	-1.54	9	-3.15	10	-1.28
	2	Imports	9	-3.89**	9	-3.83***	9	-3.88**
Pakistan	1	Exports	0	-6.61**	0	-6.78**	0	-6.32**
	1	Imports	0	-10.02**	0	-10.18**	0	-9.66**
Maldives	1	Exports	0	-6.34**	0	-7.39**	0	-5.28**
	1	Imports	0	-6.47**	0	-6.42**	0	-6.51**
Nepal	2	Exports	4	-9.41**	4	-11.26**	6	-2.12***
	1	Imports	0	-8.02**	0	-7.96**	0	-7.93**
Bangladesh	2	Exports	5	-7.24**	5	-7.66**	6	-2.94**
	2	Imports	9	-2.51	9	-2.59	7	-1.64

*** & ** denote significance 1% & 5% levels respectively

Perron (1989) affirms that non-rejection of the unit root hypothesis in the conventional unit root tests- such as the ADF, DF-GLS - tests rested on failure to account for the possibility of a structural change in the economic variables in the series. Therefore, to account for the structural break Perron (1989) uses a single arbitrarily exogenously determined break and then test for the presence of unit root in the variable by adding a dummy variables which represents different intercepts and slopes. However, assumption of a priori break has been criticized by many and argued that an exogenously determined break date could lead to an over rejection of the unit root hypothesis. Hence, studies following Perron (1989) have developed alternate

methodologies for determining break dates endogenously and allows for testing of unit root by incorporating the determined break date in the model.

Studies which determine break dates endogenously are Zivot and Andrews (1992) further extended by Perron (1997) which uses it for trending data while, Vogelsand and Perron(1998) applied it for non-trending data. Lumdaine and Papell (1997), Lee and Strazicich (2003) developed tests that captures two structural changes, while Bai and Perron(2003) extended the work on estimation for multiple endogeneously determined structural breaks to reduce the bias in the conventional unit root test (Ndirangul, Garcia and Gitau, 2014).

3.7.2. Unit root Test with Structural break

A structural break can occur in a macroeconomic time series for a number of reasons, including policy change, economic crisis or war, change in government regime, inclusion in international agreements etc. Analysis of the presence of structural break is of grave importance since the presence of structural break in a series if goes undetected can lead to wrongly rejecting a non-stationary series while specifying the unit root test. Such flawed results can lead to inaccuracy in forecasting (Shepherd, 2012). This study uses single endogenously determined structural break test as developed by Zivot and Andrews (1992) for analyzing the annual data of the bilateral trade between India and the SAARC countries. Zivot and Andrews (1992) proposed a unit root test that determines the break date endogenously by using different dummy variable for each possible break date namely, SAPTA and SAFTA respectively. The break date is then selected by measuring the minimum dispersion of the t-statistic from the ADF test of unit root. The test usually find less evidence than

Perron (1989) against conventional unit root hypothesis since the critical values are different for both the tests due to the difference in determination of the structural break points.

The structural break dates endogenously determined using Zivot-Andrews (ZA) for the exports and imports of India from SAARC countries are shown in Figure 3.9.

Figure 3.9: Structural Break Points for India's Trade (Export & Import) with SAARC Countries using Zivot-Andrews Model

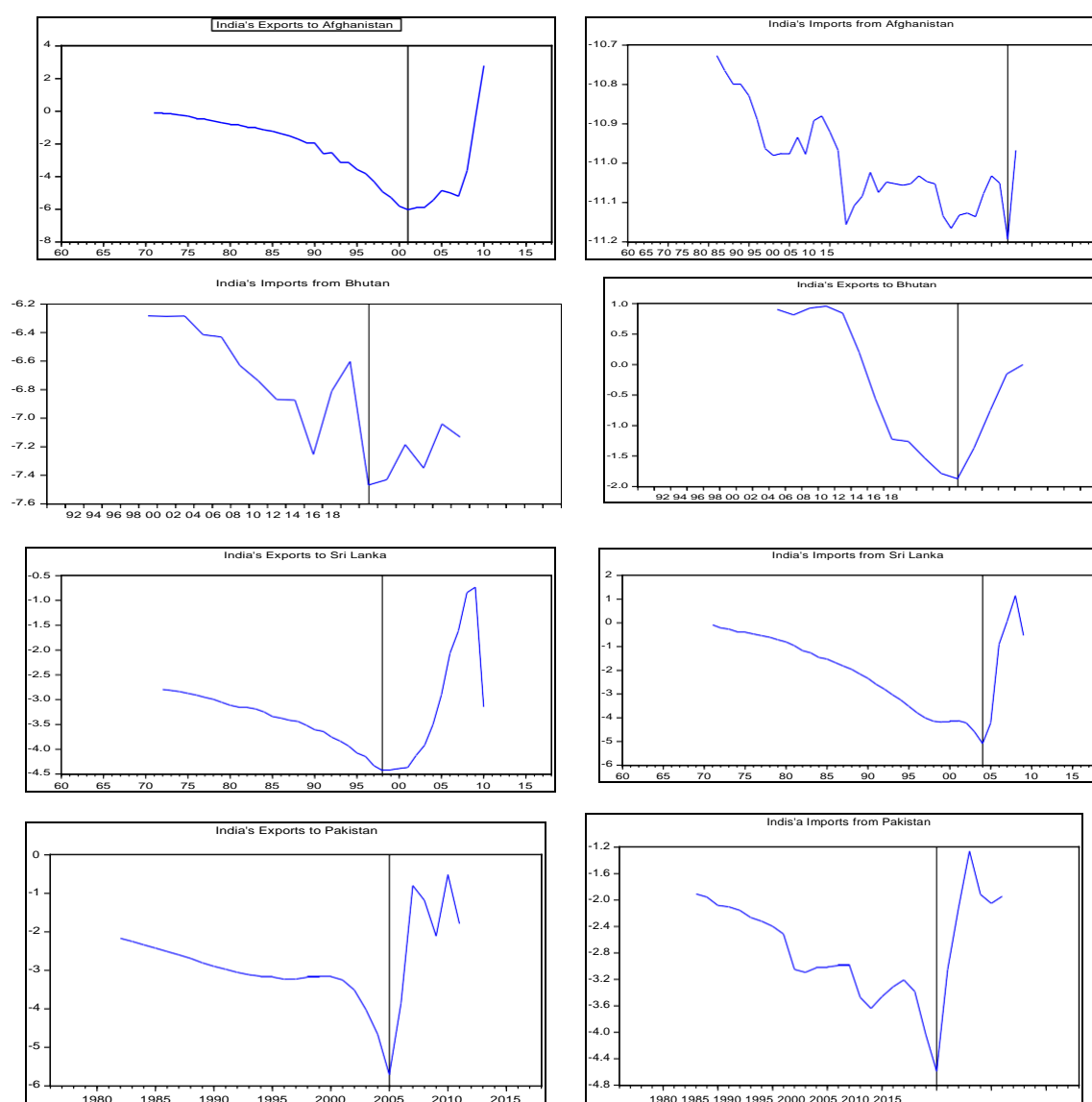
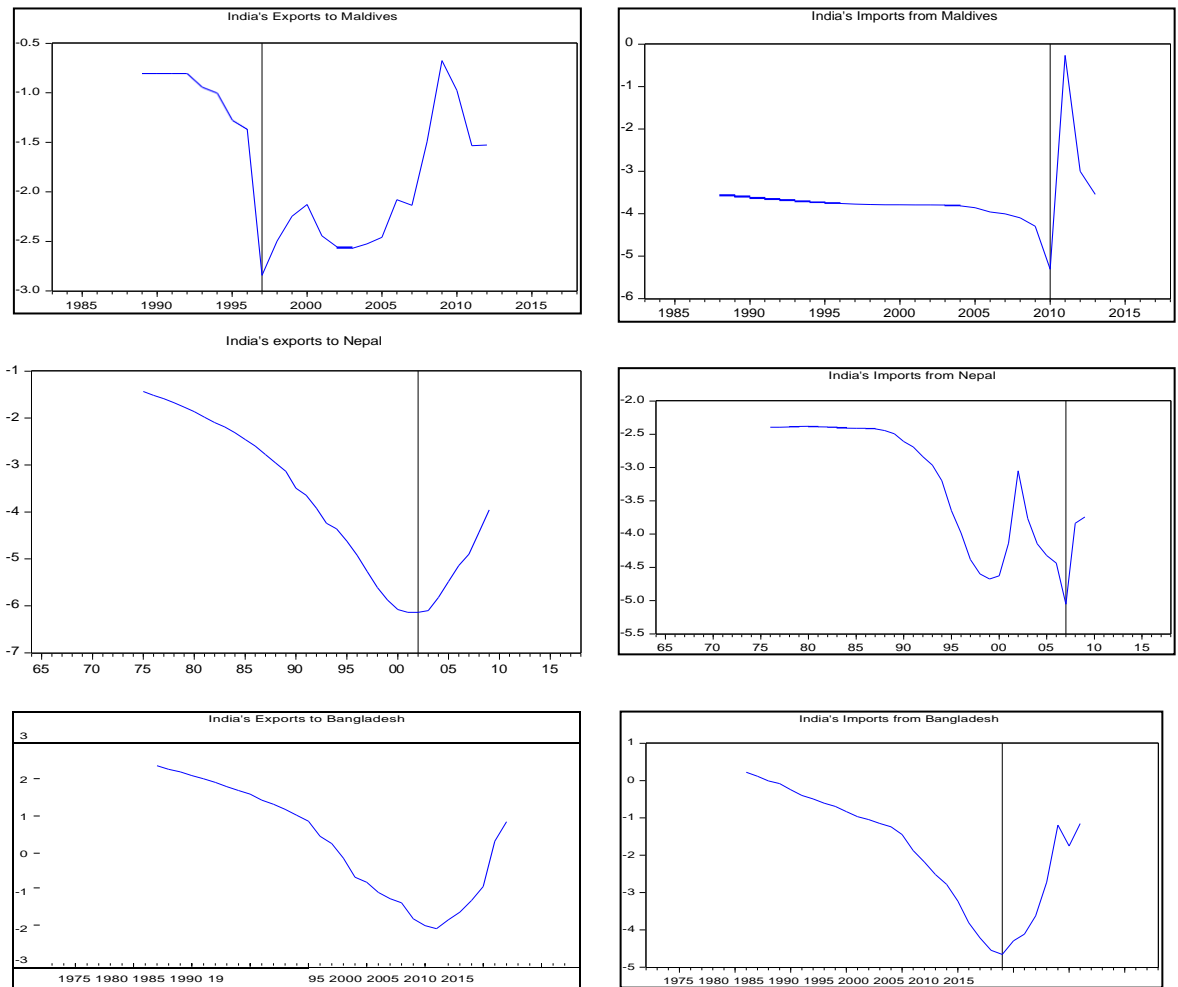


Figure 3.9 (contd.): Structural Break Points for India's Trade (Export & Import) with SAARC Countries using Zivot-Andrews Model



As is evident from the above figures that majority of the structural breaks are found in 2007 and the year surrounding it. Afghanistan joined SAARC in April, 2007 and SAFTA was extended only in 2011. Before it joined SAARC, India had a preferential trade agreement with Afghanistan signed on 6th March, 2003 with preferential concessions provided on 8 items by Afghanistan and 38 items by India. Since, the results from the tests shows the break point to be the year 2001, it is evident that the break in the series is not a result of trade agreements.

India and Bhutan signed trade agreement on 29th July, 2006, the same year in which SAFTA is implemented. The break year for imports at 2008 is found to be stationary at 1% level of difference while exports is found to be non-stationary.

Hence, the break point could be a result of the regional trade agreement, SAFTA or the bilateral trade agreement. Indo-Sri Lanka Free trade agreement was signed on 28th December, 1998 and came into force on 1st March 2000. The Zivot-Andrews test shows that there is a break-point for imports and exports in 1998 and 2004 with the break-point for exports being stationary. The lag length is taken to be four hence, the break point for exports i.e 2004 might be a result of the bilateral free trade agreement and not the regional trade agreement.

India and Maldives signed a trade agreement on 31st March, 1981 where it was agreed that promotion of trade and treatment no less favorable than that accorded to any third country should be given to the parties. The contracting parties are required to furnish lists of essential commodities with specified quota allocations will be made with due regard to the supply availability. The break-year is found to be 1997 for exports and 2010 for imports which could be a result of the SAPTA and SAFTA respectively.

India and Nepal signed an agreement on 5th March 2007 to promote facilitate, expand and diversify trade between the two countries. The break point computed for exports and imports are 2002 and 2007 respectively while both the series accounting for the structural break are found to be non-stationary at levels while being stationary at first difference. India and Bangladesh signed a trade agreement on 1st April, 2006 for improving trade relations between the two countries. The break point computed for exports and imports are 2010 and 2006 respectively while the series accounting for the structural break is found to be non-stationary at levels but are stationary at first difference. Therefore, there is a possibility of the trade agreements having significant impact on the bilateral trade.

To supplement the information given in Figure 3.9, the results for Zivot and Andrews unit root test is presented in Table 3.6. ZA approach ignores other possible break points and captures only the most significant structural break in the series since ZA is a single break test (Ndirangul, Garcia and Gitau, 2014). These results suggest that we can reject the null of unit root with a structural break in both the intercept and trend for India's Imports from Sri Lanka and Maldives at 1 percent significance while we can reject the same for India's exports to Afghanistan and Pakistan at 5% level of significance, hence affirming their stationarity at levels. The rest of the variables are found to be non-stationary at level since we fail to reject the hypothesis of a unit root with a structural break in intercept and trend at 5% level.

Table 3.5: Results of Zivot and Andrews one-break test

Country	Variables	Order	k	t-stat	Break year	Sample
Afghanistan	Exports	1	4	6.84***	2007	1960-2018
	Imports	1	4	-3.14	2007	1960-2018
Bhutan	Exports	1	3	-4.63	2011	1991-2018
	Imports	1	1	-7.47***	2008	1991-2018
Sri Lanka	Exports	0	4	-4.43	1998	1960-2018
	Imports	0	4	-5.09**	2004	1960-2018
Pakistan	Exports	0	0	-5.71***	2005	1976-2018
	Imports	1	4	-7.66***	2005	1976-2018
Maldives	Exports	1	0	-7.96***	1997	1983-2018
	Imports	0	0	-5.31**	2010	1983-2018
Nepal	Exports	1	3	-6.14***	2002	1964-2018
	Imports	1	4	-5.05**	2007	1964-2018
Bangladesh	Exports	1	2	-7.62***	2010	1972-2018
	Imports	1	1	-8.07***	2006	1972-2018

The critical values for Zivot and Andrews test are -5.57, -5.08 and -4.82 at 1%, 5% and 10% levels of significance respectively. *** and ** denote significance at 1% & 5% levels respectively

The test identifies endogenously the break year for each time series by selecting the point of the single most significant structural break which is reported in the Table 3.5. Identification of the break point is important for accurate evaluation of any program which are intended to bring about a structural change in our case being the trade agreements namely SAPTA and SAFTA. The order of integration is denoted by 0 if it is at levels and 1 if it is integrated at first difference. Lag length is estimated

by the value k and the size of the sample differs from country to country depending upon availability of continuous data which is given in the table.

For this study 1995 and 2006 are the year in which the trade agreements, SAPTA and SAFTA came into force and are regarded as the most potential candidate for a structural break in bilateral trade data. The results shows that none of the thirteen variables (i.e., exports and imports) bear witness to the presence of a structural break in 1995 or 2006 except imports for Bangladesh which has a break on 2006 but is found to be stationary only at first difference. Contrary to the potential break point, the break identified in the export at 2005 for Pakistan, 1997 for Maldives, 2002 for Nepal, 2007 for Afghanistan and 2010 for Bangladesh are found to be stationary at 1% level of significance at first order difference except for Pakistan whose break is significant at levels. At the same time, a break identified for India's import from Sri Lanka at 2004 and from Nepal in 2007 are found to be stationary at 5% level of significance at levels and first order of difference respectively. While the rest of the break point identified for India's imports from the SAARC countries except from Afghanistan are found to be stationary at first order of difference.

The rest of the break point identified in the test namely imports for Afghanistan and exports for Bhutan and Sri lanka are found to be non-stationary at levels and first difference. The results of the break test show that the year 2007 and the year surrounding it such as 2006 and 2005 emerges as the most significant break-year for bilateral trade for the data series under study. An interesting observation from the test is that although none of the break-points are identified for the year of implementation of the trade agreements, all the break point identified are observed to be after the implementation of the trade agreements i.e SAPTA for 1995 and SAFTA for 2006. Since, trade agreements and any government policy takes time for its

implementation and for getting its effective results, the impact of the trade agreements cannot be invalidated.

The result of the Unit root test with Structural Breaks clearly contradicts the results obtained from the unit root test without structural breaks for the two series. Perron's affirmation that negligence to account for structural break in unit root test leads to non-rejection of the null hypothesis is evident from results computed in the two tests. None of the variables in Table 3.4 are stationary at levels while three of the variables in Table 3.5 which accounts for structural breaks in the series are found to be stationary at levels and twelve of the variables are found to be stationary at first difference. Hence, it can be concluded that accounting of the structural break has a significant impact on the analysis of the stationarity of the unit root of the series.

3.8. Determinants of India's Trade with SAARC countries

The analysis so far has indicated the possibility of India's trade with SAARC countries to be determined by the trade agreements, but no concrete conclusions can be drawn regarding direction and the extent of the impact. Therefore, a gravity model has been adopted for studying the impact of the trade agreements and other variables empirically. Gravity model was conventionally used as an intuitive way of understanding trade flows. The term gravity is used since the gravity model equation resembles Newton's law of gravity where exports are directly proportional to the trading countries economic size and inversely proportional to the distance between them (Anderson, 1979). The economic mass of the trading countries are represented by the GDP and the population size. The distance between the two countries and a dummy for trade agreements i.e. SAFTA and SAPTA captures the trade resistance.

The basic gravity model has only two explanatory variables i.e. size of the economy and distance between trading partners. Hence, according to the gravity model, larger countries are expected to trade more while mutual distance between the countries cause a resistance to trade perhaps due to transport costs, time, etc. Later, the model has been reformulated to incorporate new variables such as common language, common culture, border/ adjacency, regional trade agreements, colonial links etc. (Shepherd, 2012).

The gravity model develops a gravity equation for determining potential trade by using macroeconomic variables such as GDP, population size, distance between the countries etc between the trade partners. Indicators of transportation costs such as implementation of trade agreements are incorporated in the model. In this study gravity model is used to explain trade potential and to analyse the impact of trading agreements under SAARC namely SAPTA and SAFTA. The first example of gravity model was given by Tinbergen in 1962 who uses the model to study trade flows. Another early contributions to gravity model of trade are by Bergstrand (1985) and Anderson (1979). Despite these theoretical developments the gravity model failed to make much impact until it was popularized by Anderson and Van Wincoop (2003) and other influential studies including Chaney (2008) and Helpman et.al (2008), Eaton and Kortum(2002) and recent studies by Arkolakis et.al(2012). The New trade theories develop the importance of the economies of scale, imperfect competition and product differentiation in explaining the world trade thereby slowly relaxing the strict assumptions of classical theory (Krugman and Obstfeld, 2005). The detailed elaboration of the model was elaborated was presented in Chapter 1.

For the empirical analysis a panel data has been used which is a combination of time series and cross-section observation,also known as pooled data. “Panel data

gives more informative data, more variability, less collinearity among variables, by combining time series and cross section observations” (Gujarati, 2012). A balanced panel data is used and is estimated using fixed effect model and random effect model. We then analyse the results of the estimated model using Hausman Test in order to choose which model to be considered.

According to Gujarati (2012), FEM will be selected if there is a correlation between individual effects and explanatory variables. Since, FEM can estimate individual and time-specific effects for the variables which are invariant over time. But if individual effects of the variables are randomly distributed and not correlated with explanatory variables, REM will be more effective. REM considers the residual of each entity (which is not correlated with explanatory variables) as a new explanatory variable and can estimate the invariant factors such as, distance. The main problem of FEM is that the variables which do not change over time cannot be estimated directly in this model. So variables such as distance, SAPTA, SAFTA in equation (1&2) will not be supported in FEM since it give a near singular matrix as a result.

Table 3.6: Result o Hausman’s Test for appropriateness of the Model

<i>Null hypothesis: Random effect Model</i>			
<i>Alternate Hypothesis: Fixed effect Model</i>			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Hausman test	0.0000	5.0000	1.0000

Table 3.6 presents the result of Hausman test for analyzing the appropriateness of random effect model. Test result indicates that the null hypothesis “Random effect model” has not been rejected at 10% level of significance. Thus, it is decided to select random effects model and focus the interpretation on estimation results obtained from this model. The analysis shows that there is no correlations between the individual

specific effects and the time-specific effects i.e. there is no time specific effect for the model. The random effect estimate of the cross-section variance term is zero, so that there is no evidence of individual effects in the data. Hence, random effect is used for estimation of the gravity model.

Results of the estimated gravity model for India's exports to partner countries is presented in Table 3.7. For estimating India's export with a partner countries, six independent variable are used, namely, Exchange rate between India and the partner country, GDP of the partner country, Population of the partner country, distance between India and the partner country and inclusion into SAPTA and SAFTA by using a dummy variable.

Table 3.7: Estimated Gravity Model for India's Export to SAARC Countries

<i>Dependent Variable: India's Exports to partner countries (X_{ijt})</i>				
Notations	Independent Variable	Coefficients	p-value	
C	Constant	-5.38	0.094	
Yit	Exchange rate between partner countries	-0.94	0.000	
Yjt	GDP of partner countries	1.54	0.000	
Njt	Population of Partner countries	-0.73	0.000	
Dij	Distance between India and partner countries	0.11	0.762	
Pijt	inclusion into SAPTA - 0: not included 1: included	0.43	0.000	
Tijt	Inclusion into SAFTA - 0: not included 1: included	0.63	0.001	
<i>R-Square=0.87 Adj. R-Square=0.86 F-stat.=207.67 Prob(F-Stat) = 0.000</i>				

It is observed from Table 3.7 that five out of the six independent variable are found to be significant at 1% level of significance while only one variable is found to be insignificant at 10% level of significance. GDP, the proxy of economic size, of partner countries has a significant implications on measuring India's exports to the partner countries. The magnitude of the estimate indicates that a unit increase in GDP of the partner country causes exports of India to increase by 1.535. This can be construed as the dependence of India's export potentials to its neighbouring countries.

In other words, it can also be said that the regional development will have unequivocal impacts on India's export.

Secondly, Exchange Rate has a negative and significant effect on India's exports to the partner countries. The magnitude of the coefficient indicated that a unit increase in India's exchange rate relative to exchange rate of a partner country, India's exports decline by 0.94 unit. An increase in the estimated exchange rate shows appreciation of the Indian currency which leads to reduction in exports since our exports are becoming more expensive relative to partner countries imports. Thirdly, the population of the partner country of India is found to be highly significant but negative which is quite contrasting to the expected results. Fourthly, the estimated coefficient of geographical distance while being positive is not found to have a significant effect on determining India's exports with partner countries. A possible explanation for such results stems from the highly asymmetric role that India plays among the South Asian Countries which causes South Asia to be highly Indo-centric thereby distance not playing an important factor in determining exports.

It may be noted that SAPTA was effective between the years 1995 till 2006 i.e the year in which SAFTA became effective. The impact of SAPTA is captured by using a dummy variable which assumes the value 0 for the year in which SAPTA was non-effective and the value one for the year in which SAPTA was under operation. Estimated results shows that SAPTA is highly significant with 1% level which shows that there is a 0.430 unit increase in India's exports for the year in which SAPTA is effective. So, we can concluded that SAPTA has significant impact on India's export to SAARC countries. At the same time, the dummy of SAFTA, which replaced SAPTA from 2006, is found to be positive and significant at 5% level, thereby indicating the increase in India's export post-SAFTA. In view these results, it may be

concluded that regional trade agreements within SAARC countries have significant impacts on India's exports to the member countries.

The estimated gravity model India's imports from SAARC countries is presented in Table 3.8. For estimating India's import's from a partner countries, six independent variable are used, namely, exchange rate between India and the partner country, GDP of India, Population of India, distance between India and the partner country and inclusion into SAPTA and SAFTA by using a dummy variables. The magnitude of R-square, adjusted R-square and significant F-statistic shows the significance of the adopted model to estimate India's imports from member countries.

Table 3.8: Estimated Gravity Model for India's Imports to SAARC Countries

<i>Dependent Variable: India's Imports from partner countries (M_{ijt})</i>				
Notations	Independent Variable		Coefficients	p-value
C	Constant		-20.34	0.000
Yjt	GDP of India		1.44	0.000
EXit	Exchange rate between the two countries		-2.18	0.000
Nit	Population of India		5.32	0.000
Dij	Distance between india and partner countries		-0.80	0.000
Pijt	inclusion into SAPTA-0: not included 1: included		0.85	0.000
Tijt	Inclusion into SAFTA-0: not included 1: included		0.64	0.024
<i>R-Square=0.895</i>			<i>Prob(F-Stat) =</i>	
<i>Adj. R-Square=0.89</i>			<i>0.000</i>	
<i>F- stat.=268.98</i>				

Table 3.8 shows that four out of the six independent variable are found to be significant at 1% level of significance and one of the variable at 5% level while only one variable is found to be insignificant at 10% level of significance. As anticipated, India's economy size as indicated by GDP has a significant impact on imports from partner countries. The estimated coefficient of 1.44 implicates that the proportionately increasing India's imports from these countries with the growth of the economy. Like the export, exchange rate has also a negative and significant effect on India's imports from the partner countries. Result shows that a one percent increase in India's

exchange rate relative to exchange rate of a partner country causes imports to decline by 2.176 percent. An increase in the estimated exchange rate shows appreciation of the Indian currency which should lead to increase in imports since imports per unit are cheaper relative to other country's exports.

The population size of India is found to be highly significant and effective in measuring India's imports from partner countries. A one percent increase in population of India leads to 5.326 percent increase in imports. The higher is the population, the greater is the demand which leads to more imports. Meanwhile, distance is found to have a significant and negative impact on imports of India from partner countries. The assumption of the basic gravity model is justified here since the results shows that a one percent increase in distance between the trading partner countries causes a decline of 0.802 percent of imports of India from the partner countries. Interestingly, the estimated coefficient (0.85) of SAPTA dummy is highly significant. Meanwhile, the estimated coefficients of SAFTA dummy is significant with 5% level. It can, thus, be concluded that the two trade agreements have significant impact on India's import from SAARC countries.

3.9. Concluding Notes

In view of the results of the analysis in the preceding sections, the following points may be highlighted as concluding notes:

- Trends of bilateral trade between India and the seven SAARC countries shows that there is a significant improvement in trade especially since 2000 for all the countries with exports of India outweighing imports from the partner countries. The annual growth rate of India's bilateral trade with the SAARC

countries shows an increasing trend over time. This may be construed as increasing integration of India's economy with its neighbours.

- Intra-SAARC trade of member countries as a percentage of trade with the rest of the world shows only a dismal improvement over time, which hints that improvement in bilateral trade does not result in increase of intra-SAARC trade.
- Unit root analysis shows that exports and imports are non-stationary at levels which shows changing variance over time, and the unpredictability of India's trade with its neighbouring countries. This reflects the volatility of India's trades which is subject to a change in geopolitical conditions, bilateral trade agreements and other factors within the region. Meanwhile, the structural break test have shown that India's trade with SAARC countries had undergone substantial change during the period between 2005- 2007.
- The growth of the Indian economy as indicated by GDP and the population size have significantly increased imports from the partner countries, while the economic growth in these countries positive impact on India's export. At the same time, the two regional trade agreements namely SAPTA and SAFTA are found to have significant impact the export and imports of India within SAAR region. So, the regional trade agreement in the region have increased the integration of Indian economy with the member countries.

Chapter 4

NATURE AND PATTERNS OF INDO-SRI LANKAN TRADE – COMMODITY ANALYSIS

Chapter 4

NATURE AND PATTERNS OF INDO-SRI LANKAN TRADE – COMMODITY ANALYSIS

4.1. Background

India and Sri Lanka shares a long history with commercial links dating back as far as the 4th century. The natural and climatic features of Sri Lanka parallel those of South Asian states of India. Moreover, the society, culture and Sinhala literature of Sri Lanka is deeply influenced by the rich Indian culture and is a mixture of both North India and south Indian elements (Meyer, 1996). Sri Lanka's central position in the Indian Ocean, the geographic proximity to India along with the cultural and historical ties were the factors that influenced the early development of trade between the two countries. Up till the colonial times, the economic ties and the maritime trade between the two countries centered on production of goods for the colonial powers.

However, in the post-independence period which is 1947 for India and 1948 for Sri Lanka, despite close political relation, economic ties weakened as both countries adopted inward-looking economic policies pivoted on the concept of self-reliance and import-substitution by means of stringent exchange controls, greater government controls in all areas of economic activity, reduced opportunity for foreign investment and lesser private participation in the economy which lead to a dismal low level of trade between the two countries (Kantha & Kelegama, 2013).

Economic links between the two countries revived with Sri Lanka embarking on a liberalization program in 1977, becoming the first South Asian country to open up its economy. In terms of economic size, India accounts for 75 percent of GDP

while Sri Lanka contributes only to 5 percent of GDP in South Asia, however, it can be noted that Sri Lanka has the highest trade dependence ratio in the region which proves the openness of its economy. (Perara, 2009) Other South Asian countries slowly started to follow suit including India with partial liberalization starting from 1980s and further liberalization in 1991.

Table 4.1 : India's Trade with Sri Lanka

Year	India's exports to Sri Lanka (USD Mn)	India's total exports (USD Mn)	% share of exports	India's Imports from Sri Lanka (USD Mn)	India's total imports (USD Mn)	% share of imports
1960	38.8	1313.5	2.95	8.2	2249.4	0.36
1965	24.6	1651.5	1.49	9.6	2772.9	0.35
1970	39.6	2024.1	1.96	3.7	2093.3	0.18
1975	28.8	4364.0	0.66	0.4	6197.2	0.01
1980	100.6	8440.1	1.19	31.7	14821.8	0.21
1985	71.3	8265.2	0.86	5.4	16329.0	0.03
1990	101.5	17811.2	0.57	22.1	23991.4	0.09
1995	383.4	30534.4	1.26	38.9	34486.5	0.11
2000	604.9	42463.6	1.42	44.8	50259.7	0.09
2005	1871.8	97898.4	1.91	527.9	139666.6	0.38
2010	3313.9	222906.9	1.49	519.7	350780.2	0.15
2015	5526.2	266162.8	2.08	853.9	392229.8	0.22
2018	4662.5	323269.3	1.44	1318.9	508988.0	0.26

Source: DOTS, IMF database

Table 4.1 shows India's trade with Sri Lanka from 1960 to 2018. It is evident from the table that after the liberalization of Sri Lankan economy in 1977, India's exports to Sri Lanka received a major increase from 28.8 US \$ mn in 1975 to 100.6 US\$ mn in 1980 while its imports from Sri Lanka also indicates a high level of growth from 0.4 US\$ mn in 1975 to 31.7 US\$ mn in 1980. And India's trade with Sri Lanka has increased further between 1990 to 1995 which can be attributed to the liberalization of Indian economy.

Table 4.2: Sri Lanka's trade with India

Year	Sri Lanka exports to India (USDMn)	Sri Lanka total exports (USD Mn)	% share of exports	Sri Lanka imports from India (USD Mn)	SL total imports (USD Mn)	% share of imports
1960.0	7.3	372.6	1.96	56.4	408.8	13.80
1965.0	8.9	408.1	2.18	28.1	307.7	9.13
1970.0	3.5	335.2	1.06	37.9	388.9	9.75
1975.0	0.4	556.5	0.07	21.3	744.9	2.85
1980.0	34.3	1039.1	3.30	96.7	2028.7	4.77
1985.0	6.2	1264.9	0.49	74.7	1831.8	4.08
1990.0	20.2	1895.2	1.07	118.0	2634.5	4.48
1995.0	32.0	3801.0	0.84	469.0	4481.0	10.47
2000.0	58.0	5302.5	1.09	600.1	6526.4	9.20
2005.0	566.4	6068.0	9.33	1835.4	8621.0	21.29
2010.0	473.8	9571.5	4.95	2547.7	10501.9	24.26
2015.0	644.8	9744.5	6.62	4284.9	15124.5	28.33
2018.0	769.2	11626.5	6.62	4121.0	22199.3	18.56

Source: DOTS, IMF database

Sri Lanka's trade with India is shown in Table 4.2 which also shows a significant increase in exports from 0.4 US\$ mn in 1975 to 34.3 US\$ mn in 1980 and increase in imports from 21.3 US\$ mn in 1975 to 96.7 US\$ mn in 1980. Eventhough there is a great increase in values of exports and imports, there is only a meager change in the percentage share of imports and exports. The results could be because of the overall improvement in trade both for Sri Lanka with the rest of the world consequent to the liberalization of its economy.

This process of liberalization was further deepened by establishment of the South Asian Association for Regional Cooperation (SAARC) in 1985, with the main objective of promoting the welfare and improving the quality of life of the peoples of South Asia through increased regional integration. Trade between the two countries accelerated with the intensification of deregulation and privatization in both the countries after 1991 causing India's exports to Sri Lanka to increase by more than

200% and Sri Lanka's exports to India to increase by more than 50% between 1990 to 1995.

4.2. Rationale for Signing of Bilateral FTA

Regional initiative which included both India and Sri Lanka emerged in 1995 in the form of the South Asian Preferential Trade Agreement (SAPTA) and the decision to further liberalization in the form of South Asian Free Trade Agreement (SAFTA) encouraged greater bilateral trade cooperation between India and Sri Lanka. However, the SAPTA process offered very limited concessions and only preferential liberalization, while the transition to SAFTA was a slow progress. For Sri Lanka it became slowly evident that trade with SAARC ultimately amounted to trade with India owing to its dominating role in terms of size and economic influence. (Kantha & Kelegama, 2013). Therefore, bilateral agreements became increasingly attractive owing to the perceived mutual benefits of free trade between the two countries.

Another important aim of the ISFTA was formalization of trade by means of tariff reductions and lowering of transaction costs. A bilateral FTA between India and Sri Lanka is also expected to trigger Indian investment to Sri Lanka. Moreover, in order to accommodate the huge asymmetries between the two countries, special and differential treatment (SDT) needed to be built effectively in the agreement which is possible under bilateral agreement. (Kantha & Kelegama, 2013).

Sri Lanka's largest trade deficit with a foreign country is with India with the number of items imported from India far outweighing the exports to India. Therefore, with the imposition of bilateral free trade agreement between the two countries, Sri

Lanka expects to reduce its widening trade balance (Reghunathan, 2002). India already had two bilateral agreements in place with Nepal and Bhutan, but was non-reciprocal in nature where India offers market access on a unilateral basis.

4.3. Indo-Sri Lanka Free Trade Agreement

The India-Sri Lanka Free Trade Agreement (ISFTA) was signed on December, 1998 by Mrs Chandrika Bandaranaike Kumaratunga, President of Sri Lanka and Shri Atal Behari Vajpayee, Prime Minister of India and entered into force on 1st March, 2000. The agreement aims to remove trade barriers between the two countries within a stipulated time frame with the overall objective of enhancing trade relations and broadening economic integration. India agreed to remove tariffs to Sri Lankan commodities within a timeframe of three years while Sri Lanka committed to remove tariffs for free access to Indian commodities within eight years of the implementation of the agreement.

4.3.1. Objectives of the ISFTA

The main objectives of Indo-Sri Lanka Free Trade Agreement as stated in the Agreement are:

- (i) To promote through the expansion of trade the harmonious development of the economic relations between the India and Sri Lanka
- (ii) To provide fair conditions of competition for trade between India and Sri Lanka
- (iii) In the implementation of this agreement, the contracting parties shall pay due regard to the principle of reciprocity

- (iv) To contribute in this way, by the removal of barriers to trade, to the harmonious development and expansion of world trade

4.3.2. Tariff Concessions under the Agreement

The FTA consists of the Agreement and six annexure summarized in table 4.3.

Table 4.3 : Tariff concession under India-Sri Lanka Free Trade Agreement (ISFTA)

	Items	Concessions	% share	description of items
India's Commitments	431	0%	8%	for items in Annex D (i) w.e.f 01.03.2000
	528	25%	10%	for items in Annex A, para 1 (b) w.e.f 01.03.2000
	1357	100%	26%	for items in Annex E w.e.f 01.03.2000
	2870	50%	55%	for items except Annex D & E w.e.f 01.03.2000 and phased out removal of tariffs upto 100% in 3 years
	4227	100%	82%	total number of 0 duty w.e.f. 01.03.2003
Sri Lanka's Commitments	1220	0%	23%	for items in Annex D(ii) w.e.f.01.03.2000
	319	100%	6%	for items in Annex F-I w.e.f. 01.03.2000
	889	50%	17%	for items in Annex F II with phased out removal within three years w.e.f. 01.03.2000
	2802	35%	54%	for items except Annex D & F w.e.f 01.03.2000 and phased out removal of tariffs upto 100% in 8 years
	4010	100%	77%	total number of 0 duty w.e.f. 01.03.2008

Reduction of tariffs by India

- i) 100% removal of tariffs on 1357 items upon entry into force of the agreement included in Annexure E.
- ii) 25% tariff reduction for 528 textile items included in Chapters 51-56, 58-60, 63 upon entry into force of the agreement.
- iii) 0% tariff reduction for 431 items in the negative lists.
- iv) 50% removal of tariffs for the remaining 2870 items upon entry into force of the Agreement followed by phased out removal of tariffs up to 100% in two stages within three years.
- v) 50% tariff concessions for imports of tea from Sri Lanka on a preferential basis subject to an annual maximum quota of up to 15 million kgs.

- vi) 50% tariff reductions for imports of garments from Sri Lanka subject to a maximum quota of 8 million pieces of which a minimum of 6 million pieces should contain Indian fabrics.

Reduction of tariffs by Sri Lanka

- i) 100 % removal of tariffs on 319 items upon entry into force of the agreement included in Annexure F(i).
- ii) 50 % reduction of tariffs on 889 items upon entry into force of the agreement followed by phased out removal of tariffs up to 100 % in three stages within three years.
- vii) 0% tariff reduction for 1220 items in the negative lists.
- iii) 50% removal of tariffs for the remaining 2802 items upon entry into force of the Agreement followed by phased out removal of tariffs up to 100 % in eight years as follows
 - Upto 35% tariff concessions before 01.03.2003
 - Up to 70% tariff concessions before 01.03.2006
 - Up to 100% tariff concessions before 01.03.2008

There is a great asymmetry in economic size between India and Sri Lanka which has been accommodated by providing special and differential treatment for Sri Lanka using longer tariff liberalization period, a larger negative lists and favorable rules of origin to avoid undue advantage to be reaped by the larger country (Kantha & Kelegama, 2013).

Free trade means the exports and import of goods and services unhindered by tariff and non-tariff barriers and is denoted by the free movement of factors of production, especially capital. The items in the negative list are the items in which no duly preferences are made therefore the goods listed are neither preferential nor free trade. Further, the items listed 25 percent and 50 percent tariff concessions cannot

constitute free trade and hence only the items in the 100 percent concessions constitute a free trade. India has also imposed quantitative restriction on imports of tea, garments and textiles from Sri Lanka without mentioning it explicitly. If that is the case, only 26% of India's imports from Sri Lanka and 6% of imports from India are listed under free trade under the agreement.

Table 4.3 also shows that the percentage share of the negative list for India is 8 percent i.e 431 items of the total 5186 items traded while the percentage share of negative list for Sri Lanka is 23 percent i.e. 1220 of the total 5230 items traded. The large number of negative list accorded for Sri Lankan imports from India compared to the negative lists for India may be defended on the grounds of protecting indigenous small and medium-scale agricultural and industrial producers. But certain studies on the concessions offered under the trade agreements concluded that the inclusion of many items in the negative lists are not well thought out and duty free access to Indian fish and dairy products, tariff concessions or removal on imports of motor and vehicle parts which are included in the negative lists could lead to better intake of nutritional requirement and can prove beneficial to customers by lowering the overall transportation cost (Sarvananthan, 2000).

It may also be noted that although the number of goods offered for 100 percent tariff reductions by India i.e. 1357 items may seem impressive, Sri Lanka may not be able to take full advantage of the concessions offered due to problems such as lack of resource, production incapability and non-competitiveness of price with respect to the Indian products. Moreover, another constraint to Sri Lanka's exports of commodities under free trade is in the form of rules of origin clause whereby at least 35 percent of the value added good of the final product has to be in the country of export which is reduced to 25 per cent if the inputs are from the import country. (Sarvananthan, 2000)

Indo-Sri Lanka FTA may be regarded as a preferential trade agreement rather than a free trade agreement since only a few items are included in the free trade category and even after the end of the stipulated period for phasing out tariffs which is three years for India and eight years for Sri Lanka, the negative lists will still continue and the items under FTA will still be 82% and 77% of the total traded goods for India and Sri Lanka respectively. Another important factor which hinders the free trade between India and Sri Lanka is the large presence of thriving informal trade between the two countries caused by factors such as complicated administrative process including licensing, various payments to clearing agents, infrastructure bottlenecks, stringent government rules and regulations, high domestic taxes leading to huge transaction costs for undertaking the formal routes. Therefore, traders often prefer the informal channel for transaction since it is speedier and cheaper than the formal channel. Many traders also use the informal routes due to lack of necessary resources and lack of education which made them unaware of the FTAs such as Indo-Sri Lanka FTA (Pohit et al., 2003).

4.3.3. Rules of Origin

The main aim for imposition of Rules of Origin (RoO) criteria is to ensure that the tariff concessions granted under the agreements are only limited to imports from the partner country and not from other third party countries. RoO can also be understood as regulations or administrative procedures which is used to determine the product's country of origin and the materials used for the production to qualify for tariff preferences under the agreement in the importing partner country. A summary of the RoO criteria has been tabled in table 4.4.

Table 4.4: Summary of Rules of Origin Criterion

Criteria	Specifications
Domestic Value Addition(DVA) Cumulative Rules of Origin	Minimum of 35% F.O.B value Exporting Country minimum value addition of 25% F.O.B. if the inputs from importing country are utilised, subject to the condition that aggregate value addition is 35% F.O.B. value
Change of tariff Heading (CTH)	CTH at 4 digit HS Classification

Source: Handbook on India Sri Lanka Free Trade Agreement

According to the RoO criterion, goods produced are classified into two main categories:

- (i) Goods wholly obtained or produced: These are the products which are considered wholly produced or obtained in the territory of the exporting party, as per the ISFTA and are automatically accepted as eligible under the FTA. The following products includes: (a) Raw or mineral products extracted from its soil, its water or its seabed; (b) Vegetable products harvested there; (c) Animals born and raised there; (d) Products obtained from animals referred to in clause (c) above; (e) Products obtained by hunting or fishing conducted there; (f) Products of sea fishing and other marine products from the high seas by its vessels; (g) Products processed and/or made on board its factory ships exclusively from products referred to in clause (f) above; (h) Used articles collected there, fit only for the recovery of raw materials; (i) Waste and scrap resulting from manufacturing operations conducted there; (j) Products extracted from the seabed or below seabed which is situated outside its territorial waters, provided that it has exclusive exploitation rights; (k)

Goods produced there exclusively from the products referred to in clauses (a) to (j) above.

- (ii) Goods not wholly obtained or produced: These are goods that are not listed under wholly obtained or produced, and include the goods produced that may contain non-originating materials. These products need to comply with the RoO criteria to be eligible for tariff concessions under the ISFTA. In order for the products to be included in the agreement, a combination of Domestic Value Addition (DVA) and Change of Tariff Heading (CTH) is required. DVA is the minimum requirement of total value addition that should be achieved by the exporting country on the domestic inputs which is not less than 35 per cent of the freight on board (FOB) value of the finished product. However, a minimum of 25 per cent DVA is allowed, if raw materials not less than 10 per cent of the FOB value of the product are imported from the partner country. The relaxation of DVA criterion offered to Sri Lanka's exports is referred to as Cumulative Rules of Origin. CTH states that the HS codes of the imported raw materials and the exported finished products should be different at 4-digit level of classification.

Further additional requirement for products to satisfy RoO criterion states that the final manufacturing process should be carried out in the territory of the exporting country, and the traded products should not pass through the territory of a third party country.

After it has been proved that the RoO criteria has been met, Certificate of Origin (CoO) will be issued by the relevant authorities which is the Department of Commerce for Sri Lanka and Export Inspection Council for India after which the product will be able to enjoy the tariff concessions.

4.4. Direction of Sri Lanka's Trade

India is the largest trading partner of Sri Lanka with a total value of trade in 2017 amounting to 4494.1 US\$ mn. The other major trading partner of Sri Lanka in 2017 are China, UAE, Singapore and Japan. Though India remains the biggest import source of Sri Lanka, its share in Sri Lanka's total trade has been declining from 24.4 percent in 2007 to 21.1 per cent in 2017. A prominent observation in the direction of trade is the large increase in the share of China in Sri Lanka's total trade from 8.2% in 2007 to 19.7% in 2017. The share of UAE in Sri Lanka's total share of imports has also increased over the years while the share of Singapore has decreased.

Table 4.5: Major Export Destinations of Sri Lanka

Exporters	2017		2007	
	Value (US\$ mn)	% share	Value (US\$ mn)	% share
India	4494.1	21.1	2781.4	24.4
China	4189.4	19.7	929.0	8.2
UAE	1563.9	7.3	370.8	3.3
Singapore	1292.1	6.1	1106.9	9.7
Japan	1038.1	4.9	412.8	3.6

Source: ITC Trade Map, derived from UN COMTRADE

The biggest importing market for the product exported by Sri Lanka is the United States of America with 24.9% of Sri Lanka's total exports imported by the country. India is the third biggest export destination with 6.7% of Sri Lanka's exports imported by India. Although the total value of exports to other major importers countries has increased except for UK which has been declining, the percentage share of the goods imported has been declining except for India.

Table 4.6: Major Import Sources of Sri Lanka

Importers	2017		2007	
	Value (US\$ mn)	% share	Value (US\$ mn)	% share
USA	2920.2	24.9	1978.0	25.8
UK	1043.2	8.9	1017.2	13.3
India	789.6	6.7	515.8	6.7
Germany	547.1	4.7	438.0	5.7
Italy	531.7	4.5	391.8	5.1

Source: ITC Trade Map, derived from UN COMTRADE

4.5. Trade Index

In order to analyse the items in which India and Sri Lanka trade, the intensity of the bilateral trade and the potential to which India and Sri Lanka can further reap the benefits of bilateral trade, Revealed Comparative Index, Trade Complementarity Index and Trade Intensity Index of the two countries has been calculated for 99 categories of items aggregated into 16 categories at 2-digit HS classification.

4.5.1 Comparative Advantages

Revealed Comparative Advantage (RCA) is first propounded by Balassa (1965) and is used to evaluate the degree of export specialization of a country in its export products. Revealed Comparative Advantage Index shows the competitiveness of a product in countries export compared to the products share in world trade. A product with high RCA is competitive in world trade and can be considered for exports to other countries especially to a country with low RCA in the product. Since the export items of the two countries with similar RCA profiles will be competitive

instead of complementary, they are unlikely to have high bilateral trade intensities and hence there is less scope for flourishing bilateral trade.

In the present study RCA is calculated for India and Sri Lanka for the years 1990 to 2017 across 99 commodity groups in 2 digit HS classification grouped into 16 major commodity categories to identify the country's specific advantage in trade. The revealed comparative advantage indexes of India and Sri Lanka are shown in Table 4.7 below:

Table 4.7: The revealed comparative advantage of India's 16 categories of products

Products	2017	2014	2010	2005	2000	1994	1990
Animal	1.88	1.8	1.11	1.35	2.21	1.88	1.41
Vegetable	0.61	0.74	0.46	0.6	0.94	1.11	1.47
Food Products	0.61	0.65	0.81	0.66	0.85	0.85	1.21
Minerals	1.61	1.26	5.21	8.12	2.46	2.56	4.72
Fuels	1.43	1.37	1.23	0.93	0.38	0.33	0.52
Chemicals	18.25	15.3	16.32	14.5	11.94	7.59	8.71
Plastic or Rubber	0.11	0.11	0.1	0.12	0.07	0.09	0.04
Hides and Skin	0.17	0.18	0.14	0.25	0.51	0.64	0.66
Wood	0.51	0.45	0.39	0.76	0.97	0.74	0.2
Textiles and clothing	1.45	1.34	1.3	1.64	2.77	3.23	3.49
Foot wear	0.24	0.25	0.2	0.27	0.4	0.54	0.74
Stone and Glass	3.29	2.87	4.06	5.45	6.23	6.21	6.1
Metals	2.33	1.98	2.46	2.08	1.23	0.8	0.66
Mach and Elec	0.69	0.69	0.77	0.6	0.48	0.37	0.34
Transportation	2.43	2.7	2.45	1.77	0.99	0.84	0.75
Miscellaneous	0.8	0.79	1.32	0.98	0.92	0.61	0.57

Data sources: UNCOMTRADE, WITS Database

According to the observations, India has an exceptionally high RCA in exports of Chemicals, a very strong RCA in exports of Stone and Glass. It also has a strong RCA in exports of Animals, Fuels, Textiles and clothing, Minerals, Metals and Transportation and a weak RCA in exports of the rest of the six categories of products. It can be observed from the table that RCA for Vegetable and Food products has continuously declined from 1990 to 2017 with the products having comparative

advantage in 1990 and are no longer found to be competitive in 2017. Other products with declining RCA are Minerals and Textile and clothing with the product comparative advantage declining from very strong RCA in 1990 to average RCA in 2017. RCA for Stone and Glass has also reduced from 6.1 in 1990 to 3.29 in 2017. Meanwhile, the items for which increasing RCA are observed are fuels, metals and transportation where RCA index improved from having comparative disadvantage in 1990 to positive RCA in 2017. RCA index for Chemicals has improved significantly from 8.71 in 1990 to 18.25 in 2017.

Table 4.8: The revealed comparative advantage of Sri Lanka's 16 categories of products

Products	2017	2014	2010	2005	2000	1994	1990
Animal	0.98	1.17	1.16	1.00	1.37	0.79	0.53
Vegetable	1.74	2.11	2.17	2.07	2.05	2.36	4.80
Food Products	1.07	0.92	1.01	0.61	0.41	0.47	0.27
Minerals	0.31	0.28	0.36	0.62	0.10	0.20	0.81
Fuels	0.27	0.17	0.12	0.00	0.05	0.12	0.26
Chemicals	5.48	5.50	4.38	1.76	1.37	1.44	2.65
Plastic or Rubber	0.28	0.34	0.35	0.30	0.16	0.21	0.23
Hides and Skin	0.03	0.03	0.03	0.07	0.36	0.23	0.09
Wood	1.13	1.21	1.41	1.28	1.11	1.69	0.63
Textiles and clothing	4.59	4.65	4.26	4.54	5.82	5.62	4.44
Foot wear	0.24	0.23	0.12	0.13	0.43	0.55	0.20
Stone and Glass	0.57	0.84	1.58	1.95	1.35	3.07	3.63
Metals	0.24	0.15	0.16	0.82	0.08	0.10	0.27
Mach and Elec	0.30	0.34	0.30	0.25	0.37	0.18	0.08
Transportation	0.96	0.58	0.74	0.75	0.45	0.08	0.54
Miscellaneous	3.93	2.60	2.54	1.55	1.10	1.31	0.62

Data sources: UNCOMTRADE, WITS Database

According to the observations of Sri Lanka's RCA in Table 4.8, Sri Lanka seems to have very strong RCA in exports of Chemicals, Textiles and clothing and Miscellaneous while it has a strong RCA in exports of Vegetables. The analysis shows an average RCA in exports of Animals, Food Products, Wood and Transportation while it has weak RCA in exports of the rest of eight product categories. It can be observed from the table that RCA for Stone and glass has

continuously declined from 1990 to 2017 with the product no longer having revealed comparative advantage in 2017 as compared to 1990. Other product with large declining RCA is for vegetable product where the RCA has declined from having a very strong RCA in 1990 to average RCA in 2017.

Meanwhile, the items for which major increasing RCA index are observed are Food products, wood and miscellaneous where RCA index improved from having comparative disadvantage in 1990 to positive RCA in 2017. RCA index for Chemicals has also improved significantly from 2.65 in 1990 to 5.48 in 2017.

It can be seen from the analysis of the RCA profiles of the two countries that Chemicals, Textiles and clothing are the two categories where both the countries have high RCA. India has a whopping 18.25 RCA index while Sri Lanka also has a very high RCA index of 5.48 for Chemicals which proves that both India and Sri Lanka can improve trade by exporting Chemicals to countries with low RCA.

The products in which India has a scope to trade with Sri Lanka are Animal products, Minerals, stone and glass, fuels, metals and transportation since it has a positive revealed comparative advantage while Sri Lanka has a low RCA in these categories. On the other hand, Sri Lanka has a comparative advantage in exports of vegetable, food products, wood and miscellaneous and hence can gain by trading these commodities with India since India has a low RCA.

4.5.2. Trade Complementarity Analysis

Trade complementarity index (TCI) measures the degree to which the export pattern of one country matches the import pattern of another. A high degree of TCI

indicates that a large share of exports of one country to be the import share of another country. TCI ranges from 0 to 100, and a score of 0 indicates null trade complementarity between partner countries, while a score of 100 denotes that the export of one country and import of the partner country exactly match and the countries are ideal trading partners. A high value of TCI found for countries with contrasting RCA profiles and is desirable for effective bilateral trade.

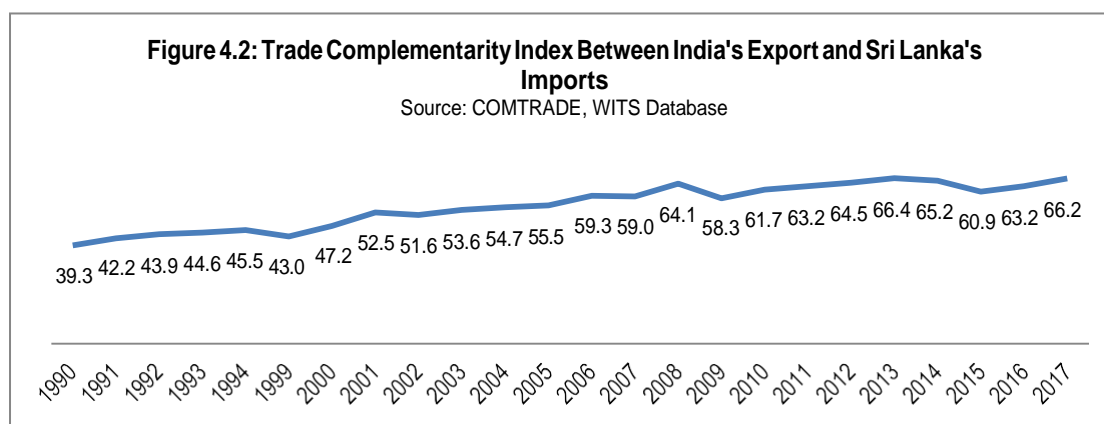
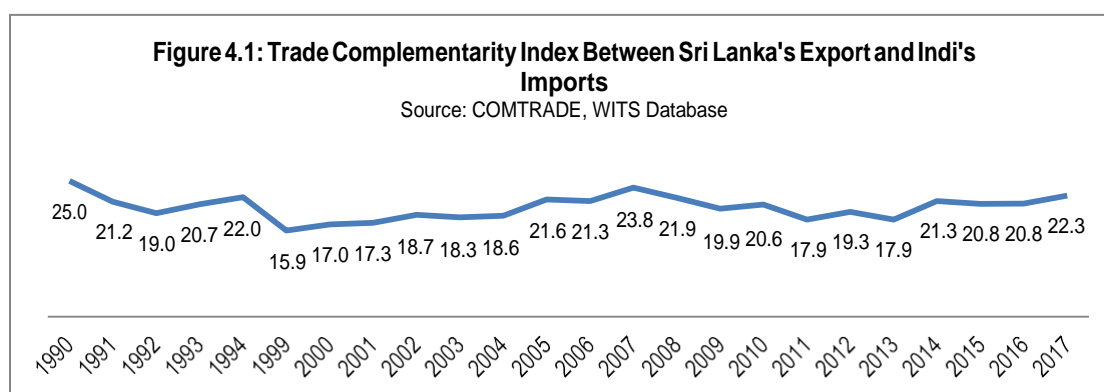


Figure 4.1 shows the computation of the trade complementarity Index between Sri Lanka's exports and India's imports from 1990 to 2017 using data from UNCOMTRADE and WITS Database. The above analysis shows that there is a low trade complementarity between the two countries. The highest level of TCI is 25 which is observed in 1990 which gradually declines overtime and started improving slowly since 2005 with fluctuations in between. However, the lowest TCI of 15.88 is

observed in 1999 and overall the trade complementarity index remains below 25. The observation indicates that only 22.30 % of Sri Lanka's exports forms a part of India's imports

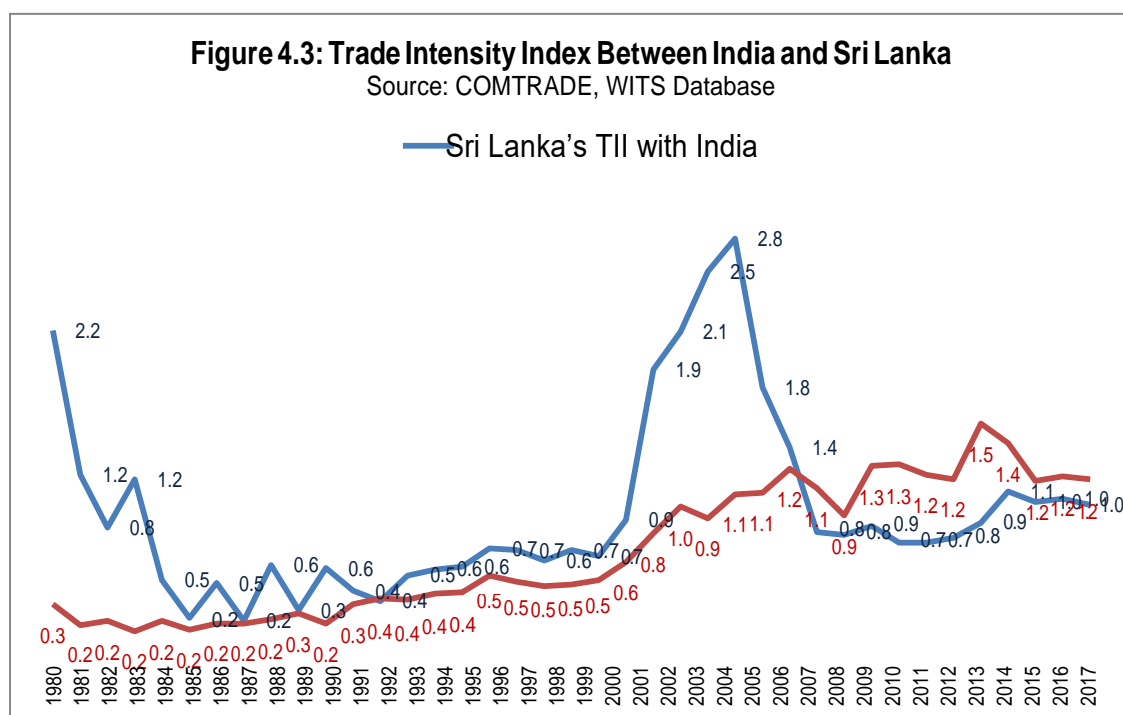
Figure 4.2 shows the computation of the trade complementarity Index between India's exports and Sri Lanka's imports. It is evident from that table that there is a high level of trade complementarity between India's exports and Sri Lanka's imports. TCI ranges between 39.31 in 1990 to 66.37 in 2013. The highest level of TCI is observed in 2013 where 66.37 % of India's exports forms Sri Lanka's imports share. TCI between India's exports and Sri Lanka's imports has gradually risen over the years which shows the scope for improvement in trade between India and Sri Lanka

The observations for trade complementarity index can be supported by the RCA profiles computed in table 4.7 and table 4.8. According to Table 4.8 , the categories in which Sri Lanka has a high RCA while India has a low RCA are only for the two categories of Vegetables and Miscellaneous which explains the low complementarity of India's imports with Sri Lanka's exports. However, if one analyse Table 4.7, the categories in which India has a strong RCA while Sri Lanka has low RCA are animal products, minerals, fuels, stone and glass, metals and transportation which explains the high complementarity between India's exports and Sri Lanka's imports.

If one further observe the RCA index of 1990, the categories in which both the countries have positive RCA are exactly similar and hence, TCI for both country's exports with partner country's imports remain low.

4.5.3. Trade Intensity

The trade intensity index (TII) is used to determine whether the value of trade between two countries is greater or smaller than would be expected on the basis of their importance in world trade. It is defined as the share of one country’s exports going to a partner with respect to its total trade divided by the share of world exports going to the partner with respect to the total world trade (Chandran, 2010). As explained in Chapter 1, an index of more than one indicates an intense bilateral trade flow that is larger than expected, compared with its trading pattern with rest of the world. Whereas, TII less than one indicates a bilateral trade flow that is smaller than expected, compared with its trading pattern with rest of the world.



Trade Intensity Index (TII) is calculated in Figure 4.3 for India and Sri Lanka for the period 1980 to 2018 using data from Direction of trade Statistics, IMF and

WITS Database. According to the computation in table, Sri Lanka's TII with India shows that the bilateral trade is larger than expected for the years 1980, 1981, 1983, 2002, 2003, 2004, 2005, 2006, 2007, 2015, 2016, 2017 i.e for 12 years out of 38 years given the importance of India in world trade. India's TII with Sri Lanka is above one for the years 2005-2008 and 2010-2018 ie for a total of 13 out of 38 years which signifies that India's trade with Sri Lanka is larger than expected for the given years given the importance of Sri Lanka in world trade.

It is thus evident that trade intensity between India and Sri Lanka is low for majority of the study years. It can also be observed that while Sri Lanka's TII with India fluctuates overtime, India's TII with Sri Lanka has improved overtime and has turned positive only since 2005 and remains positive till date.

4.6. Exports Composition of India and Sri Lanka

The exports composition of bilateral trade between India and Sri Lanka is analysed to find whether the export composition matches the revealed comparative index of the country and to discover any potential for improvement of bilateral trade. Table 4.9 shows the exports composition of India to Sri Lanka for 16 groups of products. The top six exports products of India to Sri Lanka are Chemicals, Fuels, Metals, Textiles and clothing, Vegetables and Transportation. A comparative analysis of exports compositions of India to Sri Lanka with RCA profiles for India shows that the major export items of India to Sri Lanka are the products in which India has a high RCA in comparison to Sri Lanka's low RCA. Categories in which India and Sri Lanka both has strong RCA such as Chemical products, India's exports to Sri Lanka is still substantial since India's RCA is much higher in comparison to Sri Lanka's RCA for the category.

Table 4.9: India's exports to Sri Lanka (US\$ thousands)

Products	2017	2010	2000	1990
Animal	17564.03	11817.66	4633.09	3172.2
Chemicals	385554.48	263011.43	64490.4	13573.49
Food Products	88636.92	123197.83	19982.98	3540.24
Footwear	8387.69	2173.61	961.38	
Fuels	815427.55	597916.37	269.08	0
Hides and Skins	5667.33	6201.05	1761.73	1077.4
Mach and Elec	331873.35	181290.27	43399.65	8728.11
Metals	405662.9	295799.43	80820.99	6417.8
Minerals	151026.78	33158.63	24669.06	625.77
Miscellaneous	46614.81	80269.34	12237.21	797.36
Plastic or Rubber	134154.85	93725.96	23129.23	1700.45
Stone and Glass	60961.65	19163.36	10165.05	1801.21
Textiles and Clothing	604792.38	396179.8	131540.02	
Transportation	765010.92	912880.11	79905.7	44965.04
Vegetable	478222.32	196944.11	62526.49	16136.8
Wood	113871.2	91394.3	29614.75	5536.85

Source: WITS Database

Table 4.10: Sri Lanka's exports to India (US\$ thousands)

Product Group	2017	2010	2000	1990
Animal	1200.87	1646.51	851.56	14.58
Chemicals	16243.8	8260.76	432.28	394.93
Food Products	88785.19	79666.23	1115.41	34.35
Footwear	301.69	449.37	85.46	0
Fuels	85654.98	185.7	5258.16	
Hides and Skins	266.05	77.19	25.18	211.5
Mach and Elec	57804.65	62366.49	2417.45	818.73
Metals	52226.52	40662.28	6856.4	11201.93
Minerals	5457.38	2874.78	25.4	157.13
Miscellaneous	75613.15	15547.62	304.23	2.41
Plastic or Rubber	38968.86	58034.58	3986.65	1542.22
Stone and Glass	29082.93	19845.15	454.79	1148.15
Textiles and Clothing	98206.74	34572.64	6610.43	128
Transportation	26589.29	22073.74	632.19	446.83
Vegetable	154327.83	77101.11	22717	4363.03
Wood	58856.15	43817.4	5099.52	125.52

Source: WITS Database

Table 4.10 shows the exports composition of Sri Lanka to India for 16 groups of products for the years spanning from 1990- 2017. The major exports products of Sri Lanka to India are vegetable and food products, textiles and clothing, fuels, miscellaneous and wood products. A comparison with RCA profiles for Sri Lanka shows that the major export items of Sri Lanka to India are the products in which Sri Lanka has a high RCA in comparison to India's low RCA.

4.7. Summary of the Observations

From the above analysis of direction of Sri Lanka's trade, Revealed Comparative Advantage Index of both the countries, Trade Complementarity Index and Trade Intensity Index between the countries, Exports composition of India and Sri Lanka, we can make the following observations:

- India is still the major trading partner of Sri Lanka but its share has been declining with the possibility of China surpassing it in the near future.
- India is the third biggest export destination of Sri Lanka with its share gradually improving in comparison to the falling shares for the top two export markets.
- RCA index of India shows that India has a scope to trade with Sri Lanka in Animal products, Minerals, stone and glass, fuels, metals and transportation since it has a high revealed comparative advantage while Sri Lanka has a low RCA in these categories.
- On the other hand, the RCA index of Sri Lanka shows that Sri Lanka has a comparative advantage in exports of vegetable, food products, wood and

miscellaneous and hence can gain by trading these commodities with India since India has a low RCA.

- There is a low trade complementarity between Sri Lanka's exports and India's imports. Hence, it may be advisable for Sri Lanka to concentrate its exports products on few items where it has a comparative advantage with India.
- There is a higher trade complementarity between India's exports and Sri Lanka's imports which indicates a higher potential for India's trade with Sri Lanka
- Sri Lanka's TII with India shows that the bilateral trade is larger than expected for a total of 12 years out of 38 years given the importance of India in world trade.
- India's TII with Sri Lanka is above one for the years 2005-2008 and 2010-2018 ie for a total of 13 out of 38 years which signifies that India's trade with Sri Lanka is larger than expected for the given years given the importance of Sri Lanka in world trade.
- The exports composition of India and Sri Lanka indicates that the major export items of the countries are the products in which the country has a high RCA in comparison to the partner country's RCA.

Chapter 5

SUMMARY OF FINDINGS & CONCLUSION

Chapter 5

SUMMARY OF FINDINGS & CONCLUSION

5.1. Major Findings

In view of the results of the analysis in the preceding chapters, the following points may be highlighted as the major findings:

1. Trends of bilateral trade between India and the seven SAARC countries shows that there is a significant improvement in trade especially since 2000 for all the countries with exports of India outweighing imports from the partner countries. The annual growth rate of India's bilateral trade with the SAARC countries shows an increasing trend over time. This may be construed as increasing integration of India's economy with its neighbours.
2. Intra-SAARC trade of member countries as a percentage of trade with the rest of the world shows only a dismal improvement over time, with compound annual growth rate of exports and imports between 1990 to 2017 only amounting to 2.39% and 0.54% respectively, which hints that improvement in bilateral trade does not result in increase of intra-SAARC trade.
3. The conventional Unit root analysis using ADF test shows that exports and imports are non-stationary at levels which shows changing variance over time, and the unpredictability of India's trade with its neighboring countries. This reflects the volatility of India's trades which is subject to a change in geopolitical conditions, bilateral trade agreements and other factors within the region. Meanwhile, the unit root analysis which accounts for the structural

break using Zivot-Andrews test have shown that exports and imports are either stationary at levels or at first difference. The results shows that accounting for the structural break has a significant impact on rendering the stationarity of the series.

4. The structural break analysis also shows that India's trade with SAARC countries had undergone substantial change during the period between 2005-2007. Another interesting observation from the break year is that all the break points identified are observed to be after the implementation of the trade agreements i.e SAPTA for 1995 and SAFTA for 2006. For measuring the impact of the trade agreements empirically, gravity model has been applied. Hausman's specification test has been used to check the appropriateness of a fixed effect model or a random effect model where the test results shows that random effect model is more appropriate for the gravity analysis.
5. The growth of the partner economy as indicated by GDP has significantly increased exports of India to the partner countries, while the exchange rate between India and the partner country has a negative impact on India's export. The growth of India's economy as indicated by GDP and population has significantly increased imports of India from the partner countries, while the exchange rate and distance between India and the partner country has a negative impact on India's export.
6. The two regional trade agreements are also found to have significant and positive impact on the estimation of imports and exports of India from SAARC member countries. So, the regional trade agreement in the region has

increased the integration of Indian economy with the member countries. (*Hypothesis 1*)

7. The analysis of direction and trends of Sri Lanka's trade reveals that India is still the major trading partner of Sri Lanka but its share has been declining with the possibility of China surpassing it in the near future. India is the third biggest export destination of Sri Lanka with its share gradually improving in comparison to the falling shares for the top two export markets.
8. RCA index of India shows that India has a scope to trade with Sri Lanka in Animal products, Minerals, stone and glass, fuels, metals and transportation since it has a high revealed comparative advantage while Sri Lanka has a low RCA in these categories. On the other hand, the commodities in which Sri Lanka has a high RCA and can gain by trading with India are in exports of vegetable, food products, wood and miscellaneous since India has a low RCA comparatively.
9. There is a low trade complementarity between Sri Lanka's exports and India's imports. Meanwhile, a higher trade complementarity is observed for India's exports with Sri Lanka's imports which also shows an increasing trend indicating a higher potential for India's trade with Sri Lanka (*Hypothesis 2*).
10. Sri Lanka's TII with India shows that the bilateral trade is larger than expected for a total of 12 years out of 38 years given the importance of India in world trade and India's TII with Sri Lanka is above one for a total of 13 out of 38 years which signifies that India's trade with Sri Lanka is larger than expected given the importance of Sri Lanka in world trade. It may also be observed that

Sri Lanka's TII with India outweighs India's TII with Sri Lanka until 2007 beyond which India's TII has gained prominence over Sri Lanka's TII.

II. The exports composition of India and Sri Lanka indicates that the major export items of the countries are the products in which the country has a high RCA in comparison to the partner country's RCA. The analysis of RCA index, TII and TCI for India and Sri Lanka shows that there is a positive impact of ISLFTA on bilateral trade between India and Sri Lanka (*Hypothesis 3*)

5.2. Conclusions & Suggestions

With the increasing globalization and increasing integration of the world economy, it is important for a large country like India to reap the advantage of forming an RTA and joining bilateral FTAs. The adoption of import-substituting policies among South Asia after independence renders it to be a late comer in the formation of RTAs. With the operationalisation of SAARC and subsequent RTAs and bilateral FTAs, the trade agreements are found to have positive impact on India's integration into world trade. However, the slow progress and consequent failure of RTA's has led to proliferation of bilateral trade agreements which if not checked can render the RTAs redundant. The operation of bilateral trade agreements along with RTAs simultaneously, can lead to overlapping of trade agreements referred to as "spaghetti bowl" which can lead to greater confusion and further complexities. E.g:- In the case of SAFTA and ISLFTA, there are instances where Sri Lankan exporters are eligible for tariff concessions under SAFTA, but falls under negative list under ISLFTA. Unless SAARC takes appropriate action

immediately, it may find itself obsolete in the process of regional integration of South Asian economies.(Weerakoon, 2001).

The dismal progress of SAARC is mainly due to internal constraints which stems from political tensions especially between India and Pakistan. Despite the charter requiring its member countries to meet annually, SAARC summit have been cancelled numerous times which is evident from the fact that after 34 years of its formation, only 18 summits have been held with the last summit held in Kathmandu, 2014. Therefore, maintaining a good political relation apart from economic ties is imperative for having an effective trade between countries.

It is observed that Sri Lanka has a comparative advantage in export of wood products and India's imports of wood from Sri Lanka is only limited to 55 items while 136 items under the category is included in the negative lists. Therefore, there is scope for improvement in trade of wood product by reducing the negative list in this category. Sri Lanka is dependent on India for a wide variety of products including animal and vegetable products, textile and clothing, fuels, metals, chemicals and transport. Most of such category of products will not benefit from FTA since they are subjected to Sri Lanka's negative lists. Therefore, there is a potential for improving Sri Lanka's imports from India since India has a high RCA relative to Sri Lanka in the said categories.

In addition, there is huge scope for further research in the area under study. Since, the present study only confines itself to trade in goods, it can be expanded to include trade in services, analysis of investment linkages, Foreign Direct Investment, Intra-Industry, Inter-Industry trade and welfare

implications of trade agreements such as poverty incidence, inequality index etc. Commodity wise analysis can be computed for SAARC member countries to study the complementarity of goods traded along with the revealed comparative index profiles of the member countries. The commodity wise analysis for Sri Lanka bilateral trade with India can be made more specific by analyzing at 4 digit HS classification or 6 digit HS classification. A region wise analysis can also be undertaken since trade agreements could have varying effects across regions and sectors across the member countries. Another interesting area for further research could be the analysis of potential gain from probable FTA among existing RTAs or between countries using GTAP simulations.

APPENDICES

APPENDIX I

INDIA'S TRADE IMPORTS WITH SAARC COUNTRIES							
	Afghanistan	Bhutan	Sri lanka	Pakistan	Maldives	Nepal	Bangladesh
1960	10.5		8.2	31.9			
1961	5.9		9.1	23.5			
1962	7.4		15.4	37.4			
1963	11.8		11.8	23.6			
1964	6.8		13.7	22.2		7.3	
1965	11		9.6	27.4		23.9	
1966	8.6		4.3	1.8		14.2	
1967	8.6		4.0	2.8		22.6	
1968	13.2		2.9			20.2	
1969	13.79		4.56		0.03	21.33	
1970	11.35		3.74		0.03	14.75	
1971	13.49		1.34			10.57	
1972	14.3		1.79			14.66	2.08
1973	16.63		1.51			16.01	22.83
1974	18.36		0.23			24.06	10.45
1975	20.56		0.36	21.58	0.01	28.47	5.07
1976	27.46		0.32	5.45	0.01	38.61	9.79
1977	26.74		1.18	22.99	0.02	24.96	0.58
1978	27.11		7.24	24.84	0.02	14.85	2.79
1979	25.29		11.09	30.1		19.04	4.52
1980	12.99		31.74	76.46		21.04	12.35
1981	2.74		55.53	76.71		44.53	13.55
1982	10.91		10.66	49.9		46.39	18.61
1983	13.98		25.55	14.36	0.01	41.52	5.75
1984	14.35		14.45	20.47	0.06	43.81	26.74
1985	11.84		5.38	27.91	0.02	50.47	28.9
1986	19.51		9.79	14.63	0.02	40.49	7.9
1987	19.53		5.62	23.45	0.02	40.91	14.11
1988	18.55		11.47	38.02	0.01	35.49	12.28
1989	4.83		10.59	34.18	0.03	3.3	13.95
1990	14.07		22.05	44.86	0.03	15.1	15.26
1991	10.87	0.5	11.51	57.61	0.03	19.19	5.73
1992	5.77	1.28	13.57	145.77	0.09	22.92	9.78
1993	2.68	2.89	17.17	46.78	0.06	18.78	12.93
1994	2.01	3.04	30.97	47.15	0.05	13.89	34.27
1995	7.67	16.43	38.91	37.37	0.13	27.46	78.82
1996	4.26	16.54	34.88	38.59	0.18	49.35	57.96
1997	8.8	18.5	33.95	42.35	0.2	87.43	53.65
1998	23.75	7.93	35.83	171.9	0.13	132.48	59.5
1999	22.85	15.03	42.58	104.75	0.33	177.68	74.25
2000	25.23	20.33	44.8	65.05	0.25	238.48	79.85

2001	19.93	23.21	54.76	69.51	0.23	355.88	59.1
2002	18.22	30.1	84.96	49.83	0.35	300.31	61.32
2003	35	47.32	168.76	54.45	0.36	284.97	73.73
2004	43.36	50.7	321.88	85.91	0.53	326.52	60.57
2005	55.57	84.33	527.87	158.41	0.64	371.34	110.11
2006	40.48	128.27	497.39	287.33	2.79	324.44	203.13
2007	90.55	181.15	590.99	296.67	3.87	547.29	249.87
2008	130.61	161.2	431.25	377.32	4.71	567.45	329.45
2009	120.7	141.29	327.98	273.8	3.24	427.15	234.88
2010	144.58	186.14	519.67	321.34	31.56	506.71	359.13
2011	119.91	206.16	718.99	362.66	18.4	538.7	583.07
2012	148.64	182.81	638.93	574.12	7.31	567.32	596.61
2013	209.09	148.89	672.84	373.71	4.12	504.65	554.41
2014	242.14	159.46	591.69	529.32	4.47	602.04	556.64
2015	315.47	245.62	853.89	456.4	5.06	504.94	651.26
2016	282.3	220.06	631.95	462.43	6.26	407.5	711.67
2017	366.19	195.8	609.66	431.84	7.18	374.04	550.97
2018	420.24	255.92	1318.91	542.68	20.05	403.61	899.47

APPENDIX- II

INDIA'S TRADE EXPORTS WITH SAARC COUNTRIES							
Year	Afghanistan	Bhutan	Sri Lanka	Pakistan	Maldives	Nepal	Bangladesh
1960	12.8		38.8	21.3			
1961	10.9		35	20.6			
1962	13.1		31.5	19.6			
1963	14.8		36.1	15.2			
1964	11.8		35.1	18.6		26.1	
1965	11.8		24.6	16.5		32	
1966	11.3		27.5			37.2	
1967	8.1		21.2			27.1	
1968	11.9		26.6			30.3	
1969	14.94		32.78		0.05	36.47	
1970	16.67		39.64	0.45	0.21	36.21	
1971	18.5		36.44	0.02	0.31	31.15	
1972	12.55		14.98		0.22	45.58	85.39
1973	17.27		9.5		0.16	37.44	174.35
1974	18.9		31.45		0.81	45.74	61.35
1975	33.32		28.75		0.83	59.61	71.23
1976	27.79		32.06	4.86	0.38	56.85	59.41
1977	31.17		54.71	18.18	0.66	53.79	66.42
1978	38.87		103.51	26.5	1.25	69.75	61.47

1979	30.58		121.21	11.05	2.21	77.11	97.76
1980	21.1		100.62	2.08	2.94	94.5	105.52
1981	28.01		65.23	3.09	0.56	79.46	49.01
1982	15.24		73.41	8.3	2.93	51.07	60.18
1983	14.14		95.96	8.12	1.36	61.53	41.97
1984	14.1		117.4	11.19	1.58	94.97	89.97
1985	13.44		71.28	12.07	0.72	81.74	104.19
1986	14.72		67.12	13.21	1.86	82.05	112.59
1987	21.75		73.56	12.21	2.28	72.85	145.48
1988	26.9		90.28	19.27	3.03	81.98	169.99
1989			116.56	42.35		214.65	176.23
1990	58.78		101.52	43.48	4.7	39.54	297.1
1991	18.03	1.2	174.53	40.17	4.91	77.28	324.56
1992	33.63	2.14	231.35	51.98	7.7	72.85	353.18
1993	28.67	4.59	246.82	57.78	6.32	75.45	429.62
1994	14.51	6.8	333.58	59.38	15.61	84.52	521
1995	14.69	11.72	383.39	70.4	12.47	107.13	959.62
1996	20.44	10.07	458.33	140.95	50.74	157.6	832.45
1997	21.58	15.48	486.25	146.7	9.13	168.93	807.13
1998	14.9	10.53	450.13	115.38	8.47	134.3	943.33
1999	28.1	8.1	483.75	96.2	7.58	144	726.13
2000	27.73	2.72	604.9	163.33	20.28	143.4	860.33
2001	20.85	5.97	610.19	164.29	25.25	189.01	1000.63
2002	51.67	31.18	848.46	190.62	30.41	316.38	1132.54
2003	124.29	76.88	1219.64	266.74	39.65	589.6	1599.55
2004	154.4	85.4	1345.11	450.82	42.47	713.68	1624.82
2005	148.36	95.52	1871.8	647.19	62.59	830.76	1656.05
2006	171.96	67.92	2197.85	1184.51	58.44	911.36	1636.98
2007	232.07	79.36	2682.76	1795.53	84.35	1361.66	2594.56
2008	362.27	109.1	2880.51	1779.27	109.7	1706.86	2969.72
2009	469.21	107.63	1732.87	1449.37	107.54	1417.25	2181.1
2010	393.5	159.34	3313.93	2250.89	100.38	1906.76	3023.64
2011	501.67	220.06	4806.93	1676.23	118.91	2686.98	3764.89
2012	479.93	228.84	4193.79	1747.34	122.69	3058.91	5017.8
2013	393.5	297.24	4227.28	2247.65	109.87	3438.62	5710.36
2014	443.05	303.35	6433.18	2181.82	139.84	4405.08	6579.88
2015	533.47	415.89	5526.18	2007.62	168.92	3310.6	5727.64
2016	473.57	429.59	3910.61	1646.06	181.76	4614.51	5711.64
2017	639.1	417.5	4424.27	1795.82	213.49	5567.22	7280.87
2018	728.71	654.03	4662.49	2362.21	220.94	7343.39	8826.53

APPENDIX- III

Commodity at 2 digit HS Classification grouped into 16 categories	Code
1. ANIMAL	1-5
Animals; live	1
Meat and edible meat offal	2
Fish and crustaceans, molluscs and other aquatic invertebrates	3
Dairy produce; birds' eggs; natural honey; edible products of animal origin, not elsewhere specified or included	4
Animal originated products; not elsewhere specified or included	5
2. VEGETABLE	6-15
Trees and other plants, live; bulbs, roots and the like; cut flowers and ornamental foliage	6
Vegetables and certain roots and tubers; edible	7
Fruit and nuts, edible; peel of citrus fruit or melons	8
Coffee, tea, mate and spices	9
Cereals	10
Products of the milling industry; malt, starches, inulin, wheat gluten	11
Oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruit, industrial or medicinal plants; straw and fodder	12
Lac; gums, resins and other vegetable saps and extracts	13
Vegetable plaiting materials; vegetable products not elsewhere specified or included	14
Animal or vegetable fats and oils and their cleavage products; prepared animal fats; animal or vegetable waxes	15
3. FOOD PRODUCTS	16-24
Meat, fish or crustaceans, molluscs or other aquatic invertebrates; preparations thereof	16
Sugars and sugar confectionery	17
Cocoa and cocoa preparations	18
Preparations of cereals, flour, starch or milk; pastrycooks' products	19
Preparations of vegetables, fruit, nuts or other parts of plants	20
Miscellaneous edible preparations	21
Beverages, spirits and vinegar	22
Food industries, residues and wastes thereof; prepared animal fodder	23
Tobacco and manufactured tobacco substitutes	24
4. MINERALS	25-27
Salt; sulphur; earths, stone; plastering materials, lime and cement	25

Ores, slag and ash	26
5. FUELS	27
6. CHEMICALS	28-38
Inorganic chemicals; organic and inorganic compounds of precious metals; of rare earth metals, of radio-active elements and of isotopes	28
Organic chemicals	29
Pharmaceutical products	30
Fertilizers	31
Tanning or dyeing extracts; tannins and their derivatives; dyes, pigments and other colouring matter; paints, varnishes; putty, other mastics; inks	32
Essential oils and resinoids; perfumery, cosmetic or toilet preparations	33
Soap, organic surface-active agents; washing, lubricating, polishing or scouring preparations; artificial or prepared waxes, candles and similar articles, modelling pastes, dental waxes and dental preparations with a basis of plaster	34
Albuminoidal substances; modified starches; glues; enzymes	35
Explosives; pyrotechnic products; matches; pyrophoric alloys; certain combustible preparations	36
Photographic or cinematographic goods	37
Chemical products n.e.c.	38
7. Plastic or Rubber	39-40
Plastics and articles thereof	39
Rubber and articles thereof	40
8. Hides and Skin	41-43
Raw hides and skins (other than furskins) and leather	41
Articles of leather; saddlery and harness; travel goods, handbags and similar containers; articles of animal gut (other than silk-worm gut)	42
Furskins and artificial fur; manufactures thereof	43
9. WOOD	44-49
Wood and articles of wood; wood charcoal	44
Cork and articles of cork	45
Manufactures of straw, esparto or other plaiting materials; basketware and wickerwork	46
Pulp of wood or other fibrous cellulosic material; recovered (waste and scrap) paper or paperboard	47
Paper and paperboard; articles of paper pulp, of paper or paperboard	48

Printed books, newspapers, pictures and other products of the printing industry; manuscripts, typescripts and plans	49
10. TEXTILES AND CLOTHING	50-63
Silk	50
Wool, fine or coarse animal hair; horsehair yarn and woven fabric	51
Cotton	52
Vegetable textile fibres; paper yarn and woven fabrics of paper yarn	53
Man-made filaments; strip and the like of man-made textile materials	54
Man-made staple fibres	55
Wadding, felt and nonwovens, special yarns; twine, cordage, ropes and cables and articles thereof	56
Carpets and other textile floor coverings	57
Fabrics; special woven fabrics, tufted textile fabrics, lace, tapestries, trimmings, embroidery	58
Textile fabrics; impregnated, coated, covered or laminated; textile articles of a kind suitable for industrial use	59
Fabrics; knitted or crocheted	60
Apparel and clothing accessories; knitted or crocheted	61
Apparel and clothing accessories; not knitted or crocheted	62
Textiles, made up articles; sets; worn clothing and worn textile articles; rags	63
11. FOOT WEAR	64-67
Footwear; gaiters and the like; parts of such articles	64
Headgear and parts thereof	65
Umbrellas, sun umbrellas, walking-sticks, seat sticks, whips, riding crops; and parts thereof	66
Feathers and down, prepared; and articles made of feather or of down; artificial flowers; articles of human hair	67
12. Stone and Glass	68-71
Stone, plaster, cement, asbestos, mica or similar materials; articles thereof	68
Ceramic products	69
Glass and glassware	70
Natural, cultured pearls; precious, semi-precious stones; precious metals, metals clad with precious metal, and articles thereof; imitation jewellery; coin	71
13. METALS	72-84
Iron and steel	72
Iron or steel articles	73

Copper and articles thereof	74
Nickel and articles thereof	75
Aluminium and articles thereof	76
Lead and articles thereof	78
Zinc and articles thereof	79
Tin; articles thereof	80
Metals; n.e.c., cermets and articles thereof	81
Tools, implements, cutlery, spoons and forks, of base metal; parts thereof, of base metal	82
Metal; miscellaneous products of base metal	83
Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	84
14. MACH AND ELEC	85-86
Electrical machinery and equipment and parts thereof; sound recorders and reproducers; television image and sound recorders and reproducers, parts and accessories of such articles	85
Railway, tramway locomotives, rolling-stock and parts thereof; railway or tramway track fixtures and fittings and parts thereof; mechanical (including electro-mechanical) traffic signalling equipment of all kinds	86
15. TRANSPORTATION	87-90
Vehicles; other than railway or tramway rolling stock, and parts and accessories thereof	87
Aircraft, spacecraft and parts thereof	88
Ships, boats and floating structures	89
Optical, photographic, cinematographic, measuring, checking, medical or surgical instruments and apparatus; parts and accessories	90
16. MISCELLANEOUS	91-99
Clocks and watches and parts thereof	91
Musical instruments; parts and accessories of such articles	92
Arms and ammunition; parts and accessories thereof	93
Furniture; bedding, mattresses, mattress supports, cushions and similar stuffed furnishings; lamps and lighting fittings, n.e.c.; illuminated signs, illuminated name-plates and the like; prefabricated buildings	94
Toys, games and sports requisites; parts and accessories thereof	95
Miscellaneous manufactured articles	96
Works of art; collectors' pieces and antiques	97
Commodities not specified according to kind	99

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