India's Experiences on Preferential Trade Agreements

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Abbreviations

APEC	Asia Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
BIMSTEC	Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation
BoP	Balance of Payment
BoT	Balance of Trade
BPO	Business Process Outsourcing
BRICS-TERN	BRICS Trade & Economics Research Network
CAT	Competition Appellate Tribunal
CCI	Competition Commission of India
CECA	Comprehensive Economic Cooperation Agreement
CEP	Closed Economic Partnership
CEPA	Comprehensive Economic Partnership Agreement
CGE	Computable General Equilibrium
EU	European Union
FDI	Foreign Direct Investment
FTAs	Free Trade Agreements

GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GEAC	Genetic Engineering Approval Committee
GoE	Group of Experts
HLC	High Level Committee
HRP	Human Resource Planning
IIT	Intra-industry Trade
IMF	International Monetary Fund
IPR	Intellectual Property Right
ISLFTA	India-Sri Lanka Free Trade Agreement
JSG	Joint Study Group
JWG	Joint Working Group
LDCs	Least Developed Countries
LPO	Legal Process Outsourcing
MDGs	Millennium Development Goals
MERCOSUR	Mercado Común del Sur
MFN	Most Favoured Nation
MRTP	Monopolies and Restrictive Trade Practices
MTP	Monopolistic Trade Practices
NTBs	Non-tariff Barriers
OFDI	Outward Foreign Direct Investment
PTAs	Preferential Trade Agreements
RCA	Revealed Comparative Advantage
RCGM	Review Committee on Genetic Manipulation
RoO	Rules of Origin

RTAs	Regional Trade Agreements
RTPs	Restrictive Trade Practices
SAFTA	South Asia Free Trade Agreement
SAPTA	South Asia Preferential Trade Agreement
SAARC	South Asian Association for Regional Cooperation
SEZs	Special Economic Zones
TCI	Trade Complementarity Index
TDCA	Trade Development and Cooperation Agreement
TERC	Trade and Economic Relations Committee
UTPs	Unfair Trade Practices
WTO	World Trade Organisation

Preface

Why is India pursuing a number of preferential trade agreements while, at the same time, acting like a good international citizen by highlighting the virtues of multilateralism. Conventional thinking and a narrow approach to address this question lead us to an easy answer: as the Doha Round of negotiations by the WTO Members is not coming to an end, India is engaging itself more and more with preferential trade agreements in order to garner benefits from gradual trade liberalisation. Some of the PTAs are motivated by strategic interests also.

India is gradually moving away from shallow preferentialism to deep engagement so as to develop its capacity to deal with new issues of trade governance which are expected to come up on the multilateral platform – sooner or later. In other words, India's approach to preferential trade agreements is based on the paradigm of multilateralising preferentialism.

The genesis of this study dates back to 2008 when the Department of Commerce, Government of India asked us to prepare a diagnostic study on India's engagement with PTAs. It was on account of our proposal to the Department to engage a think- and action-tank like us to implement a rolling programme focusing on India's preferential trade agreements so to develop our capacity to negotiate.

While there was considerable political buy-in for our proposal, it was railroaded by ill informed opinion. Nevertheless, we produced a paper on Preferential Trade

Agreements and India, which was appreciated by many in the Department of Commerce and the trade policy community.

Incidentally, our proposal was a part of our larger engagement with the Government of India, through the Department of Commerce, to develop the country's capacity on economic diplomacy.

With support from the Department of Commerce, we had implemented a very successful rolling programme on India's economic diplomacy. The programme was scheduled to be done over a period of three years. The feedback from those who attended the programme was very encouraging. For e.g. one back office official said that his notes are now more professional and tailored with negotiating calculus in mind, as against the unilateral notes which he had produced in the past. Alas, the same ill informed official railroaded it too. Who suffered – not he, neither us but our country!

In our lexicon, failure is not absolute but deferred success. We are sure that sooner than later the Department of Commerce will realise the value of our proposal and start implementing. It does not matter whether we do it or not; our country should benefit from its implementation.

This study is a comprehensive extension of our earlier work and evaluates India's negotiating experiences on preferential trade agreements. It draws lessons from some select engagements such as like India-Sri Lanka Free Trade Agreement, Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation, India-Thailand Comprehensive Economic Cooperation Agreement, India-MERCOSUR Preferential Trade Agreement, India-Singapore Comprehensive Economic Cooperation Agreement, India-ASEAN Free Trade Agreement.

The focus is on evaluating and analysing India's negotiating process and its preparedness for negotiation. The study makes case based analyses of good practices highlighting ways of

preparedness adopted by other countries. Given the advances that India has made in negotiating PTAs, such analytical studies underline the scope for improvement in negotiating preparedness.

Cost-benefit analysis has also been undertaken for some PTAs. In some cases, it was found that while economic cost was more than economic benefits, political benefits from a PTA often outweigh economic costs.

Moreover, such analysis is extended to countries like Brazil, Russia, China and South Africa to make a case for greater economic integration among the BRICS group of countries. Incidentally, a draft version of this paper was presented at the launch of a new initiative called BRICS Trade & Economics Research Network. CUTS and a group of like-minded think-tanks from among BRICS countries came together to launch this initiative to conduct network-based research and advocacy on emerging issues of global economic governance.

The initiation of this Network provided us with an opportunity to revise and extend this work. Incidentally, our Brazilian partner of this initiative is doing a study looking at commonalities and differences between the PTAs that industrialised countries like those in Europe and the US have entered into and those of emerging economies like us. This study will provide significant inputs to this larger work on PTAs.

Lessons derived in this study will help our negotiators – not only in negotiating preferential trade agreements but also in the realm of economic diplomacy. For instance, the European Union and India are entering into a final stage of negotiation of the EU-India free trade agreement. We are closely following this negotiation including having done qualitative and quantitative analyses in partnership with reputed institutions like the Centre for Regional Integration at Sussex University.

Recommendations made here will help in appreciating the economic/political costs and benefits from EU-India free trade agreements and other such agreements in future. Thus, our effort is not just to do *ex-post* analyses but also to do *ex-ante* analyses on PTAs including their social, economic and environmental sustainability.

I am sure that this study will develop the negotiating capacity of our present and future trade negotiators including their capacity to understand better larger issues of economic diplomacy. I thank my colleagues who have made this study possible.

Jaipur
March 2012

Pradeep S Mehta
Secretary General

Executive Summary

International trade has been an engine of India's growth story. Both trade and investment have helped India benefit from global economic asymmetries, reduce economic vulnerability, focus on environmental sustainability, and mobilise financial and natural resources for creating avenues for development in both rural and urban areas, thereby creating welfare effects.

India's commitment to multilateralism does continue but besides that it has been taking several measures of economic integration in order to increase liberalisation and enhance market access opportunities. India has concluded several Preferential Trade Agreements (PTAs), Free Trade Agreements (FTAs) and Comprehensive Economic Cooperation Agreements (CECAs) and is also negotiating several others.

This study evaluates India's negotiation experiences on PTAs especially in cases of some select integration efforts including India-Sri Lanka FTA (ISLFTA), Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation (BIMSTEC), India-Thailand CECA India-MERCOSUR PTA, India-Singapore CECA, India-ASEAN FTA, and India-Malaysia CECA. It discusses India's negotiating process on PTAs, and also makes an evaluation and analyses of negotiating process and the preparedness for negotiation. Though the negotiation process suggests that India has made considerable advances, yet there are still room for

improvement in the preparedness for such negotiations. An evaluation of India's negotiation process highlights several issues and also presents the scope of improving preparedness. Moreover, cases of country and regional experiences on PTAs have been undertaken to derive best practices.

India's approach to negotiating PTAs have evolved over time in the direction of greater methodological sophistication, more systematic procedures and attention to economic rewards. There is more emphasis on the establishment and achievement of comprehensive economic goals, as opposed to the mere enhancement of trade in goods and services. This has defined India's negotiation stances at a bilateral and regional level, which are also duly reflected in its multilateral negotiations.

The study also undertakes a cost and benefits analyses of select PTAs of India. Various statistical and econometric techniques like Revealed Comparative Advantage (RCA) index, Intra-industry Trade (IIT) index, Trade Complementarity Index (TCI) and an augmented Gravity Model of trade have been employed for the same. The analysis also includes those for BRICS countries, and recommends a higher degree of intra-BRICS engagement and economic integration.

On the basis of lessons derived from this study, the paper makes several recommendations on how to enhance preparedness for negotiations and also outlines the way forward for the BRICS Trade and Economics Research Network (BRICS TERN).

The genesis of BRICS TERN, which is a network of like-minded think tanks from BRICS countries, stems from the Sanya Summit op BRICS Leaders, held in April 2011, which calls for greater cooperation among the BRICS economies, forming the necessary base for a strong economic growth and development. The Sanya Declaration laid out current and

future action areas, which emphasises on the need to hold BRICS think-tank symposia, and consider establishing a network of research centres of BRICS countries. BRICS TERN was launched in Shanghai, China, on November 19, 2011.

The objective of this Network is for partner organisations to work together on issues of trade and economics, and jointly produce outputs which can assist policy making in BRICS countries.

It recommends that BRICS-TERN can undertake studies on best practices adopted by their respective governments and share these practices to identify gaps for further training and capacity building of the negotiators. It should seek to enhance public participation in economic policy-making and on matters of economic governance through network-based policy research and advocacy on trade and regulatory issues including competition law, investment policies and economic diplomacy.

1
Introduction

International trade continues to be a universally acceptable engine of a country's socio-economic development and economic growth. Trade has helped India in its economic development through harnessing global economic asymmetries, reducing economic vulnerability, environmental sustainability, mobilising financial and natural resources and creating avenues for development infrastructure in both rural and urban areas thereby creating welfare effects.

Trade and globalisation is not new to India. Its economic history can be traced to the period of Indus Valley Civilisation (3000-1500 BC) when people practiced agriculture, domesticated animals, traded with other cities, and followed excellent urban planning. India had the world's largest economy from the 1st to the 18th century. It had a 32.9 percent share of world's Gross Domestic Product (GDP) in the 1st century and 28.9 percent in 1000 AD. In 1700 AD, it was estimated to be 24.4 percent.[1]

Moreover, an overview of independent India reveals that trade openness and reforms have largely contributed to development. In the early years of post-independence era, India witnessed a growth rate of around three-four percent. This trend continued to around three decades till it crossed the figure of five percent in the 1980s.

Owing to India's policy of non-alignment, the national leadership set forth to build the economy through dedicated policies aimed at self-sufficiency. At the time when India launched its first five year plans, agriculture was the mainstay of the economy with its contribution of approximately 55-56 percent of the country's GDP. The rural-urban ratio of the population was such that more than 70 percent of the population lived in rural areas. Other indicators like per capita income were very low. A life expectancy of 32 years at the time of birth and a literacy rate of merely 18 percent explains the level of development at that time, thus making it easy to classify India as a poor country then.

Such nuances can well be supported by other data like gross domestic savings which was about 8 percent of the GDP and exports which were approximately six percent of the GDP. Till the 1980s that is before the reforms, government regulation and control of economic activity was pervasive, and the trade sector did very poorly. One consequence was that imports were highly restricted and their scarcity was itself a major constraint on growth.[2]

India faced a severe balance of payment (BoP) crisis in the late 80s and early 90s which compelled it to secure a US$1.8bn loan from International Monetary Fund (IMF). This landmark event created a new chapter and marked the beginning of economic reforms in 1991 initiated by Prime Minister Manmohan Singh who was then the Finance Minister of the country.

The reforms were comprehensive and structural in nature and made meaningful contribution in accelerating the overall growth of the economy. Often described as one of the most comprehensive economic reforms in Asia, it included amongst others, economic liberalisation, deregulation, privatisation of state-owned enterprises, and increasing opportunities for foreign investments.

In the first phase of liberalisation till 1997, the economy grew at more than seven percent per annum owing to growth in industrial and services sector, while it grew at an average of close to nine percent in the few years preceding the global recession. For instance, the real GDP registered a growth of nine percent in 2007-08 as compared to 9.4 in the previous fiscal, especially owing to the increased activities in the manufacturing sector and the growth of the services sector. The growth rate, however, declined to 7.1 percent during 2008-09 as a result of global economic slowdown. Though, the growth rate declined during this period, India maintained its resilience during those turbulent times. It is noteworthy that the growth rate was 7.8 percent in the first quarter of 2011 over the same quarter, previous year.

From 2004 until 2010, India's average quarterly GDP growth was 8.4 percent reaching a historical high of 10.1 percent in September 2006 and a record low of 5.5 percent in December 2004.[3] The services sector makes the highest contribution to GDP (55.3 percent), while the share of industry is 28.6 percent and that of agricultural sector is 16.1 percent.[4]

India has always played a significant role in the evolution of international trading systems; and its economic diplomacy has been influencing the direction of trade policies at all levels. And thus, being an open economy, India maintains a vibrant trade policy with an urge to enhance its global engagements. The country's total merchandise exports account for US$176.76bn; with UAE (US$25.41bn), US (US$19.12bn) and China (US$10.37bn) being its top three export destinations as of 2009. Moreover, its world imports account for US$266.4bn with its top three sources of imports being China, UAE and US accounting for US$30.61bn, US$19.73bn, and US$15.99bn respectively. In its participation in international trade, India has an unfavourable Balance of Trade (BoT) of US$89.63bn; and on a bilateral level, it has a positive BoT with UAE

(US$5.68bn), Netherlands (US$4.48bn) and US (US$3.12bn), among few others; while with China and Saudi Arabia, among others it has a negative trade balance of US$20.24bn and US$10.62bn respectively.[5]

India has been able to position itself strongly in the global economic order owing to the evolutionary nature of its foreign trade policy. The present foreign trade policy covering the period of 2009-14 aims to provide a stable and conducive environment for increasing exports. Some of its key objectives include: 25 percent annual growth in exports by 2014, double India's share in global trade by 2020, improving export related infrastructure, reducing transaction costs through trade facilitation measures, and securing enhanced market access, among others. It also aims to for diversification of export markets with focus on new markets like Africa, Latin America, Oceania and the CIS.

Investment has also played a crucial role in the country's development. The consolidated FDI policy of India was launched in March 2011 'with the intent of promoting foreign direct investment through a policy framework which is transparent, predictable, simple and clear and reduces regulatory burden the Government of India introduced a consolidated FDI policy. The system of periodic consolidation and updation was also introduced as an investor friendly measure'.[6]

In India FDI can come through 'automatic route' or through 'government route'. The magnitude of FDI in different sector is also defined by this policy. A look at the sectoral description reveals how investment is affecting development in India:

Agriculture and Animal Husbandry: 100 percent FDI has been allowed through automatic route in the activities viz. floriculture, horticulture, cultivation of vegetables & mushrooms under controlled conditions; development and production of seeds and planting material; animal husbandry

(including of breeding of dogs), pisciculture, aquaculture under controlled conditions; and, services related to agro and allied sector.[7]

Mining: 100 percent FDI has been allowed through automatic route in the following activities: a) mining and exploration of metal and non-metal ores including diamond, gold, silver and precious ores[8], b) coal & lignite mining for captive consumption by power projects, iron & steel and cement units[9], c) setting up coal processing plants like washeries[10], and, d) mining and mineral separation of titanium bearing minerals & ores, its value addition and integrated activities.[11]

Electricity Generation, Transmission and Distribution: 100 percent FDI has been allowed through automatic route in the following activities: a) generation and transmission of electric energy produced in hydroelectric, coal/lignite-based thermal, oil-based thermal and gas-based thermal power plants, b) non-conventional energy generation and distribution, c) distribution of electric energy to households, industrial, commercial and other users, and, d) power trading.[12]

Petroleum and Natural Gas Sector: 100 percent FDI has been allowed through automatic route in the activities like exploration activities of oil and natural gas fields, infrastructure related to marketing of petroleum products and natural gas, marketing of natural gas and petroleum products, petroleum product pipelines, natural gas/ pipelines, LNG regasification infrastructure, market study and formulation, and, petroleum refining in the private sector.[13]

Development of Townships, Housing, Built-up infrastructure and Construction-Development projects: 100 percent FDI is allowed through automatic route in the areas of developing townships, housing, built-up infrastructure and construction development projects (which would include, but not be restricted to, housing, commercial premises, hotels,

resorts, hospitals, educational institutions, recreational facilities, city and regional level infrastructure).[14]

Development of Industrial Parks: 100 percent FDI is allowed through automatic route in the areas of both developing new and existing Industrial Parks.

Telecommunication: 74 percent FDI is allowed in the sector of which 49 percent is allowed through automatic route. Any investment above 49 percent but upto 74 percent is allowed only through the government route.[15]

Trading related activities: 100 percent FDI through automatic route has been allowed in trading activities pertaining to cash & carry trading, e-commerce marketing and test marketing.

E-Commerce: FDI up to 100 percent is permitted for e-commerce activities subject to the condition that such companies would divest 26 percent of their equity in favour of the Indian public in five years, if these companies are listed in other parts of the world.[16]

Food Processing: 100 percent FDI is allowed in the sector through automatic route.

The multilateral trading system may be the first best option for achieving an efficient outcome via global welfare maximisation. However, with the impasse in the Doha round, countries are increasingly engaging in PTAs to realise benefits through trade and integration. Apart from the economic benefits, PTAs have been seen to contribute in enhancing political ties and friendly relations among member countries which may also contribute towards a breakthrough in multilateralism. The measures of economic integration undertaken by India has also played a vital role in the process of development especially through increased liberalisation and better market access opportunities for India. India has concluded several Preferential Trade Agreements (PTA), Free Trade Agreements (FTA) and Comprehensive Economic

Cooperation Agreements (CECA) and is also negotiating several others.

The successive part of this paper discusses India's negotiating process on PTAs, and also evaluation and analyses of negotiating process and the preparedness. The next part of the paper deals with negotiation process and the country experiences. Further, the cost and benefits analyses of select PTAs of India have been undertaken and various econometric techniques like Revealed Comparative Advantage (RCA) index[17], Intra-industry Trade (IIT) index[18], Trade Complementarity Index (TCI)[19] and an augmented gravity model of trade have been used. The analysis also includes those for BRICS countries.

2
India's Negotiating Process on PTAs

India has always supported the cause of multilateralism and often adopted a cautious approach to forming PTAs. Though modest in outcomes, such an approach characterises most of the economic decisions India has made since its independence, opting for a mixed economy frame work, rather than going for the extremes.

The post-Cold War era prompted many developing countries to form regional congregations and enter into regional trade agreements (RTAs) and PTAs at a fast pace. This activity stemmed from the perception that those non-aligned to regional groupings were losing out on economic gains from PTAs, even though these agreements were in violation of the basic tenets of WTO, i.e. Most Favoured Nation (MFN) and National Treatment. Similarly, it can be argued that India too resorted to preferential trading as a defensive strategy against loss of markets, rather than as a proactive strategy to expand markets.

India's approach to international trade has mostly been that of increasing liberalisation, while its belief in multilateralism only allowed it to sign a handful of PTAs, and operationalising even fewer. Initially such agreements were largely governed

by geo-economic reasons and were not merely economic instruments. In the contemporary context, India's impetus to more such preferential agreement can, to a considerable extent, be attributed to the slow progress under World Trade Organisation (WTO) and the intangibility of associated benefits. This is largely because the Doha Agenda has been generating too much political scrutiny domestically and agreements like PTAs seem to offer a less complicated pathway to trade openness.

India's negotiation process on PTAs can well be understood by evolution pattern of such negotiations and evaluating the need for preparedness.

Evolution of India's PTA Negotiations

India's approaches to negotiating PTAs have evolved over time in the direction of greater methodological sophistication, more systematic procedures and attention to economic rewards. There is more emphasis on the establishment and achievement of comprehensive economic goals, as opposed to the mere enhancement of trade in goods and services. This has defined India's negotiation stances especially in cases of Comprehensive Economic Cooperation Agreements (CECA) in which it has shown keen interest in recent years.

India's engagement in PTAs can be broadly divided into two phases. The first phase entails the formation of PTAs as a result of various political considerations and the prevailing international setting. Agreements that were formed on this basis include the India-Bhutan Treaty (1949), India-Nepal Friendship Treaty (1950)[20] and the Bangkok Agreement (1975).[21] Economic considerations and incentives were not the primary motivations behind the initiation of negotiations for these agreements. In addition, stakeholder consultations before or during the negotiation process were almost absent in reaching these agreements.

The second phase saw the emergence of economic issues during the consultation process. The inclusion of these issues was initiated in the third round of SAARC Preferential Trade Agreement (SAPTA) negotiations. In the initial part of this phase, the consultation process was largely limited to Central government ministries and apex chambers of commerce, a trend that continued into the fourth round of negotiations on SAPTA. However, in both the aforementioned rounds, negotiations and consultations were not guided by any *ex-ante* economic analysis of costs and benefits from the proposed agreement.

India's first FTA, the India-Sri Lanka FTA (ISLFTA) was signed in December 1998, and originated from geopolitical factors. Neither was an *ex-ante* cost and benefit analysis carried out, nor were there broad based stakeholder consultations in the negotiation of this agreement. A Joint Committee was established only at the ministerial level in order to review the progress of the agreement every year. The Committee nominated one apex chamber from each country as a nodal chamber to represent the views of the industries. The success of ISLFTA has paved the way for deepening the engagement by including services and investments through a Comprehensive Economic Partnership Agreement (CEPA). CEPA negotiations are ongoing since 2005 after a Joint Study Group (JSG) recommended it in 2003. Though negotiations were concluded in 2008, but were again resumed in December 2010 owing to some reservations from Sri Lankan side.

Another important agreement is the Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation (BIMSTEC). It is an important element in India's 'Look East' policy and was signed in February 2004. It marked the first instance of involvement of academia, business and Government in the Group of Experts (GoE) laying out the contours of the negotiation and the Framework Agreement itself.

The India-Thailand FTA was signed in October 2003. It established a Joint Working Group (JWG) to draft the Framework Agreement.[22] This development marks an advance from the BIMSTEC Agreement. For the first time, a feasibility study comprising Computable General Equilibrium (CGE) modelling and Revealed Comparative Advantage (RCA) analysis was carried out to assess the possible impact of the proposed agreement. This agreement also marked the beginning of extensive stakeholder consultations prior to the FTA, which have subsequently been integrated into the preparedness strategies for all FTAs.

The PTA between India and Mercado Común del Sur (MERCOSUR), was signed in January 2004. MERCOSUR comprises of Argentina, Brazil, Paraguay and Uruguay. Besides trade in goods, it also has considerable focus on RoO. Before the signing of PTA, a comprehensive feasibility study was carried out.

In 2005, India signed CECA with Singapore, known as India-Singapore CECA. A JSG was set up in 2002 to study its feasibility which submitted its report in 2003 and recommended the launching of negotiations.

In 2009, the India-ASEAN FTA was signed.[23] It provides an interesting insight into India's negotiation process. There were many stumbling blocks in the process mainly due to the fact that this was the first time India was negotiating a trading agreement with a regional trading bloc that was not a Customs Union.[24] This meant that negotiations on tariff lines proved to be extremely complicated as every nation in the regional bloc had to individually agree to Indian tariff proposals and *vice-versa*.[25]

Most recently, that is, in February 2011, India entered into CECA with Malaysia. The negotiations took time owing to some critical issues which needed deeper negotiations. They were the issues like movement of persons which happened to

be a key concern to New Delhi, while palm oil was an issue for Malaysia, which sought significant tariff reduction in this commodity. It may be noted that India is one of Malaysia's biggest markets for palm oil. Stakeholder's consultations were held and Joint Study Group was also constituted to do a feasibility study.

The history of India's negotiation of PTAs reveals that apart from the evolution of stakeholder involvement in the formulation of PTAs, there have been developments along other lines. However, India's urge for a higher degree of economic diplomacy in its neighbourhood does continue. India's market should be available to all its smaller neighbours if we are to develop common stakes in regional prosperity.[26]

Evaluation and Analyses of Negotiating Process and Preparedness

Though the negotiation process suggests that India has made considerable advances, yet there are still room for improvement in the preparedness for such negotiations. An evaluating of India's negotiation process highlights several issues and also presents the scope of improving preparedness. Such issues need to be given pragmatic impetus by the Trade and Economic Relations Committee (TERC), Government of India. This committee, constituted in May 2005 is directly headed by the Prime Minister and has supervised the negotiations on recent/proposed PTAs and also taken a stock of the progress of existing PTAs like India-Chile PTA.

First and foremost, preparedness and consistency in negotiations is desired. The rapid transfer of personnel also deters the formation of an expert group on negotiation. Thus, a better Human Resource Planning (HRP) in the Ministry is required to enhance preparedness.

It is generally observed that enough time is not spent in analysing sectoral complexities. The key stakeholders in the

negotiation process which include the corporate houses are also generally not equipped enough to provide inputs worth considering to the government during the negotiation process. A series of multi-stakeholder meetings need to be organised, and their inputs be further analysed. It is important that information available in the public domain on negotiations should be updated regularly. Also, a standard template containing a core set of questionnaire relating to each sector should be developed for the purpose of stakeholder consultations.

Moreover, there is a need to develop a roster of institutions and individuals capable of conducting country and sector-specific studies. Instead of assigning all such studies to a few select institutions, competition should be encouraged among service providers listed in the roster through an open bidding process.[27]

Importantly in PTAs/FTAs, the benefits are not limited to gains from trade in goods. Spin offs from a PTA/FTA could outweigh the apparent trade benefits and will have to be adequately factored in. These spin-offs may be in the form of better investment opportunities (as in the case of the Indo- Sri Lanka FTA); ease of visa procedures (Indo-Singapore CECA) and the like. It is important to gauge these spin-offs on an *ex-ante* basis prior to starting negotiations.

Prior market analyses in prospective partner countries are generally not conducted by India. This could bias evaluation of the feasibility of the agreement, thereby resulting in sub-optimal outcomes of negotiations. In one instance, South Korea commissioned Indian research organisations to carry out India-specific analyses. It is suggested that the Indian government should do the same in prospective partner countries.

Planning and management of the negotiation of each PTA should be improved. For instance, a greater role should be played by the Indian Embassy in each country in gathering

information that may not be readily available to the research organisation conducting the study. There should be greater coordination between the former and the latter. Similarly, there should be better coordination between the ministries of External Affairs and Commerce throughout the negotiation process.

Though, India's negotiation strategies have come a long way and improved greatly over the years with PTA negotiations now following a systematised process, yet there is much scope for improvement to match prospective partners. Some examples of best practices in negotiations can be adopted from negotiators like the European Union (EU) which follow a comprehensive process encompassing detailed market studies, sectoral complexities and keen attention to multi-stakeholders consultations.

3
Negotiation Process and the Country Experiences

Having discussed the evolution and the need for preparedness in negotiating PTAs, it is vital to understand the nitty-gritty of an ideal negotiation process. Also, the lessons from country experiences in negotiating PTAs can be beneficial for keeping a track of best practices in such negotiation processes.

An Ideal Negotiation Process

Stephen Hoadley, Professor of Political Studies at the University of Auckland uses his detailed study of the New Zealand-Singapore FTA to sketch out an ideal negotiation process. This FTA was also known as the Closed Economic Partnership (CEP) Agreement. The various elements of the larger process in which negotiations are couched are described by Hoadley as follows:

***1. Identification of a Trade Problem*:** According to Hoadley, the persistence of a problem leads to the recognition that the *status quo* is unsatisfactory.[28] New Zealand had been faced with the problem of an insecure market for its agricultural products throughout the three decades preceding the mentioned agreement.[29]

New Zealand tried unsuccessfully through the GATT in the 1980s and 1990s to get barriers facing the exports of its agricultural products lowered. In 1999 after several unsuccessful attempts, New Zealand's trade access to international markets (except Australia) was still largely restricted. Thus, the existence of a trade problem leads to negotiations. This also hints at one primary reason for the proliferation of new style PTAs – the impasse at the Doha rounds.[30]

***2. Diagnosis Phase*:** The diagnosis phase begins when the awareness of a problem stimulates the country's government into action – identifying the possibility for and then defining a negotiation with a specific country which can solve the mentioned problem.

In the case of New Zealand, the frustration of not being able to overcome barriers to agricultural trade was recognised at a luncheon meeting in Wellington on July 01, 1999 attended by New Zealand's trade minister, Lockwood Smith; his counterpart from Singapore, George Yeo; and New Zealand's former Minister of Finance, Sir William Birch. After listening to the outpouring of frustrations on both sides Birch suggested that New Zealand and Singapore should go in for a bilateral FTA. Birch's solution can be labelled as a 'diagnosis'. Diagnosis involves the identification of a country which is complementary to the initiating country in both economic interests and other characteristics.

3. Pre-negotiation Stage – Setting the Agenda: The pre-negotiation stage is best described in Hoadley's own words: "In the pre-negotiation phase, the parties confirm that negotiation is the best way to proceed, establish what they hope to achieve and decide what they will negotiate about and how. In this phase they clarify and prioritise options, set

parameters, establish boundaries, choose participants and assess each other's likely demands"

In the case of the FTA between New Zealand and Singapore, the pre-negotiation phase began on August 11, 1999 with both officials from New Zealand and Singapore reaffirming their commitment in the multilateral trading system and wish to remain consistent with the rules of the WTO and Asia Pacific Economic Cooperation (APEC) – free trade and investment by 2010-2020.

New Zealand officials then set the ball rolling by proposing the major elements of the potential FTA which include a) elimination of all tariffs, b) under RoO minimum local content of 50 percent to qualify as duty free in the other country, c) nil export restrictions except those allowed by WTO under Article XX, d) removal of all subsidies on both sides, e) replace anti-dumping laws by competition laws, f) no national procurement requirement, g) a mutual recognition agreement, and, h) free trade in all services.

The responses from Singapore to each of these proposals respectively, were as follows: a) agreed; except that it would continue to retain levies on alcoholic beverages for social reasons, b) minimum local content of 20 percent, c) agreed, d) wanted to retain subsidies for domestic support programmes, e) had problem with adopting competition laws as Singapore had no experience with these, f) wanted to retain the right of government procurement, g) agreed, and, h) was keen to protect some of its services.

In a way, therefore, the pre-negotiation phase serves to not only flag the main issues of interest for both countries going in for an agreement but also helps to identify the issues within these over which there is agreement and therefore those on which there is no agreement.

4. ***Negotiation:*** According to Hoadley, the following are the elements associated with formal full scale negotiation:

Strategies – These are general plans adopted by negotiators to achieve certain objectives. For example, it includes:

- avoidance of thorny issues
- yielding or a show of meeting the other party half way on some issues by initially adopting a stand which is more extreme than what one really believes in – this allows the striking of bargains on other issues
- contending to intentionally oppose certain proposals so that any moderation of stand seems like a major concession
- problem solving, that is, cooperation with the other side to arrive at an agreement on an issue on which there is initially a major disagreement

Tactics – These are actions used which are components of a strategy. For example, requests, proposals, offers, concessions etc.; and others such as rhetoric, warnings, threats, bluffs and displays of good faith.

There were compromises and adjustments made on both sides. New Zealand did manage to get certain concessions from Singapore and ended up also granting some. The concessions that New Zealand exacted included an improved access to Singapore's service market, a single New Zealand/ Singapore procurement market, more stringent rules of origin (RoO) than originally agreed to by Singapore, less threatening anti-dumping provisions etc.

Among the concessions obtained by Singapore from New Zealand were: access to electrical and electronic equipment without further testing; elimination of tariffs on petrochemicals, electrical and machinery products; investment facilitation etc. On the other hand, there were deferrals – wishes made by each side which were not granted by the other.[31] This illustrates that negotiations involve give and take

to arrive at an agreement. Underlying any agreement are compromises, adjustments and deferrals made during the process of negotiation.

5. ***Legitimation:*** The negotiation phase ends when the negotiators have agreed on a text. But for the formal adoption of an agreement it has to be accepted politically.

However, legitimation can be explained through a two-stage game.[32] Democratic governments striving to reach international agreements have to negotiate with leaders of domestic political parties and interest groups as well as with their foreign counterparts. Therefore, the acceptance of an agreement can only be achieved if there is broad consensus in the stands taken by foreign counterparts and domestic leaders. It is in this way that citizens in a democracy get to influence the content of the agreement.

In the case of the New Zealand-Singapore agreement the legitimation phase began when the New Zealand government endorsed the text of the CEP Agreement on August 23, 2000. The Cabinet then released a briefing paper, National Interest Analysis and a cost-benefit assessment to the Parliament and public.

As the second step in the legitimation process the CEP Agreement was submitted to the Parliament where it was debated. It was then referred to the Select Committee on Foreign Affairs, Defence and Trade, which, in turn, invited written submissions from the public. The Committee also conducted oral hearings of its members and conveyed to the Parliament that a majority of its members had endorsed the agreement. On the basis of the endorsement, the Parliament conducted a debate and then voted 89 to 30 to take notice of the recommendations of the Select Committee's report on the agreement.[33]

With the completion of this step in the legitimation phase, the New Zealand Cabinet approved the draft agreement. Then, a week later, on November 14, 2004, New Zealand and Singapore signed the CEP agreement.

6. ***Ratification:*** The facilitation of the agreement required certain legislative changes which were introduced to the Parliament in the form of the CEP Bill. Since only the required legislative changes constituted the bill and not the surrounding clauses of the agreement it seemed quite harmless. There were three statutes and a regulation as follows:

- amendment of Tariff Act to eliminate all tariffs on imports from Singapore
- raising of the threshold for legitimacy of anti-dumping claims from two to five percent
- waiving of the residency requirement for Singapore engineers
- legal change to lower the content requirement for an import to be classified as belonging to Singapore

Given the harmless nature of the bill, it was easily passed. Though the above discussion provides the stage-wise description of the ideal negotiation process, yet there are aspects to negotiations like human capital formation, preparedness etc. that cannot be captured through such description of stages.[34]

Below are the lessons which can be taken from the experiences of different countries/regions:

Lessons from Country/Regional Experiences

The ASEAN Experience

- The most important lesson from the Association of Southeast Asian Nations (ASEAN) experience is for leaderships to give primacy to economic issues and not

allow political differences to stand in the way of regional cooperation.

- It is necessary that negotiators have a positive attitude towards greater openness especially in situations where trading relations among neighbours are not well developed. In the case of ASEAN countries, large negative lists, limited number of concessional tariff lines, restrictive RoO, exclusion of services, non-tariff barriers (NTBs) etc., changed in favour of greater openness because of the cooperative attitude of negotiators on all sides. This happened despite great differences in governance structures and outlooks.

Lessons from Singapore's Experience

Singapore is at present involved in signing or negotiating a number of FTAs/PTAs with a large number of countries, both developing and developed. It has been successful in negotiating agreements and thus its experience is of immense value to India.

The International Affairs Division of Singapore came up with a strategy for the negotiation process in 2007 which has the following components:

- The delegation will be led by a Chief Negotiator with teams in charge of specific areas of the FTA
- During the negotiations, two or three or even more of these teams may be meeting their counterparts concurrently in parallel sessions
- The Attorney-General's Chambers will assign one or two legal officers to the Singapore delegation negotiating each FTA
- The legal officers assigned will not only be providing advice and assistance to a particular negotiating team but will also head the team in charge of negotiating the general, institutional and dispute settlement chapters of the FTAs[35]

These lessons are valid for any FTA negotiation process. Five pointers which legal officers should bear in mind include:

- *Get into the details:* Since a typical FTA covers such a wide range of issues, mastering technical details is a daunting task for any legal officer which one must nevertheless endeavour to do.
- *Build relationships:* The building of good working relationships with your negotiating counterparts is very important because most FTA negotiations span many rounds and many months and one often has to deal with counterparts repeatedly. Good working relationships lead to a higher degree of trust among the individuals involved which in turn, facilitates the negotiation process.
- *Be flexible:* Sometimes clauses which are standard in other FTAs might not work for a particular FTA under negotiation in terms of catering to the interests of the domestic stakeholder groups of a country as well as its negotiating partner country.
- *Watch out for precedents set:* While there is a need to be flexible about the texts of FTA provisions, one must also realise that what one agreed to give to one FTA partner would be difficult to refuse to another trading partner in a subsequent FTA negotiation.
- *Manage the documentation:* The better the maintenance of records of the previous rounds, the easier it will be for the new legal officers to handle subsequent negotiations.

Thus, the above directives lay a lot of stress on specialisation and mastery of details and at the same time flexibility and positive thinking.

The South African Experience with the Trade Development and Cooperation Agreement (TDCA) Negotiated with the EU

This agreement has been in force since 2000 and offers valuable lessons for other developing countries. From a study of the South African experience, it is apparent that the success of negotiations depends upon sufficient and informed political support.[36]

The political momentum led to defining of objectives for negotiations as a part of the national development strategy which was based on sound political backing, and the establishment of comprehensive coordination mechanisms for the conduct of negotiations. This ensured that negotiations were not only given an important place in the development strategy of South Africa but were supported by information and human capital through a variety of mechanisms which ensured that the objectives of the development strategy were indeed met.[37]

4
Cost and Benefit Analysis of PTAs

Though India has recently been engaging in various PTAs at bilateral and regional level, yet compared to other countries, India's involvement in PTAs has been rather modest. A large share of its trade occurs through the multilateral channels indicating that trade through multilateral channels may be the best option for India despite the surge in PTAs in recent years.[38]

Nevertheless, PTAs may offer various benefits beyond economic ones, such as, deep political, diplomatic ties as well as peace dividends. In any case economic gains still hold centre place among many PTAs as indicated by the inclusion of various schemes to protect certain sectors.

Among the few PTAs that India has been engaged in, this section looks at some selected ones, namely, South Asia Free Trade Agreement (SAFTA), ISLFTA, India-Singapore CECA, India-ASEAN FTA, India-Malaysia CECA, and India-MERCOSUR PTA, to analyse the costs and benefits of such engagement for India. A large share of India's trade is with countries with which it does not have a preferential trading agreement.

In 2009-10, the combined share of MERCOSUR, SAFTA and Singapore in India's exports stood at 10.5 percent, up from 6.33 percent in 1999-00, while the corresponding share in India's imports was only 4.2 percent declined from 4.5 percent over the decade. On the contrary, the export and import shares of its major partners, EU (27), US, ASEAN and China were 47.72 and 38.8 percent respectively in 2009-10 (Tables 2 and 4).[39]

While accurate measurements of cost and benefit from PTAs are difficult due to a range of factors and criss-crossing overlaps of bilateral, regional and plurilateral PTAs, a fair diagnosis can be made through examination of some key indicators as well as the gravity trade model. Key indicators like Intra-Industry Trade (IIT) index, Trade Complementarity Index (TCI) and Revealed Comparative Advantage (RCA) index have also been calculated for the same.

Further, two key export sectors of India – textiles & clothing (T&C) and the spice sector – are studied to understand how PTAs have affected them. Moreover, the treatment of some important issues like intellectual property rights, trade and environment, trade and social standards, competition policy, trade facilitation, and government procurement in a country's PTAs have also been discussed.

India's Engagement with PTAs

South Asian Free Trade Agreement

SAARC Preferential Trading Agreement (SAPTA) was initiated by the SAARC member countries in 1993 (and operationalised in 1995) to promote trade liberalisation on a preferential basis. During the 12th SAARC Summit in Islamabad in 2004, SAFTA was signed with the aim of enhancing mutual trade and cooperation. SAFTA came into effect from January 01, 2006 and Afghanistan joined in as the eighth member in 2008.

Exports from India to SAFTA were recorded at US$8391mn during 2009-10 while imports were US$1657.4mn (Tables 1 and 3). Average annual growth rates for Indian exports and imports to SAFTA during 1999-00 and 2009-10 were 21 and 17 percent respectively.[40]

SAFTA accounts for only about 4.69 percent of India's exports and a meagre 0.6 percent of its total imports.[41] Within SAFTA in the year 2009-10, Bangladesh, Sri Lanka, Pakistan and Nepal account for 29, 26, 19 and 18 percent respectively of India's exports while their shares in Indian imports from SAFTA are 15, 24, 17 and 27 percent respectively. India has separate bilateral trading agreements with all these countries except Pakistan.

Bangladesh: Considering that Bangladesh has not offered any substantial tariff and non-tariff concessions to Indian exports, there remains a large potential for Indian exports to penetrate the Bangladeshi market.

India's top three exports to Bangladesh include cotton, edible vegetables and certain roots and tubers and vehicles other than railway or tramway rolling stock, and parts and accessories thereof. Bangladesh has global comparative advantage in the following sectors: Vegetable textile fibres nes, paper yarn, woven fabric (114.01); Articles of apparel, accessories, knit or crochet (39.04); Articles of apparel, accessories, not knit or crochet (32.80) (Table 11). There is moderate trade complementarity between India and Bangladesh as reflected from the TCI calculations which stands at 48 percent (Table 16).

Nepal: The exports basket to Nepal is changing over the years from Mineral fuels, oils and distillation products make up which constituted 35 percent of India's exports to Nepal in the year 2007 excluding petroleum products, rice is the

country's top export product to Nepal followed by cements and medicines. Under the Indo-Nepal treaty of trade, Nepalese manufactured goods receive duty free non-reciprocal access to India's markets subject to RoO.[42]

Considering that carpets, particularly woollen carpets are Nepal's top most exports, and India also has a comparative advantage in this sector, Nepal has imposed an *ad valorem* tariff equivalent of 24.7 percent. However, Nepal is losing its competitive edge in this sector due to its own internal supply constraints, while India has managed to increase carpet and textile floor covering exports to the rest of the world at an annual growth rate of 11 percent over 2001-2010. Moreover, Indian carpet and textile floor covering exports to Nepal have experienced a robust annual average growth rate of 349 percent during 2001-2009.

India's top three exports to Nepal include mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes, iron and steel, salt; sulphur; earths and stone; plastering materials, lime and cement while animal/ vegetable fats are India's major import from Nepal. Nepal has global comparative advantage in the following sectors Vegetable plaiting materials, vegetable products nes (362.21); Carpets and other textile floor coverings (79.13); Vegetable textile fibres nes, paper yarn, woven fabric (46.98) in 2010 (Table 13). There is high trade complementarity between India and Nepal as reflected from the TCI calculations which stands at 65 percent (Table 16) in 2010.

Pakistan: Trade between India and Pakistan remains modest despite large potential for trade and investment cooperation.[43] Export structures of the two countries are quite similar as the top ten sectors in each of these countries in terms of comparative advantages. Another indicator of further trade and integration potential is the relatively high intra-industry

trades between India and Pakistan *vis-à-vis* other South Asian countries. This implies that although the two countries have comparative advantages in similar industries, they have managed to diversify and specialise in differentiated products within those industries. India's exports to Pakistan have increased from US$93mn in 1999-00 to US$1573mn in 2009-10 at an average annual rate of 40 percent. On the other hand, India's imports from Pakistan have risen from US$68.2mn to US$370.17mn in 2008-09 and which declined to US$275.94mn during the same period at a growth rate of 22 percent.

India's top three exports to Pakistan include organic chemicals; cotton; and man-made filaments, however, Pakistan's top three exports to India are salt; sulphur; earths and stone; plastering materials, lime and cement; edible fruits, nuts, peel of citrus fruit, and melons; and cotton. Pakistan has global comparative advantage in the following sectors such as Cotton (51.21); other made textile articles, sets, worn clothing etc. (45.90); Cereals (19.61) in 2010 (Table 13). There is moderate trade complementarity between India and Pakistan as reflected from the TCI calculations which stands at 65 percent (Table 16) in 2010.

Maldives: India's top three exports to Maldives include Cereals, salt; sulphur; earths and stone; plastering materials, lime and cement and pharmaceutical products while, Maldives' top three exports to India are Iron and steel, Copper and articles thereof, and Aluminium & articles thereof. Maldives has global comparative advantage in the following sectors such as Fish, crustaceans, molluscs, aquatic invertebrates nes (128.42); Meat, fish and seafood food preparations nes (26.31); Residues, wastes of food industry, animal fodder (1.79) in 2010 (Table 13). There is perfect trade complementarity between India and Maldives as reflected from the TCI calculations which stands at 100 percent (Table 16) in 2010.

Due to India's dominant position in the region, trade with almost all of its partners has been lop-sided with India being the major trading partner for most of them. The high growth and shares of Indian exports in the imports of partners indicates that India has benefited from the export expansion of its neighbours. Some of this Indian export expansion can be attributed to falling tariffs in partner countries – the result was trade diversion i.e. Indian goods replacing lower cost products from non-SAFTA members.

India-Sri Lanka Free Trade Agreement (ISLFTA)

The ISLFTA was signed in 1998 and operationalised in March 2000. This FTA is based on 'less than full reciprocity' as Sri Lanka has been given a larger share of concessions in terms of the negative list and RoO along with a longer time frame for tariff reduction. Owing to Sri Lanka's already low existing tariffs and the generous concessions offered by India, Sri Lankan exporters appear to have benefited considerably more than Indian exporters from this FTA. Although India has managed to choose its negative list quite strategically, one sector which has experienced detrimental effects from ISLFTA is spices, which Sri Lanka pushed for removal from India's sensitive list.

Following the FTA, Sri Lanka's exports to India have increased substantially from pre-existing negligible levels. India's exports to Sri Lanka have gone up from US$499mn to US$2188mn during 1999-00 to 2009-10 registering an average annual growth rate of 18 percent. Likewise, imports to India have increased from US$44.2mn to US$392.2mn during the same period, recording an annual average growth rate of 33 percent. At present, India enjoys a trade surplus with Sri Lanka. However, in 2001, India's average applied MFN tariff on manufactured goods equalled 31.7 percent compared to 8 percent for Sri Lanka.[44]

India's top three exports to Sri Lanka include Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes; Vehicles other than railway or tramway rolling stock, and parts and accessories thereof; Cotton while, Sri Lanka's top three exports to India are Coffee, tea, mate and spices; Residues and waste from the food industries; prepared animal fodder; Rubber and articles thereof. Sri Lanka has global comparative advantage in the following sectors such as Coffee, tea, mate and spices (74.82); Vegetable textile fibres nes, paper yarn, woven fabric (51.64); Vegetable plaiting materials, vegetable products nes (21.86) in 2010 (Table 14).

There is high trade complementarity between India and Sri Lanka as reflected from the TCI calculations which stands at 63 percent (Table 16) in 2009. The IIT index between India and Singapore reveals that the intra-industry trade is the highest in Products of residues, wastes of food industry, animal fodder; Ships, boats and other floating structures; and Special woven or tufted fabric, lace, tapestry etc. (Table 21) in 2009.

India-Singapore Comprehensive Economic Cooperation Agreement (CECA) and India-ASEAN FTA

India's first ever CECA agreement was signed with Singapore on June 29, 2005 and became operational from August 01, 2005. In addition to a FTA in goods, the CECA have three more components: trade in services, arrangement for investment flows and an agreement for avoiding double taxation. A RoO clause with 40 percent local content requirement and change of classification at the 4-digit HS level is also included. Moreover, there are detailed product specific rules for a long list of items.

Due to pre-existing zero MFN tariffs applied by Singapore, Indian exports to the Singapore market have not recorded a surge while imports from Singapore have increased three folds

since CECA enforcement. Exports from India to Singapore have increased from US$4,001mn to US$7,592.17mn while imports have gone up from US$2,651mn to US$6454.57mn over 2004-05 to 2009-10. In 2009-10, Indian exports to Singapore as a share of total Indian exports stand at 4.25 percent while the corresponding import share is 2.2 percent, which is larger than its import shares *vis-à-vis* SAFTA and MERCOSUR.[45]

Singapore has increased its exports of high end electronic products to India, while India's exports to Singapore are concentrated in petroleum oils (HS 2710) which account for 37.4 percent of total Indian exports to the country. Petroleum oil exports by Singapore also account for about 23.1 percent of its exports to India, while nuclear reactors, boilers, machinery, etc.; and electronic products make up 17.18 and 17.86 percent respectively.

Singapore is currently the second largest foreign direct investor in India with cumulative investment flows reaching US$7934mn during April 2000 to April 2009.[46] This was the first time India had entered into a bilateral agreement in services. As a result, Singapore now has increased presence in the construction, communication, business services, insurance and banking sectors of India.

India's top three exports to Singapore include Mineral fuels, mineral oils and products of their distillation, bituminous substances, mineral waxes; ships, boats and floating structures; and miscellaneous goods, while, Singapore top three exports to India are Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes; electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts, nuclear reactors, boilers, machinery and mechanical appliances, parts thereof.

Singapore has global comparative advantage in the following sectors such Commodities not elsewhere specified (4.51), Tin and articles thereof (4.37), Electrical, electronic equipment (2.66) in 2010 (Table 14). There is moderate trade complementarity between India and Singapore as reflected from the TCI calculations which stands at 50 percent (Table 9.1) in 2010. The IIT index between India and Singapore reveals that the intra-industry trade is the highest in Products of Umbrellas, walking-sticks, seat-sticks, whips, etc., Articles of iron or steel and Salt, sulphur, earth, stone, plaster, lime and cement (Table 21) in 2009.

India-ASEAN FTA was signed in 2009. It is supposedly one of the most comprehensive FTAs negotiated by India in recent times. India's top three exports to ASEAN include cotton, mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes, ships, boats and floating structures, and miscellaneous goods.

India top three imports from ASEAN are mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes; animal or vegetable fats and oils and their cleavage products, pre edible fats, animal or vegetable waxes; and electrical machinery and equipment and parts thereof, sound recorders and reproducers, television image and sound recorders and reproducers, and parts. There is moderate trade complementarity between India and ASEAN as reflected from the TCI calculations of ASEAN countries.

The IIT index between India and ASEAN reveals that the intra-industry trade is the highest in Products of animal origin, nes, Headgear and parts thereof and Articles of iron or steel (Table 21) in 2009.

India-MERCOSUR PTA

India signed PTA with MERCOSUR on January 25, 2004. This was to be ratified in July 2007. Argentina, Brazil, Paraguay

and Uruguay are the founder members while Venezuela joined later. Unlike other PTAs, this was based on an offer list with reciprocal fixed tariff preferences. MERCOSUR will provide preferential access to 452 items while getting Indian market access to 450 products in return.[47] RoO, safeguard measures and dispute settlement clauses are included in the agreement.

At the outset, a PTA with MERCOSUR potentially offers India market access to a region with a combined estimated GDP of US$1tn and a population of about 200 million. Despite the large markets of the two regions and dynamic growth rates, India's export to MERCOSUR as a share of total Indian exports is only 0.63 and 1.55 percent respectively while the corresponding import share is 1.4 percent during 1999-00 and 2009-10.[48]

Over the last ten years (1999-00 to 2009-10), Indian exports to MERCOSUR have increased from US$231mn to US$2770mn while imports from MERCOSUR have gone from US$680.6mn to US$4131.4mn. Thus, at present India has a trade surplus with MERCOSUR. Not surprisingly, among the MERCOSUR countries, Brazil and Argentina account for 87 and 10 percent of India's exports to MERCOSUR respectively.

Likewise, 83 and 16 percent of India's imports from MERCOSUR originated from Brazil and Argentina respectively in the above mentioned period. Since India's MFN applied tariffs are higher than those of MERCOSUR countries, exports from the region to India may possibly increase in some sectors.

India's top three exports to MERCOSUR include mineral fuels, oils, distillation products, etc; organic chemicals; miscellaneous chemical products, While India top three imports from MERCOSUR are mineral fuels, oils, distillation products, etc; sugars and sugar confectionery; animal, vegetable fats and oils, cleavage products, etc.

There is moderate to high trade complementarity between India and MERCOSUR as reflected from the TCI calculations which stands at 61 percent (Tables 15 and 16) in 2010. The IIT index between India and MERCOSUR reveals that the intra-industry trade is the highest in products of cork and articles of cork; explosives, pyrotechnics, matches, pyrophoric, etc. optical, photo, technical, medical, etc. apparatus (Table 21) in 2009.

India and other BRICS countries

An analysis of India and other BRICS countries reveals that there exists potential for cooperation and deeper engagement among the BRICS countries also.

Brazil: India's top three exports to Brazil include mineral fuels, mineral oils and products of their distillation, bituminous; organic chemicals; electrical machinery and equipment and parts thereof, sound recorders and reproducers, television image and sound recorders and reproducers, and parts, While India top three imports from Brazil are mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes; sugars and sugar confectionery; and iron and steel. The trade complementarity between India and Brazil as reflected from the TCI calculations stands at 93 percent (Table 15) in 2010. The IIT index between India and Brazil reveals that the intra-industry trade is the highest in products of inorganic chemicals, precious metal compound, isotopes, rubber and articles thereof and printed books, newspapers, pictures etc. (Table 20) in 2009.

Russia: India's top three exports to Russia include pharmaceutical products; coffee, tea, mate and spices; miscellaneous edible preparations, While India top three imports from Russia are fertilisers; mineral fuels, mineral oils

and products of their distillation, bituminous substances, mineral waxes and iron and steel. There is moderate trade complementarity between India and Russia as reflected from the TCI calculations which stands at 50 percent (Table 15) in 2010. The IIT index between India and Russia reveals that the intra-industry trade is the highest in products of soaps, lubricants, waxes, candles, modelling pastes; Electrical, electronic equipment and miscellaneous chemical products (Table 20) in 2009.

China: India's top three exports to China include ores, slag and ash; cotton; copper and articles thereof, While India top three imports from China are electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts; nuclear reactors, boilers, machinery and mechanical appliances; parts thereof; organic chemicals. There is moderate trade complementarity between India and China as reflected from the TCI calculations which stands at 50 percent (Table 15) in 2010. The IIT index between India and China reveals that the intra-industry trade is the highest in Products of aircraft, spacecraft, and parts thereof; cocoa and cocoa preparations; products of animal origin, nes (Table 20) in 2009.

South Africa: India's top three exports to South Africa include mineral fuels, mineral oils and products of their distillation; bituminous substances, mineral waxes; vehicles other than railway or tramway rolling stock, and parts and accessories thereof and pharmaceutical products. India top three imports from South Africa are natural or cultured pearls, precious or semiprecious stones, preview metals, clad with precious metal and articles thereof, imitation jewellery, coin; mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes; ores, slag and ash.

There is moderate trade complementarity between India and South Africa as reflected from the TCI calculations which stands at 50 percent (Table 15) in 2010. The IIT index between India and South Africa reveals that the intra-industry trade is the highest in salt, sulphur, earth, stone, plaster, lime and cement; copper and articles thereof and cocoa and cocoa preparations (Table 20) in 2009.

Trade Creation and Diversion of India's PTAs

Using an augmented gravity trade model with bilateral trade flows between India and 166 trading partners over the 2000-2010 time periods, the trade creation and diversion effects of India's PTAs has been seen.[49] However, it should be noted that such trade creation and diversion effects of PTAs cannot be related to welfare effects directly and many studies that have looked at these effects have been inconclusive or have produced conflicting predictions depending on country and time period coverage and model use. Nevertheless, the gravity model has become popular in studying the impact of RTAs/PTAs on trade flows, especially after the establishment of theoretical foundations for using it.[50]

In the equations used in the study, X_{ij} is exports from country i to country j. M_{ij} is imports from country i to country j. GDP_j is GDP of country j at constant US$2000. POP_j is population of country j. As India is the common trading partner for each country in the sample, we do not include GDP and population figures for India. Dist. is the geographical distance between the trading partners i and j. The equation has been augmented using dummy variables. Comlang means common language; if the two countries share a common language, assign 1 otherwise 0. Contig. means contiguity; if the two countries share a common border, assign 1 otherwise 0. Comcol means common colony; if the two countries have been colony of the same coloniser, assign 1 otherwise 0. Smctry means same

country; if the two countries were the same country in the past, assign 1 otherwise 0. e_{ij} is the error term.

For analysis, only the PTAs where India has membership, namely SAFTA, BIMSTEC, MERCOSUR, Indo-Sri Lanka and ASEAN FTA and Indo-Singapore CECA, have been included as PTA dummies. In equation 1, PTA dummies take the value 1 if country j is also a member of the PTA along with India. A positive coefficient of the PTAs indicates trade creation. It measures the impact on India's exports to country j of country j being a member of the PTA. Therefore, the as above mentioned, six PTA dummies have been included in the equation.

In the bilateral imports equation 2, all these six PTA dummies have been taken and have been assigned 1 only if India is a member of that PTA and 0 if both India and country j are members of that PTA. This variable looks at the impact on Indian imports from country j of the partner country j (exporter) not being a PTA member. A negative coefficient of the PTA dummies implies that exports from country j to India get reduced because of its non-member status, that is, trade diversion.

According to this model, bilateral trade flows between two countries are enhanced by their economic sizes (GDP) and populations (Pop.) but reduced by geographical distance (Dist.). Additional variables like sharing of a common language (comlang.), contiguity (contig.), common colony (comcol.), and historically been one country (smctry) membership in PTAs are also included in the model to control for trade impediments. An augmented gravity model somewhat similar to that of Soloaga and Winters (2001) and Srinivasan and Archana (2008) has been used to investigate the impact of PTAs on India's bilateral trade flows (details in Tables 17-19 of Appendix).

The results from empirical exercise imply that larger GDP and population of India's trading partner have a significant

positive impact on bilateral trade flows while greater geographical distance reduces trade. It shows good amount of trade creation in terms of India-Singapore CECA and also low trade creation for SAFTA, BIMSTEC and very less in case of MERCOSUR. Sharing a common border with a trading partner, however, does not appear to impact India's trade flows. This is unusual as the border effect on trade flows is positive and significant in most gravity model estimations. The deviant result for India further confirms that it has not been able to convert geographical proximity into an advantage for trading with SAFTA members relative to its other trading partners. Even the smctry variable has negatively impacted which is obvious considering the low intra-regional trade in South Asia.

However, ISLFTA and India-ASEAN largely reflects lack of trade creation, though some previous studies have shown that ISLFTA creates trade. There is some difference in results pertaining to trade creation from PTAs depending upon the type of estimation procedure, and the differences owing to the country and time period coverage of the data used for analysis.

OLS estimations for the imports flow in equation 2 shows significant negative coefficients on the PTA variables for Indo-Singapore CECA implying trade diversion. In other words, for countries which are not a part of the above two PTAs, there has been a reduction in their exports to India.

These results are in line with the analysis using other key trade related indicators, which implies that almost all of India's PTA partner countries (except Singapore) have similar export structures, and exhibit low intra-industry trade and relatively low degree of trade complementarity with India, all pointing towards low potential for growth of trade in goods.

Impact on Key Sectors

In this section two key sensitive sectors of India have been examined to infer the sector specific impacts of PTAs. India has undertaken substantial tariff liberalisation for its manufactured goods: average MFN applied tariffs have fallen from 31.6 percent in 2001 to close to 9.3 percent in 2008 implying that its domestic manufactured goods market is quite competitive. However, such tariff reduction schemes have bypassed agriculture, livestock, processed food, T&C sectors. India's SAFTA partners also have comparative advantage in some of these sectors. Most of them have maintained a sensitive items list much longer than the one put forward by India.

Although the sensitive list maintained towards non-LDCs is required to be different from those facing LDCs, not all members have enforced it. For example, India's sensitive list contains 865 and 744 products for non-LDCs and LDCs respectively while Sri Lanka has maintained 1079 products for both groups. However, a closer look at the specific items indicates that India has been quite strategic in choosing products for this list. The sensitive list is dominated by two product groups that hold major importance for its SAFTA partners, namely vegetable products, accounting for 20.2 percent of the sensitive list items, and textiles and clothing products, making up 34.2 percent.[51]

The products in the sensitive list maintained by India make up a relatively bigger portion of a typical partner's top ten RCA sectors compared to its sensitive list's share in India's top ten RCA sectors. In the case of Sri Lanka, the sensitive list maintained by India is longer in SAFTA compared to the one maintained in the India-Sri Lanka FTA.[52] Such a strategic approach in the selection of sensitive items has certainly helped India protect some of its industries from export competition.

India-Singapore CECA has the shortest time line for tariff reduction, but since India is undertaking this unilaterally, there may not be much scope for gains for India purely in terms of trade in goods. Recently, India has decided to provide additional concessions on 539 products (8 digit HS code), mostly base metal, machinery and mechanical appliances, chemicals, plastic and rubber articles and textiles. Tariff elimination will be undertaken for 307 items in five phases from January 15, 2008 to December 01, 2011 with 97 products slated for duty free status by 2015.

SAFTA, with the longest time frame for tariff reduction, offers no substantial benefits for India in the near future. The India-MERCOSUR PTA has a fixed offer list of very limited products with no arrangements for future tariff reduction or elimination.

Moreover, India-MERCOSUR PTA has the most restrictive rules of origin with a 60 percent domestic value added requirement while ISLFTA requires only 35 percent domestic value added with a change in tariff heading. However, due to lax product specific rules within RoO under ISLFTA, European and Chinese products have made their way into India after undergoing minor modifications or re-packaging.[53]

Both SAFTA and Indo-Singapore FTA have provisions for 40 percent value added with change in classification; however, the safeguard measures and product specific rules under the Indo-Singapore CECA are much more detailed in scope, with the objective of ensuring that only goods actually produced in the two countries benefit from the agreement.

Textiles & Clothing Sector

One of the common features of South Asian economies is their comparative advantage in the labour intensive readymade garment (RMG) sector. India's exports in the T&C sectors (HS lines 50-63) for 2009-10 were US$23.49bn accounting

for 13.14 percent of its total exports. According to Indian Textile Journal report, India's share in world clothing exports fell from 2.63 percent to 2.55 percent over the MFA phase out period of 1996-2004, while the country's share in world textile imports increased from 2.91 to 3.58 percent during the same period.[54]

Over the recent years, countries like Bangladesh have successfully specialised in this sector thereby penetrating larger overseas markets, while Nepal has lost its competitive edge due to its inefficient production systems. India still has a competitive domestic RMG sector; however, the country's strength lies in relatively more capital intensive textile manufacturing. At present, only India and Pakistan from South Asia have a competitive export-oriented textile industry.

The RMG sector also comes under the top ten RCA sectors for Sri Lanka. As mentioned above, the T&C sector is not covered by India's tariff liberalisation scheme. A long list of products from this sector have made their way into India's sensitive list and high specific tariffs have been also introduced in addition to *ad valorem* tariffs to protect producers in this sector. About 41 percent of the T&C tariff lines (HS chapters 50-63) face specific duties and the system is designed to restrict RMG imports from developing countries.

In 2009, about 19 percent internal tariffs were imposed by India on duty-free RMG from Bangladesh.[55] Due to these hidden barriers, out of 3.65 million duty-free quota certificates applied for by Bangladeshi exporters in 2008, only 50 percent was successfully processed as high internal duties discouraged Indian importers. Although these internal tariffs are not discriminatory as these are applied to domestic goods as well, they do lead to increased transaction costs and unnecessary delay in movement of consignments.

Bangladesh's RMG sector has recorded unprecedented growth in other markets while with regard to India; its RMG

export performance has been nominal. Although preferential rates on both *ad valorem* and specific duties have been extended to Bangladesh in addition to an annual export quota of 8 million pieces, Bangladesh has not been able to increase its RMG exports to India partially due to the fact it may be less competitive vis-à-vis India's RMG sector.[56] Poor facilitation at the Indo-Bangladesh Land Customs Station is also a crucial factor impeding RMG exports to India.

Sri Lanka has a large garment export sector but its garment exports to India are negligible. Garments have been given preferential market access of 50 percent for 8 million pieces per year while textiles have been granted a preferential margin of 25 percent with no quantitative restrictions. It should be noted that in the granted quota of 8 million pieces, at least 2 million pieces are required to have Indian fabric content.

India also faces various impediments from its SAFTA partners in this sector. For example, Bangladesh had imposed a ban on textile fabric imports for domestic use, thereby adversely affecting India's textile exports into the country. Although this ban has been eliminated since 2005, the sector is still protected by high tariffs. Moreover, textile yarn imports from India can only enter Bangladesh through its sea ports.

Such measures have been taken to curb trade through informal channels, but there is no saying that such NTBs do not impact regular trade flows. Moreover, such port restrictions not only increase informal trade but could also be a breeding ground for bribes to customs officials at the borders.

To sum up, despite India's provision of concessions and preferential market access to South Asian RMG producers, they have not been able to increase RMG exports to India. There are two reasons for this. One, the Indian RMG sector is quite competitive relative to this sector in its neighbouring countries. Not only does it have easy access to domestic fabric and textiles but the sector is far more diversified than RMG

sectors in its neighbouring countries. Second, various hidden duties, port restrictions and many NTBs have made RMG exports from neighbours uncompetitive.

Spices

India is one of the largest consumers and producers of spices in the world. According to the Spice Board of India, total exports in spices (pepper, cardamoms, chilli, ginger, turmeric, coriander, cumin, celery, fennel, fenugreek, other seeds, garlic, nutmeg & mace, vanilla, curry powder, mint products, oils & oleoresins and other spices) stood at US$1502.85mn in 2010-11, up from US$1173.75mn in 2009-10. In terms of volume, India's share in world spice trade is 48 percent while in terms of value this figure is 44 percent.

Sri Lanka is another major global player in the spice industry and has received duty free treatment for the same from India under the Indo-Sri Lanka FTA. Following the exemption of spices from the sensitive list in the ISLFTA, India's existing trade deficit in pepper took a significant jump. In 1999, a year prior to the enforcement of the ISLFTA, India exported US$69,025 worth of pepper (HS 090411) to Sri Lanka. By 2005, pepper exports declined to US$9,203 while imports kept rising. In addition to pepper originating from Sri Lanka, third country pepper also made its way into the Indian market via Sri Lanka.

During the same time period, Vietnamese pepper displaced Indian pepper from a large portion of the US market, while unfavourable weather conditions at home adversely affected domestic production. All these factors depressed pepper prices and generated a lot of hue and cry among pepper producers in Kerala. Kerala contributes to 92 percent of pepper exports, 74 percent of cardamom and 63 percent of ginger exports among others, making up 67.5 percent of total national spice export.[57]

Although not entirely responsible for bringing distress in the pepper industry, the ISLFTA did have an impact. Hence, in 2006, the India Pepper Spice Trade Association put forth a demand for a quota restriction on Sri Lankan pepper imports.[58] The Government of India responded favourably by placing an annual import cap of 2,500 tonnes on Sri Lankan pepper as well as designating only one port, i.e. Kochi, for such imports in order to monitor quantity and quality of pepper imports.[59]

India also has substantial trade deficits with Sri Lanka in cinnamon and cinnamon-tree flowers (HS 0906) nutmeg, mace and cardamoms (HS 0908) and cloves (HS 0907).

Some other spices that have experienced a decrease in production are pepper, cardamom, fenugreek, saffron and celery; however, the rates of decrease have been fairly modest when compared to that in cloves and cinnamon. India has zero exports in cloves while recently cinnamon exports to Sri Lanka stood at a mere US$1,000. On the other hand, India imported US$1.1mn and US$7.3mn worth of cinnamon and cloves from Sri Lanka. Change in weather conditions with extended dry spells is also cited as a major reason for the decline in production of some spices like cardamom and pepper.

Other spices, namely, chilli, ginger, turmeric, coriander, fennel, cumin, vanilla, garlic, dill seed and *ajwan* have seen an increase in production. Also certain spices have lost their competitive edge adversely affecting livelihoods of Indian spice farmers. But the fact that others enjoy a trade surplus despite duty-free access to Sri Lankan spices is an indicator that India is still competitive in those products.

Services and Investment in PTAs

India has focused on deregulation of services sectors. The telecommunication sector has been opened up to competition. Several other services including the knowledge-based sectors like IT and ITES sectors have been able to make up a mark

and contribute favourably to the success story of the Indian services sector. The increase in such knowledge knowledge-based sectors including BPO, LPO, business process re-engineering and others have provided robust growth to the economy. This has been possible owing to the series of technological advances and availability of low-cost and skilled manpower with competence in English language.

India has made services commitments in the WTO Uruguay Round, and has made partial commitments in 42 subsectors, across six of the 12 major services groupings (business, communications, construction, financial, health and tourism) in the Service Sectoral Classification List. India opened up its services sectors and this is reflected in its Offer at the WTO wherein it has offered 11 out of 12 services sectors as per the Services Sectoral classification of the WTO.[60]

A majority of PTAs have only included provisions for trade in goods while trade in services, investment flows and cooperation in other spheres have been left out of most trade agreements. Given India's success in knowledge intensive sectors like information technology and the growing share of the service sector in its GDP, including service trade is likely to greatly enhance economic gains from PTAs. SAFTA, India-ASEAN and India-MERCOSUR are largely goods-based PTAs while the above mentioned issues are included in ISLFTA and Indo-Singapore CECA to certain degrees.

In terms of investments, before 1991, the amount of FDI flow in and out of India was not very significant. While the amount of FDI in India has been US$252mn in 1992, the figure stood at US$40,418mn in 2008.

In order to attract FDI, India has gradually reduced various caps on FDI inflow. It has recently formulated a consolidated FDI policy in 2011 which is expected to facilitate greater FDI inflow. Mauritius, Singapore, US, Japan, Netherlands and UK are the major sources of FDI for India. The Outward FDI

(OFDI) from India is also expanding gradually over the time. While the OFDI figure for India was US$0.35mn in 1993, it increased to US$14,896.72mn in 2009.[61]

In 1999, that is, pre-ISLFTA, there were only 18 projects with Indian investment flows in Sri Lanka with 67.8 percent of such investment taking place in the food, beverage and tobacco sector. By 2006, the number of projects went up to 83, with 30 in the service sector soaking up 71.1 percent of Indian investment flows.[62]

An increase in goods exports to Sri Lanka under the FTA contributed towards creating a positive business climate and business confidence of Indian suppliers, thereby motivating them to undertake foreign direct investment (FDI) in the region. Sri Lanka attracts the largest share of outward Indian FDI in the South Asia region with more than 50 percent of Indian joint ventures and wholly owned subsidiaries.

Indian FDI in manufacturing is mostly concentrated in fabricated metal products, machinery and transport equipment while significant resources are also flowing into Vanaspati and copper sectors. In the service sector, India's presence is seen in tourism, information technology, advertising, financial services, hotels, health services and in retailing and distribution.

India has been able to attract a large number of Sri Lankan students in the higher education sector, who view the country as an inexpensive alternative to western countries. India is keen on penetrating the Sri Lankan market in a variety of professional services like engineering, architecture, IT, accounting, health etc. Involvement in such service trade will definitely be complemented with increased investments. With growing service sectors in both countries, there is much more scope for bilateral investments and service trade under ISLFTA.

With investors and service providers receiving national treatment in each other's countries, the Indo-Singapore CECA has been widely successful in attracting inward FDI into India.

Singapore was India's seventh largest investor during the pre-CECA period, but at present it occupies the second position.[63]

Being a regional economic hub and holding the top most rank in Asia with regards to ease of doing businesses, Singapore is high on competitiveness. sService trade and investments have extended to sectors like telecommunications, transportation, construction, distribution, health and tourism along with business services and IT. The potential for further cooperation in investment in sectors like infrastructure, food processing, bio-technology, entertainment and tourism has not been exploited fully.

Another area where Singapore could bring in substantial investments and expertise is in developing Special Economic Zones (SEZs) in India, having successfully done the same in China and Vietnam.[64]

Treatment of Other Related Areas in PTAs

This part discusses the treatment of some related issues like intellectual property rights (IPR), trade and environment, trade and social standards, competition policy, trade facilitation, and government procurement in India's PTAs.

India has paid due attention to the IPRs and is continuously striving to modernise its administrative mechanism to meet domestic and international standards. The number of patents being filed in India has also shown an increase. For instance, analysis of patenting activity in IT sector in India gives a good account of the intellectual property generation and the amount of innovation and technological innovation taking place.[65]

Also, latest report reveals that in the 2010-11 financial year the total number of applications for patent in India, was 37,000 as compared to 34,000 in the preceding year; and, considering the success rate of approval that is 75 percent in India, it is a sizeable number. It may be noted that in the year 1999-2000, the total patent application were numbered at merely 4,824.

Also the total number of applications for trademarks during 2010-11 is 170,000 which have seen an increase from 140,000 in the preceding year.[66]

With one of the most vibrant IP regimes in the world, supported by an integrated legislative and judicial framework, India's IPR strategy is committed to meet obligations and safeguard public interest.[67]

The Annex-II of the SAFTA Agreement identifies areas for Technical Assistance to Least Developed Contracting States under Article 11 (d) in which it outlines Legislative and policy related measures, assistance for improvement of national capacity on IPRs but with little impetus. Also, the India-Singapore CECA mentions IPR in the context of necessity of both parties for mutual capacity building in this field.

In the PTAs signed by India, the issues related to environment has not been given due impetus and in the matter of social standards, the pragmatic considerations are missing in PTAs already concluded. However, SAFTA does mention competition issues as one of its objective. It seeks to promote conditions of fair competition in the free trade area, and ensuring equitable benefits to all Contracting States, taking into account their respective levels and pattern of economic development. Yet, there is no pragmatic consideration to the procedure to be adopted for such initiatives.

The competition regime in India has evolved substantially since the independence days. Article 39 (clauses b and c) of the Constitution of India also significantly points out the vitality of competition policies.[68] The first law related to competition in India was the Monopolies and Restrictive Trade Practices (MRTP) Act, 1969. The Act aimed for prevention of concentration of economic power to the common detriment; control of monopolies; prohibition of Monopolistic Trade Practices (MTPs); prohibition of Restrictive Trade Practices (RTPs); and, the prohibition of Unfair Trade Practices (UTPs).

Based on the provisions of this the MRTP Commission was also constituted in 1984.

In the wake of economic reforms, the MRTP Act was amended in 1991. Further, in October 1999, considering the global developments and the need for a more systemic competition regime, the Government of India appointed a High Level Committee (HLC) on Competition Policy and Law to suggest a legislative framework which could either propose a new law or make appropriate amendments to the MRTP Act. The recommendations of the HLC which came in the year 2000, paved the way for the Competition Act which was passed by the Parliament in 2002.

The Competition Act, 2002 was subsequently amended by the Competition (Amendment) Act, 2007; and in accordance to the provisions of this Amendment Act, the Competition Commission of India (CCI) and Competition Appellate Tribunal (CAT) has been established. CCI has a Chairperson and six members. Moreover, the Ministry of Corporate Affairs vide its Notification dated August 28, 2009, repealed the MRTP Act, 1969 and replaced it by the Competition Act, 2002 with effect from September 01, 2009.

In terms of trade facilitation, PTAs have largely given due impetus to it. For instance, Annex-II of the SAFTA agreement identifies areas for Technical Assistance to Least Developed Contracting States under Article 11(d) under which it mentions about Customs procedures related measures as: Assistance to improve institutional, managerial, regulatory and procedural matters relating to customs, Assistance for creation of database, training, post clearance audit for the customs valuation; and automation of customs administrations, HS Nomenclature and issues pertaining to RoO.

In terms of government procurement, the PTAs have not failed to give it a due consideration. Though, SAFTA in its Article 11 mentions the issue of government procurement but

with no practical considerations. It is noteworthy that, in 2010, India attained the status of an observer to the WTO Plurilateral Agreement on Government Procurement.[69]

As a result, although India can observe negotiations and other proceedings it cannot take part in them with official submissions. However, there can be informal bilateral/ plurilateral meetings with other members of that agreement. India has also become an active player in the government procurement market by agreeing to negotiate this subject as part of the India-Japan FTA and the EU-India FTA. Interestingly, India's market for government procurement at central government level is estimated to be ₹250bn, and more and more Indian firms are also bidding for foreign contracts.

5
Conclusion and the Way Forward

1. Negotiations must be couched in a larger process consisting of: a) identification of economic/trade problems; b) identification of a potential partner and possible subject for negotiation which solves the identified economic problem; c) firming up of the agenda for negotiation through the pooling of demands from both sides and identification of issues on which there is agreement (implying that no negotiation on such issues is necessary) and otherwise; d) use of strategies and facilitating tactics to gain the maximum benefit from negotiations i.e. use of these tools to arrive at preferred outcomes; and e) the garnering of political backing and necessary legislative approval. BRICS Trade and Economics Research Network (BRICS TERN) can undertake studies on best practices adopted by their respective governments and share these practices to identify gaps for further training and capacity of the negotiators.

2. There are still room for improvement in the preparedness for such negotiations. Thus, the BRICS TERN needs to advocate for a better Human Resource Planning (HRP)

in public administration, governance and at ministerial levels for trade negotiations. The network can establish inter-linkages with key stakeholders, and help their respective governments in enhancing preparedness for such negotiations.

3. The BRICS TERN should seek to enhance public participation in economic policy-making and on matters of economic governance through network-based policy research and advocacy on trade and regulatory issues including competition and investment policies, and economic diplomacy.

4. Generally, in the event of PTA negotiations, prior market analyses in prospective partner countries are not conducted. This could bias evaluation of the feasibility of the agreement, thereby resulting in sub-optimal outcomes of negotiations. BRICS TERN also needs to strongly advocate, and may be, undertake such practices.

5. Some of these critical issues like competition policies need to be harmonised among the BRICS countries, which shall be a task of this network.

6. In such negotiations, the impact assessment of domestic regulations is crucial. Effective regulations are vital for ensuring healthy development of market economies, protecting producer and consumer interests and promoting fair competition. BRICS TERN needs to assist the on-going efforts of promoting effective regulations related to domestic regulations, trade costs (including NTBs), competition policy and investment.

7. The network should also advocate for due impetus to IPRs, trade and environment, trade and social standards, competition policy, trade facilitation, and government procurement for inclusion in their respective government's approach to PTA/FTA/CECA negotiations.

8. BRICS TERN needs to engage in policy research and advocacy on institutional reforms and support the cause of South-South cooperation.

9. BRICS countries represent a progressive model of development. Yet upon deeper reflection the spectacular growth of these countries is accompanied by socio-economic realities of low human development which are becoming a cause of concern for social stability. BRICS TERN needs to work towards policy solutions for sustainable human development in the medium to long term, and also support all such programs and projects which can help their respective government attain Millennium Development Goals (MDGs) by 2015.

10. BRICS countries support the development and use of renewable energy resources as a means to address sustainability concerns. BRICS TERN through its networking activities need to play a role in emphasising the importance of cooperation and information exchange on knowledge and technologies to address climate change concerns and other relevant issues of sustainable development.

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7 It also mentions that in case any company is dealing with transgenic/genetically modified seeds, relevant clearance from the Genetic Engineering Approval Committee (GEAC) and Review Committee on Genetic Manipulation (RCGM) has been made mandatory. Further the policy also mandates compliance to the Environment Protection Act.

8 It excludes titanium bearing minerals and its ores and is subject to the Mines and Minerals (Development & Regulation) Act, 1957

9 It also includes other eligible activities permitted under and subject to the provisions of Coal Mines (Nationalisation) Act, 1973

10 This is subject to the condition that the company shall not do coal mining and shall not sell washed coal or sized coal from its coal processing plants in the open market and shall supply the washed or sized coal to those parties who are supplying raw coal to coal processing plants for washing or sizing

11 This is subject to sectoral regulations and the Mines and Minerals (Development and Regulation Act, 1957)

12 FDI in the Atomic Energy sector is prohibited and is reserved for the public sector

13 This is subject to the existing sectoral policy and regulatory framework in the oil marketing sector and the policy of the government on private participation in exploration of oil and the discovered fields of national

oil companies. However, an FDI cap of 49 percent has been put on activities pertaining to Petroleum refining by the Public Sector Undertakings (PSU), without any disinvestment or dilution of domestic equity in the existing PSUs

14 This is also subject to some restrictions. Also, more importantly, FDI is not allowed in Real Estate

15 Similar FDI route and FDI cap also applies to ISP with gateways, ISP's not providing gateways, i.e. without gate-ways (both for satellite and marine cables), radio paging, and end-to-end bandwidth.

16 Also, such companies would engage only in business to business (B2B) e-Commerce and not in retail trading, *inter alia*, implying that existing restrictions on FDI in domestic trading would be applicable to e- comm. also

17 RCA has been calculated using the following formula: $RCA_{ij} = (X_{ij}/X_{wj})/(X_i/X_w)$

W*here,* X_{ij} = i_{th} country's export of commodity j X_{wj} = world exports of commodity j X_i = total exports of country i; and, X_w = total world exports. An RCA index value of more than one reveals that the country has a comparative advantage. The data for calculation of RCA has been taken from Trade Map database of International Trade Centre, Geneva

18 IIT is calculated as: $IIT_{jk} = 1 - [sum_i | X_{ijk} - M_{ijk} | / (X_{ijk} + M_{ijk})]$. Where, X_{ijk} and M_{ijk} represent exports and imports of products from industry i in country j to and from country k. Intra-industry trade attempts to ascertain how much trade between two economies occurs within the same industry. It is based upon the premise that economies of scale provide an incentive to trade, even when factor endowments and consumer preferences are identical between partner economies. The IIT index ranges between zero and one, with larger values indicating a greater level of trade between firms in the same industry. Higher IIT ratios suggest that net gains from specialisation in different products are being exploited and that the participating country is increasing its integration into the world economy

19 It is one of the overlapping indices that enable a comparison of export and import profiles between two countries i.e., how the export set of industries from the source country matches with the import set of industries from a destination country. In one conception of the determinants of trade, complementarity can be thought of as a proxy for relative resource endowments and can show how much scope there is for further trade TCI= $\left(1-\left(\sum\left|\frac{\sum_m m_{sm,d}}{\sum_m M_{w,d}}-\frac{\sum_m X_{sm}}{\sum_m X_{wm}}\right|\right)\div 2\right)\times 100$

Where: d - importing country of interest; s - exporting country of

interest; w - set of all countries in the world; i - set of industries; x - commodity export flow; X - total export flow; m - commodity import flow; M - the total import flow. The degree of TCI ranges between 0 and 100 percent. Higher complementarity value indicates a better export/import match, while 0 (zero) indicates no complementarity at all

20 In October 2009, India and Nepal entered into an Agreement of Co-operation to Control Unauthorised Trade

21 The Bangkok Agreement was an initiative of Economic and Social Commission for Asia and the Pacific (ESCAP). It is a preferential tariff arrangement that aims at promoting intra-regional trade through exchange of mutually agreed concessions by six member countries which include Bangladesh, China, India, Korea, Lao PDR, and Sri Lanka. Interestingly, other countries like Pakistan, Fiji, Iran and New Zealand, among others have indicated their desire to join

22 The Framework Agreement covers FTA in Goods, Services and Investment and other areas of Economic Cooperation. The Framework Agreement also provided for an Early Harvest Scheme (EHS) for elimination of tariff on a fast track basis on 82 items of export interest to the sides. The tariff concessions on 82 items of EHS list began from September 2004 and have become zero for both sides from September 2006

23 India and ASEAN will eliminate import duties on 71 percent of products by December 31, 2012 and another nine percent by 2015. Tariffs on sensitive tariff lines will be brought down to five percent by 2015 and India will keep 489 tariff lines insulated from tariff cuts

24 India-Singapore CECA was signed in June 2005 and India-Malaysia CECA was recently signed in February 2011

25 As envisaged, this was the main reason why it took almost six years for the negotiations to come to a conclusion. When India and ASEAN kicked off negotiations, a comprehensive agreement was meant to be forged in goods, services and investment. However, ASEAN managed to convince India to first negotiate an agreement on goods before moving onto services and investment

26 Ponappa, 2011

27 An important point to consider here is that the budgetary allocation for such studies will have to be demarcated. Lack of a consistent policy on this front affects the vendor organisation's ability to conduct the studies effectively. The Market Access Initiative (MAI) under the Ministry of Commerce provides almost uniform budgetary support for all FTAs, even if they differ in importance. In certain cases, the difference in magnitudes is counter intuitive. For instance, the budgetary

allocations for studies on the India-Australia PTA were lower than those for the India-Indonesia PTA, despite the former having more trade potential

28 Hoadley, 2003

29 The insecurity began in 1973, when Britain's joining the European Economic Community reduced access for Kiwi cheese, butter and sheep meat to UK markets

30 Here it must be remembered that the old style PTAs were motivated more by geo-strategic considerations. These considerations still play a major role in the negotiation of PTAs by the US and Europe. Thus, the labelling of the 'existence of a trade problem' as an essential pre-condition for a FTA by Hoadley can only apply to new style PTAs which are motivated primarily by economic considerations

31 For example, New Zealand was not granted the following demands: a definite target date for unrestricted access to the Singapore service market, the elimination of all subsidies by Singapore, introduction of a comprehensive competition policy by Singapore, elimination of investment restrictions facing New Zealand investors in Singapore

32 Putnam, 1988

33 This was the roundabout route taken to complete the legitimation of the report. Use of this route was facilitated by the fact that according to New Zealand law the Parliament has no powers as far as treaty ratification is concerned. The circuitous route ensured that no move to create a precedent for giving a direct treaty ratification role to the Parliament was initiated

34 The lessons for India for the negotiation of PTAs that can be culled from international experience not only relate to the processes revealed by these stages but also consist of those that relate to human capital, staff deployment and the like

35 IAD Report, Singapore, 2005-06

36 Bilal, 2003

37 Expressed in another way, any functioning democratically elected government can view the suitability of negotiations in the context of the national development strategy. In the case of a democracy the national development strategy in most cases would be quite representative of the interests of the entire population or at least a substantial portion. Thus, negotiations with expected outcomes that are consistent with the national development strategy should be taken up while others should be discarded. Such consistency and consequent political support will lead to the successful implementation of the coordination mechanisms highlighted above

38 Kumar, P. (2008), "Multilateral Trading System – Is it India's Best Option?" CUTS CITEE Working Paper, No. 4/2008

39 Nevertheless, India's own domestic economic reforms and unilateral liberalisation have played a major role in making the country competitive in various sectors, thereby, enabling it to take advantage of the opportunities offered by PTAs

40 See Appendix Tables 1 and 3

41 See Appendix Tables 2 and 4

42 However, four items, namely, vegetable fats (*vanaspati*), copper products, acrylic yarn and zinc oxide face quota restrictions. In addition, alcoholic liquors/ beverages, non-Nepalese/non-Indian perfumes, cosmetics and cigarettes and tobacco are also not granted preferential access into India. Likewise Nepal has also protected its beverages and tobacco sector with an *ad valorem* tariff equivalent of 70 and 41.1 percent respectively

43 The recent visit by Pakistan's Commerce Minister in September 2011 to India have raised hope about Pakistan granting MFN status to India

44 WTO Trade Profiles 2011

45 See Appendix Tables 2 and 4

46 DIPP, Federal Ministry of Commerce and Industry, Government of India

47 India-MERCOSUR PTA, Department of Commerce, Government of India

48 Lack of information on policies and regulations, large geographical distance with few direct shipping lines, poor air transportation links, differences in language and cultural aspects along with inadequate banking and insurance facilities have been identified as possible factors for low volumes of trade between the two regions

49 The study uses the following equations:

$$LnX_{ij} = \beta_0 + {}_1 LnGDP_j + {}_2 LnPOP_j + {}_3 LnDist._{ij} + {}_4 cont + {}_5 comlang + {}_6 comcol + {}_7 smctry + {}_k PTA_{kij} + {}_{ij} \quad \ldots\ldots(1)$$

$$LnM_{ij} = {}_0 + {}_1 LnGDP_j + {}_2 LnPOP_j + {}_3 LnDist._{ij} + {}_4 cont + {}_5 comlang + {}_6 comcol + {}_7 smctry + {}_k PTA_{kij} + {}_{ij} \quad \ldots\ldots(2)$$

50 See Anderson, 1979; Helpman and Krugman, 1985

51 Taneja and Sawhney, 2007

52 See Appendix Table 6

53 Kundu, 2004

54 Joshi and Singh, 2008

55 Apparel Bulletin, 2009

56 World Bank, 2006

57 VUAT, 2007

58 Financial Express, 2004

59 Nair, 2006

60 The details are reflected in India's Revised Offer of 2005 at the WTO

61 World Investment Report, 2010

62 Weerakoon, D. and J. Thennakoon, 2007

63 RBI, 2010

64 Singh, 2008

65 Suman *et al.*, 2009

66 News-item '37,000 patents filed in India this fiscal', The Economic Times, March 13, 2011

67 There are substantial improvement in the way in which IPRs are enforced, with strong civil and criminal regulations in place for dealing with counterfeiting and piracy. Also there is an inter-ministerial committee which coordinates on issues related IP enforcement

68 Article 39 states that 'the State shall, in particular, direct its policy towards securing – (clause b) that the ownership and control of material resources of the community are so distributed as best to subserve the common good; and, (clause c) that the operation of the economic system does not result in the concentration of wealth and means of production to the common detriment'

69 The Doha Agenda on government procurement was limited to transparency in government procurement, but the WTO Plurilateral Agreement on Government Procurement covers transparency as well as market access

APPENDIX

Table 1: India's Merchandise Exports to Countries/Groups (US$mn)

Region	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	AAGR
Argentina	63	99	65	60	87	186	200	212	290	352	270	22%
Brazil	135	226	219	479	276	678	1091	1453	2518	2651	2414	45%
Paraguay	7	8	7	7	11	12	16	27	47	39	37	22%
Uruguay	27	36	26	17	19	25	28	37	51	66	48	10%
MERCOSUR	231	369	317	563	393	901	1334	1729	2905	3108	2770	36%
Afghanistan	33	26	24	61	145	165	143	182	249	394	464	40%
Bangladesh	636	935	1002	1176	1741	1631	1664	1628	2918	2498	2434	18%
Bhutan	8	1	8	39	89	85	99	58	87	111	119	118%
Maldives	7	25	27	32	42	48	68	69	90	128	80	41%
Nepal	151	141	214	350	669	743	860	928	1507	1570	1533	30%
Pakistan	93	187	144	206	287	521	689	1350	1945	1440	1573	40%
Sri Lanka	499	640	631	921	1319	1413	2025	2256	2827	2426	2188	18%
SAFTA	1428	1954	2050	2785	4294	4606	5548	6469	9622	8567	8391	21%
Singapore	673	877	972	1422	2125	4001	5425	6069	7371	8444.9	7592.17	30%
BRICS	1907.3	2256.7	2322.1	3642	4484.1	7909.3	10110	12892.3	16953.4	15082	17071	27%
ASEAN	2238	2914	3457	4619	5822	8426	10411	12614	16384	19141	18114	24%
EU(27)	9666	10694	10155	11886	14517	18249	23229	26806	34507	39351	36028	15%
China	539	831	952	1975	2955	5616	6759	8294	10834	9353.5	11617.88	40%
Chile	68.61	108.45	83.25	72.13	83.02	111.2	152.15	377.22	250.21	393.47	277.32	25%
Japan	1685.4	1794.5	1510.4	1864	1709.29	2127.91	2481.26	2868.12	3858.48	3025.7	3629.54	10%
Korea	476.56	450.78	471.37	644.85	764.86	1041.68	1827.21	2518.4	2860.84	3952.3	3421.05	24%
US	8396	9305	8513	10896	11490	13766	17353	18866	20722	21150	19535.49	9%
India's Total Export	36822	44560	43827	52719	63842.6	83535.9	103091	126414	163132	185295	178751.4	18%

Source: Export Import Data Bank, Ministry of Commerce, Government of India
Note: AAGR: Average Annual Growth Rate; Figures are in millions of US$

Table 2: India's Merchandise Export Shares (%)											
Region/Country	**1999-00**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2009-10**
MERCOSUR	0.63	0.83	0.72	1.07	0.62	1.08	1.29	1.37	1.78	1.68	1.55
SAFTA	3.88	4.39	4.68	5.28	6.73	5.51	5.38	5.12	5.90	4.62	4.69
BRICS	5.18	5.06	5.30	6.91	7.02	9.47	9.81	10.20	10.39	8.14	9.55
ASEAN	6.08	6.54	7.89	8.76	9.12	10.09	10.10	9.98	10.04	10.33	10.13
EU (27)	26.25	24.00	23.17	22.55	22.74	21.85	22.53	21.20	21.15	21.24	20.16
Sri Lanka	1.36	1.44	1.44	1.75	2.07	1.69	1.96	1.78	1.73	1.31	1.22
Singapore	1.83	1.97	2.22	2.70	3.33	4.79	5.26	4.80	4.52	4.56	4.25
China	1.46	1.86	2.17	3.75	4.63	6.72	6.56	6.56	6.64	5.05	6.50
Chile	0.19	0.24	0.19	0.14	0.13	0.13	0.15	0.30	0.15	0.21	0.16
Japan	4.58	4.03	3.45	3.54	2.68	2.55	2.41	2.27	2.37	1.63	2.03
Korea	1.29	1.01	1.08	1.22	1.20	1.25	1.77	1.99	1.75	2.13	1.91
US	22.80	20.88	19.42	20.67	18.00	16.48	16.83	14.92	12.70	11.41	10.93
Source: Export Import Data Bank, Ministry of Commerce, Government of India											

Table 3: India's Merchandise Imports from Countries/Groups

Country/Region	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	AAGR
Argentina	347.5	380.8	436	404.1	524	539.6	754	879.9	905.9	499.07	672.21	10%
Brazil	330.9	145.2	308.2	316.8	313.5	792.4	893.1	990.9	948.8	1186	3437.97	44%
Paraguay	0.2	0.5	18.1	0.6	0.8	2.8	4.2	2.8	0.5	0.58	5.22	461%
Uruguay	2	2.9	3.5	4.7	10.2	4.1	4	7.3	13.3	14.73	16.04	34%
MERCOSUR	680.6	529.4	765.7	726.2	848.5	1338.8	1655.4	1880.9	1868.4	1700.3	4131.44	26%
Afghanistan	21.1	26.6	17.5	18.5	40.5	47	58.4	34.5	109.3	126.24	125.19	35%
Bangladesh	78.2	80.5	59.1	62.1	77.6	59.4	127	228.3	257.1	313.11	254.66	19%
Bhutan	18	21.1	23.9	32.2	52.4	71	88.8	141.3	194.5	151.79	153.11	26%
Maldives	0.4	0.2	0.4	0.3	0.4	0.6	2	3.1	4.2	3.97	3.63	42%
Nepal	188.6	255.1	355.9	281.8	286	345.8	379.9	305.7	628	496.04	452.61	14%
Pakistan	68.2	64	64.8	44.9	57.7	95	179.6	323	287.9	370.17	275.94	22%
Sri Lanka	44.2	45	67.4	90.8	194.7	378.4	577.7	470.3	631.4	356.57	392.19	33%
SAFTA	418.7	492.5	589	530.4	709.3	997.2	1413.3	1506.2	2112.4	1817.9	1657.34	17%
Singapore	1160.3	1463.9	1304.1	1434.8	2085.4	2651.4	3353.8	5485.3	8121.6	7654.9	6454.57	21%
BRICS	4252.8	3186.77	4320.61	5794.89	7225.32	11410.81	16255.09	23317.09	34148.31	43525	43503.28	29%
ASEAN	4629	4147	4387	5150	7433	9115	10884	18090	22675	26203	25797.96	20%
EU(27)	11135	10675	10649	12834	15075	19302	25998	29809	38432	42733	38433.12	14%
Chile	85.49	57.14	94.79	167.31	156.73	345.57	434.5	1923.48	1837.21	1503.9	1119.38	54%
JAPAN	2535.8	1842.19	2146.44	1836.33	2667.68	3235.13	4061.1	4599.54	6325.92	7886.3	6734.18	13%
Korea South	1104.42	893.76	1141.37	1522.01	2829.17	3508.77	4563.85	4803.15	6044.8	8676.8	8576.07	26%
China	1283	1502	2036	2792	4053	7098	10868	17447	27116	32497	30824.02	39%
US	3560	3015	3150	4444	5035	7001	9455	11727	21030	18561	16973.68	20%
India's Total Import	49738.06	50536.45	51413.28	61412.14	78149.11	111517.4	149165.7	185735.2	251654	303696	288372.9	20%

Source: Export Import Data Bank, Ministry of Commerce, Government of India
Note: AAGR: Average Annual Growth Rate; Figures are in millions of US$

Table 4: India's Merchandise Import Shares (%)											
Region/Country	**1999-00**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2009-10**
MERCOSUR	1.4	1.0	1.5	1.2	1.1	1.2	1.1	1.0	0.7	0.6	1.4
SAFTA	0.8	1.0	1.1	0.9	0.9	0.9	0.9	0.8	0.8	0.6	0.6
BRICS	8.6	6.3	8.4	9.4	9.2	10.2	10.9	12.6	13.6	14.3	15.1
ASEAN	9.3	8.2	8.5	8.4	9.5	8.2	7.3	9.7	9.0	8.6	8.9
EU(27)	22.4	21.1	20.7	20.9	19.3	17.3	17.4	16.0	15.3	14.1	13.3
Sri Lanka	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.3	0.3	0.1	0.1
Singapore	2.3	2.9	2.5	2.3	2.7	2.4	2.2	3.0	3.2	2.5	2.2
Chile	0.2	0.1	0.2	0.3	0.2	0.3	0.3	1.0	0.7	0.5	0.4
JAPAN	5.1	3.6	4.2	3.0	3.4	2.9	2.7	2.5	2.5	2.6	2.3
Korea South	2.2	1.8	2.2	2.5	3.6	3.1	3.1	2.6	2.4	2.9	3.0
China	2.6	3.0	4.0	4.5	5.2	6.4	7.3	9.4	10.8	10.7	10.7
US	7.2	6.0	6.1	7.2	6.4	6.3	6.3	6.3	8.4	6.1	5.9
Source: Export Import Data Bank, Ministry of Commerce, Government of India											

Table 5: Average MFN Applied Tariffs									
Country	2000	2006	2009	2006		2009		2006	2009
	Manufactured Goods			Non-Agricultural Products	Agricultural Products	Non Agri.	Agri	All Products	
India	31.7 (2001)	15.3 (2005)	9.3	16.4	37.6	10.1	31.8	19.2	12.9
Afghanistan	——	5.8	5.7 (2008)	5.7	5.5	5.5 (2008)	5.8 (2008)	5.7	5.6 (2008)
Argentina	13.7	9.8	10.7	12.6	10.1	13	10.3	12.2	12.6
Bangladesh	22.2	15.4	14.5 (2007)	14.9	17.3	14.3 (2008)	17.6 (2008)	15.2	14.7 (2008)
Bhutan	16.5 (2002)	18.7 (2005)	18.4 (2007)	19.2	41.3	—		22.1	
Brazil	16.8	13.4	15.2		10.2	14.1	10.2	12.3	13.6
Chile	7	6	6	—	—	6	6	—	6
China	16.5	9.5	9.3	—	—	8.7	15.6	—	9.6
Japan	2.9	2.5	2.5	—	—	2.5	21	—	4.9
Maldives	20.4	20.4	20.7	20.5	18.4	20.7	18.3	20.2	20.4
Nepal	13.7	12.6	12.6	13.7	14.9	12.1	14.3	13.9	12.4
Pakistan	21.1 (2001)	14.8	14 (2008)	14	16.3	13.4	17.1	14.3	13.9
Paraguay	13.8	10.4	10.9	10	9.8	10.3	10.3	9.9	10.3
Russia	10.2 (2001)	9.7 (2005)	8.7			10.1	13.2		10.5
Singapore	0	0	0	0	0.2	0	0.2	0	0
Sri Lanka	8	9.4	9	9.2	23.8	9.2	24.8	11.2	11.2
Uruguay	14.7	11.3	11.2	10.7	10	10.6	10.1	10.6	10.5
Source: UNCTAD Handbook of Statistics 2000, 2006; WTO Trade Profiles 2011									

Table 6: Preferential Arrangements in India's PTAs						
	Negative List (HS-6 digit)	Tariff Liberalisation Schedule			Rules of Origin	
ISLFTA		Immediately	By 2003 (in 3 years)	By 2008 (In 8 years)	Domestic Value Added	Change in Tariff Heading
India	419	1351 products	50 percent, 75 percent and 100 percent reduction		35 percent	4-digit
Sri Lanka	1180	319 products & 50 percent margin of preference on 889 items	70 percent, 90 percent and 100 percent on 889 items	35 percent, 70 percent and 100 percent	35 percent	4-digit
SAFTA	Negative List (HS-6 digit)	In 2 Years (First Phase)	By 2013 (in 5 years) (Second Phase)	By 2016 (in 8 years) (Second phase)		
LDC	Bangladesh: 1249 (for LDC) 1254 (for NLDC) Nepal: 1335 Bhutan: 137 Maldives: 671	30 percent (annual reduction of 5percent)		0-5 percent reduction	30 percent	4-digit
Sri Lanka	1065	20 percent reduction (annual reduction of 10 percent)	0-5 percent reduction within 6 years		35 percent	4-digit

contd...

Non-LDC	India: 865 (for NLDC) 744 (for LDC) Pakistan: 1183	20 percent reduction (annual reduction of 10 percent)			40 percent	4-digit
Indo-Singapore CECA	Negative List (HS 8 digit)	Early Harvest Scheme	Phased Tariff Elimination- by 2009	Phased Tariff Reduction		
India	6551 products	506 products	At five stages margin of preference 10 percent, 25 percent, 50 percent, 75 percent and 100 percent on 2202 items	At five stages margin of preference 5 percent, 10 percent, 20 percent, 35 percent and 50 percent on 2407 items	40 percent	4-digit
Singapore	-	-	-	-	40 percent	4-digit
India-MERCOSUR	Positive List (HS 8 digit)					
MERCOSUR	452	Fixed Tariff concessions ranging from 10 percent to 100 perUScent			60 percent	
India	450				60 percent	
Source: Various Trade Agreements, Department of Commerce, Government of India						

Table 7: Revealed Comparative Advantage for India (Goods)			
Sectors	**2010**	**Sectors**	**2005**
Lac, gums, resins, vegetable saps and extracts nes	9.40	Silk	12.94
Carpets and other textile floor coverings	8.74	Lac, gums, resins, vegetable saps and extracts nes	11.79
Vegetable plaiting materials, vegetable products nes	8.52	Carpets and other textile floor coverings	9.27
Cotton	8.40	Pearls, precious stones, metals, coins, etc	8.47
Vegetable textile fibres nes, paper yarn, woven fabric	7.71	Other made textile articles, sets, worn clothing etc	7.28
Other made textile articles, sets, worn clothing etc	5.66	Ores, slag and ash	7.07
Silk	5.34	Cotton	5.69
Ores, slag and ash	5.28	Vegetable plaiting materials, vegetable products nes	5.22
Bird skin, feathers, artificial flowers, human hair	3.81	Vegetable textile fibres nes, paper yarn, woven fabric	4.92
Coffee, tea, mate and spices	3.69	Coffee, tea, mate and spices	4.86
Source: Calculations based on ITC data			

Table 8: Revealed Comparative Advantage for India (Services)			
Sectors	**2009**	**Sectors**	**2004**
Computer and information services	8.59	Computer and information services	9.46
Personal remittances	7.45	Personal remittances	8.29
Transportation	0.88	Communications services	1.24
Travel	0.71	Other business services	0.88
Insurance services	0.67	Travel	0.86
Other business services	0.59	Insurance services	0.85
Communications services	0.59	Transportation	0.77
Financial services	0.50	Construction services	0.67
Personal, cultural and recreational services	0.50	Government services, n.i.e.	0.37
Construction services	0.33	Financial services	0.14
Source: Calculations based on ITC data			

Table 9: Revealed Comparative Advantage (top 10 sectors) for India's trading partners-Brazil and Russia							
Brazil				Russia			
Sectors	2005	Sectors	2010	Sectors	2005	Sectors	2010
Oil seed, oleagic fruits, grain, seed, fruit, etc, nes	15.64	Sugars and sugar confectionery	21.94	Nickel and articles thereof	8.00	Nickel and articles thereof	7.01
Sugars and sugar confectionery	14.89	Oil seed, oleagic fruits, grain, seed, fruit, etc, nes	11.63	Fertilisers	5.89	Arms and ammunition, parts and accessories thereof	6.81
Coffee, tea, mate and spices	12.23	Ores, slag and ash	11.01	Mineral fuels, oils, distillation products, etc	4.58	Fertilisers	5.31
Ores, slag and ash	9.90	Coffee, tea, mate and spices	10.72	Iron and steel	2.70	Mineral fuels, oils, distillation products, etc	4.65
Meat and edible meat offal	9.83	Meat and edible meat offal	9.04	Wood and articles of wood, wood charcoal	2.41	Wood and articles of wood, wood charcoal	2.25
Residues, wastes of food industry, animal fodder	8.95	Pulp of wood, fibrous cellulosic material, waste etc	7.60	Other base metals, cermets, articles thereof	2.38	Inorganic chemicals, precious metal compound, isotopes	2.21
Pulp of wood, fibrous cellulosic material, waste etc	6.79	Residues, wastes of food industry, animal fodder	6.51	Aluminium and articles thereof	2.25	Iron and steel	1.95
Tobacco and manufactured tobacco substitutes	5.93	Tobacco and manufactured tobacco substitute	5.82	Copper and articles thereof	1.41	Other base metals, cermets, articles thereof	1.92
Raw hides and skins (other than furskins) and leather	4.57	Products of animal origin, nes	4.55	Inorganic chemicals, precious metal compound, isotopes	1.15	Aluminium and articles thereof	1.80
Products of animal origin, nes	2.94	Raw hides and skins (other than furskins) and leather	4.54	Arms and ammunition, parts and accessories thereof	0.18	Copper and articles thereof	1.24
Source: Calculations based on ITC data							

Table 10: Revealed Comparative Advantage (top 10 sectors) for India's trading partners-China and South Africa

China				South Africa			
Sectors	2005	Sectors	2010	Sectors	2005	Sectors	2010
Manufactures of plaiting material, basketwork, etc.	8.30	Umbrellas, walking-sticks, seat-sticks, whips, etc	7.14	Pearls, precious stones, metals, coins, etc	9.57	Ores, slag and ash	9.86
Umbrellas, walking-sticks, seat-sticks, whips, etc	7.99	Bird skin, feathers, artificial flowers, human hair	6.45	Ores, slag and ash	7.35	Pearls, precious stones, metals, coins, etc	6.86
Bird skin, feathers, artificial flowers, human hair	6.25	Manufactures of plaiting material, basketwork, etc.	6.33	Edible fruit, nuts, peel of citrus fruit, melons	5.53	Edible fruit, nuts, peel of citrus fruit, melons	5.80
Silk	5.64	Silk	5.09	Explosives, pyrotechnics, matches, pyrophorics, etc	5.06	Explosives, pyrotechnics, matches, pyrophorics, etc	5.74
Headgear and parts thereof	4.51	Headgear and parts thereof	4.23	Iron and steel	4.48	Wool, animal hair, horsehair yarn and fabric thereof	4.53
Articles of leather, animal gut, harness, travel goods	4.39	Articles of leather, animal gut, harness, travel goods	4.04	Aluminium and articles thereof	3.67	Iron and steel	4.23
Toys, games, sports requisites	4.21	Other made textile articles, sets, worn clothing etc	3.75	Pulp of wood, fibrous cellulosic material, waste etc	3.45	Pulp of wood, fibrous cellulosic material, waste etc	3.42
Other made textile articles, sets, worn clothing etc	4.16	Toys, games, sports requisites	3.55	Wool, animal hair, horsehair yarn and fabric thereof	3.23	Nickel and articles thereof	2.94
Footwear, gaiters and the like, parts thereof	3.89	Articles of apparel, accessories, knit or crochet	3.53	Beverages, spirits and vinegar	3.06	Aluminium and articles thereof	2.73
Articles of apparel, accessories, knit or crochet	3.39	Footwear, gaiters and the like, parts thereof	3.44	Nickel and articles thereof	2.87	Beverages, spirits and vinegar	2.59

Source: Calculations based on ITC data

Table 11: Revealed Comparative Advantage (top 10 sectors) for India's trading partners: Afghanistan, Argentina, Bangladesh, and Bhutan

Afghanistan		Argentina		Bangladesh		Bhutan	
Sectors	2010	Sectors	2010	Sectors	2010	Sectors	2009
Meat, fish and seafood food preparations nes	37.64	Residues, wastes of food industry, animal fodder	34.32	Vegetable textile fibres nes, paper yarn, woven fabric	114.01	Inorganic chemicals, precious metal compound, isotopes	6.23
Miscellaneous manufactured articles	37.30	Oil seed, oleagic fruits, grain, seed, fruit, etc., nes	21.49	Articles of apparel, accessories, knit or crochet	39.04	Salt, sulphur, earth, stone, plaster, lime and cement	43.11
Iron and steel	27.85	Cereals	11.51	Articles of apparel, accessories, not knit or crochet	32.80	Photographic or cinematographic goods	0.00
Edible vegetables and certain roots and tubers	25.16	Milling products, malt, starches, inulin, wheat gluten	11.18	Headgear and parts thereof	14.79	Iron and steel	1.14
Silk	17.67	Animal,vegetable fats and oils, cleavage products, etc	8.08	Other made textile articles, sets, worn clothing etc	10.85	Headgear and parts thereof	0.00
Essential oils, perfumes, cosmetics, toileteries	13.19	Raw hides and skins (other than furskins) and leather	7.65	Fish, crustaceans, molluscs, aquatic invertebrates nes	4.84	Works of art, collectors pieces and antiques	0.01
Meat and edible meat offal	12.05	Wool, animal hair, horsehair yarn and fabric thereof	5.08	Raw hides and skins (other than furskins) and leather	4.14	Vegetable, fruit, nut, etc food preparations	1.66
Commodities not elsewhere specified	8.12	Edible fruit, nuts, peel of citrus fruit, melons	4.95	Footwear, gaiters and the like, parts thereof	2.13	Cereals	0.06
Soaps, lubricants, waxes, candles, modelling pastes	6.83	Meat and edible meat offal	4.16	Tobacco and manufactured tobacco substitutes	1.60	Commodities not elsewhere specified	0.00
Miscellaneous chemical products	5.71	Fish, crustaceans, molluscs, aquatic invertebrates nes	4.01	Manufactures of plaiting material, basketwork, etc.	1.17	Edible vegetables and certain roots and tubers	5.22

Source: Calculations based on ITC data

Table 12: Revealed Comparative Advantage (top 10 sectors) for India's trading partners: Brazil, Chile, Japan, and South Korea							
Brazil		**Chile**		**Japan**		**Korea South**	
Sectors	**2010**	**Sectors**	**2010**	**Sectors**	**2010**	**Sectors**	**2010**
Sugars and sugar confectionery	21.94	Copper and articles thereof	37.92	Photographic or cinematographic goods	4.97	Ships, boats and other floating structures	8.77
Oil seed, oleagic fruits, grain, seed, fruit, etc, nes	11.63	Ores, slag and ash	16.00	Commodities not elsewhere specified	3.31	Knitted or crocheted fabric	4.69
Ores, slag and ash	11.01	Pulp of wood, fibrous cellulosic material, waste etc	11.46	Ships, boats and other floating structures	2.94	Optical, photo, technical, medical, etc apparatus	2.52
Coffee, tea, mate and spices	10.72	Edible fruit, nuts, peel of citrus fruit, melons	9.51	Vehicles other than railway, tramway	2.56	Manmade filaments	2.42
Meat and edible meat offal	9.04	Fish, crustaceans, molluscs, aquatic invertebrates nes	6.68	Musical instruments, parts and accessories	2.29	Zinc and articles thereof	1.97
Pulp of wood, fibrous cellulosic material, waste etc	7.60	Beverages, spirits and vinegar	3.93	Glass and glassware	1.99	Electrical, electronic equipment	1.87
Residues, wastes of food industry, animal fodder	6.51	Vegetable plaiting materials, vegetable products nes	3.72	Iron and steel	1.93	Impregnated, coated or laminated textile fabric	1.81
Tobacco and manufactured tobacco substitutes	5.82	Wood and articles of wood, wood charcoal	3.64	Other base metals, cermets, articles thereof	1.61	Iron and steel	1.78
Products of animal origin, nes	4.55	Lac, gums, resins, vegetable saps and extracts nes	3.60	Optical, photo, technical, medical, etc apparatus	1.60	Plastics and articles thereof	1.58
Raw hides and skins (other than furskins) and leather	4.54	Fertilisers	2.53	Machinery, nuclear reactors, boilers, etc	1.60	Vehicles other than railway, tramway	1.54
Source: Calculations based on ITC data							

Table 13: Revealed Comparative Advantage (top 10 sectors) for India's trading partners: Malaysia, Maldives, Nepal, and Pakistan

Malaysia		Maldives		Nepal		Pakistan	
Sectors	2010	Sectors	2010	Sectors	2010	Sectors	2010
Animal,vegetable fats and oils, cleavage products, etc	15.13	Fish, crustaceans, molluscs, aquatic invertebrates nes	128.42	Vegetable plaiting materials, vegetable products nes	362.21	Cotton	1.21
Tin and articles thereof	8.47	Meat, fish and seafood food preparations nes	26.31	Carpets and other textile floor coverings	79.13	Other made textile articles, sets, worn clothing etc	45.90
Vegetable plaiting materials, vegetable products nes	4.66	Residues, wastes of food industry, animal fodder	1.79	Vegetable textile fibres nes, paper yarn, woven fabric	46.98	Cereals	9.61
Rubber and articles thereof	3.42	Commodities not elsewhere specified	1.73	Manmade staple fibres	29.79	Manmade staple fibres10.60	
Wood and articles of wood, wood charcoal	2.93	Cereals	1.24	Manmade filaments	29.08	Raw hides and skins (other than furskins) and leather	10.22
Cocoa and cocoa preparations	2.32	Mineral fuels, oils, distillation products, etc	0.63	Coffee, tea, mate and spices	19.05	Salt, sulphur, earth, stone, plaster, lime and cement	9.18
Electrical, electronic equipment	2.21	Tobacco and manufactured tobacco substitutes	0.49	Wadding, felt, nonwovens, yarns, twine, cordage, etc	17.00	Articles of leather, animal gut, harness, travel goods	8.84
Miscellaneous chemical products	1.49	Printed books, newspapers, pictures etc	0.46	Headgear and parts thereof	16.99	Articles of apparel, accessories, knit or crochet	7.73
Cereal, flour, starch, milk preparations and products	1.28	Oil seed, oleagic fruits, grain, seed, fruit, etc, nes	0.32	Edible vegetables and certain roots and tubers	16.14	Carpets and other textile floor coverings	6.58
Manmade filaments	1.27	Animal,vegetable fats and oils, cleavage products, etc	0.32	Other made textile articles, sets, worn clothing etc	14.52	Articles of apparel, accessories, not knit or crochet	6.05

Source: Calculations based on ITC data

Table 14: Revealed Comparative Advantage (top 10 sectors) for India's trading partners: Paraguay, Singapore, Sri Lanka, and Uruguay							
Paraguay		Singapore		Sri Lanka		Uruguay	
Sectors	2010	Sectors	2010	Sectors	2010	Sectors	2010
Oil seed, oleagic fruits, grain, seed, fruit, etc, nes	77.31	Commodities not elsewhere specified	4.51	Coffee, tea, mate and spices	74.82	Wool, animal hair, horsehair yarn and fabric thereof	39.31
Meat and edible meat offal	31.13	Tin and articles thereof	4.37	Vegetable textile fibres nes, paper yarn, woven fabric	51.64	Meat and edible meat offal	8.46
Cereals	22.31	Electrical, electronic equipment	2.66	Vegetable plaiting materials, vegetable products nes	21.86	Milling products, malt, starches, inulin, wheat gluten	25.58
Residues, wastes of food industry, animal fodder	19.58	Clocks and watches and parts thereof	1.90	Articles of apparel, accessories, not knit or crochet	17.22	Oil seed, oleagic fruits, grain, seed, fruit, etc, nes	22.72
Animal, vegetable fats and oils, cleavage products, etc	11.61	Organic chemicals	1.62	Articles of apparel, accessories, knit or crochet	17.09	Cereals	21.59
Raw hides and skins (other than furskins) and leather	10.75	Essential oils, perfumes, cosmetics, toileteries	1.48	Milling products, malt, starches, inulin, wheat gluten	13.82	Products of animal origin, nes	17.45
Products of animal origin, nes	10.40	Machinery, nuclear reactors, boilers, etc	1.26	Rubber and articles thereof	7.68	Live animals	17.18
Milling products, malt, starches, inulin, wheat gluten	6.13	Printed books, newspapers, pictures etc	1.26	Headgear and parts thereof	6.62	Dairy products, eggs, honey, edible animal product nes	16.96
Tobacco and manufactured tobacco substitutes	4.62	Mineral fuels, oils, distillation products, etc	1.07	Special woven or tufted fabric, lace, tapestry etc	3.97	Raw hides and skins (other than furskins) and leather	16.49
Wood and articles of wood, wood charcoal	3.01	Plastics and articles thereof	1.00	Fish, crustaceans, molluscs, aquatic invertebrates nes	3.68	Wood and articles of wood, wood charcoal	9.76
Source: Calculations based on ITC data							

Table 15: India's Trade Complementarity Index (TCI) with Brazil Russia, China and South Africa during 2001-2010				
Country	Brazil	Russia	China	South Africa
2001	60%	45%	43%	43%
2002	58%	43%	45%	45%
2003	56%	43%	47%	48%
2004	56%	44%	48%	49%
2005	56%	43%	50%	53%
2006	56%	44%	49%	54%
2007	56%	43%	49%	58%
2008	59%	47%	50%	56%
2009	56%	48%	55%	58%
2010	93%	50%	50%	50%
Source: Calculations based on ITC data				

Table 16: India's TCI (%) with PTA partner countries during 2001-2010									
Year	Argentina	Bangladesh	Maldives	Nepal	Pakistan	Paraguay	Singapore	Sri Lanka	Uruguay
2001	45%	NA	50%	NA	NA	39%	34%	51%	47%
2002	46%	51%	50%	NA	NA	41%	37%	53%	50%
2003	46%	51%	50%	53%	50%	42%	38%	55%	51%
2004	45%	51%	50%	NA	54%	45%	40%	56%	52%
2005	47%	51%	50%	NA	58%	50%	45%	59%	56%
2006	45%	52%	50%	NA	58%	47%	46%	61%	56%
2007	48%	51%	50%	NA	63%	46%	50%	62%	60%
2008	48%	48%	50%	NA	54%	49%	48%	57%	55%
2009	51%	47%	50%	61%	60%	52%	50%	63%	60%
2010	50%	48%	100%	65%	50%	50%	50%	50%	50%
Source: Calculations based on ITC data									

Table 17: Gravity Trade Model Estimations		
Particulars	**OLS, dependant variable: export**	**OLS dependant variable: import**
ln_POP	0.447 *(5.720)**	0.545 *(4.032)**
ln_GDP	0.563 *(9.081)**	0.940 *(8.780)**
ln_DIST	-0.613 *(-3.033)*	-0.663 *(-1.898)*
contig	-0.165 *(-0.155)*	0.137 *(0.075)*
comlang	0.219 *(0.773)*	-0.904 *(-1.834)*
comcol	1.042 *(3.341)**	1.578 *(2.927)**
smctry	-2.647 *(-2.370)*	-3.670 *(-1.900)*
SAFTA	1.018 *(1.277)*	0.142 *(0.103)*
BIMSTEC	0.916 *(1.000)*	-1.798 *(-1.135)*
India-ASEAN	-0.107 *(-0.212)*	-0.030 *(-0.034)*
India-MERCOSUR	0.160 *(0.230)*	0.420 *(0.348)*
ISLFTA	-0.842 *(-0.484)*	2.614 *(0.869)*
India-Singapore	2.320 *(1.636)*	-2.373 *(-0.968)*

Source: Calculated estimations through SPSS
Note: Figures in parenthesis denote t-statistics. In equation 1 (i.e. for export as dependant variable), the R^2 value is 0.687 while the value for Adj. R^2 is 0.660. In equation 2 (i.e. for import as dependant variable), the R^2 value is 0.628 while the value for Adj. R^2 is 0.596.
**denotes significance at 1% level of significance*

Table 18: List of Countries in the Sample (166 countries)						
Afghanistan	**Bulgaria**	**Estonia**	**Jamaica**	**Mexico**	**Russian Federation**	**Trinidad and Tobago**
Albania	Burkina Faso	Ethiopia	Japan	Micronesia	Rwanda	Tunisia
Algeria	Burundi	Fiji	Jordan	Moldova	Saudi Arabia	Turkey
Angola	Cambodia	Finland	Kazakhstan	Mongolia	Senegal	Turkmenistan
Antigua & Barbuda	Cameroon	France	Kenya	Morocco	Seychelles	United Arab Emirates
Argentina	Canada	Gabon	Kuwait	Mozambique	Sierra Leone	United Kingdom
Armenia	Cape Verde	Georgia	Kyrgyzstan	Myanmar	Singapore	United States
Australia	Cayman Islands	Germany	Lao PDR	Namibia	Slovakia	Uganda
Austria	Chad	Ghana	Latvia	Nepal	Slovenia	Ukraine
Azerbaijan	Chile	Greece	Lebanon	Netherlands	Somalia	Uruguay
Bahamas	China	Grenada	Lesotho	New Zealand	South Africa	Uzbekistan
Bahrain	Colombia	Guinea	Liberia	Nicaragua	South Korea	Venezuela
Bangladesh	Costa Rica	Guinea Bissau	Libya	Niger	Spain	Vietnam
Barbados	Côte d'Ivoire	Guyana	Lithuania	Nigeria	Sri Lanka	Yemen
Belarus	Croatia	Haïti	Luxembourg	Norway	Sudan	Zambia
Belgium	Cuba	Honduras	Macao	Oman	Suriname	Zimbabwe
Belize	Cyprus	Hong Kong	Macedonia	Pakistan	Swaziland	
Benin	Czech Republic	Hungary	Madagascar	Panama	Sweden	
Bermuda	Denmark	Iceland	Malawi	Papua New Guinea	Switzerland	
Bhutan	Djibouti	Indonesia	Malaysia	Paraguay	Syria	
Bolivia	Dominican Republic	Iran	Maldives	Peru	Taiwan	
Bosnia	Ecuador	Iraq	Mali	Philippines	Tajikistan	
Botswana	Egypt	Ireland	Malta	Poland	Tanzania	
Brazil	El Salvador	Israel	Mauritania	Portugal	Thailand	
Brunei	Eritrea	Italy	Mauritius	Qatar	Togo	

Table 19: Data Source	
Variables	**Source**
GDP, Population	World Development Indicators, World Bank
Distance, Contig, comcol, comlang, smctry	Centre d'Etudes Prospectives et d' Informations Internationales (CEPII database), France
Export and Import data, RCA, IIT, TCI	International Trade Centre's Market Analysis Tool Database, Geneva

Table 20: India's IIT with each BRICS countries in 2009

HS Code	Sectors	Brazil	Russia	China	South Africa
'01	Live animals	0.001	0.000	0.000	0.000
'02	Meat and edible meat offal	0.000	0.000	0.000	0.000
'03	Fish, crustaceans, molluscs, aquatic invertebrates nes	0.000	0.000	0.001	0.002
'04	Dairy products, eggs, honey, edible animal product nes	0.000	0.000	0.404	0.000
'05	Products of animal origin, nes	0.000	0.000	0.916	0.033
'06	Live trees, plants, bulbs, roots, cut flowers etc	0.000	0.000	0.591	0.078
'07	Edible vegetables and certain roots and tubers	0.137	0.378	0.000	0.015
'08	Edible fruit, nuts, peel of citrus fruit, melons	0.813	0.000	0.151	0.748
'09	Coffee, tea, mate and spices	0.168	0.004	0.351	0.003
'10	Cereals	0.000	0.000	0.000	0.000
'11	Milling products, malt, starches, inulin, wheat gluten	0.000	0.000	0.534	0.000
'12	Oil seed, oleagic fruits, grain, seed, fruit, etc, nes	0.237	0.844	0.676	0.064
'13	Lac, gums, resins, vegetable saps and extracts nes	0.422	0.000	0.336	0.007
'14	Vegetable plaiting materials, vegetable products nes	0.000	0.000	0.015	0.000
'15	Animal,vegetable fats and oils, cleavage products, etc	0.102	0.068	0.018	0.000
'16	Meat, fish and seafood food preparations nes	0.000	0.000	0.033	0.001
'17	Sugars and sugar confectionery	0.000	0.000	0.120	0.195

HS Code	Sectors	Brazil	Russia	China	South Africa
'18	Cocoa and cocoa preparations	0.000	0.226	0.924	0.876
'19	Cereal, flour, starch, milk preparations and products	0.000	0.000	0.580	0.081
'20	Vegetable, fruit, nut, etc food preparations	0.039	0.001	0.339	0.694
'21	Miscellaneous edible preparations	0.133	0.001	0.555	0.072
'22	Beverages, spirits and vinegar	0.002	0.000	0.334	0.350
'23	Residues, wastes of food industry, animal fodder	0.221	0.216	0.307	0.523
'24	Tobacco and manufactured tobacco substitutes	0.102	0.000	0.695	0.000
'25	Salt, sulphur, earth, stone, plaster, lime and cement	0.186	0.051	0.508	0.942
'26	Ores, slag and ash	0.000	0.036	0.009	0.001
'27	Mineral fuels, oils, distillation products, etc	0.719	0.003	0.329	0.687
'28	Inorganic chemicals, precious metal compound, isotopes	0.987	0.185	0.356	0.061
'29	Organic chemicals	0.573	0.612	0.283	0.873
'30	Pharmaceutical products	0.026	0.008	0.478	0.047
'31	Fertilisers	0.000	0.000	0.000	0.020
'32	Tanning, dyeing extracts, tannins, derivs,pigments etc	0.123	0.085	0.536	0.559
'33	Essential oils, perfumes, cosmetics, toileteries	0.577	0.072	0.854	0.032
'34	Soaps, lubricants, waxes, candles, modelling pastes	0.613	0.954	0.553	0.075
'35	Albuminoids, modified starches, glues, enzymes	0.444	0.046	0.117	0.806
'36	Explosives, pyrotechnics, matches, pyrophorics, etc	0.867	0.000	0.000	0.101
'37	Photographic or cinematographic goods	0.707	0.000	0.005	0.085
'38	Miscellaneous chemical products	0.160	0.888	0.522	0.472
'39	Plastics and articles thereof	0.941	0.819	0.597	0.631
'40	Rubber and articles thereof	0.978	0.129	0.168	0.314
'41	Raw hides and skins (other than furskins) and leather	0.013	0.718	0.336	0.312
'42	Articles of leather, animal gut, harness, travel goods	0.016	0.000	0.065	0.010

HS Code	Sectors	Brazil	Russia	China	South Africa
'43	Furskins and artificial fur, manufactures thereof	0.000	0.000	0.000	0.000
'44	Wood and articles of wood, wood charcoal	0.138	0.204	0.031	0.337
'45	Cork and articles of cork	0.000	0.000	0.000	0.000
'46	Manufactures of plaiting material, basketwork, etc.	0.000	0.000	0.071	0.000
'47	Pulp of wood, fibrous cellulosic material, waste etc	0.001	0.000	0.008	0.000
'48	Paper & paperboard, articles of pulp, paper and board	0.393	0.101	0.020	0.347
'49	Printed books, newspapers, pictures etc	0.977	0.082	0.060	0.040
'50	Silk	0.819	0.000	0.030	0.000
'51	Wool, animal hair, horsehair yarn and fabric thereof	0.947	0.000	0.484	0.075
'52	Cotton	0.004	0.001	0.309	0.054
'53	Vegetable textile fibres nes, paper yarn, woven fabric	0.066	0.000	0.635	0.081
'54	Manmade filaments	0.002	0.246	0.033	0.331
'55	Manmade staple fibres	0.000	0.000	0.579	0.002
'56	Wadding, felt, nonwovens, yarns, twine, cordage, etc	0.307	0.000	0.125	0.157
'57	Carpets and other textile floor coverings	0.000	0.000	0.425	0.041
'58	Special woven or tufted fabric, lace, tapestry etc	0.016	0.000	0.030	0.002
'59	Impregnated, coated or laminated textile fabric	0.562	0.397	0.011	0.030
'60	Knitted or crocheted fabric	0.000	0.000	0.001	0.030
'61	Articles of apparel, accessories, knit or crochet	0.002	0.017	0.542	0.001
'62	Articles of apparel, accessories, not knit or crochet	0.000	0.004	0.685	0.002
'63	Other made textile articles, sets, worn clothing etc	0.000	0.000	0.290	0.001
'64	Footwear, gaiters and the like, parts thereof	0.955	0.000	0.066	0.001
'65	Headgear and parts thereof	0.000	0.000	0.029	0.194
'66	Umbrellas, walking-sticks, seat-sticks, whips, etc	0.000	0.000	0.000	0.000
'67	Bird skin, feathers, artificial flowers, human hair	0.000	0.000	0.095	0.000

HS Code	Sectors	Brazil	Russia	China	South Africa
'68	Stone, plaster, cement, asbestos, mica, etc articles	0.222	0.022	0.466	0.093
'69	Ceramic products	0.162	0.034	0.021	0.041
'70	Glass and glassware	0.157	0.194	0.498	0.236
'71	Pearls, precious stones, metals, coins, etc	0.929	0.411	0.740	0.031
'72	Iron and steel	0.399	0.080	0.755	0.305
'73	Articles of iron or steel	0.363	0.729	0.044	0.078
'74	Copper and articles thereof	0.332	0.019	0.330	0.923
'75	Nickel and articles thereof	0.047	0.006	0.010	0.044
'76	Aluminium and articles thereof	0.958	0.053	0.801	0.138
'78	Lead and articles thereof	0.000	0.000	0.622	0.567
'79	Zinc and articles thereof	0.000	0.044	0.148	0.128
'80	Tin and articles thereof	0.000	0.000	0.044	0.022
'81	Other base metals, cermets, articles thereof	0.715	0.000	0.114	0.113
'82	Tools, implements, cutlery, etc of base metal	0.177	0.277	0.203	0.072
'83	Miscellaneous articles of base metal	0.586	0.372	0.080	0.051
'84	Machinery, nuclear reactors, boilers, etc	0.956	0.835	0.109	0.619
'85	Electrical, electronic equipment	0.302	0.953	0.046	0.101
'86	Railway, tramway locomotives, rolling stock, equipment	0.000	0.050	0.019	0.249
'87	Vehicles other than railway, tramway	0.697	0.122	0.110	0.021
'88	Aircraft, spacecraft, and parts thereof	0.014	0.718	0.985	0.321
'89	Ships, boats and other floating structures	0.197	0.116	0.124	0.310
'90	Optical, photo, technical, medical, etc apparatus	0.969	0.354	0.284	0.185
'91	Clocks and watches and parts thereof	0.000	0.235	0.003	0.051
'92	Musical instruments, parts and accessories	0.000	0.000	0.217	0.000
'93	Arms and ammunition, parts and accessories thereof	0.016	0.000	0.024	0.000

HS Code	Sectors	Brazil	Russia	China	South Africa
'94	Furniture, lighting, signs, prefabricated buildings	0.125	0.004	0.028	0.015
'95	Toys, games, sports requisites	0.072	0.290	0.008	0.034
'96	Miscellaneous manufactured articles	0.089	0.000	0.024	0.013
'97	Works of art, collectors pieces and antiques	0.381	0.000	0.593	0.023
'99	Commodities not elsewhere specified	0.047	0.330	0.086	0.782
Total	All products	0.762	0.438	0.506	0.560

Source: Calculations based on ITC data

Table 21: India's IIT with select PTA partners and BRICS

Product code	Product label	Singapore	Sri Lanka	BRICS	ASEAN	MERCOSUR	SAARC
'01	Live animals	0.1374	0.0000	0.0011	0.6409	0.0012	0.0000
'02	Meat and edible meat offal	0.000	0.0000	0.0006	0.0000	0.0000	0.0000
'03	Fish, crustaceans, molluscs, aquatic invertebrates nes	0.0252	0.0068	0.0012	0.0417	0.2766	0.9953
'04	Dairy products, eggs, honey, edible animal product nes	0.0126	0.0000	0.7128	0.0523	0.0000	0.1240
'05	Products of animal origin, nes	0.0117	0.1783	0.8834	0.9971	0.0000	0.6749
'06	Live trees, plants, bulbs, roots, cut flowers etc	0.0116	0.0000	0.9964	0.9347	0.7358	0.1783
'07	Edible vegetables and certain roots and tubers	0.0626	0.0050	0.1083	0.2058	0.1337	0.0139
'08	Edible fruit, nuts, peel of citrus fruit, melons	0.1516	0.8949	0.3170	0.6332	0.9438	0.9372
'09	Coffee, tea, mate and spices	0.0243	0.6969	0.3027	0.8616	0.3450	0.6412
'10	Cereals	0.0000	0.0000	0.0000	0.0002	0.0104	0.0130
'11	Milling products, malt, starches, inulin, wheat gluten	0.0779	0.5609	0.9221	0.6978	0.0093	0.2250
'12	Oil seed, oleagic fruits, grain, seed, fruit, etc, nes	0.0095	0.3315	0.5881	0.1136	0.2103	0.3097
'13	Lac, gums, resins, vegetable saps and extracts nes	0.6439	0.5314	0.2609	0.9567	0.3454	0.4010
'14	Vegetable plaiting materials, vegetable products nes	0.4839	0.0000	0.0142	0.8308	0.0000	0.8282

Product code	Product label	Singapore	Sri Lanka	BRICS	ASEAN	MERCOSUR	SAARC
'15	Animal,vegetable fats and oils, cleavage products, etc	0.9334	0.2176	0.9535	0.0239	0.0262	0.5884
'16	Meat, fish and seafood food preparations nes	0.0881	0.3841	0.0214	0.0574	0.0000	0.4318
'17	Sugars and sugar confectionery	0.2528	0.0214	0.0051	0.1011	0.0000	0.1215
'18	Cocoa and cocoa preparations	0.0827	0.3782	0.9927	0.1651	0.0000	0.9243
'19	Cereal, flour, starch, milk preparations and products	0.3511	0.0339	0.6061	0.5926	0.0000	0.3242
'20	Vegetable, fruit, nut, etc food preparations	0.3292	0.7116	0.5167	0.9637	0.0952	0.9384
'21	Miscellaneous edible preparations	0.2845	0.9586	0.1742	0.6094	0.1408	0.4730
'22	Beverages, spirits and vinegar	0.7824	0.2064	0.0430	0.7184	0.0019	0.5455
'23	Residues, wastes of food industry, animal fodder	0.1972	0.9965	0.3305	0.0773	0.1263	0.3160
'24	Tobacco and manufactured tobacco substitutes	0.3955	0.0000	0.0335	0.2541	0.0814	0.0016
'25	Salt, sulphur, earth, stone, plaster, lime and cement	0.9812	0.0669	0.8968	0.7266	0.1694	0.6889
'26	Ores, slag and ash	0.2061	0.2320	0.1900	0.1090	0.0000	0.2044
'27	Mineral fuels, oils, distillation products, etc.	0.7764	0.0759	0.5399	0.6915	0.7195	0.1329
'28	Inorganic chemicals, precious metal compound, isotopes	0.3160	0.1379	0.2605	0.9463	0.9165	0.7254
'29	Organic chemicals	0.4292	0.0077	0.3915	0.8310	0.4386	0.1798
'30	Pharmaceutical products	0.5207	0.0057	0.2217	0.2268	0.0524	0.0464
'31	Fertilisers	0.1267	0.0000	0.0003	0.3360	0.4000	0.7436
'32	Tanning, dyeing extracts, tannins, derivs, pigments etc.	0.8510	0.0668	0.9327	0.9870	0.1340	0.3219
'33	Essential oils, perfumes, cosmetics, toileteries	0.6326	0.1117	0.9343	0.7933	0.4426	0.2850
'34	Soaps, lubricants, waxes, candles, modelling pastes	0.8220	0.0032	0.9204	0.6083	0.6824	0.3019
'35	Albuminoids, modified starches, glues, enzymes	0.8491	0.0250	0.1661	0.9101	0.5232	0.0751
'36	Explosives, pyrotechnics, matches, pyrophorics, etc	0.8235	0.0000	0.1058	0.0038	0.9901	0.0000
'37	Photographic or cinematographic goods	0.6695	0.0102	0.0398	0.8227	0.0448	0.0203
'38	Miscellaneous chemical products	0.7144	0.1116	0.8925	0.8113	0.1246	0.2385
'39	Plastics and articles thereof	0.2484	0.1593	0.6991	0.4471	0.8147	0.5529

Product code	Product label	Singapore	Sri Lanka	BRICS	ASEAN	MERCOSUR	SAARC
'40	Rubber and articles thereof	0.8409	0.6655	0.3339	0.5386	0.8872	0.5352
'41	Raw hides and skins (other than furskins) and leather	0.4812	0.0967	0.5768	0.3329	0.0160	0.3975
'42	Articles of leather, animal gut, harness, travel goods	0.2375	0.0960	0.3222	0.4781	0.0173	0.1134
'43	Furskins and artificial fur, manufactures thereof	0.0000	0.000	0.0000	0.0000	0.0000	0.8235
'44	Wood and articles of wood, wood charcoal	0.5812	0.7956	0.0666	0.0082	0.1716	0.8662
'45	Cork and articles of cork	0.8000	0.0000	0.1196	0.3168	0.000	0.0000
'46	Manufactures of plaiting material, basketwork, etc.	0.3158	0.0000	0.1254	0.4861	0.0000	0.1799
'47	Pulp of wood, fibrous cellulosic material, waste etc	0.0000	0.1444	0.0011	0.0034	0.0011	0.1458
'48	Paper & paperboard, articles of pulp, paper and board	0.9442	0.2651	0.1135	0.6191	0.4255	0.1660
'49	Printed books, newspapers, pictures etc	0.1684	0.4691	0.2019	0.4071	0.7471	0.2630
'50	Silk	0.0310	0.0305	0.0471	0.6232	0.9379	0.0723
'51	Wool, animal hair, horsehair yarn and fabric thereof	0.0142	0.0000	0.2526	0.2814	0.0036	0.8131
'52	Cotton	0.0472	0.0537	0.2660	0.0685	0.0033	0.1253
'53	Vegetable textile fibres nes, paper yarn, woven fabric	0.3417	0.1254	0.7086	0.5083	0.0434	0.3632
'54	Manmade filaments	0.6263	0.1162	0.5673	0.9395	0.0038	0.0730
'55	Manmade staple fibres	0.1641	0.0600	0.7693	0.9578	0.0093	0.5652
'56	Wadding, felt, nonwovens, yarns, twine, cordage, etc	0.0409	0.5118	0.4342	0.5921	0.3247	0.6819
'57	Carpets and other textile floor coverings	0.3026	0.3803	0.7005	0.9782	0.0000	0.4183
'58	Special woven or tufted fabric, lace, tapestry etc	0.4104	0.9662	0.1045	0.8233	0.0134	0.6952
'59	Impregnated, coated or laminated textile fabric	0.7492	0.1223	0.0320	0.1618	0.6232	0.4656
'60	Knitted or crocheted fabric	0.9691	0.1648	0.0326	0.8044	0.0000	0.3458
'61	Articles of apparel, accessories, knit or crochet	0.0491	0.5051	0.3089	0.2229	0.0033	0.5257
'62	Articles of apparel, accessories, not knit or crochet	0.0308	0.4410	0.3526	0.0591	0.0011	0.6596
'63	Other made textile articles, sets, worn clothing etc	0.3802	0.2270	0.8329	0.6432	0.0000	0.3679
'64	Footwear, gaiters and the like, parts thereof	0.3027	0.2080	0.3211	0.7477	0.6133	0.8508

Product code	Product label	Singapore	Sri Lanka	BRICS	ASEAN	MERCOSUR	SAARC
'65	Headgear and parts thereof	0.4390	0.0571	0.3743	0.9933	0.0000	0.5970
'66	Umbrellas, walking-sticks, seat-sticks, whips, etc	1.0000	0.0827	0.0008	0.0777	0.0000	0.0550
'67	Bird skin, feathers, artificial flowers, human hair	0.0068	0.0000	0.0784	0.0411	0.0000	0.0444
'68	Stone, plaster, cement, asbestos, mica, etc articles	0.5195	0.7653	0.6304	0.8631	0.7996	0.6097
'69	Ceramic products	0.3672	0.5606	0.0948	0.9656	0.1587	0.3242
'70	Glass and glassware	0.8467	0.5488	0.6031	0.5744	0.1679	0.9067
'71	Pearls, precious stones, metals, coins, etc	0.3528	0.7144	0.5013	0.5246	0.7990	0.5154
'72	Iron and steel	0.5371	0.0488	0.4916	0.6202	0.4414	0.5820
'73	Articles of iron or steel	0.9997	0.1002	0.1750	0.9888	0.6258	0.4067
'74	Copper and articles thereof	0.1305	0.3898	0.5293	0.5103	0.3632	0.9513
'75	Nickel and articles thereof	0.3987	0.0000	0.0110	0.7250	0.0474	0.8147
'76	Aluminium and articles thereof	0.2314	0.1140	0.6141	0.6179	0.9144	0.2558
'78	Lead and articles thereof	0.7047	0.8266	0.1915	0.2166	0.0000	0.4639
'79	Zinc and articles thereof	0.3797	0.5393	0.2812	0.2080	0.0000	0.0810
'80	Tin and articles thereof	0.1489	0.0000	0.2016	0.1556	0.0000	0.0000
'81	Other base metals, cermets, articles thereof	0.5991	0.0000	0.1045	0.9299	0.3042	0.0000
'82	Tools, implements, cutlery, etc of base metal	0.8382	0.6640	0.5933	0.9523	0.1527	0.2090
'83	Miscellaneous articles of base metal	0.9227	0.1987	0.2220	0.9599	0.7615	0.0857
'84	Machinery, nuclear reactors, boilers, etc	0.5893	0.7378	0.1619	0.5704	0.9361	0.2510
'85	Electrical, electronic equipment	0.5229	0.7906	0.1063	0.7033	0.2891	0.3391
'86	Railway, tramway locomotives, rolling stock, equipment	0.0765	0.0000	0.0522	0.1153	0.0000	0.0000
'87	Vehicles other than railway, tramway	0.3258	0.0059	0.7570	0.6387	0.5958	0.0123
'88	Aircraft, spacecraft, and parts thereof	0.6665	0.3488	0.7315	0.4981	0.0286	0.0290
'89	Ships, boats and other floating structures	0.6437	0.9774	0.3032	0.3928	0.1974	0.6374
'90	Optical, photo, technical, medical, etc apparatus	0.5716	0.1456	0.3389	0.6200	0.9809	0.1574

Product code	Product label	Singapore	Sri Lanka	BRICS	ASEAN	MERCOSUR	SAARC
'91	Clocks and watches and parts thereof	0.3167	0.0022	0.0060	0.7841	0.0000	0.0010
'92	Musical instruments, parts and accessories	0.3085	0.0000	0.2487	0.3478	0.0000	0.0063
'93	Arms and ammunition, parts and accessories thereof	0.0142	0.0000	0.0934	0.0023	0.0158	0.0000
'94	Furniture, lighting, signs, prefabricated buildings	0.1732	0.4725	0.0926	0.1268	0.0993	0.8541
'95	Toys, games, sports requisites	0.4158	0.5427	0.0905	0.7174	0.1703	0.4240
'96	Miscellaneous manufactured articles	0.8421	0.2533	0.1548	0.5620	0.0719	0.1035
'97	Works of art, collectors pieces and antiques	0.9093	0.0074	0.6215	0.6852	0.2769	0.3741
'99	Commodities not elsewhere specified	0.1744	0.1037	0.0990	0.1950	0.0489	0.2002
Total	All products	0.9471	0.3202	0.5284	0.8550	0.7479	0.3363
Source: Calculations based on ITC data							

Table 22: Revealed Comparative Advantage (RCA) for 99 sectors for BRICS						
HS Code	Sectors	Brazil	Russia	India	China	South Africa
'01	Live animals	2.80	0.01	0.03	0.23	0.36
'02	Meat and edible meat offal	9.04	0.01	0.65	0.10	0.28
'03	Fish, crustaceans, molluscs, aquatic invertebrates nes	0.18	1.03	1.96	1.00	1.13
'04	Dairy products, eggs, honey, edible animal product nes	0.32	0.10	0.16	0.05	0.25
'05	Products of animal origin, nes	4.55	0.12	1.00	1.76	0.46
'06	Live trees, plants, bulbs, roots, cut flowers etc	0.10	0.00	0.24	0.09	0.63
'07	Edible vegetables and certain roots and tubers	0.02	0.05	1.09	1.23	0.22
'08	Edible fruit, nuts, peel of citrus fruit, melons	0.85	0.02	0.90	0.33	5.80
'09	Coffee, tea, mate and spices	10.72	0.09	3.69	0.42	0.24
'10	Cereals	2.38	1.19	0.89	0.06	0.85
'11	Milling products, malt, starches, inulin, wheat gluten	0.28	0.26	0.39	0.38	1.79
'12	Oil seed, oleagic fruits, grain, seed, fruit, etc, nes	11.63	0.05	1.14	0.27	0.49
'13	Lac, gums, resins, vegetable saps and extracts nes	1.01	0.01	9.40	1.06	0.15
'14	Vegetable plaiting materials, vegetable products nes	1.02	0.25	8.52	0.62	0.15
'15	Animal,vegetable fats and oils, cleavage products, etc	1.53	0.37	0.90	0.04	0.46
'16	Meat, fish and seafood food preparations nes	2.79	0.12	0.31	1.43	0.27
'17	Sugars and sugar confectionery	21.94	0.11	0.70	0.23	1.36
'18	Cocoa and cocoa preparations	0.74	0.27	0.06	0.05	0.45
'19	Cereal, flour, starch, milk preparations and products	0.26	0.21	0.34	0.23	0.38
'20	Vegetable, fruit, nut, etc food preparations	3.04	0.06	0.77	1.08	2.05
'21	Miscellaneous edible preparations	1.71	0.26	0.72	0.30	1.02
'22	Beverages, spirits and vinegar	0.93	0.15	0.06	0.11	2.59
'23	Residues, wastes of food industry, animal fodder	6.51	0.22	2.05	0.32	0.44
'24	Tobacco and manufactured tobacco substitutes	5.82	0.43	1.78	0.28	1.45

HS Code	Sectors	Brazil	Russia	India	China	South Africa
'25	Salt, sulphur, earth, stone, plaster, lime and cement	1.36	0.94	3.13	0.75	1.83
'26	Ores, slag and ash	11.01	0.43	5.28	0.03	9.86
'27	Mineral fuels, oils, distillation products, etc	0.65	4.65	1.13	0.11	0.67
'28	Inorganic chemicals, precious metal compound, isotopes	1.72	2.21	0.56	0.95	1.99
'29	Organic chemicals	0.60	0.32	2.16	0.76	0.69
'30	Pharmaceutical products	0.21	0.03	1.32	0.09	0.07
'31	Fertilizers	0.42	5.31	0.13	0.92	0.73
'32	Tanning, dyeing extracts, tannins, derivs,pigments etc	0.43	0.09	2.05	0.57	0.71
'33	Essential oils, perfumes, cosmetics, toileteries	0.58	0.13	0.71	0.26	0.70
'34	Soaps, lubricants, waxes, candles, modelling pastes	0.50	0.29	0.50	0.41	0.97
'35	Albuminoids, modified starches, glues, enzymes	0.99	0.04	1.08	0.72	0.35
'36	Explosives, pyrotechnics, matches, pyrophorics, etc	0.47	0.64	1.38	1.53	5.74
'37	Photographic or cinematographic goods	0.31	0.01	0.11	0.56	0.30
'38	Miscellaneous chemical products	0.44	0.09	0.80	0.58	0.76
'39	Plastics and articles thereof	0.49	0.12	0.52	0.68	0.41
'40	Rubber and articles thereof	0.90	0.66	0.76	0.82	0.43
'41	Raw hides and skins (other than furskins) and leather	4.54	0.25	2.10	0.14	1.34
'42	Articles of leather, animal gut, harness, travel goods	0.14	0.02	3.42	4.04	0.10
'43	Furskins and artificial fur, manufactures thereof	0.30	0.30	0.06	2.55	0.11
'44	Wood and articles of wood, wood charcoal	1.28	2.25	0.12	0.83	0.70
'45	Cork and articles of cork	0.08	0.00	0.09	0.09	0.28
'46	Manufactures of plaiting material, basketwork, etc.	0.00	0.00	1.87	6.33	0.40
'47	Pulp of wood, fibrous cellulosic material, waste etc	7.60	0.99	0.01	0.03	3.42
'48	Paper & paperboard, articles of pulp, paper and board	0.86	0.36	0.34	0.52	0.78
'49	Printed books, newspapers, pictures etc	0.09	0.28	0.49	0.59	0.43

HS Code	Sectors	Brazil	Russia	India	China	South Africa
'50	Silk	0.85	0.00	5.34	5.09	0.01
'51	Wool, animal hair, horsehair yarn and fabric thereof	0.20	0.05	1.00	1.76	4.53
'52	Cotton	1.35	0.04	8.40	2.26	0.09
'53	Vegetable textile fibres nes, paper yarn, woven fabric	0.85	0.19	7.71	2.36	0.07
'54	Manmade filaments	0.17	0.03	2.09	2.39	0.09
'55	Manmade staple fibres	0.37	0.03	3.06	2.24	0.08
'56	Wadding, felt, nonwovens, yarns, twine, cordage, etc	0.93	0.13	0.61	1.20	0.37
'57	Carpets and other textile floor coverings	0.12	0.01	8.74	1.35	0.49
'58	Special woven or tufted fabric, lace, tapestry etc	0.27	0.01	1.75	3.18	0.16
'59	Impregnated, coated or laminated textile fabric	0.41	0.06	0.37	2.36	0.26
'60	Knitted or crocheted fabric	0.16	0.00	0.44	3.26	0.06
'61	Articles of apparel, accessories, knit or crochet	0.04	0.00	2.51	3.53	0.04
'62	Articles of apparel, accessories, not knit or crochet	0.03	0.02	3.38	3.06	0.06
'63	Other made textile articles, sets, worn clothing etc	0.31	0.03	5.66	3.75	0.36
'64	Footwear, gaiters and the like, parts thereof	1.24	0.01	1.94	3.44	0.06
'65	Headgear and parts thereof	0.06	0.02	0.37	4.23	0.23
'66	Umbrellas, walking-sticks, seat-sticks, whips, etc	0.01	0.00	0.07	7.14	0.36
'67	Bird skin, feathers, artificial flowers, human hair	0.00	0.00	3.81	6.45	0.24
'68	Stone, plaster, cement, asbestos, mica, etc articles	1.95	0.27	2.33	1.42	0.38
'69	Ceramic products	0.69	0.19	0.50	2.60	0.40
'70	Glass and glassware	0.34	0.19	0.60	1.53	0.45
'71	Pearls, precious stones, metals, coins, etc	0.47	0.81	3.47	0.33	6.86
'72	Iron and steel	1.59	1.95	1.12	0.70	4.23
'73	Articles of iron or steel	0.45	0.30	1.16	1.49	0.97
'74	Copper and articles thereof	0.31	1.24	0.84	0.29	0.90

HS Code	Sectors	Brazil	Russia	India	China	South Africa
'75	Nickel and articles thereof	1.03	7.01	0.07	0.40	2.94
'76	Aluminium and articles thereof	0.86	1.80	0.56	0.90	2.73
'78	Lead and articles thereof	0.01	1.10	1.60	0.24	0.59
'79	Zinc and articles thereof	0.73	0.45	2.96	0.19	0.60
'80	Tin and articles thereof	0.36	0.04	0.11	0.25	0.03
'81	Other base metals, cermets, articles thereof	0.54	1.92	0.22	1.73	1.35
'82	Tools, implements, cutlery, etc of base metal	0.66	0.11	0.97	1.59	0.76
'83	Miscellaneous articles of base metal	1.27	0.07	0.96	1.75	0.31
'84	Machinery, nuclear reactors, boilers, etc	0.45	0.12	0.38	1.61	0.59
'85	Electrical, electronic equipment	0.20	0.06	0.45	1.94	0.16
'86	Railway, tramway locomotives, rolling stock, equipment	1.26	0.60	0.14	2.44	1.07
'87	Vehicles other than railway, tramway	0.81	0.08	0.55	0.33	1.21
'88	Aircraft, spacecraft, and parts thereof	1.40	0.00	0.06	0.05	0.18
'89	Ships, boats and other floating structures	0.08	0.54	0.06	2.22	0.13
'90	Optical, photo, technical, medical, etc apparatus	0.13	0.10	0.24	1.03	0.17
'91	Clocks and watches and parts thereof	0.01	0.01	0.10	0.91	0.05
'92	Musical instruments, parts and accessories	0.06	0.00	0.23	2.29	0.05
'93	Arms and ammunition, parts and accessories thereof	1.75	6.81	0.18	0.07	NA
'94	Furniture, lighting, signs, prefabricated buildings	0.37	0.08	0.54	2.75	0.74
'95	Toys, games, sports requisites	0.04	0.04	0.22	3.55	0.09
'96	Miscellaneous manufactured articles	0.43	0.34	0.90	3.07	0.18
'97	Works of art, collectors pieces and antiques	0.08	0.01	0.37	0.08	0.46
'99	Commodities not elsewhere specified	1.19	0.35	0.36	0.06	0.03

Source: Calculations based on ITC data

Table 23: Revealed Comparative Advantage (RCA) for 99 sectors						
HS Code	Sectors	Afghanistan	Argentina	Bangladesh	Bhutan	Chile
'01	Live animals	0.471144	0.384993	0.000	0	0.1381
'02	Meat and edible meat offal	12.05343	4.16288	0.001	0.380303	1.5283
'03	Fish, crustaceans, molluscs, aquatic invertebrates nes	0.118596	4.009093	4.842	0.549153	6.6827
'04	Dairy products, eggs, honey, edible animal product nes	0.291489	2.363966	0.001	0	0.5748
'05	Products of animal origin, nes	0.109297	2.783633	0.294	0.103147	0.9068
'06	Live trees, plants, bulbs, roots, cut flowers etc	0.069918	0.037153	0.000	0	0.4607
'07	Edible vegetables and certain roots and tubers	25.16408	2.498209	0.256	1.485509	0.5434
'08	Edible fruit, nuts, peel of citrus fruit, melons	0.148942	4.949007	0.024	0.06919	9.5122
'09	Coffee, tea, mate and spices	1.179923	0.794299	0.730	0.020259	0.0863
'10	Cereals	0.050922	11.50608	0.031	1.870676	0.4452
'11	Milling products, malt, starches, inulin, wheat gluten	0.127121	11.18346	0.006	0	1.2867
'12	Oil seed, oleagic fruits, grain, seed, fruit, etc, nes	4.501724	21.49237	0.132	0.095542	0.9297
'13	Lac, gums, resins, vegetable saps and extracts nes	0.007371	0.08802	0.011	0	3.6023
'14	Vegetable plaiting materials, vegetable products nes	0.283365	2.371132	0.487	0	3.7219
'15	Animal,vegetable fats and oils, cleavage products, etc	0.169791	8.07788	0.017	0	0.2381
'16	Meat, fish and seafood food preparations nes	37.63573	0.972679	0.531	NA	1.9108
'17	Sugars and sugar confectionery	0.154596	2.3835	0.008	0	0.1524
'18	Cocoa and cocoa preparations	NA	0.659348	0.000	NA	0.1891
'19	Cereal, flour, starch, milk preparations and products	0.039343	1.350874	0.145	0	0.6576
'20	Vegetable, fruit, nut, etc food preparations	0.064616	3.733594	0.042	3.228839	2.2630
'21	Miscellaneous edible preparations	0.172528	0.915537	0.009	0	1.5773
'22	Beverages, spirits and vinegar	0.019291	2.458704	0.008	0	3.9308
'23	Residues, wastes of food industry, animal fodder	NA	34.31976	0.002	0	2.1916
'24	Tobacco and manufactured tobacco substitutes	0.376106	2.416654	1.605	NA	0.3585

HS Code	Sectors	Afghanistan	Argentina	Bangladesh	Bhutan	Chile
'25	Salt, sulphur, earth, stone, plaster, lime and cement	1.250906	0.826598	0.019	13.30881	0.7382
'26	Ores, slag and ash	0.008481	1.787769	0.080	0	15.9994
'27	Mineral fuels, oils, distillation products, etc.	0.01311	0.644032	0.039	0.220952	0.0270
'28	Inorganic chemicals, precious metal compound, isotopes	4.491548	0.655197	0.044	59.29539	2.3198
'29	Organic chemicals	1.849587	0.321314	0.000	0.003872	0.1452
'30	Pharmaceutical products	0.473444	0.359174	0.048	0.001648	0.0585
'31	Fertilisers	0.033342	0.24693	0.365	0	2.5349
'32	Tanning, dyeing extracts, tannins, derivs, pigments etc.	0.125446	0.678184	0.001	0.010566	0.0606
'33	Essential oils, perfumes, cosmetics, toileteries	13.18847	1.706248	0.004	0.175458	0.1732
'34	Soaps, lubricants, waxes, candles, modelling pastes	6.833738	0.98589	0.004	0	0.0482
'35	Albuminoids, modified starches, glues, enzymes	0.170064	2.769569	0.017	NA	0.1693
'36	Explosives, pyrotechnics, matches, pyrophorics, etc.	0.007365	0.442383	0.000	NA	1.7444
'37	Photographic or cinematographic goods	0.318307	0.882699	0.000	10.26822	0.0238
'38	Miscellaneous chemical products	5.713518	2.956352	0.003	0.014546	0.1676
'39	Plastics and articles thereof	0.010281	0.656526	0.080	0.606152	0.2024
'40	Rubber and articles thereof	1.64387	0.545343	0.030	0.227045	0.2360
'41	Raw hides and skins (other than furskins) and leather	0.092662	7.647635	4.144	0	0.2538
'42	Articles of leather, animal gut, harness, travel goods	0.446473	0.182351	0.424	0.015461	0.0148
'43	Furskins and artificial fur, manufactures thereof	0.001733	1.452513	0.046	0	0.0000
'44	Wood and articles of wood, wood charcoal	0.093606	0.652484	0.007	0.272893	3.6352
'45	Cork and articles of cork	NA	0.24846	0.000	NA	1.0981
'46	Manufactures of plaiting material, basketwork, etc.	0.779696	0.002506	1.171	0	0.0053
'47	Pulp of wood, fibrous cellulosic material, waste etc	0.016281	0.876595	0.002	0	11.4640
'48	Paper & paperboard, articles of pulp, paper and board	0.96578	0.537901	0.012	0.02614	0.8082
'49	Printed books, newspapers, pictures etc	0.202906	0.384129	0.019	0.312321	0.2131

HS Code	Sectors	Afghanistan	Argentina	Bangladesh	Bhutan	Chile
'50	Silk	17.6697	0.000233	0.002	0	0.0092
'51	Wool, animal hair, horsehair yarn and fabric thereof	0.106843	5.084451	0.002	0	0.5718
'52	Cotton	0.073273	0.361631	0.257	0	0.1293
'53	Vegetable textile fibres nes, paper yarn, woven fabric	0.049593	0.003329	114.006	0.216041	0.0963
'54	Manmade filaments	0.217437	0.322246	0.086	0.472798	0.0634
'55	Manmade staple fibres	0.080608	0.065107	0.053	0	0.0595
'56	Wadding, felt, nonwovens, yarns, twine, cordage, etc	0.353297	0.790123	0.641	1.176132	0.0924
'57	Carpets and other textile floor coverings	1.957219	0.160565	0.533	0.715168	0.0441
'58	Special woven or tufted fabric, lace, tapestry etc	1.265908	0.377903	0.129	NA	0.0228
'59	Impregnated, coated or laminated textile fabric	0.183684	0.530324	0.019	0.066764	0.0485
'60	Knitted or crocheted fabric	0.476104	0.132743	0.062	NA	0.1024
'61	Articles of apparel, accessories, knit or crochet	0.380307	0.072203	39.036	0.552594	0.0139
'62	Articles of apparel, accessories, not knit or crochet	0.733671	0.043055	32.797	0.259879	0.0206
'63	Other made textile articles, sets, worn clothing etc	0.062089	0.102389	10.854	0.06048	0.0298
'64	Footwear, gaiters and the like, parts thereof	0.998334	0.076672	2.128	0.007698	0.0260
'65	Headgear and parts thereof	2.735374	0.072971	14.792	4.457129	0.0266
'66	Umbrellas, walking-sticks, seat-sticks, whips, etc	NA	0.022614	0.094	NA	0.0010
'67	Bird skin, feathers, artificial flowers, human hair	NA	0.02072	0.324	0	0.0007
'68	Stone, plaster, cement, asbestos, mica, etc articles	0.869288	0.499009	0.004	0.430809	0.0832
'69	Ceramic products	0.492977	0.469956	0.687	0.299158	0.0467
'70	Glass and glassware	0.524605	0.172951	0.010	0	0.1433
'71	Pearls, precious stones, metals, coins, etc	0.017567	0.879659	0.001	0.002099	0.8679
'72	Iron and steel	27.85403	0.314375	0.031	6.627673	0.2487
'73	Articles of iron or steel	0.148168	0.824523	0.017	0.324768	0.2239
'74	Copper and articles thereof	0.145084	0.029509	0.149	0	37.9227

HS Code	Sectors	Afghanistan	Argentina	Bangladesh	Bhutan	Chile
'75	Nickel and articles thereof	NA	0.003601	0.000	NA	0.0004
'76	Aluminium and articles thereof	1.260001	1.380145	0.002	0.024779	0.1174
'78	Lead and articles thereof	NA	1.791495	0.000	0	0.5685
'79	Zinc and articles thereof	NA	0.306554	0.028	NA	0.0018
'80	Tin and articles thereof	0.214045	0.002261	0.002	0	0.0082
'81	Other base metals, cermets, articles thereof	0.348036	0.02883	0.011	0	0.7585
'82	Tools, implements, cutlery, etc of base metal	0.045801	0.21123	0.010	0.842119	0.0776
'83	Miscellaneous articles of base metal	0.012191	0.222785	0.005	0.277728	0.1617
'84	Machinery, nuclear reactors, boilers, etc	0.00459	0.205789	0.015	0.593089	0.0650
'85	Electrical, electronic equipment	0.418048	0.053081	0.016	0.188537	0.0235
'86	Railway, tramway locomotives, rolling stock, equipment	0.361761	0.078439	0.004	0.108899	0.0073
'87	Vehicles other than railway, tramway	0.189874	1.647998	0.044	0.728922	0.0564
'88	Aircraft, spacecraft, and parts thereof	0.574167	0.002826	0.021	0.013123	0.0104
'89	Ships, boats and other floating structures	0.020709	0.0248	0.005	NA	0.1404
'90	Optical, photo, technical, medical, etc apparatus	0.018723	0.08603	0.037	0.061283	0.0144
'91	Clocks and watches and parts thereof	0.042366	0.037484	0.001	NA	0.0100
'92	Musical instruments, parts and accessories	0.769966	0.066116	0.003	0	0.0121
'93	Arms and ammunition, parts and accessories thereof	NA	0.338202	0.000	0.166794	0.0688
'94	Furniture, lighting, signs, prefabricated buildings	0.279119	0.144535	0.098	0.359629	0.0656
'95	Toys, games, sports requisites	0.168747	0.051662	0.170	0.308853	0.0093
'96	Miscellaneous manufactured articles	37.30184	0.178736	0.017	0.112718	0.0553
'97	Works of art, collectors pieces and antiques	5.084089	0.206998	0.014	3.316059	0.0091
'99	Commodities not elsewhere specified	8.117324	0.157015	0.064	1.826343	1.6010

Source: *Calculations based on ITC data*

Table 24: Revealed Comparative Advantage (RCA) for 99 sectors						
HS Code	Sectors	Japan	Korea	Maldives	Malaysia	Nepal
'01	Live animals	0.03	0.00	NA	0.71	0.54
'02	Meat and edible meat offal	0.01	0.01	NA	0.02	0.10
'03	Fish, crustaceans, molluscs, aquatic invertebrates nes	0.30	0.53	128.42	0.63	0.00
'04	Dairy products, eggs, honey, edible animal product nes	0.01	0.01	0.00	0.31	0.4
'05	Products of animal origin, nes	0.15	0.25	0.00	0.07	0.27
'06	Live trees, plants, bulbs, roots, cut flowers etc	0.07	0.16	NA	0.47	0.25
'07	Edible vegetables and certain roots and tubers	0.01	0.07	NA	0.19	16.14
'08	Edible fruit, nuts, peel of citrus fruit, melons	0.03	0.06	0.03	0.10	1.56
'09	Coffee, tea, mate and spices	0.04	0.03	0.31	0.22	19.05
'10	Cereals	0.01	0.00	1.24	0.00	0.10
'11	Milling products, malt, starches, inulin, wheat gluten	0.10	0.16	0.00	0.35	1.21
'12	Oil seed, oleagic fruits, grain, seed, fruit, etc, nes	0.04	0.09	0.32	0.04	1.57
'13	Lac, gums, resins, vegetable saps and extracts nes	0.12	0.32	NA	0.08	7.26
'14	Vegetable plaiting materials, vegetable products nes	0.03	0.00	NA	4.66	362.21
'15	Animal,vegetable fats and oils, cleavage products, etc	0.03	0.02	0.32	15.13	0.96
'16	Meat, fish and seafood food preparations nes	0.33	0.15	26.31	0.30	0.06
'17	Sugars and sugar confectionery	0.04	0.29	0.01	0.44	0.21
'18	Cocoa and cocoa preparations	0.03	0.03	NA	2.32	0.01
'19	Cereal, flour, starch, milk preparations and products	0.18	0.34	0.00	1.28	3.55
'20	Vegetable, fruit, nut, etc food preparations	0.02	0.12	0.00	0.22	5.48
'21	Miscellaneous edible preparations	0.32	0.45	0.01	1.11	1.05
'22	Beverages, spirits and vinegar	0.08	0.17	0.00	0.47	2.38
'23	Residues, wastes of food industry, animal fodder	0.03	0.07	1.79	0.43	3.65
'24	Tobacco and manufactured tobacco substitutes	0.17	0.54	0.49	0.69	0.53

HS Code	Sectors	Afghanistan	Argentina	Bangladesh	Bhutan	Chile
'25	Salt, sulphur, earth, stone, plaster, lime and cement	0.36	0.29	0.01	0.92	7.75
'26	Ores, slag and ash	0.01	0.03	NA	0.06	
'27	Mineral fuels, oils, distillation products, etc.	0.11	0.46	0.63	1.05	0.00
'28	Inorganic chemicals, precious metal compound, isotopes	0.74	0.79	0.02	0.27	0.00
'29	Organic chemicals	1.10	1.38	0.04	0.72	0.01
'30	Pharmaceutical products	0.15	0.06	0.00	0.03	0.14
'31	Fertilisers	0.05	0.24	NA	0.59	0.00
'32	Tanning, dyeing extracts, tannins, derivs,pigments etc	1.31	0.68	0.01	0.61	0.83
'33	Essential oils, perfumes, cosmetics, toileteries	0.38	0.35	0.01	0.27	2.44
'34	Soaps, lubricants, waxes, candles, modelling pastes	0.83	0.36	0.00	1.18	2.11
'35	Albuminoids, modified starches, glues, enzymes	0.90	0.40	0.00	0.31	0.07
'36	Explosives, pyrotechnics, matches, pyrophorics, etc	0.17	0.13	NA	0.24	0.68
'37	Photographic or cinematographic goods	4.97	0.56	0.02	0.51	0.66
'38	Miscellaneous chemical products	1.52	0.58	0.00	1.49	0.84
'39	Plastics and articles thereof	1.17	1.58	0.06	0.96	0.71
'40	Rubber and articles thereof	1.44	1.22	0.02	3.42	0.04
'41	Raw hides and skins (other than furskins) and leather	0.15	0.91	0.00	0.06	5.42
'42	Articles of leather, animal gut, harness, travel goods	0.02	0.07	0.03	0.06	0.13
'43	Furskins and artificial fur, manufactures thereof	0.00	0.06	NA	0.03	0.00
'44	Wood and articles of wood, wood charcoal	0.02	0.02	0.13	2.93	1.11
'45	Cork and articles of cork	0.03	0.00	NA	0.01	0.00
'46	Manufactures of plaiting material, basketwork, etc.	0.01	0.02	0.00	0.03	0.86
'47	Pulp of wood, fibrous cellulosic material, waste etc.	0.48	0.07		0.02	0.62
'48	Paper & paperboard, articles of pulp, paper and board	0.38	0.51	0.02	0.42	0.57
'49	Printed books, newspapers, pictures etc	0.37	0.26	0.46	0.41	0.21

HS Code	Sectors	Afghanistan	Argentina	Bangladesh	Bhutan	Chile
'50	Silk	0.66	0.95	NA	0.09	0.06
'51	Wool, animal hair, horsehair yarn and fabric thereof	0.41	0.20	NA	0.24	0.06
'52	Cotton	0.24	0.42	0.00	0.25	0.06
'53	Vegetable textile fibres nes, paper yarn, woven fabric	0.14	0.11	0.00	0.12	46.98
'54	Manmade filaments	1.07	2.42	0.01	1.27	29.08
'55	Manmade staple fibres	1.01	1.49		0.60	29.79
'56	Wadding, felt, nonwovens, yarns, twine, cordage, etc	0.92	1.00	0.00	0.54	17.00
'57	Carpets and other textile floor coverings	0.07	0.08	NA	0.10	79.13
'58	Special woven or tufted fabric, lace, tapestry etc	0.42	1.51	0.01	0.21	3.08
'59	Impregnated, coated or laminated textile fabric	0.83	1.81	NA	0.17	0.96
'60	Knitted or crocheted fabric	0.53	4.69	NA	0.46	2.97
'61	Articles of apparel, accessories, knit or crochet	0.02	0.14	0.19	0.28	0.99
'62	Articles of apparel, accessories, not knit or crochet	0.02	0.13	0.13	0.17	6.33
'63	Other made textile articles, sets, worn clothing etc	0.10	0.38	0.05	0.20	14.52
'64	Footwear, gaiters and the like, parts thereof	0.01	0.14	0.00	0.17	1.53
'65	Headgear and parts thereof	0.40	0.51	0.00	0.27	16.99
'66	Umbrellas, walking-sticks, seat-sticks, whips, etc	0.00	0.04	NA	0.01	0.00
'67	Bird skin, feathers, artificial flowers, human hair	0.02	0.31	NA	0.01	0.45
'68	Stone, plaster, cement, asbestos, mica, etc articles	1.13	0.38	0.00	0.57	0.87
'69	Ceramic products	0.68	0.10	0.00	0.51	0.29
'70	Glass and glassware	1.99	0.39	0.00	1.11	0.47
'71	Pearls, precious stones, metals, coins, etc	0.63	0.40	0.02	0.55	0.16
'72	Iron and steel	1.93	1.78	0.00	0.34	4.67
'73	Articles of iron or steel	0.96	1.01	0.17	0.82	2.52
'74	Copper and articles thereof	1.10	0.88	0.21	0.71	2.49

HS Code	Sectors	Afghanistan	Argentina	Bangladesh	Bhutan	Chile
'75	Nickel and articles thereof	0.47	0.32		0.07	0.00
'76	Aluminium and articles thereof	0.38	0.50	0.01	0.61	1.16
'78	Lead and articles thereof	0.41	1.21	0.00	0.99	0.00
'79	Zinc and articles thereof	0.41	1.97	0.00	0.79	0.14
'80	Tin and articles thereof	0.28	0.20	0.00	8.47	0.02
'81	Other base metals, cermets, articles thereof	1.61	0.50	0.01	0.21	0.01
'82	Tools, implements, cutlery, etc of base metal	1.25	0.85	0.23	0.42	0.10
'83	Miscellaneous articles of base metal	0.46	0.49	0.02	0.44	0.21
'84	Machinery, nuclear reactors, boilers, etc	1.60	0.91	0.26	1.23	0.05
'85	Electrical, electronic equipment	1.35	1.87	0.09	2.21	0.09
'86	Railway, tramway locomotives, rolling stock, equipment	0.41	0.63	0.04	0.21	0.00
'87	Vehicles other than railway, tramway	2.56	1.54	0.01	0.10	0.03
'88	Aircraft, spacecraft, and parts thereof	0.22	0.17	0.13	0.23	0.30
'89	Ships, boats and other floating structures	2.94	8.77	0.17	0.30	0.01
'90	Optical, photo, technical, medical, etc apparatus	1.60	2.52	0.18	0.87	0.04
'91	Clocks and watches and parts thereof	0.66	0.08	0.05	0.51	0.00
'92	Musical instruments, parts and accessories	2.29	0.81	0.02	0.79	2.31
'93	Arms and ammunition, parts and accessories thereof	0.11	0.58	NA	0.02	0.39
'94	Furniture, lighting, signs, prefabricated buildings	0.18	0.18	0.02	1.15	0.33
'95	Toys, games, sports requisites	0.56	0.18	0.01	0.29	0.06
'96	Miscellaneous manufactured articles	1.31	0.63	0.01	0.62	0.28
'97	Works of art, collectors pieces and antiques	0.15	0.24	0.01	0.02	
'99	Commodities not elsewhere specified	3.31	0.00	1.73	0.28	0.59

Source: Calculations based on ITC data

Table 25: Table- Revealed Comparative Advantage (RCA)							
HS Code	Sectors	Pakistan	Paraguay	Sri Lanka	Singapore	Thailand	Uruguay
'01	Live animals	1.00	0.02	0.03	0.02	0.45	17.18
'02	Meat and edible meat offal	0.89	31.13	0.04	0.02	0.06	28.46
'03	Fish, crustaceans, molluscs, aquatic invertebrates nes	1.92	0.00	3.68	0.15	2.62	4.65
'04	Dairy products, eggs, honey, edible animal product nes	0.46	0.09	0.04	0.22	0.21	16.96
'05	Products of animal origin, nes	2.92	10.40	0.98	0.10	0.37	17.45
'06	Live trees, plants, bulbs, roots, cut flowers etc	0.03	0.01	1.02	0.09	0.41	0.05
'07	Edible vegetables and certain roots and tubers	1.45	0.24	0.87	0.02	1.43	0.05
'08	Edible fruit, nuts, peel of citrus fruit, melons	2.32	0.17	1.83	0.06	0.58	3.13
'09	Coffee, tea, mate and spices	0.88	0.15	74.82	0.19	0.10	0.04
'10	Cereals	19.61	22.31	0.23	0.01	5.18	21.59
'11	Milling products, malt, starches, inulin, wheat gluten	2.37	6.13	13.82	0.13	5.12	25.58
'12	Oil seed, oleagic fruits, grain, seed, fruit, etc, nes	0.32	77.31	0.29	0.04	0.10	22.72
'13	Lac, gums, resins, vegetable saps and extracts nes	3.71	0.00	0.75	0.19	0.36	0.24
'14	Vegetable plaiting materials, vegetable products nes	5.20	0.46	21.86	0.47	0.39	0.01
'15	Animal,vegetable fats and oils, cleavage products, etc	0.74	11.61	0.31	0.28	0.33	3.02
'16	Meat, fish and seafood food preparations nes	0.54	0.09	0.11	0.08	11.77	2.91
'17	Sugars and sugar confectionery	1.40	2.85	0.04	0.22	4.16	0.02
'18	Cocoa and cocoa preparations	0.00	0.00	0.79	0.66	0.15	0.80
'19	Cereal, flour, starch, milk preparations and products	0.35	0.02	0.40	0.91	1.26	0.71
'20	Vegetable, fruit, nut, etc food preparations	0.44	0.14	1.43	0.08	2.78	0.47
'21	Miscellaneous edible preparations	0.20	1.02	2.00	0.51	2.07	0.68
'22	Beverages, spirits and vinegar	1.47	0.04	0.07	0.89	0.53	0.30
'23	Residues, wastes of food industry, animal fodder	0.45	19.58	2.46	0.14	1.36	1.40
'24	Tobacco and manufactured tobacco substitutes	0.35	4.62	2.90	0.70	0.22	2.84

HS Code	Sectors	Pakistan	Paraguay	Sri Lanka	Singapore	Thailand	Uruguay
'25	Salt, sulphur, earth, stone, plaster, lime and cement	9.18	0.39	0.65	0.08	1.76	1.05
'26	Ores, slag and ash	0.56	0.00	0.07	0.01	0.06	0.01
'27	Mineral fuels, oils, distillation products, etc.	0.37	0.00	0.12	1.07	0.33	0.14
'28	Inorganic chemicals, precious metal compound, isotopes	0.18	0.03	0.18	0.17	0.32	0.44
'29	Organic chemicals	0.08	0.03	0.00	1.62	0.78	0.07
'30	Pharmaceutical products	0.21	0.26	0.01	0.49	0.06	0.47
'31	Fertilisers	0.00	0.02	0.01	0.02	0.12	1.16
'32	Tanning, dyeing extracts, tannins, derivs,pigments etc	0.28	0.01	0.07	0.76	0.41	0.96
'33	Essential oils, perfumes, cosmetics, toileteries	0.08	0.49	0.29	1.48	1.39	0.10
'34	Soaps, lubricants, waxes, candles, modelling pastes	0.22	0.24	0.12	0.54	0.93	2.95
'35	Albuminoids, modified starches, glues, enzymes	0.28	0.00	0.35	0.42	1.93	1.62
'36	Explosives, pyrotechnics, matches, pyrophorics, etc	3.52	NA	0.01	0.35	0.15	0.00
'37	Photographic or cinematographic goods	0.05	0.00	0.00	0.65	0.24	0.01
'38	Miscellaneous chemical products	0.07	0.21	0.65	0.98	0.38	0.82
'39	Plastics and articles thereof	0.59	0.48	0.18	1.00	1.46	1.10
'40	Rubber and articles thereof	0.04	0.40	7.68	0.33	6.48	1.36
'41	Raw hides and skins (other than furskins) and leather	10.22	10.75	0.02	0.13	1.19	16.49
'42	Articles of leather, animal gut, harness, travel goods	8.84	0.51	0.61	0.36	0.53	0.16
'43	Furskins and artificial fur, manufactures thereof	0.04	0.00	0.00	0.00	0.02	6.21
'44	Wood and articles of wood, wood charcoal	0.19	3.01	0.62	0.05	1.14	9.76
'45	Cork and articles of cork	0.00	0.00	0.00	0.02	0.01	0.00
'46	Manufactures of plaiting material, basketwork, etc.	0.04	0.92	0.65	0.03	0.38	0.00
'47	Pulp of wood, fibrous cellulosic material, waste etc	0.02	0.04	0.85	0.18	0.16	0.20
'48	Paper & paperboard, articles of pulp, paper and board	0.10	0.14	0.27	0.30	0.59	1.11
'49	Printed books, newspapers, pictures etc	0.07	0.05	3.46	1.26	3.69	0.62

HS Code	Sectors	Pakistan	Paraguay	Sri Lanka	Singapore	Thailand	Uruguay
'50	Silk	0.20	1.30	0.14	0.15	0.31	0.89
'51	Wool, animal hair, horsehair yarn and fabric thereof	0.64	0.00	0.00	0.02	0.33	39.31
'52	Cotton	51.21	2.36	0.55	0.06	1.00	0.03
'53	Vegetable textile fibres nes, paper yarn, woven fabric	0.90	NA	51.64	0.01	0.44	0.23
'54	Manmade filaments	1.11	0.51	0.30	0.20	1.52	0.00
'55	Manmade staple fibres	10.60	0.00	1.40	0.15	3.27	0.11
'56	Wadding, felt, nonwovens, yarns, twine, cordage, etc	0.97	2.09	1.61	0.16	1.28	0.06
'57	Carpets and other textile floor coverings	6.58	0.00	0.70	0.07	1.01	0.43
'58	Special woven or tufted fabric, lace, tapestry etc	1.51	0.06	3.97	0.28	1.32	0.54
'59	Impregnated, coated or laminated textile fabric	0.30	0.04	0.32	0.18	0.49	0.18
'60	Knitted or crocheted fabric	2.30	0.01	1.47	0.16	0.79	0.61
'61	Articles of apparel, accessories, knit or crochet	7.73	0.13	17.09	0.16	0.87	0.22
'62	Articles of apparel, accessories, not knit or crochet	6.05	0.52	17.22	0.08	0.55	0.27
'63	Other made textile articles, sets, worn clothing etc	45.90	0.93	1.72	0.10	0.55	0.84
'64	Footwear, gaiters and the like, parts thereof	0.66	0.59	0.36	0.11	0.64	0.07
'65	Headgear and parts thereof	0.19	0.01	6.62	0.05	0.68	0.08
'66	Umbrellas, walking-sticks, seat-sticks, whips, etc	0.06	0.01	0.07	0.02	0.04	0.07
'67	Bird skin, feathers, artificial flowers, human hair	0.00	0.00	1.09	0.02	0.75	0.00
'68	Stone, plaster, cement, asbestos, mica, etc articles	0.38	0.00	0.35	0.11	0.66	0.26
'69	Ceramic products	0.17	0.14	1.73	0.07	1.13	0.14
'70	Glass and glassware	0.17	0.27	0.36	0.24	1.05	0.22
'71	Pearls, precious stones, metals, coins, etc	1.15	0.01	2.38	0.90	2.48	0.48
'72	Iron and steel	0.06	0.20	0.01	0.21	0.29	0.01
'73	Articles of iron or steel	0.42	0.02	0.05	0.47	1.01	0.40
'74	Copper and articles thereof	0.39	0.17	0.29	0.30	0.48	0.09

HS Code	Sectors	Pakistan	Paraguay	Sri Lanka	Singapore	Thailand	Uruguay
'75	Nickel and articles thereof	0.02	0.06	0.00	0.93	0.03	0.00
'76	Aluminium and articles thereof	0.16	NA	0.04	0.20	0.62	0.12
'78	Lead and articles thereof	1.41	2.90	2.40	0.47	0.23	0.06
'79	Zinc and articles thereof	0.02	0.11	0.00	0.25	0.39	0.02
'80	Tin and articles thereof	0.00	0.03	0.00	4.37	5.05	0.02
'81	Other base metals, cermets, articles thereof	0.02	0.00	0.05	0.25	0.26	0.00
'82	Tools, implements, cutlery, etc of base metal	1.23	0.01	0.17	0.99	0.43	0.01
'83	Miscellaneous articles of base metal	0.01	0.02	0.16	0.45	0.92	0.04
'84	Machinery, nuclear reactors, boilers, etc	0.10	0.04	0.06	1.26	1.41	0.05
'85	Electrical, electronic equipment	0.05	0.03	0.19	2.66	1.17	0.05
'86	Railway, tramway locomotives, rolling stock, equipment	0.01	0.00	0.00	0.03	0.06	0.03
'87	Vehicles other than railway, tramway	0.05	0.00	0.12	0.16	1.28	0.37
'88	Aircraft, spacecraft, and parts thereof	0.03	0.03	0.09	0.85	0.38	0.00
'89	Ships, boats and other floating structures	0.30	0.00	1.02	0.58	0.18	0.11
'90	Optical, photo, technical, medical, etc apparatus	0.38	0.01	0.12	0.88	0.57	0.07
'91	Clocks and watches and parts thereof	0.00	0.00	0.01	1.90	1.16	0.01
'92	Musical instruments, parts and accessories	0.41	0.01	0.05	0.20	0.25	0.00
'93	Arms and ammunition, parts and accessories thereof	0.32	0.00	0.00	0.03	0.09	0.00
'94	Furniture, lighting, signs, prefabricated buildings	0.39	0.22	0.30	0.10	0.59	0.80
'95	Toys, games, sports requisites	1.89	0.11	0.99	0.40	0.71	0.01
'96	Miscellaneous manufactured articles	0.51	0.01	2.13	0.39	0.79	0.06
'97	Works of art, collectors pieces and antiques	0.00	0.00	0.00	0.37	0.02	0.12
'99	Commodities not elsewhere specified	0.00	NA	0.00	4.51	0.00	0.00

Source: Calculations based on ITC data

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