

Does BIMSTEC-Japan Economic Cooperation Promote Intra-Regional Trade?

The Case for Free Trade Arrangement

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Contents

1.	Introduction	1
2.	BIMSTEC: A Journey towards Regional Integration	5
3.	BIMSTEC-Japan Trade: Pattern and Trend	8
4.	Assessing Likely Impact of PTAs and FTA	20
	between Japan and BIMSTEC	
	4.1. Quantifying the Trade Impact: Analytical	20
	Framework, Data and Methodology	
	4.2 The Scope and the Methodology	21
	4.3. Data Sources	24
	4.4. The Model	24
	4.5. The Methodology	26
5.	Results of the Study	29
6.	Concluding Observations	41
	References	45

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Swapan K. Bhattacharya*

Abstract: BIMSTEC is fast becoming a significant trade bloc in Asia-Pacific. BIMSTEC's intra-regional trade is significantly higher than many economic groupings in Asia-Pacific region except perhaps East Asia Economic Grouping (EAEG) and ASEAN. Intra-regional trade is fairly high among BIMSTEC countries even in absence of any preferential tariff arrangements. One of the conclusions of this paper is that once PTA and FTA will be negotiated and come into force in BIMSTEC, intra-regional trade will grow much faster and hope to catch ASEAN level. If Japan joins in this group with FTA, this will emerge as one of the most vibrant economic groups in this region. However, while moving towards this objective, there are many challenges such as rules of origin, harmonization of standards and uniform certification procedures which are vital to any kind of trade liberalization in the form of PTA or FTA. It is revealed from this study that at present tariff level in Japan is as low as 2.4 percent, whereas this is significantly higher in BIMSTEC countries. There is an apprehension for the BIMSTEC countries that once tariffs are lowered there will be surge in imports from Japan due to liberalized tariff regime whereas exports from the BIMSTEC countries to Japan can not rise significantly. Therefore, there should be comprehensive programme to liberalize and eliminate non-tariff barriers in tandem with the liberalization of tariffs. Success of PTA and FTA depends on the liberalization of NTBs and every member should prepare a comprehensive plan how to minimize it.

1. Introduction

Presently, regionalism is the only viable option as an alternative to multilateralism for its proximity to demand pattern among members, easy procedures to conclude agreements based on mutual interests,

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and resource endowments and consensus among smaller group of countries in any particular issue. RTBs (Regional Trading Blocs), has been very popular among the countries where multilateral efforts to augment trade is gradually plummeted due to complex web of interests. In the present set up of the World Trade Organisation (WTO), where 149 countries are the members, it is almost impossible to reach consensus in any multilateral issue. As a result, we have noticed collapse of many Ministerial Meetings, right from the Seattle Round, due to lack of consensus among the members on issues relating to environment and labour standards. Doha Meet has failed because of lack of consensus on developmental agenda in one hand and issue of agricultural subsidies on the other. Nevertheless, Doha Development Agenda (DDA) is yet to get shape due to differences of opinions among members on contentious issues. Cancun Meet failed because of intransigence attitude of European Union on the issue of reduction of agricultural subsidies and cotton subsidies given by US government to its farmers. Hong Kong Ministerial Meeting ended without any achievement except EU's commitment to phase out blue-box subsidy by 2013.

World trade is now more regional and bilateral, rather than multilateral in the sense that more than 60 per cent of world trade is now covered by regional trading arrangements. Recently, there has been spurt of regional trading arrangement than ever before. On 1 January 1995, there were 100 RTBs, the number of which increased to 212 during 2000 and it now becomes 450 at the end of 2006. RTBs are concluded under Article XIV of WTO and Enabling Clause XII, where similar interested parties can form regional trading agreement in order to enhance intra-regional trade in tandem with the multilateral arrangement. So far, India's success to fit into any RTB is miniscule. SAARC starts with much fanfare but it is still crawling due to political factor between major trading partners of this region. Bangkok Agreement (BA) started in the early eighties, but it is yet to take shape in spite of China's entry to the group recently. Revitalization of Bangkok Agreement is mooted extending its membership to some developed countries. India does not figure in ASEAN, where its

presence is still as an observer. Much touted Asian Economic Community (AEC) is still at the conceptual stage due to complex web of bilateral free trade arrangements (FTAs) in the Asian region. India has recently concluded Comprehensive Economic and Cooperation Agreements (CECA) with some of the Asian countries without extending preferential trading arrangements (PTAs), which is the precursor to FTA. Only Indo-Sri Lanka Free Trade Arrangement is a success story of India's drive towards regional integration, which concluded on 1998 and came into force from 2000. India's approach towards FTA and RTB with the countries of the Asian region is a misnomer due to its high tariffs.

Regional integration among the South Asian countries is the weakest in the world, next to Sub-Saharan African countries. Even today, i.e. 20 years after the formation of the South Asian Association for Regional Cooperation (SAARC), the fist of this kind in this region, intra-regional trade among SAARC countries is hovering round 4-4.5 per cent per annum. Any attempt to forge intra-regional economic cooperation through PTAs remains unsuccessful due to political skirmishes between two major trading partners of this region. As a first step of enhancing regional economic cooperation, SAARC countries thought to conclude preferential trading arrangement among them. First South Asian Preferential Trade Arrangement (SAPTA) was concluded in 1995, just 10 years after the formation of SAARC. So far member countries have concluded Three Rounds of SAPTA negotiations (i.e. SAPTA I, II, III) and reached an agreement for the conclusion of SAPTA IV with national schedules of the respective countries. In Islamabad Meet in 2004, member countries have unanimously adopted resolution to form South Asian Free Trade Arrangement (SAFTA) in July 2006, which is in doldrums because of Pakistan's intransigence attitude not to extend MFN treatment to India beyond 773 items.

Due to inherent weakness of SAARC to emerge as a vibrant regional trading bloc, India has been desperately looking for other options to form regional groupings. According to SAARC Charter, any member can form sub-regional group through preferential trading

arrangements to increase intra-regional trade. India has so far explored Bhutan, Bangladesh, and India and Nepal –Growth Quadrangle (BBIN-GQ) and Mekong – Ganga Cooperation (MGC) incorporating 5 ASEAN countries viz. Cambodia, Lao PDR, Myanmar, Thailand and Vietnam without any substantial progress in this area. Realizing the importance of economic cooperation between South and South East Asia, Thailand took the initiative in 1994 to explore the possibility of formation of a sub-regional group. After plethora of deliberations of Inter-Ministerial Consultation and with the active support of Asian Development Bank and UN-ESCAP, a regional forum was established in 1997 with four countries, viz. Bangladesh, India, Sri Lanka and Thailand. Myanmar joined later in this group. This newly formed sub-regional group, which was formally known as Bangladesh-India-Myanmar-Sri Lanka-Thailand Economic Cooperation (BIMSTEC), is now known as Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation. This sub-regional group not only aims at increase in intra-regional trade among the members but also includes wider areas of cooperation viz. investment, industry, technology, human resource development, agriculture and infrastructure.

At this moment, it is premature to evaluate the performance of BIMSTEC in enhancing intra-regional trade of this region. It is yet to set any concrete agenda of extending preferential trading arrangements among its members, neither it has outlined any policy framework how to go about with the PTA and FTA. It has five SAARC members and two ASEAN members, viz. Thailand and Myanmar. BIMSTEC has enormous potentials to intra-regional trade. Japan can be a vibrant partner of BIMSTEC due to its robustness of trade and other economic activities in this region. Japan has been emerging as one of the robust countries in this region with active pro-Asian policies in trade and investment, which is manifested through the opening of its market to Asian partners and increasing amount of FDI flows to the latter countries. Intra-regional trade among BIMSTEC countries was 14.75 per cent in 2003, which showed much potential in trade and investment among its members. Though it is not an active regional forum, intra-regional trade (including Japan) has increased significantly over the years. Intra-regional trade of Bangladesh has increased from 10.14 per cent of its total trade in 2001 to 15.21 percent in 2003, which

showed a significant rise. India's intra-regional trade has increased from 4.12 per cent in 2001 to 6.61 per cent in 2003. Corresponding figures for Myanmar were 27.63 per cent and 33.13 per cent, respectively. Nepal's intra-regional trade has declined from 43.07 per cent to 37.6 per cent during the same period. Sri Lanka's share increased from 8.33 per cent to 17.86 per cent during the same comparable periods. Thailand's share in intra-regional trade has been increased astronomically from 2.19 per cent in 2001 to 21.16 per cent in 2003.

Japan is the largest economy in Asia but its market potential is still untapped by the members of the bloc. This provides a strong case for the liberalization of trade between BIMSTEC and Japan through preferential and free trade arrangements. Japan's intra-bloc trade was only 3.96 per cent of its total trade during 2003, which shows it has enough scope of increasing trade and economic cooperation with the BIMSEC countries. If trade among the bloc countries is free or at least starts with the preferential arrangement, welfare gain is expected to be enormous, which is captured in this present exercise.

2. BIMSTEC: A Journey towards Regional Integration

Historically, all BIMSTEC countries were linked with each other for their trade through land and sea routes. Going down to the memory lane, one can see that land and sea routes between Arab and China ran through this region, which was possibly among the richest part of the world built on free trade till the Portuguese arrived on the scene. It is a well-known fact that these countries had common history, culture and commercial ties with each other over centuries. In the ancient times, India's trade linkage with these countries through sea route was among the best in the world. Famous 'silk route' between India and China was the main artery of economic activity of this region, which India, of late, had taken initiative to revive its past glory to rejuvenate economic landscape of this region.

The formation of BIMSTEC can be attributed to two things. One is the failure of SAARC to form a vibrant regional forum for trade and economic cooperation. Secondly, ongoing process of liberalization

in South Asian economies is desperate to discover new markets in the ASEAN region as a substitute of SAARC, whose scope is limited due to non-economic factor that is unlikely to change in the near future. There is another factor, which may be cited for the formation of this bloc is the Thailand's desire to establish strong foothold on the Indian subcontinent because of increasing competition it has been facing in the ASEAN markets. Though BIMSTEC comes into existence very recently, its formation can be traced back till mid-1960s, when both India and Sri Lanka were invited to join ASEAN but was rejected by both the countries. In 1981, Sri Lanka made an unsuccessful attempt to join ASEAN, and India and Pakistan obtained Dialogue Partner status in 1993. The approach of South Asian countries to establish link and enhance economic cooperation shows their intension to strengthen economic relations with the ASEAN countries (Kelegama, 2000). BIMSTEC may be used as conduit for South Asian countries to establish and develop a good relationship with the ASEAN countries.

Keeping this objective in mind, Sri Lanka, India, Bangladesh and Thailand requested UN-ESCAP to undertake a study on the practicability of the formation of regional forum among themselves, which culminated with a document on 1997 titled "BIMSTEC Development Programme: Overview and Sectoral Cooperation". The Report identifies sectoral cooperation in areas viz. technology, transport and communications, energy, tourism, agriculture, fisheries, and human resource development. On the basis of the findings of the Report, a trans-South Asian regional forum was established in June 1997 with the objective of strengthening cooperation in areas of trade and investment among others. Initially it had 4 members viz. Bangladesh, India, Sri Lanka and Thailand. First Ministerial Meeting was held in Bangkok in December 1997, when it got expanded with Myanmar entering the group. Nepal was given an observer status in 1999, but now both Nepal and Bhutan have become full-fledged members along with two South East Asian nations. BIMSTEC also adopted a framework agreement for an FTA to be implemented within 10 years at its first Summit held in Bangkok in July 2004.

All members of the group have identified six major areas to strengthen economic cooperation and have also assigned one lead country for each group. Bangladesh has been given responsibility to take care of investment. Technology is given to Sri Lanka. India is leading transport and communication sector. Energy is given to Myanmar. Tourism is again to India, and finally Thailand is leading fishery sector. Expert level meetings have already taken place in areas of tourism, fisheries and trade and investment. But priority was given to some sub-sectors such as. e-BIMSTEC and speedy completion of the BIMSTEC component of the Trans-Asian Railway and Asian Highway projects. Every country of this bloc is keen to have more dialogues and to upgrade it to the Ministerial level. So far six Ministerial meetings have taken place, at Bangkok in December 1997, at Dhaka in December 1998, at New Delhi in July 2000, at Yangon in December 2001, at Colombo in December 2002 and at New Delhi in August 2006.

Right from the first meeting, trade and industry ministers have been emphasizing on setting up of a free trade area in this region. In order to explore the possibility of free trade among its members, Ministers in their Third Meeting in Yangon in February 2001, set up a Group of Expert (GoE) with India as the Chair country to work out the details of a time-bound programme in this regard. The GOE held two meetings and has recommended a negative list approach towards achieving this objective. Another decision was to set up a BIMSTEC Secretariat in Thailand. Since the moratorium on the expansion of membership ended in 2002, the meeting decided that criteria to be evolved for the expansion of membership. The year 2004 had been declared the “Visit BIMSTEC Year” for which expert group on tourism had been asked to make a detailed plan for the success of the event at its meeting in February 2003. In tandem with the Government’s initiative, private sector has also taken much interest to expedite the process of integration, which include, establishing Chambers of Commerce and Federation of Processed Food Industries, exclusively for the region.

BIMSTEC member countries are also contemplating the formation of BIMSTEC Economic Forum in line with the Pacific

Economic Cooperation Council, whose basic objective will be the formation of independent academic and business groups to have regular interactions with the government officials. In order to make these groups active, there should be independent funds both for research institutions and academic groups (Kelegama 1998) similar in line with APEC and IOR-ARC, so that they can conduct independent studies estimating the gains from economic cooperation of this region. This should be seriously thought of since there is not much enthusiasm from the private sector about the possible gains from the economic cooperation of this region so far.

3. BIMSTEC-Japan Trade: Pattern and Trend

BIMSTEC, a conglomeration of seven countries viz. Bangladesh, India, Sri Lanka, Thailand, Myanmar, Bhutan and Thailand, covers a population of approximately 1.3 billion and a combined GDP of about \$1.3 trillion. The forum is the first formal link between South Asian and South East Asian countries bridging India's 'Look East' Policy with the Thailand's 'Look West' Policy. For India, it is the best alternative of SAARC, which is almost defunct due to political reason and provides best opportunities for inclusion of Myanmar and Thailand. Besides providing a link between South East Asia and South Asia, BIMSTEC can serve India's interest through the exploitation of its massive potential in hydroelectricity and hydrocarbons. Issues of hydroelectricity and natural gas supply from Nepal and Bangladesh are of immense importance to India. BIMSTEC is expected to be more successful in enhancing intra-regional trade because of its proximity of demand and strong historical, cultural and economic ties with the member countries.

Prior to the formation of a trading bloc, every member has been attached with another with some preferential trading arrangement. Bangladesh has extended SAPTA to India and Sri Lanka and GSTP and BA to Thailand. Both Bangladesh and India are the beneficiaries of BA and GSTP. India covers Bangladesh in SAPTA, GSTP and BA, and Thailand in GSTP. India and Sri Lanka concluded Indo-Sri Lanka Bilateral Trading Arrangement in 1998, which came into force in 2000, under which India has given duty free treatment to all Sri

Lankan products except few negative list on 31 March 2003, where Sri Lanka will provide free market access to Indian products by 2008 with few negative list. Myanmar does not have any economic cooperation agreement neither any preferential trading arrangement with the South Asian countries. But, since it is one of the members of ASEAN, it has extended preferential trading arrangement with the ASEAN countries only. Sri Lanka extends preferential arrangements to Bangladesh through SAPTA, BA and GSTP, and to India, these are SAPTA, ISLPTA and BA. Thailand extends GSTP to Bangladesh, India and Sri Lanka and ASEAN PTA to Myanmar. The matrix of preferential trading arrangements among the BIMSTEC countries is shown in Table 1.

Pattern of Japan- BIMSTEC trade is also very significant. Data on exports of Japan and BIMSTEC countries show that rate of growth is much higher in relatively smaller and poorer countries, compared to more developed countries. We have taken export data from 1994 to 2003 for eight countries including Japan, which show that rate of growth of exports is highest in case of Myanmar, the country registered an exponential growth of 14.02 per cent during this period, followed by Bangladesh whose growth in exports was 10.04 per cent. India's export growth during this period was 9.35 per cent. Growth rates of exports of Nepal and Bhutan are also very impressive. During this period Nepal registered export growth of 6.93 per cent and the figure was 6.86 per cent in case of Bhutan. Thailand has experienced a moderate growth of 6.61 per cent in exports during this period followed by Sri Lanka whose rate was 5.34 per cent. Surprisingly, Japan has registered a lowest growth in exports among all countries i.e. 1.94 per cent during this period though in absolute terms export figure is highest among all Asian nations. Exports of Japan and BIMSTEC countries are shown in Table 2. The trend of export growth is shown in Figure 1.

Imports of Japan and BIMSTEC countries have also been very vibrant similar to exports. Japan has shown the lowest import growth during this period. Japan registered only 3.73 per cent growth in imports from 1994-2003, which was less than any country of

Table 1: Existing Preferential Trading Arrangements among BIMSTEC Countries

From:	Bangladesh	India	Myanmar	Sri Lanka	Thailand
Bangladesh		SAPTA BA GSTP		SAPTA	GSTP BA GSTP
India	SAPTA GSTP BA			SAPTA ISLFTA BA	GSTP
Myanmar					ASEAN PTA
Sri Lanka	SAPTA BA GSTP GSTP	SAPTA ISLFTA BA			GSTP
Thailand	GSTP	GSTP	ASEAN PTA	GSTP	

GSTP= Global System of Trade Preference, BA= Bangkok Agreement, ISLFTA= Indo-Sri Lanka Bilateral Trade Agreement, SAPTA=South Asia Preferential Trading Arrangement

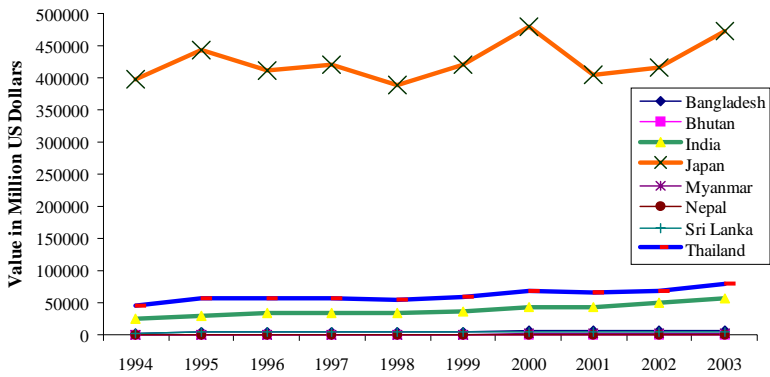
Source: Saman Kelegama, 'Bangkok Agreement and BIMSTEC: Crawling Regional Economic Groupings in Asia', Journal of Asian Economics, 2001, p.115

Table 2: Exports of Japan and Other BIMSTEC Countries

	(US\$ million)							
	Bangladesh	Bhutan	India	Japan	Myanmar	Nepal	Sri Lanka	Thailand
1994	2934	66	25022	397005	798	362	3208	45261
1995	3733	103	30630	443116	851	345	3798	56439
1996	4009	100	33105	410910	746	385	4095	55721
1997	4840	118	35008	420957	866	406	4639	57374
1998	5141	108	33437	387927	1065	474	4809	54456
1999	5458	116	35667	419367	1125	602	4594	58440
2000	6399	111	42379	479249	1646	804	5430	69057
2001	6085	98	43347	403496	2381	737	4816	65113
2002	6078	108	49312	416726	3046	568	4699	68768
2003	6942	120	55982	471817	2600	662	5125	80522

Source: DOTS, IMF, various issues.

Figure 1: Export of Japan and Other BIMSTEC Countries



BIMSTEC. Similar to its exports, Myanmar also registered highest growth rate among all bloc countries, which was 12.70 per cent during this period. India registered an import growth of 11.36 per cent, followed by Bhutan whose growth in imports was 9.01 per cent. Imports of Bangladesh also registered a higher growth of 8.35 per cent. Growth rates of Nepal, Sri Lanka and Thailand were less, compared to other members. During the same period, Nepal registered an import growth of 4.75 per cent, and growth rates for Sri Lanka and Thailand were 3.80 and 3.74, respectively. The trend and pattern of import growth of Japan and other countries of BIMSTEC are shown in Table 3 and Figure 2.

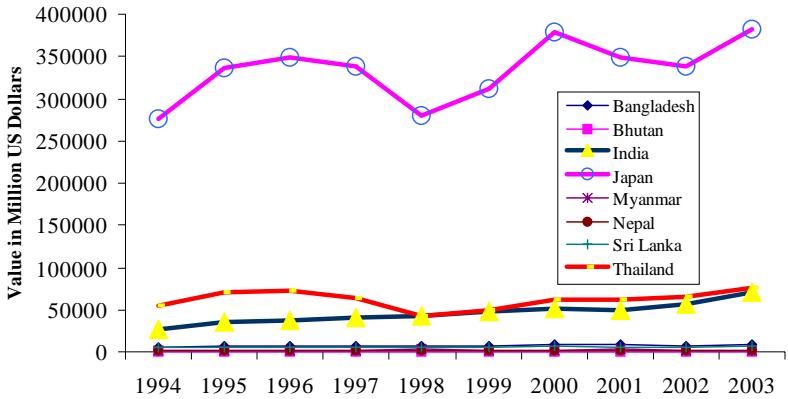
Matrix of intra-regional trade is shown in Tables 4 and 5. Table 4 shows the matrix of intra-regional exports and imports between Japan and BIMSTEC countries. Both exports and imports figures are taken for the year 2003, which is the latest available year. In Table 4, we have shown total world trade of the respective countries expressed in US million dollars. The consolidated figures are presented in Table 5, where we have shown total intra-regional trade of Japan and BIMSTEC countries. In this table we have also shown the share of trade with the BIMSTEC in total world trade of the respective countries. From this table we have noticed that

Table 3: Imports of Japan and Other BIMSTEC Countries

	(US\$ million)							
	Bangladesh	Bhutan	India	Japan	Myanmar	Nepal	Sri Lanka	Thailand
1994	4602	92	26843	275235	886	1155	4767	54459
1995	6502	112	34707	335882	1335	1333	5306	70786
1996	6621	128	37942	349152	1358	1398	5442	72332
1997	6898	137	41432	338754	2037	1693	5864	62854
1998	6974	134	42980	280484	2666	1246	5905	42971
1999	7694	182	46979	311262	2300	1422	5961	50342
2000	8360	203	51523	379511	2401	1573	7177	61924
2001	8350	191	50392	349089	2877	1473	5973	62058
2002	7914	165	56517	337194	2348	1419	6105	64658
2003	9476	200	70707	382930	2600	1754	6672	75809

Source: DOTS, IMF, various Issues.

Figure 2: Imports of Japan and Other BIMSTEC Countries



intra-regional trade (i.e. trade with BIMSTEC as a percentage of total trade) is highest in Nepal, which is 37 per cent, and lowest in Myanmar, which is only 3.13 per cent, followed by Japan whose intra-regional trade was miniscule i.e. 3.96 per cent in 2003. India's intra-regional (including Japan) trade is 6.61 per cent during the period mentioned above. Intra-regional trade for Sri Lanka and Thailand is very impressive as compared to other bloc countries, except Nepal. Sri Lanka's trade was 17.86 per cent during 2003, and for Thailand, it was 21.18 per cent during the same period. Thailand's intra-bloc trade is very negligible, if we exclude Japan as a trading partner. Japan is very significant trading partner of Thailand, similar to India for Nepal and Bhutan, followed by Bangladesh. Intra-regional trade between Japan and other seven BIMSTEC countries is shown in Tables 4 and 5.

Countrywide distribution of intra- and extra-regional trade is depicted in Table 6. It is evident from the table that share of intra-regional exports in total exports of Bangladesh declined from 2.05 per cent in 1995 to 1.46 per cent during 2001. In case of all other countries, intra-regional exports increased significantly. In case of Myanmar and Nepal, increase is much robust. India's share almost remains at the same level during the period mentioned above. Trend

Table 4: Intra-BIMSTEC Trade (Exports & Imports), 2003

(Value in million dollars)

(a) Intra-Regional Exports									
Exports to	Bangladesh	Bhutan	India	Japan	Myanmar	Nepal	Sri Lanka	Thailand	World
Bangladesh		2.38	55.34	51.49	2.44	2.98	5.8	9.45	6229.4
Bhutan									
India	1358	4		1976	73	217	957	799	60641
Japan	428	10	2396		125	13	375	16043	473911
Myanmar	30.21		247.01	126.89			1.38	831.65	2641.7
Nepal	4.42		328.76	6.52			0.22	1.24	649.4
Sri Lanka	11.17		245.05	160.98	0.24	1.66		11.54	5133.3
Thailand	273		641	11435	439	28	161		80521
(b) Intra-Regional Imports									
Imports from	Bangladesh	Bhutan	India	Japan	Myanmar	Nepal	Sri Lanka	Thailand	World
Bangladesh		3.84	1494.22	566.7	33.23	4.86	9.24	176.56	9672.3
Bhutan									
India	61	29		2636	259	345	227	706	85294
Japan	131		2174		140	7	193	11890	383025
Myanmar	2.68		76.49	136			0.37	483	3204.9
Nepal	3.28		228.29	14			1.18	30.57	996.6
Sri Lanka	5.64		1076.16	448.13	2.29	0.19		145.89	6671.9
Thailand	30		879	18266	915	1	8		75809

Source: DOTS, IMF.

Table 5: Intra-BIMSTEC Total Trade (Exports & Imports), 2003

	(US\$ million)											
	Bangladesh	Bhutan	India	Japan	Myanmar	Nepal	Sri Lanka	Thailand	BIMSTEC	World	BIMSTEC	as a % of the World
Bangladesh	6	1550	618	36	8	15	186	2419	15902	15.21		
Bhutan												
India	1419	33	0	4612	332	582	1184	1505	9647	145935	6.61	
Japan	559	10	4570	0	265	20	568	27933	33925	856936	3.96	
Myanmar	33	0	324	264	0	0	2	1315	1937	5847	3.13	
Nepal	8	0	557	21	0	0	1	32	619	1646	37	
Sri Lanka	17	0	1321	609	3	2	0	157	2109	11805	17.86	
Thailand	303	0	1520	29701	1354	29	169	0	33076	156330	21.18	

Source: DOTS, IMF.

is similar in case of imports also, where share of intra-regional imports in Bangladesh's total imports has declined slightly, but it has increased significantly for Nepal, Myanmar and Thailand. Even India's share has improved from 1.35 per cent to 2.33 per cent from 1995 to 2001. As far as total trade is concerned, the trend remains the same. Intra-regional of Bangladesh trade has declined slightly from 12.03 per cent in 1995 to 10.14 per cent in 2001. In case of all other countries, shares of intra-regional trade have been increased over the years, where, most significant rise is noticed for Thailand, Myanmar and Nepal. Other countries have registered a modest growth showing intra-regional trade has been picking up, and will increase further if every country is agreed for preferential trading and later on free trading arrangements with each other. Spectrum of intra-regional trade is shown in Table 6.

Before going for PTA and FTA, one should see the importance of external sector to national economy. Importance of external sector can be gauged by the degree of openness of the respective economies, which can be measured by the trade-GDP ratios of the countries. The country is treated to be more open whose trade-GDP ratio is higher. Countries can gain much from the PTA and FTA whose degree of openness is higher. As it is evident from Table 7 that trade-GDP ratio in Bangladesh was 31.83 per cent in 2003, which was 45.94 per cent in case of Bhutan and 21.09 per cent in case of India. Trade-GDP ratio in Japan was 19.97 per cent, which is relatively less because of the robustness of domestic sector. We do not have data for Myanmar. The ratios for Nepal, Sri Lanka and Thailand were 41.29 per cent, 64.69 per cent and 109.36 per cent, respectively. Thailand's external sector is very vibrant compared to other members of the BIMSTEC. Ratios are relatively less to both Japan and India because of their robust domestic demand and size of the economies. The higher is the size of the economy, the lower will be external sector, which is measured by trade-GDP ratio. This is true in case of US also, whose trade/GDP ratio was 20 per cent in 2003. Trade-GDP ratios of the bloc countries including Japan are shown in Table 7.

Table 6: Country-wise Intra and Extra- BIMSTEC Shares in Trade

Countries	Export Share (%)			Import Share (%)			Trade Share (%)					
	Intra-Bloc		Extra-Bloc	Intra-Bloc		Extra-Bloc	Intra-Bloc		Extra-Bloc			
	1995	2001	1995	1995	2001	1995	2001	1995	2001			
Bangladesh	2.05	1.46	97.95	98.54	16.84	15.67	83.16	84.33	12.03	10.14	87.97	89.86
India	6.37	6.22	93.63	93.78	1.35	2.33	98.65	97.67	3.71	4.12	96.29	95.88
Myanmar	15.69	37.49	84.31	62.51	1.07	17.4	98.93	82.6	6.02	27.63	93.98	72.37
Nepal	9.26	35.03	90.74	64.97	35.33	46.49	64.67	53.51	27.59	43.07	72.41	56.93
Sri Lanka	1.68	2.54	98.34	97.46	13.19	13.1	86.81	86.9	7.9	8.33	92.1	91.67
Thailand	1.45	1.9	98.55	98.1	0.97	2.5	99.03	97.5	1.18	2.19	98.82	97.81

Source: De (2004).

Table 7: Trade in Goods as a Percentage of GDP

(%)

	Bangladesh	Bhutan	India	Japan	Nepal	Sri Lanka	Thailand
1994	22.32	57.72	16.08	14.02	37.3	68.05	69
1995	26.98	69.28	18.4	14.75	38.13	69.87	75.78
1996	28.14	68.42	18.43	16.21	39.43	68.62	7.48
1997	27.74	64.69	18.66	17.64	42.67	69.6	79.68
1998	27.48	60.05	18.47	17	35.42	67.83	87.1
1999	28.62	66.96	18.49	16.41	41.21	67.41	88.92
2000	31.28	64.41	20.53	18.09	43.26	77.19	106.73
2001	30.72	53.95	19.59	18.08	39.54	68.52	110.07
2002	29.42	45.25	20.74	18.98	35.73	65.3	105.25
2003	31.83	45.94	21.09	19.87	41.29	64.69	109.36

Note: Data for Myanmar not available

Source: World Bank, World Development Indicators CD-ROM.

4. Assessing Likely Impact of PTA and FTA between Japan and BIMSTEC

4.1. Quantifying the Trade Impact: Analytical Framework, Data and Methodology

Several studies are available on estimating the effects of regional trading blocs on intra-regional trade.¹ But, very few systematic studies are available using econometric model analyzing the impact of preferential/ free trade arrangements in the South Asian region in general and BIMSTEC in particular, on the trade and other macro-economic variables of the South Asian countries. However, Raipuria and Mehta (1990), Naqvi and Samad (1992), Srinivasan (1994), Srinivasan and Canonero (1993a and 1993b) made some noticeable attempts in this context. Raipuria and Mehta outlined the framework of an approach (Inter Country Link Model System) for analyzing the impact of trade cooperation in the region, along with a review of twenty-one models for analyzing bilateral trade. Naqvi and Samad's was a serious attempt using the approach of Inter-Country Link Model System.² In this study, the individual country models were worked out in a systematic way; the Trade Link Sub-System was simply unrealistic. Mehta and Bhattacharya (1997) have shown the increase in India's imports from SAARC members due to SAPTA I & II and SAFTA based on Gravity Model. In other studies (1999 & 2000), authors have shown the increase in intra-regional trade of all SAARC countries as a result of SAPTA I & II and SAFTA based on same Gravity Model.

Quite a number of studies are available on quantifying the impact of tariff reductions on bilateral trade flows using Gravity Model. In this analysis, we have used Gravity Model to estimate the increase in intra-regional trade in the SAARC region due to PTAs. The Gravity Model has been extensively used in the economic literature from sixties onwards by Tinbergen (1962), Poyhonen (1963), Linnemann (1966), Anderson (1979) and others. In eighties, Bergstrand (1985,1989), Baldwin (1994), Deardorff (1995), Nilson (2000), Kalirajan & Shand (1997), Kalirajan (1999) and Kalirajan & Findlay (2005) derived the Gravity Model from a general equilibrium

framework where location of production and destination of market differentiate each product. A large number of studies³ have appeared during nineties on Gravity Model. Recognizing this fact, Frankel (1997) submits that

“the gravity model has recently enjoyed a swan-like revival.....There are at least three reasons for that revival: (a) its empirical success at predicting bilateral trade flows. (b) its improved theoretical foundations arising mostly from modern theories of trade in imperfect substitutes, and (c) a new interest among economists in the subject of geography and trade, which seeks to treat countries or regions as physically place at particular locations rather than as disembodied constructs.”

A number of different specifications of Gravity Model have been used in the literature, depending mostly upon (i) the objective of the study, and (ii) type of the sample. In most of the existing studies, the bilateral trade flows have been explained by variables like GNP (proxy for size of countries), GNP per capita (proxy for degree of development), trade restrictive variables like tariff and non-tariff barriers, distance, adjacency, linguistic links, etc. In this paper we have taken values of the elasticities (i.e. a_4 and a_5) estimated by Srinivasan and Canonero (1993,1994,1995 & 1996), based on Gravity Model developed by Frankel (1993 & 1997) and applied by Safadi and Yeats (1993), Ashfaq Khan (1996), Frankel and Wei (1995), Rajapakse and Arunatilake (1996), Mathur (2000), Mehta and Bhattacharya (1997,1999 & 2000), Bhattacharya (2001, 2003 & 2004) and Bhattacharya and Kumar (2001). Srinivasan and Canonero estimated a gravity model, using rich data, but they gave emphasis to the intra-SAARC trade under some hypothetical situations.

4.2: The Scope and the Methodology

The Gravity Model has a number of advantages in analyzing the intra-regional trade, particularly for the preferential trading arrangement of nineties, sometimes known as “new regionalism”.⁴ Though it

provides a good measure of trade creation, it has many limitations also. It does not take into account the possible impact of the terms of trade associated with trade creation. Hence the simulated results, based on Gravity Model, are generally upward biased. The estimates also give the results in a static framework, and the extent of intra-regional trade will possibly further increase if the estimation is carried out in a dynamic framework, incorporating the effects of factors like terms of trade, scale economies, technology spill-over, investment inflows, trade liberalization etc. These could reinforce the short term trade creation thus underestimating the true long-run impact. It was very difficult to estimate the parameters related to some of these factors. The basic information to quantify all these is not available. As an example we can say that some price elasticities could be approximated but information on scale economies simple does not exist. However, a number of existing studies have shown that the short-term impact is higher than the dynamic impact. Secondly, our results also do not take into consideration the concessions offered in the form of non-tariff barriers, it only considers reduction of tariffs under different scenarios, which is purely hypothetical. Third, our results of alternate scenarios have also not measured the effect of PTAs/FTAs on different variables related to welfare.⁵ Even if our simulations correctly measure the impact on trade creation, it should be realized that this impact is not the only factor to take into account in evaluating FTAs. It is mentionable that the negative effect on bilateral trade with countries not entering in the simulated arrangement is not assessed at all in our simulations. Therefore, none of the indicators from the simulations could be viewed as a welfare measure, thus making the comparison of different scenarios rather incomplete. The results of the simulations presented here serve the limited purpose providing an estimate of the potential effects on bilateral trade between each BIMSTEC country and its partner Japan in the simulated PTA.

The scope of this paper is limited. It only estimates the increase in BIMSTEC-Japan trade under some hypothetical scenarios. In this analysis, we basically measure the impact of preferential trade arrangements by the proportionate change in exports and imports of Japan and other BIMSTEC countries in dollar terms. The higher the initial tariff level on trade between partners, the greater the final effect

of reduction and elimination of tariffs. The result of reduction of tariffs would be reflect in the increasing in the estimated values of a_4 and a_5 . However, tariff is only among many other factors that determine the impact of PTA on trade. In assessing the impact, we should keep in our mind two other things. First, the tariff T_1 represents tariffs imposed by Japan on its imports from BIMSTEC countries, whereas T_2 represents tariffs imposed by BIMSTEC countries on their imports from Japan. Since tariffs T_2 are initially higher than T_1 , the higher the coefficient of T_2 in absolute values, the greater the impact of preferential arrangement. Secondly, since a_4 and a_5 are elasticities indicating the proportionate response of bilateral trade to changes in tariffs, the initial tariff levels as well as initial trade level are relevant for determining the absolute changes in trade in both BIMSTEC countries and Japan following a PTA.

In this paper we do comparative static analysis of tariff reductions under different scenarios and its resultant effects on increase in imports and exports of both Japan and BIMSTEC countries. The objective of this analysis is to see costs and benefits of different PTAs and FTAs to different countries of this region in one hand and trade potentials between Japan and BIMSTEC countries on the other. Four hypothetical scenarios in this study are as follows.

- (i) 25 per cent across the board tariff cuts by all countries
- (ii) 50 per cent across the board tariff cuts by all countries
- (iii) 75 per cent across the board tariff cuts by all countries
- (iv) 100 per cent tariff cuts i.e. free trade among all countries (Japan and BIMSTEC)

The results of the simulations obtained are only indicative because these are estimated values based on hypothetical scenarios under proposed Japan-BIMSTEC economic integration by liberalizing economies through FTA. However, these simulations do not take into consideration the removal of non-tariff barriers, which is the major hindrance of free trade in this region. Though tariffs are reduced and then eliminated in a phased manner over the years, it is noticed that

extent of NTBs has been increasing over the years, whose trade distorting effects are much more than tariffs. In this analysis we only simulate the gains in terms of trade generation and not welfare improvement.

4.3. Data Sources

This exercise is based on elasticities estimated by Srinivasan and Canonero using panel data. Frankel's estimation procedure is adopted in this model. The results of the simulations are not valid to any particular year, these are indicative due to reductions in tariffs under different hypothetical scenarios. Both tariffs and trade data used in this analysis are taken from TRAINS CD-ROM compiled by United Nations Conference on Trade and Development (UNCTAD). Trade and tariffs data are taken for 2003 and in some exceptional cases tariff data are taken for 2004 where 2003 are not available. In case of Japan, we have different average (wtd.) tariff rates applicable for different countries depending upon the nature of goods of the exporting countries entering the Japanese market. But for BIMSTEC countries we do not have such detail average tariff rates applicable to their imports from different countries on different goods. In these cases, we have taken average (wtd) tariffs of the respective countries in aggregate rather than country-wise imports. We have also used some information available in the *World Development Indicators* of the World Bank.

4.4. The Model

In our analysis we have taken recourse to Gravity Model developed by Frankel et al. (1993) and extensively used by Safadi and Yeats (1993) in their analysis to estimate the likely impact of the formation of the North American Free Trade Area (NAFTA) on South Asia by considering other potential trading arrangements. Following above methodology, Srinivasan and Canonero have estimated the effects of preferential trading arrangements on South Asian countries. In this study we rely on the model, which was adopted by Srinivasan and Canonero(1993, 1994 and 1997). The main texture of the S-C model is as follows:

$$\text{Log BTI}_{c,d,t} = a_0 + a_1 \log (\text{GNP}_{c,t} * \text{GNP}_{d,t}) + a_2 \log (\text{PCGNP}_{c,t} * \text{PCGNP}_{d,t}) + a_3 D_{c,d} + a_4 \log (1 + \text{TR}_{c,d}) + a_5 \log (1 + \text{TR}_{d,c}) + a_6 \log \text{REXRT}_{c,d,t} + e_{c,d,t}$$

$$\text{and } e_{c,d,t} = u_c + v_d + w_t + h_{c,d,t}$$

where,

$\text{BTI}_{c,d,t}$	= Bilateral trade of commodity 'I' between country 'c' and Country/region 'd' at time 't'.
$\text{GNP}_{c,t}$ (or $\text{GNP}_{d,t}$)	= Gross National Product of country 'c' (or 'd') at time t
$\text{PCGNP}_{c,t}$ (or, $\text{PCGNP}_{d,t}$)	= Per capita Gross National Product of country 'c' on Country 'd'.
$D_{c,d}$	= Distance between relevant centres of 'c' on country 'd'.
$\text{TR}_{c,d}$	= Tariff rate imposed by country 'c' on country 'd'.
$\text{TR}_{d,c}$	= Tariff rate imposed by country 'd' on country 'c'.
$\text{REXRT}_{c,d,t}$	= Real Effective Exchange Rate between countries 'c' and 'd', at time 't'.
u, v	= country specific effects
w	= temporal effects
h	= random effects

Srinivasan and Canonero have used the cross-country data (of 21 trading countries/partners) overtime (i.e. 1968-91) to estimate the above mentioned gravity equation for 9 commodity groups. The commodity groups have been selected keeping in view the trade of South Asian countries. Further, the variance-component regression model has been adopted to capture the spatial impact of individual countries (u and v) and time period (t).

Although the model used by Srinivasan and Canonero captures the impact of country characteristics and temporal effects through variance components, and are estimated for the commodity groups relevant to South Asia.⁶ This model has number of limitations. The simulations are based on the same tariff rate for all the 9 commodity

groups. To quote an example, India's tariff rates for both clothing and fuels have been taken as 42 per cent in their study. Further, the estimation of the Variance Component Model is carried out using data for incomplete panels, i.e. missing observations. But, the estimation procedure does not seem to capture the features of incomplete repeated samples. The estimation of Variance Component Model for incomplete panels has been examined in the literature by Bifm (1981), Wansbeek and Kapteyn (1989) and others. In spite of all these limitations, the fitted regression equations of 8 commodity groups are very satisfactory. Some of the relevant parameters of the regression equation, used in our simulations, are reported below, for ready reference.

The essence of the Gravity Model is that the bilateral trade flow is positively related to the size of the two countries and inversely related to the distance between them. This follows the concept of physical science, where gravity force is directly proportional to the mass of two bodies and inversely proportional to the distance between them.⁷

4.5. The Methodology

The elasticities estimated by Srinivasan and Canonero are given in Table 8. Coefficient "a₅" is relevant while estimating gains from exports of both Japan and BIMSTEC countries at different levels of desegregation as well as total exports, whereas coefficient "a₄" is considered for estimating increase in intra-regional imports of different countries due to PTA and FTA. For estimating increase in Japan's exports to and imports from BIMSTEC countries and vice-versa, we have taken elasticities estimated by Srivnivasan and Canonero. The elasticities are a bit higher side than usually what it should be. However, this is the most dependable scientific calculation of elasticities valid for the South Asian countries. The elasticities are higher because these are tariff elasticities not the usual price elasticities that mean we have estimated increase in trade due to reduction in tariffs not reduction in price in the usual case as it is explained earlier. While estimating likely increase in Japan's imports from BIMSTEC in value terms, we have used Variance Component Model. The entire

commodities at 8-digit level are grouped into nine major groups. Srinivasan and Canonero have done this exercise by using panel data. The groups and corresponding elasticities are shown in Table 8.

Table 8: Elasticities of Major Commodities

<i>Group</i>	<i>Commodity Groups No.</i>	<i>'a₄'</i>	<i>'a₅'</i>
I	Total Trade	-3.9	-4.66
I	Coffee, tea, coca & spices	-5.81	-0.43
II	Textile fibre	-15.38	-7.78
III	Fuels	-3.83	-8.15
IV	Non-fuel primaries (except covered in I&II)	-4.76	-6.0
V	Leather, dressed, fur etc	-2.08	-2.73
VI	Textile yarn, fabrics etc	-5.16	-4.31
VII	Machine & transport equipment	-3.45	-3.14
VIII	Clothing	-2.41	-10.03
IX	Other manufactures	-4.66	-4.77

Source: Srinivasan and Canonero (1993).

Given the estimated parametric value of 'a₄' and 'a₅' from the fitted regression equations (of the nine commodity groups), and changes in tariff rates under different alternative scenarios, we work out the percentage increase in import from d to c (i.e. from BIMSTEC to Japan) and percentage increase in exports from c to d (i.e. from Japan to BIMSTEC). The methodology is:

$$[\exp \{ \hat{a}_4 \log ((1+TR_{c,d})_1 / (1+TR_{c,d})_0) + \frac{1}{2} \sigma^2 \} - 1] * 100$$

and increase of import of c from d (i.e. from BIMSTEC to Japan)

$$[\exp \{ \hat{a}_5 \log ((1+TR_{d,c})_1 / (1+TR_{d,c})_0) + \frac{1}{2} \hat{\sigma}^2 \} - 1] * 100$$

and increase of exports from c to d (i.e. from Japan to BIMSTEC)

where,

$$\hat{\sigma}^2 = \sigma^2_{a_4 \log(1+TR_{c,d}) + a_5 \log(1+TR_{d,c})}$$

The elasticities used in these simulations are much higher than what is expected to be. The reasons are as follows: (a) these are not the price elasticities, these are tariff elasticities showing the increasing in demand due to reduction in preferential tariffs. In BIMSTEC and SAARC countries (BIMSTEC has five members from SAARC countries), the role of prices in the intra-regional trade is insignificant because the sizes of the economies are too small (except Thailand) to affect the price structure of the goods traded in this region. Notwithstanding, Nepal and Bhutan have substantial trade linkages with India under bilateral free trade agreement. Therefore, we have not considered increase in demand with respect to change in prices, which is almost meaningless in this region. In this case (1+TR) is the most appropriate method to estimate the increase in trade due to reduction in tariff rather than on price. (b) Within the BIMSTEC region trade is not free, therefore prices have marginal impact in determining demand. Intra-regional trade is constrained by labyrinthine non-tariff barriers like quota and licensing, etc. (c) Elasticities (1+TR) are higher basically due to distance factor. It is also *a priori* true that price elasticity is inversely related to distance. If the distance is less, obviously elasticity is high than the commodities imported by India from USA and Europe where we face less elasticity due to distance factor.

We estimate the increase in Japan's exports to and imports from BIMSTEC countries under four hypothetical scenarios viz. (i) 25 per cent tariff cuts, (ii) 50 per cent tariff cuts, (iii) 75 per cent tariff cuts, and (iv) 100 per cent tariff cuts, i.e. if there is free trade between Japan and BIMSTEC.

The results of the simulations obtained are only indicative because these are estimated assuming four hypothetical scenarios of preferential tariff concessions. However, these simulations do not take into consideration of gains from trade that may emerge from the liberalization of non-tariff barriers. We only simulate the gains from trade creation and not welfare improvement.

5. Results of the Study

The results summarizing the likely increase in intra-regional trade between Japan and BIMSTEC countries based on the gravity model are presented in Tables 9 to 16. We have taken total imports and exports of the countries concerned. The study would have been better had we taken major commodities of each country and showed their likely increase in trade due to PTA and FTA. We may do this exercise later provided sufficient data and time are available. This will remain as future exercise to be done for this purpose. This paper deals with the comparative static analysis showing likely increase in imports and exports of Japan and BIMSTEC countries under different hypothetical scenarios, including a free trade option. But NTBs are not included in our study. Nevertheless, every country can maintain a smaller negative list in line with the Indo-Sri Lanka Bilateral Free Trade Arrangement. In this exercise, we have taken average (wtd) tariffs of all countries (i.e. BIMSTEC and Japan) for the year 2003. Tariff rates of different countries during 2003 are as follows: Bangladesh 15.9 per cent, Bhutan 0 (no information is available), Japan 2.4 per cent, Nepal 15.6 per cent, Sri Lanka 6.8 per cent, Thailand 8.3 per cent, India 28 per cent and Myanmar 3.9 per cent. It is evident from tariff figures of different countries that India is having highest rate of customs tariffs among all countries of the region and Japan is having the lowest tariff rate.

Table 9 shows the estimated increase in intra-regional (BIMSTEC-Japan) imports due to PTA and FTA in million US dollars. Import of each country is shown under four different conditions mentioned above including the free trade option, which means every country has four options. Every country has 28 probable scenarios of likely increase in imports due to PTA and FTA. Table 9 has such 196 scenarios estimating increase in imports of each country from both Japan and BIMSTEC countries under different hypothetical conditions. We could not estimate increase in imports in case of Bhutan because of two reasons. One is Bhutan's imports is miniscule much below one million dollars from other countries of this region and secondly, we have not got Bhutan's average (wtd) tariff rates for 2003. We have estimated increase in exports of Japan and other BIMSTEC

Table 9: Likely Increase in Intra-Regional (BIMSTEC-Japan) Imports due to PTA and FTA, 2003
(US\$ million)

Imports from	Bangladesh			Bhutan			India			Japan						
	Scen.I	Scen II	Scen III	FTA	Scen I	Scen II	Scen III	FTA	Scen I	Scen II	Scen III	FTA				
Bangladesh	0	0	0	0	0.6	1.19	1.79	2.38	231.64	463.28	694.92	926.57	87.85	175.71	263.56	351.41
Bhutan																
India	16.65	33.31	49.96	66.61	7.92	15.83	23.75	31.67					720.17	1440.35	2160.52	2880.7
Japan	11.93	23.86	35.79	47.72	0	0	0	0	41.55	83.09	124.64	166.18				
Myanmar	0.1	0.2	0.31	0.41	0	0	0	0	2.91	5.82	8.73	11.63	5.21	10.42	15.62	20.83
Nepal	0.5	1	1.5	2	0	0	0	0	34.72	69.45	104.17	138.89	2.19	4.39	6.58	8.78
Sri Lanka	0.38	0.76	1.14	1.52	0	0	0	0	72.4	144.8	217.2	289.59	30.15	60.3	90.44	120.59
Thailand	2.43	4.86	7.28	9.71	0	0	0	0	71.13	142.27	213.4	284.53	1478.18	2956.35	4434.53	5912.7
Imports from	Myanmar			Nepal			Sri Lanka			Thailand						
	Scen I	Scen II	Scen III	FTA	Scen I	Scen II	Scen III	FTA	Scen I	Scen II	Scen III	FTA	Scen I	Scen II	Scen III	FTA
Bangladesh	5.15	10.3	15.45	20.61	0.75	1.51	2.26	3.01	1.43	2.86	4.3	5.73	27.37	54.74	82.11	109.48
Bhutan																
India	70.71	141.41	212.12	282.56	94.19	188.37	282.56	376.74	61.97	123.94	185.91	247.88	192.74	385.48	578.21	770.21
Japan	10.84	21.68	32.51	43.35	0.38	0.76	1.14	1.52	7.13	15.05	22.58	30.11	263.16	526.31	789.47	1052.62
Myanmar					0	0	0	0	0.01	0.03	0.04	0.06	18.38	36.76	55.14	73.52
Nepal	0	0	0	0					0.18	0.36	0.54	0.72	4.65	9.3	13.95	18.6
Sri Lanka	0.15	0.31	0.46	0.62	0.01	0.02	0.03	0.04					9.77	19.54	29.3	39.07
Thailand	74.05	148.09	222.14	296.19	0.08	0.16	0.24	0.32	0.65	1.29	1.94	2.59				

Source: Results are based on author's simulations as described in text.

countries to rest of the bloc members and Japan through gravity model under 196 different scenarios, which is presented in Table 10. Similar to imports, we could not estimate value of Bhutan's increase in exports to other countries due to lack of tariff data. Gains from PTA and FTA of different countries are determined by the differences in tariff rates of the respective countries and elasticities of different commodity groups. But in our analysis we have taken total trade (exports and imports) instead of different commodity groups. Simulation results of increase in imports and exports of Japan and BIMSTEC countries are shown in Tables 9 and 10.

On the basis of Tables 9 and 10, we have calculated the percentage increase in imports and exports of Japan and BIMSTEC countries under different scenarios. From Tables 11 and 12 it is clear that the country whose tariff rate is high, increase in imports is higher than increase in exports both in absolute value and percentage increase and vice-versa. Both tables have 196 observations each. Percentage increase in exports and imports will give better idea how far one country should go for depth of tariff cuts. Higher the tariffs, gains are much less because in-depth tariff cuts increase its imports significantly higher than exports to countries whose tariff levels are less. Percentage increase in imports from and exports to Japan and BIMSTEC countries (excluding Bhutan) due to different variants of tariffs cuts including free trade option is presented in Tables 11 and 12.

Objective of this exercise is to explore possibilities of free trade option between Japan and BIMSTEC countries. Results of our simulations depicting free trade options are presented in Tables 13 and 14. Table 13 presents estimated increase in imports of Japan and BIMSTEC countries due to free trade. It is clear from the table that due to free trade, Bangladesh's increase in imports would be highest from India than other countries. Its increase in imports from India would be \$926.57 million, whereas its exports to India would be increased only miniscule amount of \$72.21 million i.e. less than one-tenth of its increase in imports. In case of India, due to free trade, India's increase in imports would be highest from Japan. This is simple because of *a priori* logic that since India's tariff rate is highest among

all BIMSTEC countries and Japan's tariff rate as little as 2.4 per cent as compared to India's rate of 28 per cent. Therefore, uniform reduction in tariffs among all countries will affect countries much more whose tariff rates are high. This is evident from the simulation results that as against India's increase in imports of \$2880.7 million from Japan, its increase in exports to the latter country would be only a meager amount of \$ 221 million i.e. less than one-tenth of its increase in imports.

If Japan concludes FTA with BIMSTEC countries, its growth in exports to the former countries will be much more than imports from these countries. As a result of free trade, Japan's imports will be highest from Thailand (among all BIMSTEC countries) i.e. to the tune of \$1052.62 million, whereas its exports to the same country will increase by \$10234.7 million, which means Japan will be maximum beneficiary of free trade than other countries of BIMSTEC. Due to FTA, Myanmar's imports from Thailand will be increased by \$73.52 million, highest among all bloc countries followed by Japan \$20.83 million third highest from India i.e. \$11.63 million. But its exports will increase significantly. Its exports to both India and Japan will be increased by \$322 million, followed by Bangladesh to the tune of \$22.38 million. Picture is same for Nepal. Nepal will be one of the most beneficiaries of FTA in this region. Given its tariff regime, free trade will increase its imports by \$138.89 million from India, followed by \$18.6 million from Thailand. But, due to duty free trade, its exports to India would be increased by \$ 428.87 million and \$3.27 million to Bangladesh. Increase in both imports from and exports to other countries are almost insignificant. Nepal and Bhutan have already duty free arrangements with India through different bilateral treaties. Therefore, simulation results of Nepal's likely increase in exports to and imports from India do not have any operational significance here. Nepal's simulation results do not valid for India.

Free trade is also beneficial for Sri Lanka due to the fact that it will increase its imports by \$289.59 million from India and to same country its exports will be increased by \$319.74 million. Sri Lanka's imports will be increased by \$120.59 million from Japan and \$39.07

**Table 11: Likely Increase in Intra-Regional (BIMSTEC-Japan) Imports due to PTA and FTA, 2003
(Percentage Change)**

Imports from	Bangladesh			Bhutan			India			Japan		
	Scen.I	Scen II	Scen III	Scen I	Scen II	Scen III	Scen I	Scen II	Scen III	Scen I	Scen II	Scen III
Bangladesh	Scen.I	Scen II	Scen III	FTA	FTA	FTA	FTA	FTA	FTA	FTA	FTA	FTA
Bhutan	15.5	31.01	46.51	62.01	7.74	15.48	23.22	30.97	15.5	31.01	46.51	62.01
India	27.3	54.6	81.96	109.2	27.3	54.6	81.96	109.2	27.3	54.6	81.96	109.2
Japan	9.11	18.21	27.32	36.43	3.77	9.55	11.32	15.09	1.91	3.82	5.73	7.64
Myanmar	3.8	7.61	11.41	15.21	0	0	0	0	3.8	7.61	11.41	15.21
Nepal	15.21	30.42	45.63	60.84	0	0	0	0	15.21	30.42	45.63	60.84
Sri Lanka	6.73	13.46	20.18	26.91	0	0	0	0	6.73	13.46	20.18	26.92
Thailand	8.09	16.19	24.28	32.37	0	0	0	0	8.09	16.19	24.28	32.37
Imports from	Myanmar			Nepal			Sri Lanka			Thailand		
Bangladesh	Scen I	Scen II	Scen III	FTA	FTA	FTA	FTA	FTA	FTA	FTA	FTA	FTA
Bhutan	15.5	31.01	46.51	62.01	15.5	31.01	46.51	62.01	15.5	31.01	46.51	62.01
India	27.3	54.6	81.96	109.2	27.3	54.6	81.96	109.2	27.3	54.6	81.96	109.2
Japan	7.74	15.48	23.22	30.97	5.42	10.84	16.26	21.68	3.9	7.8	11.7	15.6
Myanmar	0	0	0	0	0	0	0	0	3.8	7.61	11.41	15.21
Nepal	0	0	0	0	15.21	30.42	45.63	60.84	15.21	30.42	45.63	60.84
Sri Lanka	6.73	13.46	20.18	26.91	6.73	13.46	20.18	26.91	6.73	13.46	20.18	26.91
Thailand	8.09	16.19	24.28	32.37	8.09	16.19	24.28	32.37	8.09	16.19	24.28	32.37

Source: Results are based on gravity model described in the text.

**Table 12: Likely Increase in Intra-Regional (BIMSTEC-Japan) Exports due to PTA and FTA, 2003
(Percentage Change)**

Exports to	Bangladesh			Bhutan			India			Japan						
	Scen.I	Scen II	Scen III	FTA	Scen I	Scen II	Scen III	FTA	Scen I	Scen II	Scen III	FTA				
Bangladesh					0	0	0	0	36.62	65.24	97.86	130.48	2.8	5.59	8.39	11.18
Bhutan																
India	17.78	37.05	55.57	74.09	0	0	0	0					2.68	5.59	8.39	11.98
Japan	17.21	34.41	51.62	68.83	0	0	0	0	31.99	63.98	95.97	127.96				
Myanmar	18.52	37.05	55.57	74.09	0	0	0	0	36.62	65.24	97.86	130.48	2.8	5.59	8.39	11.18
Nepal	18.52	37.05	55.57	74.09	0	0	0	0	32.62	65.24	97.86	130.48	2.8	5.59	8.39	11.18
Sri Lanka	18.52	37.05	55.57	74.09	0	0	0	0	32.62	65.24	97.86	130.48	2.8	5.59	8.39	11.18
Thailand	18.52	37.05	55.57	74.09	0	0	0	0	32.62	65.24	97.86	130.48	2.8	5.59	8.39	11.18
Exports to	Myanmar			Nepal			Sri Lanka			Thailand						
	Scen I	Scen II	Scen III	FTA	Scen I	Scen II	Scen III	FTA	Scen I	Scen II	Scen III	FTA	Scen I	Scen II	Scen III	FTA
Bangladesh	4.54	9.09	13.63	18.17	18.17	36.35	54.52	72.7	7.92	15.84	23.77	31.69	9.67	19.34	29.01	38.68
Bhutan																
India	4.36	9.09	13.63	18.17	17.45	36.35	54.52	72.7	7.61	15.84	23.77	31.69	9.82	19.34	28.01	38.68
Japan	4.22	8.43	12.65	16.87	18.17	36.35	54.52	72.7	13.02	26.05	39.07	52.1	15.95	31.9	47.65	63.8
Myanmar					0	0	0	0	7.92	15.84	23.77	31.69	9.67	19.34	29.01	38.68
Nepal	0	0	0	0					9.67	19.34	29.01	38.68	7.92	15.84	23.77	31.69
Sri Lanka	4.54	9.09	13.63	18.17	18.17	36.35	54.52	72.7					9.67	19.34	29.01	38.68
Thailand	4.54	9.09	13.63	18.17	18.17	36.35	54.52	72.7	7.92	15.84	23.77	31.69				

million from Thailand, whereas its exports to the same countries would be increased by \$18 million and \$4.6 million, respectively. It is also important to mention here that India and Sri Lanka have already concluded bilateral FTA for which India has extended free trade treatment to host of Sri Lankan products except small negative list since 1 April 2003 where as Sri Lanka will reciprocate the same by 2008. As a result of ISBFTA, Sri Lanka's exports to India have increased significantly, compared to its imports from the latter. In case of Thailand, maximum increase in imports will be originated from Japan to the tune of \$5912.7 million, followed by Myanmar \$296.19 million and from India by \$284.53 million. But duty free trade will increase its exports by \$1279 million, followed by India by \$836.38 million, Bangladesh by \$202.28 million, Myanmar by \$79.78 million, and Nepal by 14.54, and to Sri Lanka. exports would be increased by \$57.02 million. Estimated increase in imports and exports of Japan and Bangladesh under free trade conditions is shown in Tables 13 and 14.

Percentage increase in imports of and exports to Japan and BIMSTEC countries are presented in Tables 15 and 16. These tables are derived from Tables 13 and 14. These tables depict percentage increase in imports and exports from the simulations derived through gravity model. From these tables it is seen that due to FTA, imports of Bangladesh from India will be increased by 30.97 per cent but from other countries including Japan the magnitude will be 62 per cent. Under the same condition, its exports to India would be increased by 130.48 per cent, followed by 72.7 per cent to Nepal, 38.68 per cent to Thailand and 31.69 per cent to Sri Lanka. India's imports from all countries will be increased by 109 per cent whereas its exports will be increased by 74.09 per cent to Bangladesh, 11.98 per cent to Japan, 18.17 per cent to Myanmar, 72.7 per cent to Nepal, 31.69 per cent to Sri Lanka and 38.68 per cent to Thailand.

Japan's increase in imports would be modest compared to increase in exports. Its increase in imports varies only between 8 to 37 per cent whereas range of its increase in exports is between 17 per cent and 128 per cent. Therefore, Japan is one of the most beneficiaries of free trade arrangements in the region. Myanmar's exposure to free

Table 13: Likely Increase in Intra-Regional (BIMSTEC-Japan) Imports due to FTA, 2003

(US\$ million)

Imports from	Bangladesh	Bhutan	India	Japan	Myanmar	Nepal	Sri Lanka	Thailand
Bangladesh	0	2.38	926.57	351.41	20.61	3.01	5.73	109.48
Bhutan								
India	66.61	31.67		2880.7	282.56	376.74	247.88	770.21
Japan	47.72	0	166.18		43.35	1.52	30.11	1052.62
Myanmar	0.41	0	11.63	20.83		0	0.06	73.52
Nepal	2	0	138.89	8.78	0		0.72	18.86
Sri Lanka	1.52	0	289.59	120.59	0.62	0.04		39.07
Thailand	9.71	0	284.53	5912.7	296.19	0.32	2.59	

Source: Results are based on Gravity Model

Table 14: Likely Increase in Intra-Regional (BIMSTEC-Japan) Exports due to FTA, 2003

Exports to Exports from:	(US\$ million)									
	Bangladesh	Bhutan	India	Japan	Myanmar	Nepal	Sri Lanka	Thailand		
Bangladesh	0	0	72.21	5.76	0.44	2.15	1.84	3.66		
Bhutan										
India	1006.2	0		221	13.27	157.75	303.25	309.04		
Japan	294.58	0	3066.01		21.09	9.45	195.37	10234.7		
Myanmar	22.38	0	322.3	14.19		0	0.44	321.67		
Nepal	3.27	0	428.97	0.73	0		0.07	0.48		
Sri Lanka	8.28	0	319.74	18	0.04	1.21		4.46		
Thailand	202.28	0	836.38	1279	79.78	14.54	57.02			

Source: Results are based on author's simulations described in the text.

Table 15: Likely Increase in Intra-Regional (BIMSTEC-Japan) Imports due to FTA, 2003
(Percentage Change)

Imports from	Bangladesh	Bhutan	India	Japan	Myanmar	Nepal	Sri Lanka	Thailand
Bangladesh		62.01	30.97	62.01	62.01	62.01	62.01	62.01
Bhutan								
India	109.2	109.2		109.2	109.2	109.2	109.2	109.2
Japan	36.43	15.09	7.64		30.97	21.68	15.6	8.85
Myanmar	15.21	0	15.21	15.21		0	15.21	15.21
Nepal	60.84	0	60.84	60.84	0		60.84	60.84
Sri Lanka	26.91	0	26.91	26.92	26.91	26.91		26.91
Thailand	32.37	0	32.37	32.37	32.37	32.37	32.37	

Source: Results are based on author's simulations described in the text.

Table 16: Likely Increase in Intra-Regional (BIMSTEC-Japan) Exports due to FTA, 2003

	(Percentage Change)							
Exports to Exports from:	Bangladesh	Bhutan	India	Japan	Myanmar	Nepal	Sri Lanka	Thailand
Bangladesh		0	130.48	11.18	18.17	72.7	31.69	38.68
Bhutan								
India	74.09	0		11.98	18.17	72.7	31.69	38.68
Japan	68.83	0	127.96		16.87	72.7	52.1	63.8
Myanmar	74.09	0	130.48	11.18		0	31.69	38.68
Nepal	74.09	0	130.48	11.18	0		38.68	31.69
Sri Lanka	74.09	0	130.48	11.18	18.17	72.7		38.68
Thailand	74.09	0	130.48	11.18	18.17	72.7	31.69	

Source: Results are based on author's simulations described in the text

trade is just similar to Japan. Its imports would increase by 15 per cent from all countries, where increase in exports would vary between 11 per cent and 130 per cent. Highest increase in exports will be to India i.e. 130.48 per cent, followed by Bangladesh (74 per cent). Nepal's increase in imports will be only 60 per cent to all countries whereas its increase in exports would vary from 31 per cent to 130.48 per cent. Highest increase in exports will be to India. Sri Lanka's imports will be uniformly increased by 26.91 per cent from all countries due to free trade. But its exports will increase much more than its imports. Its exports to Bangladesh will increase by 74 per cent and to India it will be 131 per cent and to Thailand it will be 39 per cent. To other countries of this region, increase in exports is not so significant. Finally, Thailand too, will be a beneficiary in free trade arrangements with the BIMSTEC members as well as Japan. Its imports from Japan and other bloc members will be increased by only 32.37 per cent whereas its exports will be increased by 130.48 per cent to India, 74.09 per cent to Bangladesh, 31.69 per cent to Sri Lanka and 72.7 per cent to Nepal. Surprisingly, its exports to Myanmar will be only 18.17 per cent. The matrix of increase in imports and exports of Japan and other BIMSTEC countries with the same countries is shown in Tables 15 and 16.

6. Concluding Observations

BIMSTEC has been a very insignificant player in the world trade. Its share in total world trade is minuscule as compared to other bloc in this region. In 2003, BIMSTEC's share in the world trade was only 2.20 per cent, which was extremely low to any standard. But what is most significant is that its intra-regional trade is significantly higher than many economic groupings in Asia. Pacific region except East Asia Economic Grouping (EAEG) and ASEAN. In 2003, intra-regional trade among BIMSTEC countries was 14.75 per cent as against 5.6 per cent among the SAARC countries, 23.0 per cent among ASEAN countries, 6.1 per cent among the members of Indian Ocean Commission, 5.7 per cent among Bangkok Agreement Countries and 11.9 per cent among MERCOSUR countries. Intra-regional trade among BIMSTEC is high because of Thailand, which is the most vibrant economy of this region. Higher intra-regional trade implies it has potential to grow. Intra-regional trade is fairly high among

BIMSTEC countries even in absence of any PTA. Therefore, once PTA and FTA will be negotiated and come into force, intra-regional trade will grow much faster and hope to catch ASEAN rate. If Japan joins in this group with FTA, this will emerge as one of the most vibrant economic groups in this region to reckon with.

BIMSTEC is one of the new entrants in the bandwagon of regional economic forum of this region. It was first formed in June 1997 and got expanded in December 1997, which have five meetings so far. But before being a very vibrant economic bloc of this region, it has to get WTO legitimacy. It can form a regional trading bloc under Article XII of Enabling Clause or Article XXIV of GATT. Bangkok Agreement has got GATT clearance and it has a framework for PTA by extending a list of items for concession for few items in the early eighties. Though BA is still non-starter and that is precisely the reason ESCAP actively thinking to revitalize the BA by extending its membership to some developed countries of this region viz. Australia, New Zealand, Japan and China. But BIMSTEC is yet to get GATT clearance and its formation is not figure in the nomenclature of RTBs of WTO. Therefore, it has to get GATT clearance and should evolve a comprehensive policy on PTA first and then FTA. Free trade among this region is far away from the reality, but process should be started with PTA as early as possible.

The first step to create a vibrant regional trading bloc lies in its intention of moving towards PTA as a precursor to FTA. While moving towards this objective, one has to face so many complicated problems of other related arrangements. First of this kind is to define 'rules of origin'. As Panagariya says that given the already operational regional arrangements in the BIMSTEC region, this is bound to result in a "spaghetti bowl" type of phenomenon where for a given product there could be several different tariff rates depending on what origin is assigned to it. Another related problem is the harmonization of standards among different members of BIMSTEC and uniform certification procedures within the bloc members and between Japan and BIMSTEC that are vital to any kind of trade liberalization in the form of PTA or FTA. Third problem one has to face is the identification

of negative list of commodities of the respective countries and detailed plan to prune it in a phased manner and to prepare comprehensive national schedules of items to be offered for concession similar to Indo-Sri Lanka Free Trade Arrangement. This may not be a very easy task as tariff levels are skewedly distributed among member countries in one hand and each country wants better market access to other country in which latter country has substantial interest on the other. For an example Thailand wants duty free treatment to its auto components exports to Indian market but India is unlikely to open it because this is vibrant sector in India too.

It is revealed from our analysis that tariff level in Japan was as low as 2.4 per cent in 2003, whereas this is significantly higher in BIMSTEC countries. There is an apprehension for the bloc countries that once tariffs are lowered there will be surge in imports from Japan taking advantage of the liberalized tariff regime whereas exports from the BIMSTEC countries to Japan may not rise significantly because lower tariffs in one hand and higher incidence of NTBs on the other. Therefore, there should be comprehensive programme to liberalize and removal of non-tariff barriers in tandem with the liberalization of tariffs. Our study does not cover the intensity of NTBs in both way trade and how it emerges as effective trade protection measure. Success of PTA and FTA depends on the liberalization of NTBs and every member should prepare a comprehensive plan how to minimize it.

Our simulation results show that due to Japan-BIMSTEC FTA, Japan's increase from BIMSTEC countries will be marginal but with obvious reason its exports to BIMSTEC countries will increase significantly. This is due to levels of tariffs existed between Japan and BIMSTEC. This is the area where BIMSTEC countries have strong reservation at the initial stages unless it is balanced by other trade augmenting measure. In spite of such adverse scenario, Japan-BIMSTEC FTA still merits consideration if gains in other areas for the latter countries are considered which will outweigh potential losses on the trade front such as stepped up resource transfer, foreign direct investment (FDI) flows, technology transfer and market access to

services. BIMSTEC's gains in terms of additional FDI flows or export-oriented FDI following the entry of Japan in BIMSTEC appear to be marginal, if at all given its relatively large domestic market, lack of geographical and cultural proximity with Japan, the major source of FDI in the region. At present BIMSTEC also does not appear to be equipped to evolve into a full fledged RTB with customs union, common market and free mobility of factors of production that facilitate industrial restructuring in favour of less developed countries of BIMSTEC. However, Japan may offer additional economic assistance to poorer countries and provide market access to labour intensive services especially Mode 4 to compensate for the asymmetries arising from trade. Developed countries do provide substantial economic assistance to less developed regions in the RTAs such as EU that has facilitating convergence of levels of development across the bloc.

In the present study, estimates have been done in a static framework. The exports of BIMSTEC countries to Japan would increase further if the estimations are carried out in a dynamic framework. Though it is very difficult at this moment, given sufficient time and resources, one can try to measure the welfare gains of Japan-BIMSTEC FTA. Moreover, in this study we have done comparative static analysis using gravity model. Simulation results do not cover the trade potentials between Japan and BIMSTEC countries. Therefore, one should make an attempt to estimate trade potentials between Japan and BIMSTEC by estimating stochastic frontier production function using gravity model, which provides an empirically tractable general equilibrium framework for bilateral trade flow analysis

Endnotes

- ¹ In most cases of regional blocs, a number of attempts have been made by experts to analyse the impact of preferential/free trade arrangements on the economies of member (as well as non-member) countries. For example, eight systematic attempts have been made to analyse the impact of NAFTA, as summarized in CBO (1993) and USITC (1992).
- ² See Amano et al (1980), Sawyer (1979), Yap and Nakmura (1990), among others for details of Inter-Country Link Model System.
- ³ See for example Frankel (1997) and Deardorff (1998) and references quoted

therein.

- 4 The 'new regionalism of nineties, unlike trading arrangements of sixties, has member countries with (a) vastly different levels of development, (b) different sizes of population, (c) different levels of domestic economies, and structure of production, and (d) varying degrees of openness, etc. For details, see WTO (1995), among others.
- 5 Pigato et al. (1997) have estimated the welfare consequences of a scenario when all tariffs between (a) India and (b) rest of the SMCs are removed. The welfare gains are trade creation benefits - trade diversion losses + terms of trade gains. The welfare results generate significant benefits for both India and the rest of the SMCs. However, it should be noted that the simulation is based on tariff rates of 1993-94 and 1997-98. There is free trade between India-Nepal and India-Bhutan under bilateral trading arrangements.
- 6 This portion is heavily drawn from the analysis of Mehta, R.K. and Bhattacharya, S. K., SAPTA to SAFTA: Impact on Intra-Regional Trade, Paper presented to the 35th Annual Conference of the Indian Econometric Society, Jaipur, March 11-13,1999. The author is very grateful to Rajesh Mehta for his contribution to the specification of the model.
- 7 Beata Kasia Smarzynska," Resurrecting the Gravity Model : In Search of the Centre of International Trade", mimeo, Yale University, p.4

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