ANALYSIS OF INDIA'S TRADE RELATION WITH BANGLADESH AS MEMBERS OF BIMSTEC SINCE 1997

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Abstract: *This paper assesses the analysis of India's trade relation with Bangladesh as members of BIMSTEC since 1997 using annual data from the period 1997 to 2013. Time series data had been used to calculate various trade indices. Economies of India and Bangladesh are different, may be not so much in terms of the overall stage of development but more in terms of latest growth dynamics. This Study stated that trade relations between India and Bangladesh have witnessed a significant improvement in the recent past and there is need to comprehend the potential of the pact, both the countries need to further liberalize trade, cut tariffs on India's exports to Bangladesh, reduce and remove non-tariff barriers and improve trade facilitation both at borders and inland.*

Keywords: *Trade, BIMSTEC, Intra Industry Trade, Revealed Comparative Advantages, Revealed Symmetric Comparative Advantage, Trade Intensity Index, Terms of Trade*

1. INTRODUCTION

In present world, no nations survive into economic isolation. Each and every aspects of economy- its industries, service sector, employment and levels of income, and living standard are associated to the economies of its trading cohorts. This association takes the shape of international arrangements of goods and services, labor, business venture, investment funds, and technology. The high level of economic interdependence between economies reflects the historical advancement of the world's economic and political regulation (Carbaugh, 2008). There are various factors which promote global economic integration. One of them from is international trade. Trade is one of the powerful forces of economic integration. All the factors of production are not adequately available in a country. For grafting their varied needs, countries engage in international trade.

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Regional economic integration between developing nations is advocate in the context of preferential and free trade arrangements, specialization, economies of scale and enlargement of markets, as most of these countries cannot attain in isolation. Unlike the accomplishment of economic integration among the developed nations, regional groupings in the developing world are by and great successful, barring the ASEAN which is often commended as a model of Third World regional cooperation. The SAARC, the other most important regional grouping in Asia but slow rate of progress in the SAARC was main cause for the formation of BIMSTEC in Asia. The BIMSTEC grouping, brainchild of Thailand, is a unique initiative in sub regional economic cooperation. It has the distinction of combining five geographically contiguous countries of SAARC with two of ASEAN, thus creating a vast scope for regional development. These are: India, Thailand, Bangladesh, Myanmar, Sri Lanka, Bhutan and Nepal. BIMSTEC is a relatively young organization among the various regional and sub-regional grouping (Upreti, 2007). In 1990s these countries determined to get engaged in a regional corporation with a view to attain superior economies of scale in production, achieve specialism, boost competitiveness, expand export basket and make exploit of their under-utilized economic impending in terms of human being, technological and natural resources with lesser potential of back-sliding. On 6 June 1997, a new sub-regional alliance was created in Bangkok and given the name BIST-EC (Bangladesh, India, Sri Lanka, and Thailand Economic Cooperation). Myanmar present at the foundational June gathering as an spectator and connected the organization as a complete member at a Special Ministerial conference held in Bangkok on 22 December 1997, upon which the name of the alliance was changed to BIMSTEC.India and Bangladesh are member of SAARC (South Asia Association of Regional cooperation), and BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation). But has trade relation with others regional trading blocs in Asia such as ASEAN (Association of Southeast Asian nations), MGC *(*Mekong–Ganga Cooperation), ECO (Economic Cooperation Organization), ACD (Asia Cooperation Dialogue), GCC (Gulf Cooperation Council), and SCO (Shanghai Cooperation Organization) (Asia.org).

BIMSTEC is playing important role to attract a trade and investment in Asia-Pacific. The Bay of Bengal sub region accounts about 10 per cent of India's external economic relation. India has to anchor the peace and prosperity of sub region for common good and interdependent destiny. India as largest country has the responsibility to initiate more effective and

proactive measures to hasten cooperation, including by developing enduring and mutually beneficial trade, infrastructure, investment and other linkage, which alone create and sustain a vested interest in sub regional cooperation. Being lead country in the grouping, India draws attention in the BIMSTEC framework and its functioning in the backdrop of the fast changing global economic environment. India is the fast emerging global power and is both the factor for peace and stability as well as dynamic economic player in the region. India with its recent economic clout and capacity building measure, together with the gradual shift in the foreign policy outlook to suit to be rapid change in global geo-political issues deserve a special status in the BIMSTEC region (Devi, 2007).

After achieving the liberalization Bangladesh opened the economy. India had offered help to Bangladesh in various sectors such as IT, cyclonic tidal surge management etc. The liberation war of 1971, Bangladesh able to attained its sovereignty and established relations with India. The political association among India and Bangladesh has crossed through cycles of hiccups. Now, both the nations India and Bangladesh are aware of the significance of good relations, regional safety and South Asian economic integration. Both nations share more than 4096 km adjacent border. Both the nations have advantage enormously by enhancing mutual trade and investment. Being one of the foremost players in South Asia, India and Bangladesh significantly impact the socio-political and economic demography of the state and relations among them influence the destiny of South Asia. Therefore, India and Bangladesh play a chief role in the 21st century, which is hailed as the Asian century. In terms of most populated nations India stand 2nd and Bangladesh 8th and have an almost 20 per cent of the global population at home. A well-built cultural, linguistic and religious acquaintance is shared by both the nations. Among other things, India and Bangladesh have agreed to make the reforms to get higher growth rates and share the general goal of dropping poverty and increasing living standard of their masses. Bangladesh has been more victorious than India, in attaining its societal improvement goals and surely offers a lesson for its larger neighbours nations. The consciousness that globalization is the mode to go ahead has been the foundation of the economic model followed by both the nations.India's association with Bangladesh constitutes civilization, cultural, social and economic aspects. There are lots of things that unites the both nations are a shared linguistic and cultural ties, obsession for music, history and common heritage, literature and the arts. India shares not simply a common history of struggle for independence and liberation with

Bangladesh but also stable outlook of two fraternal as well as familial ties. This harmony is reflected in multi- dimensional relations with Bangladesh at various levels of interaction. Bangladesh is an important trading associate for India (Acharya and Marwaha, 2012). On the economic aid side, India has extended the credit US$ 1 billion to Bangladesh for a projects, including railway infrastructure, supply of BG locomotives and passenger coaches, procurement of buses, and dredging projects.

2. LITERATURE REVIEW

Economics relations play an important role in the bilateral relations between India and Bangladesh. The economic relations between both nations have been multifaceted, embracing trade transactions, credit arrangements, joint ventures, transit facilities and transport development. These relations have continued and expanded even in situations of adverse political relations. This is mainly because of the operation of objective factors of both the nations such as Geographical Proximity, Common Language, Similarity of Consumption pattern, Common Development needs and experience, and Commonality of the Inherited Infrastructure (Dubey, 2013).

Rahman (2005) depicted that Bangladesh's trade with India increased tremendously especially in the 1990. The study observed that Bangladesh has always been trade deficit with India, but in recent year it has amplified exponentially. Structural and policy measures like sound physical, social and economic infrastructure, superior product quality, export diversification, sufficient institutional facilities for banking, credit and insurance, improved law and order situation, labour unrest free environment, an honest and efficient administration, political stability, huge domestic and foreign investments, joint ventures in Bangladesh with buy back arrangements, competitive devaluation of the Bangladesh currency against the Indian currency, removal of illegal trade, tariff and Non-Tariff Barriers of Bangladesh's exports to Indian market improved trade deficit between both the nations.

Devi (2007) examined the study on economic cooperation in BIMSTEC and its emerging trends and prospects. Study analyzed that there was significant change in the trade orientation of BIMSTEC nations from 1990s and most of them exhibited a higher outward orientation. The relevance of the regional bloc in enhancing the trading and investment patterns and analyzed the existing socio economic performance of individual member nation. With the formation of BIMSTEC trading bloc, majority of South Asian countries were able to improve their export competitiveness to some extent

in international market and FTA under BIMSTEC umbrella help to expand the size of market in international market of member nations.

Murty et.al (2007) acknowledged a study on possibilities of cooperation in BIMSTEC countries. The study concluded that to achieve high level of economic integration within BIMSTEC nations, identify the potential areas of trade and economic cooperation for individual economy and reduce the poverty and high mortality rate to promote the economic cooperation among nations. Study stated that among the BIMSTEC nations India and Thailand both lead in merchandise trade and Sri Lanka and Bangladesh appear as the important exporters of manufacturing goods in the BIMSTEC region.

De and Bhattacharyay (2007) pointed the prospects of India–Bangladesh economic cooperation and its implications for South Asian Regional Cooperation. Closer bilateral cooperation and integration between India and Bangladesh promoted the trade relations among South Asia. Cultural, trade, and economic exchanges between the both nations are long standing. The rapid domestic economic development and good cooperation demonstrated comprehensive prospects for more cooperation. A significant trade growth between India and Bangladesh resulted in healthy development of the economies in the region. India has become Bangladesh's leading trading partner in South Asia.

Sengupta (2007) broadly examined the way to boost India-Bangladesh trade and economic relations. Study depicted that duty free access given by India to Bangladesh's exports revealed important way of getting closer economic ties that help to encouraged the bilateral relations between both economies. Bangladesh is important nation to India for trade and investment in the future and also regional collaboration in chief areas such as energy, infrastructure, human development and poverty alleviation.

Vanajamani (2007) discussed a study on India's political economic relation with some BIMSTEC nations. With the economic integration among the BIMSTEC nations, the South Asian nation's exports of services had been grown especially commercial services export show significant growth. In case of Sri Lanka, commercial service exports had made vibrant growth in total exports and Bangladesh made remarkable increase its share of export in transport sectors. But from the observations or evident the trade performance of BIMSTEC countries at the global level had been miserable in relative sense and India play an significant role to be future cooperation in South Asia in general and BIMSTEC in particular.

Acharya and Marwaha (2012) observed that the India's trade with Bangladesh had witnessed fast growth in recent years. However, China is the largest trading partner of Bangladesh but India emerged as the largest trading partner in the coming future.

Dubey (2013) argued that economic relations between India and Bangladesh influenced by climate of political relations. After the trade liberalization in both the nations proceeded on a Most Favoured Nation (MFN) basis, India is the stronger economic partner and gained more from Bangladesh that is weaker as compare to India. Indo-Bangladesh Trade had lopsided, dominated by Indian exports, with Indian imports from Bangladesh occupied very low levels.

Basher (2013) acknowledged a study on Indo-Bangla Trade: Composition, Trends and Way Forward. The study pointed that with the continued growth of Indian economy, the scope for Bangladesh's exports had been increased to Indian market. It is significant for Bangladesh to increase the competitiveness to take advantage of the emerging opportunities. Study suggested that a three level intervention to be needed such as elimination the obstacles at the border, behind the border and over the border. To enhance the efficiency at the border in order to rise Bangladesh's export to India.

Chowdhury and Neogi (2014) found a study on Trade Complementarity and Similarity between India and BIMSTEC Countries in the Context of the Regional Trade Agreement (RTA). The paper revealed the important element of BIMSTEC region in India's "Look East" strategy and enhances a new dimension to India's economic cooperation with South East Asian nations. India and BIMSTEC free trade agreement stimulate trade and better connectivity among India, Nepal, Bangladesh, Myanmar, Sri Lanka, Bhutan and Thailand. The trade structure between India and BIMSTEC exposed the complementary sectors and products available for improving trade cooperation among the trading partners. India's trade cooperation with selected BIMSTEC countries, in all product classifications was vital player in the region. Emerging economic structure permits better collaboration from India in the regionalization efforts in Asia.

3.   TRENDS OF TRADE BETWEEN INDIA AND BANGLADESH

Trade is an outstanding feature of internationalization of economic system. As Ohlin (1952) stated that international trade mitigates the disadvantages of disproportionate geographical distribution of productive resources.

International trade decidedly increases the exchangeable value of possessions, means of enjoyment and wealth of the countries concerned. Thus, international trade plays an important role in economic development and growth of a country (Krueger, 1980).As neighbours, India and Bangladesh have established well-built bilateral relations in political, economic, social and cultural areas since the freedom of Bangladesh. The political relation had naturally undulations. As far as economic relation concern those are always remained strong and grow over time.In recent years, trade among India's and Bangladesh has witnessed rapid growth.Both economies are different, may be not so much in terms of the overall stage of development but more in terms of latest growth dynamics. The former has started off a slow but importunate acceleration of growth while the later has maintain one of the utmost growth rates of GDP in the world for more than a decade. In terms of composition of household outputs, there is no prominent difference among these economies. Both of them the nations are dominated by the tricks in the service sector which contributes to about 53 per cent and 50 per cent of entire output in India and Bangladesh respectively. The industry sector contributes approximately 29 per cent of GDP in both economies.Mutual trade flows among India and Bangladesh was approximately US$ 5.07 billion in 2011, a notable amplify from US$ 1.12 billion in 2001, registering an average yearly growth of 26 per cent. On the other hand, India's exports to Bangladesh dominated and the consequential trade gap increased over time to US$ 2.78 billion in 2011 from US$ 1.01 billion in 2001. Indo-Bangladesh bilateral trade flows show momentous fluctuations. The growth of Bangladesh's export to India accelerated during 2005 and started decelerates since then during 2009. During the year followed by the global economic and financial crises of 2008, Bangladesh's export to India declined in absolute terms. It recovered in year 2010 resuming its former growth trajectory. Growth of India's imports had accelerated until it dipped in 2004, but recovered rapidly. After an immense turn down in 2009, it again recovered. In spite of the peaks and troughs, the overall India Bangladesh trade has improved over time, especially Bangladesh's imports from India. Bangladesh's export receipts from the Indian market had improved from US$ 0.005 billion in 1991 to US$ 0.51 billion in 2011. The share of earnings from India in Bangladesh's overall exports decreased from 0.33 per cent in 1991 to 0.31 per cent in 2001, but after that it notably increased to 1.88 per cent in 2011 (Basher, 2013).India's relative importance as a bilateral trade partner is second only to China,

which was the source for about 21.5 per cent of Bangladesh's total imports. Other important import sources for Bangladesh and there share are South Korea (5 per cent), Singapore (4.7 per cent), Japan (4.7 per cent), Malaysia (4.4 per cent), Indonesia (3.9 per cent), Brazil (3.8 per cent), Kuwait (2.9 per cent), and Thailand (2.7 per cent) in 2012.Despite being the second largest source for imports, India is the only Asian country to emerge as one of the top ten export destinations of Bangladesh. India's share in Bangladesh's overall exports was 2.7 per cent in 2012. Contrasting with overall export structure of the country, Bangladesh's exports to India is dominated by primary not manufactured commodities. The shares of manufactured goods in Bangladesh's export to global markets were about 92 and 91 per cent in 2001 and 2011 respectively. (Basher, 2013) The main objective of paper is to find out intra and inter industry trade, trade intensity, comparative advantage and terms of trade for India's trade with Bangladesh.

4.   RESEARCH METHODOLOGY

This paper is entirely based on the secondary data from authentic sources i.e. UNCOMTRADE and UNCTAD. Data is used from 1997 to 2013 to show the comprehensive picture of Indo-Bangladesh trade. Total 14 commodities on HS code at 2 digit level have been selected by taking into account their continuous presence in India Bangladesh trade.

The trade transitions is accessed by using Intra Industry trade (IIT) index and Inter Industry Trade Index, Revealed Comparative Advantage (RCA) index, Revealed Symmetric Comparative Advantage (RSCA) index, Trade Intensity Index consisting of Export Intensity Index (EII) and Import Intensity Index (MII), and Terms of Trade (TOT) consists of Net Barter Terms of Trade (NBTOT), Gross Barter Terms of Trade (GBTOT) and Income Terms of Trade (ITOT).

4.1 Trade Structure of India's Export/Import with Bangladesh

India and Bangladesh being geographically proximate to each other possess huge scope to trade. Specifically as both the countries are rich in natural resources and are competent in the production of small-scale manufacturing and agrarian supplies, mostly from the eastern parts of India and Bangladesh, both possess huge potential for bilateral trade.India's trade with Bangladesh was increased at 2 digit level commodities HS code as shown in table 1.

Table 1.
HS code and product description and its total trade from 1997 to 2013 (In US $)

S. No.	HS Code at 2 digit level	Products Description	Total Exports from India to Bangladesh (US $)	Total Imports of India from Bangladesh (US $)
1.	17	Sugar and Sugar Confectionary	1,066,207,323	8,503,513
2.	23	Animals Food	1,655,558,227	45128171
3.	27	Mineral Fuel, Mineral Oil etc.	1,578,928,547	136608344
4.	29	Organic Chemicals	866,453,840	8825486
5.	32	Dyes, Pigments, Tanning Agents, paints etc.	587,269,858	3770383
6.	39	Plastics and Plastic Articles	715,408,157	34837085
7.	40	Rubbers and Rubber Articles	491,791,050	17210231
8.	52	Cotton Single Yarn	7,959,214,682	99631263
9.	55	Manmade Staple Fibers	739,384,093	6847214
10.	72	Iron and Steel	1,230,478,648	79168991
11.	73	Articles of Iron and Steel	528,940,764	2529856
12.	84	Non-electrical Machinery	1,596,592,781	23737576
13.	85	Electrical Machinery	809,720,118	52953034
14.	87	Vehicles-Car, trucks, buses, tractors	2,413,279,317	8328854
Total			**22,239,227,405**	**528,080,001**

Source: UNCOMTRADE

Table 1 depicts the descriptions of HS code. There are total 14 products which the India exports to Bangladesh as well imports from Bangladesh at 2 digit level. The total exports from 1997 to 2013 of all the products were US$ 22,239,227,405 and total imports were US$ 528,080,001 which depicts that in case of India's bilateral trade with Bangladesh, India has huge trade surplus over Bangladesh.

4.2 Trade Indices and Analysis:

Intra Industry Trade (IIT) Index and Inter Industry Trade Index

Firstly, the Intra Industry Trade Index (IIT) will be used to find out intra industry trade of India's trade with Bangladesh. The Intra Industry Trade (IIT) was propound by Grubel and Lloyd in 1975. Revolutionary work in Intra-Industry (IIT) models is due to Krugman (1979), Lancaster (1980),

Helpman (1981) and Eaton and Kierzkowski (1984). Intra Industry Trade (IIT) reflects the economies of scale. TheGrubel and Lloyd formula for IIT is-

$$IIT_i = \{[(X_i + M_i) - |\ X_i - M_i\ |] / (X_i + M_i)\}$$

Where:

Xi- Exports of Country

Mi- Imports of country

Where IIT isthe intra-industry trade index for products *i*among India and Bangladesh, much closer to 1 indicates intra-industry trade is more important and much closer to 0 indicates that inter-industry trade is more important.

Table 2.
Values of Intra Industry trade index between India and Bangladesh at 2 digit HS code level.

Year	HS 17	HS 23	HS 27	HS 29	HS 32	HS 39	HS 40	HS 52	HS 55	HS 72	HS 73	HS 84	HS 85	HS 87
1997	0.22	0.11	0.125	0.093	0.215	0.068	0.009	1.481	1.510	0.715	0.015	0.011	0.052	0.387
1998	0.13	0.00	0.006	0.008	0.022	0.064	0.000	1.084	0.000	0.004	0.007	0.010	0.024	0.813
1999	0.13	0.00	0.015	0.046	0.005	0.051	0.003	0.007	0.006	0.000	0.000	0.067	0.090	0.000
2000	0.03	0.02	0.012	0.034	0.027	0.039	0.034	0.003	0.002	0.008	0.000	0.030	0.053	0.001
2001	0.00	0.00	0.000	0.001	0.003	0.006	0.000	0.002	0.014	0.002	0.001	0.004	0.035	0.000
2002	0.00	0.00	0.001	0.002	0.005	0.017	0.000	0.007	0.004	0.001	0.011	0.009	0.029	0.000
2003	0.00	0.03	0.041	0.001	0.012	0.023	0.001	0.007	0.000	0.002	0.000	0.023	0.010	0.000
2004	0.04	0.00	0.000	0.000	0.047	0.063	0.001	0.003	0.001	0.011	0.000	0.007	0.020	0.001
2005	0.28	0.02	0.003	0.000	0.082	0.116	0.000	0.029	0.000	0.011	0.023	0.014	0.062	0.001
2006	0.01	0.03	0.155	0.225	0.000	0.072	0.003	0.016	0.005	0.103	0.004	0.081	0.371	0.003
2007	0.01	0.05	0.012	0.028	0.007	0.071	0.001	0.032	0.012	0.169	0.031	0.059	0.392	0.000
2008	0.02	0.06	0.307	0.016	0.001	0.095	0.005	0.015	0.012	0.092	0.013	0.013	0.148	0.001
2009	0.90	0.02	0.002	0.000	0.068	0.136	0.080	0.031	0.012	0.061	0.013	0.081	0.034	0.000
2010	0.83	0.02	0.373	0.002	0.001	0.102	0.064	0.019	0.010	0.356	0.006	0.038	0.186	0.000
2011	0.00	0.03	0.437	0.002	0.001	0.150	0.232	0.026	0.016	0.629	0.013	0.042	0.186	0.011
2012	0.00	0.17	0.348	0.006	0.000	0.126	0.148	0.019	0.010	0.242	0.008	0.039	0.078	0.002
2013	0.14	0.07	0.199	0.001	0.001	0.073	0.058	0.022	0.005	0.080	0.041	0.012	0.049	0.019

Data Source: Calculation based on data from UNCOMTRADE

Table 2 depicts the intra and inter industry index for the trade among India and Bangladesh at HS code 2 digit level commodity. There are total 14 commodities which have been traded among the both nations at 2 digit HS code. The value of IIT index closer to 1 indicate intra-industry trade is more

important and much closer to 0 indicate that inter-industry trade is more important. Inter-industry trade refers to a trade of products that belong to different industries. Countries engage in inter-industry trade according to their competitive advantages. On the other hand, intra-industry trade is a trade of products that belong to the same industry. In recent decades, trade of similar products, has been a key factor in trade growth. As a result of globalization and new technologies these trends mostly attributes to the fragmentation of production i.e. outsourcing and off shoring. In 2009 and 2010 intra industry trade exist between India and Bangladesh for commodity sugar and sugar confectionary. Remaining years only inter industry trade was beneficial for India. For the commodities such as Animal Foods, Mineral Fuel, Mineral Oil etc., Organic Chemicals, Dyes, Pigments, Tanning Agents, paints etc., Plastics and Plastic Articles, Rubbers and Rubber Articles, Articles of Iron and Steel, Non-electrical Machinery,Electrical Machinery, the Inter Industry trade was useful for India because the all the values was much closer to 0 in given time period (1997 to 2013). For Cotton Single Yarn intra industry trade was beneficial for India in 1997 and 1998. But for remaining period the inter industry trade is useful. Cotton Single Yarn is primary commodity and India is mainly agrarian economy that is why India has more benefit in intra industry trade for primary products. Manmade Staple Fibers has intra industry trade in 1997 which is primary in nature. In 1997 and 2011, intra industry trade was more beneficial for India in trade of Iron and Steel. But for the remaining years Inter Industry trade is more beneficial than intra industry trade for India. In the year 1998 the intra industry trade exist for Vehicles such as Car, trucks, buses, tractors but for remaining time period the Inter Industry was exist for this industry.

Revealed Comparative Advantage (RCA) Index and Revealed Symmetric Comparative Advantage (RSCA): For measuring the comparativeness of trade between countries the most frequently index that is used in worldwide isRCA index and RSCA index. It is an analytical approach based on scientific results and widely used in moderneconomic research. RCA helps to evaluate and underline the importance of trade rules or management andspecialization of countries that have comparative advantage in several goods subject to foreign trade exchanges. To calculating comparative advantages in trade, Revealed Comparative Advantage Index (RCA Index) was used more frequently in research. Revealed Comparative Advantage firstly used by BelaBalassa in 1965. The conception of revealed comparative advantage (RCA) was originated on conventional trade theory. Balassa (1965) defined RCA as-

$$RCA = [(Xij/ Xnj) / (Xit/Xnt)]$$

where:

Xij– export of "i" product of "j" country,

Xit– world export of "i" product,

Xnj– total export of "j" country,

Xnt– total world export.

RCA index measures a comparative advantage in "i" goods export of "j" country. If the value is higher than 1 (>1), then the analyzed country has revealed comparative advantages in export of various goods. If the value is lower than 1 (<1), then there is an obvious comparative disadvantage in export of various goods. RCA index presents the status of a certain economy, together with the expansion of certain products which have market potential.

Some researchers had attempted to overcome the problem of revealed comparative advantage. A difficulty amongthe Balassa index is that its value is asymmetric, it vary from one to infinity for products in which a country has arevealed comparative advantage, but merely from zero to one for products with a comparative disadvantage. Dalum*et. al*anticipated a revealed symmetric comparative advantage (RSCA) index to get rid of the skewness problem asfollows:

$$RSCA= (RCA-1)/(RCA+1)$$

The RSCA ranges is from minus one to plus one (-1 to +1) and avoids the difficulty of zero values. The RSCA value greater than (negative values) one reveals a country's comparative advantage (disadvantage) in the export of a commodity. It is possible for Bangladesh and India, to have comparative advantage in one commodity relative to the world markets, only if one of them will have comparative advantage relative to the other country in that particular commodity and vice versa.

Both the RCA and RSCA were calculated for 17 years from 1997 to 2013 for 14 commodities at HS-2 digit level. The RCA index identified the various commodities which India has comparative advantages in exports and comparative disadvantage in exports with Bangladesh. From results of RCA and RSCA, concluded that in three commodities at 2 level HS code India has comparative disadvantages that commodities are Mineral Fuel, Mineral Oil etc., Organic Chemicals and Articles of Iron and Steel. Remaining 11 commodities has comparative advantages for India export with Bangladesh.

Table 3.
Values of Revealed Comparative Advantages (RCA) index between India and Bangladesh

Year	HS 17	HS 23	HS 27	HS 29	HS 32	HS 39	HS 40	HS 52	HS 55	HS 72	HS 73	HS 84	HS 85	HS 87
1997	0.67	0.24	0.72	0.15	0.49	3.66	0.81	0.16	0.50	0.54	1.12	0.57	0.38	0.06
1998	1.45	3.84	30.14	2.17	5.25	3.26	8.20	0.92	5.64	4.18	1.20	5.03	2.74	0.56
1999	15.05	5.22	35.58	1.48	4.34	2.59	6.19	10.04	4.29	5.62	1.12	3.01	2.24	8.35
2000	21.41	6.91	2.69	1.66	4.96	1.93	5.93	11.63	5.56	3.04	2.23	4.15	1.71	9.84
2001	15.01	14.68	2.34	1.54	3.81	2.45	4.65	11.56	4.58	5.20	3.33	6.86	3.72	8.97
2002	21.74	10.12	3.04	1.55	4.21	3.27	4.54	9.38	3.57	4.52	0.99	2.92	2.85	7.33
2003	12.40	15.83	2.92	1.58	5.62	2.96	7.62	9.78	4.29	4.13	7.20	4.92	3.58	6.39
2004	9.19	9.28	1.51	1.40	4.14	2.20	3.16	11.82	3.83	1.52	4.63	2.58	2.19	3.09
2005	7.23	4.79	1.30	1.09	2.56	1.34	1.58	9.43	4.35	1.92	1.57	1.75	1.61	2.22
2006	12.35	5.14	0.77	0.79	2.61	1.47	1.37	7.95	4.89	1.59	0.56	0.92	1.13	2.44
2007	8.13	5.57	0.80	0.68	2.47	0.96	2.09	5.96	2.79	0.99	0.30	0.77	0.94	2.21
2008	13.76	4.09	0.33	0.85	2.75	1.29	1.86	13.23	2.70	1.06	0.25	1.86	0.83	2.75
2009	0.65	6.17	0.38	0.09	1.94	0.95	1.78	7.79	2.29	2.02	0.24	0.61	0.28	2.53
2010	0.02	7.64	0.19	0.67	1.31	1.34	1.19	8.98	1.98	0.63	0.37	0.77	0.41	1.78
2011	5.14	4.41	0.12	0.56	1.34	0.86	0.96	7.09	1.67	0.24	0.17	0.92	0.35	1.47
2012	7.04	4.42	0.11	0.56	2.72	1.28	1.72	9.46	3.69	0.91	0.75	1.44	0.64	1.97
2013	0.77	3.21	0.11	0.55	2.25	1.07	1.23	7.06	3.67	1.17	0.24	1.04	0.56	1.59
Total >1	13	16	8	8	16	14	15	15	16	12	8	11	9	15
Total <1	4	1	9	9	1	3	2	2	1	5	9	6	8	2

Data Source: Calculation based on data from UNCOMTRADE

Table 3 depicts the result of RCA index. The estimation for the year 1997 to 2013 provides the evidence on the movement in the pattern of revealed comparative advantages for India and comparing it with Bangladesh. At HS-2 digit level, India has comparative advantages in different products. In case of various products such as Sugar and Sugar Confectionary, Animal Foods, Dyes, Pigments, Tanning Agents, Paints etc., Plastics and Plastic Articles, Rubbers and Rubber Articles, Cotton Single Yarn, Manmade Staple Fibers, Iron and Steel, Non-electrical Machinery, Electrical Machinery, Vehicles like Car, Trucks, Buses, Tractors, India has a comparative advantages than Bangladesh. Most of products were primary in nature. There is abundance of raw material in India. But in case of export of products such as Mineral Fuel, Mineral Oil etc., Organic Chemicals, Articles of Iron and Steel, India has comparative disadvantage while exporting to Bangladesh. India has

more comparative advantages in the exports of primary product rather than manufacturing products while trade with Bangladesh.

Table 4.
Values of Revealed Comparative Symmetric Advantages (RCSA) indexbetween India and Bangladesh.

Year	HS 17	HS 23	HS 27	HS 29	HS 32	HS 39	HS 40	HS 52	HS 55	HS 72	HS 73	HS 84	HS 85	HS 87
1997	-0.19	-0.61	-0.16	-0.74	-0.33	0.57	-0.10	-0.73	-0.33	-0.30	0.05	-0.28	-0.45	-0.88
1998	0.19	0.59	0.94	0.37	0.68	0.53	0.78	-0.04	0.70	0.61	0.09	0.67	0.47	-0.28
1999	0.88	0.68	0.95	0.19	0.63	0.44	0.72	0.82	0.62	0.70	0.06	0.50	0.38	0.79
2000	0.91	0.75	0.46	0.25	0.66	0.32	0.71	0.84	0.70	0.50	0.38	0.61	0.26	0.82
2001	0.88	0.87	0.40	0.21	0.58	0.42	0.65	0.84	0.64	0.68	0.54	0.75	0.58	0.80
2002	0.91	0.82	0.51	0.22	0.62	0.53	0.64	0.81	0.56	0.64	0.00	0.49	0.48	0.76
2003	0.85	0.88	0.49	0.22	0.70	0.49	0.77	0.81	0.62	0.61	0.76	0.66	0.56	0.73
2004	0.80	0.81	0.20	0.17	0.61	0.38	0.52	0.84	0.59	0.20	0.64	0.44	0.37	0.51
2005	0.76	0.66	0.13	0.04	0.44	0.14	0.23	0.81	0.63	0.32	0.22	0.27	0.23	0.38
2006	0.85	0.67	-0.13	-0.12	0.45	0.19	0.15	0.78	0.66	0.23	-0.28	-0.04	0.06	0.42
2007	0.78	0.70	-0.11	-0.19	0.42	-0.02	0.35	0.71	0.47	0.00	-0.53	-0.13	-0.03	0.38
2008	0.86	0.61	-0.51	-0.08	0.47	0.13	0.30	0.86	0.46	0.03	-0.61	0.30	-0.09	0.47
2009	-0.22	0.72	-0.45	-0.84	0.32	-0.02	0.28	0.77	0.39	0.34	-0.62	-0.25	-0.56	0.43
2010	-0.96	0.77	-0.68	-0.19	0.14	0.15	0.09	0.80	0.33	-0.23	-0.46	-0.13	-0.42	0.28
2011	0.67	0.63	-0.78	-0.28	0.15	-0.08	-0.02	0.75	0.25	-0.61	-0.71	-0.04	-0.48	0.19
2012	0.75	0.63	-0.81	-0.28	0.46	0.12	0.26	0.81	0.57	-0.05	-0.14	0.18	-0.22	0.33
2013	-0.13	0.53	-0.79	-0.29	0.38	0.04	0.10	0.75	0.57	0.08	-0.61	0.02	-0.28	0.23
Average	**0.51**	**0.63**	**-0.02**	**-0.08**	**0.43**	**0.25**	**0.38**	**0.66**	**0.50**	**0.22**	**-0.07**	**0.24**	**0.05**	**0.37**

Data Source: Calculation based on data from UNCOMTRADE

Table 4 depicts the revealed comparative symmetric advantage index for India with its partner country Bangladesh. The range of RSCA index lies between -1 to +1. India is more efficient in the export of Sugar and Sugar Confectionary, Animal Foods, Cotton Single Yarn and Manmade Staple Fibers which were primary in nature. The average of these commodities was 0.51, 0.63, 0.66, and 0.50 respectively. There were only 3 commodities that India was not efficient in export these were Mineral Fuel, Mineral Oil etc., Organic Chemicals, and Articles of Iron and Steel. The average of these commodities was -0.02, -0.08 and -0.07 respectively. India was less efficient in exports of these commodities i.e. Dyes, Pigment, Tanning Agent, Paint etc., Plastic and Plastic Articles, Rubber and Rubber Articles, Iron and Steel, Non-Electrical Machinery, Vehicles such as Cars, Trucks, Buses, and Tractors. The

average of these commodities was 0.43, 0.25, 0.38, 0.22, 0.24, 0.05 and 0.37 respectively.

4.3 Trade intensity Index:

Trade Intensity Index was pioneered by Brown in 1947. This index was developed and popularized by Kojima (1964), Drysdale and Garnaunt (1982). Trade Intensity Index can be divided into Export Intensity Index (EII) and Import Intensity Index (MII) for looking the pattern of import and export. Following Kojima (1964) and Drysdale (1969) defined as:

Export-Intensity Index (EII): EII is the ration of export share of the country/region to share of world exports going to partner.

$$EII\ (x_{ij}) = \{(X_{ij}/X_i)/(I_j/(I_w - I_i))\}$$

Where:

x_{ij} = Export Intensity Index of India with respect to Bangladesh

X_{ij} = Exports of India to Bangladesh

X_i = Total exports of India

I_j = Total imports of Bangladesh

I_w = Total imports of World

I_i = Total imports of India

Import-Intensity Index (MII): MII is the ration of import share of the country/region to share of world import going to partner.

$$MII(i_{ij}) = \{(I_{ij}/I_i)/(X_j/(X_w - X_i))\}$$

Where:

i_{ij} = Import intensity index of India with respect to Bangladesh

I_{ij} = Imports of India from Bangladesh

X_j = Total exports of Bangladesh

X_w = Total World exports

X_i = Total exports of India

Export and Import intensity indices ranges from 0 to 1. An export index of more than one indicates the trade flow between countries/ regions is larger than expected given their importance in world trade. Similarly import index of more than unity shows greater imports of reporter country/regions

from the partner country than would be expected from that country's/regions share in total world trade.

Table 5.
Values of Trade Intensity Index (TII) for India and Bangladesh (in per cent).

Year	Export Intensity Index of India with respect to Bangladesh	Import Intensity Index of India with respect to Bangladesh
1997	17.5	9.7
1998	22.1	9.2
1999	12.4	10.2
2000	14.3	12.8
2001	16.0	7.8
2002	12.7	5.0
2003	18.1	5.6
2004	17.1	5.9
2005	12.8	6.6
2006	10.5	13.1
2007	9.1	9.7
2008	9.1	10.9
2009	5.8	5.8
2010	5.7	6.2
2011	3.8	5.3
2012	4.7	3.7
2013	6.6	3.6

Data Source: Calculation based on data from UNCOMTRADE

Table 5 investigates the Export and Import Intensity of India's trade with respect to Bangladesh, till 2003 the export intensity was high but after that it was declined. It is observed that Bangladesh's export intensities with India were far below than 100 for all those years under study. This indicates that Bangladesh was exporting extremely less to India all the time than what it

ought to export. The highest index, 22.1 per cent, was observed in the year 1999. After that the index was continuously declining and reached to 3.8 per cent in the year 2011.Though it increased slightly in 2003, it started to decline again and reached to the awful minimum of 3.8 per cent in the year 2003. Because in the case of Bangladesh, a high percentage of its imports from India is in the nature of inputs, i.e. cotton yarn and textiles, meant for the production of its main export item, i.e. readymade garments. This products further used for processing of readymade garments. Besides, imports from India are market driven as they are cheaper and of higher quality than from other sources. Another reason was Bangladesh has reduced tariffs at a faster rate and maintained a lower tariff regime over a longer period for India. In 2011 export intensity was lowest i.e. 3.8 per cent. The reason behind low export intensity of India with Bangladesh was, in recent years Bangladesh have persistent and massive negative balance of trade with India. The import intensity of India to Bangladesh was highest in 2006 i.e. 13.1 per cent. And lowest in the year of 2013 i.e. 3.6 per cent because of that high level of Indian tariffs on products of import from Bangladesh have been a major constraint low import intensity of India. India compose high amount of tariff on exports from Bangladesh. From several years, India adopted an incremental approach in responding to Bangladesh's request for duty-free entry of its goods into the Indian market. It extend tariff concessions to Bangladesh from time to time but they were always too late and too little

Terms of Trade:

Terms of trade is used to analyze the favourable and unfavourable conditions from trade for both the countries.Net barter terms of trade index is calculated as the percentage ratio of the export unit value indexes to the import unit value indexes, measured relative to the base year 2000. The formula's are-

Terms of Trade (TOT) = unit value of export index/unit value of import index

Net Barter Terms of Trade (NBTOT) = $Px/Pm*100$

Gross Barter Terms of Trade (GBTOT)

= $Qm/Qx*100$

Income term of Trade (ITOT) = $Px.Qx/Pm$

Table 6.
Values of Terms of Trade (TOT) between India and Bangladesh (Base Year=2000)

Year	India			Bangladesh		
	Net Barter Term of Trade	Gross Barter Term of Trade	Income Term of Trade	Net Barter Term of Trade	Gross Barter Term of Trade	Income Term of Trade
1997	113.59	110.58	80.20	114.29	124.69	90.04
1998	117.58	124.32	86.70	113.79	118.15	92.35
1999	105.21	113.98	87.67	108.70	117.29	92.71
2000	100	100	100	100	100	100
2001	97.83	93.52	106.12	103.60	110.52	99.91
2002	88.62	83.65	112.12	102.77	103.29	101.02
2003	96.23	97.40	128.87	93.00	99.84	103.64
2004	86.17	92.26	133.96	86.51	90.17	113.07
2005	105.20	124.11	189.75	80.51	86.51	116.74
2006	110.78	133.46	232.09	75.21	73.49	138.79
2007	114.17	143.45	256.14	68.09	73.13	130.65
2008	117.24	158.90	307.25	57.23	63.91	129.87
2009	131.67	168.91	321.65	63.64	66.26	139.22
2010	132.54	168.69	369.00	58.45	60.93	157.48
2011	127.61	160.95	408.44	53.97	57.52	168.26
2012	127.74	172.96	401.42	57.48	56.21	181.84
2013	131.09	160.80	443.35	57.38	51.57	215.74
Average	**111.96**	**129.88**	**221.45**	**82.04**	**85.50**	**127.73**

Data Source: Calculation based on data from UNCTAD.org

Table 6 depicts the terms of trade among the India and Bangladesh after the formation of BIMSTEC from the period 1997 to 2013. 2006 India's Net Barter Term of Trade (NBTOT), Gross Barter Terms of Trade (GBTOT) and Income Terms of Trade (ITOT) were higher than Bangladesh as shown in table. The average of NBTOT was 111.96 per cent whereas the average Bangladesh NBTOT was 82.50 per cent. The averages of India GBTOT and ITOT were 129.88 per cent and 221.45 respectively. Bangladesh GBTOT and ITOT were 85.50 per cent and 127.73 per cent. So concluded that terms of trade are favourable for India as compared to Bangladesh. India is the largest export destination for Bangladesh outer surface the Western world. The reason for unfavourable conditions for trade with India was the tariff levied by Indian Government. Recently in 2014, the prime minister announced the

elimination of all 46 textile items from the sensitive list and zero duty access in all these 46 items for Bangladesh exports to India. Indian government had also amplified the duty-free access to 10 million pieces of readymade garments exports from Bangladesh every year. With a view to encouraging trade from Bangladesh, both countries agreed to address removal of tariff and non-tariff barriers and port restrictions and facilitate movement of containerized cargo by rail and water. India has granted Bangladesh duty-free access to all items except tobacco and liquor.

Suggestions and Policy Implications: During the first four years after the liberation of Bangladesh, there has been a lamentable lack of planned and concerted efforts on the part of the two governments to nurture their economic relations and impart dynamism to them.

There is need to increase bilateral investment and avoidance of double taxation between the two countries. It is hoped that Bangladesh investments in India will increase with easing of local currency transfer restrictions.

An FTA will open up opportunities for specialization and division of labour between the two countries and thereby the generation of intra-industry trade opportunities.

An FTA is likely to improve the overall competitiveness of the Bangladesh economy through access to the marketing network, skill and technology of Indian manufacturers and trading partners.

Free trade must provide for the elimination, within a time-bound framework, of all non-tariff barriers, including administrative regulations and taxes which discriminate against bilateral trade. A suitable mechanism should be created to identify such barriers and monitor progress in their elimination on a regular basis.

The FTA should include measures for deeper integration, particularly trade facilitation and investment promotion.

5. CONCLUSION

The economic relations between the two countries have been multifaceted, embracing trade transactions, credit arrangements, joint ventures, transit facilities and transport development. These relations have continued and expanded even in situations of adverse political relations. Trade relations between India and Bangladesh have witnessed a significant improvement in the recent past. Inputs imported from India such as cotton, machinery, tanning chemicals etc. are used for value-addition for products such as

readymade garments, knitwear, leather goods etc., and get reflected in Bangladesh's trade surplus elsewhere. This unilateral gesture is expected to address a major and long standing demand from Bangladesh for increased market access for Bangladesh products to India. The measure will help improve trade with Bangladesh across West Bengal, Assam, Meghalaya, Tripura and Mizoram. Given the geographical proximity, warm and friendly ties, availability of workforce and investment supportive atmosphere, the quantum of Indian investment and trade with Bangladesh is further expected to improve for mutual benefit. India's exports to Bangladesh include cotton, cereals, nuclear reactors, boilers and machinery, while imports from the neighbouring country comprise edible fruit and nuts, fish, apparel and textiles articles. The study revealed that there is need to comprehend the potential of the pact, both the countries need to further liberalize trade, cut tariffs on India's exports to Bangladesh, reduce and remove non-tariff barriers and improve trade facilitation both at borders and inland. As psychological and political factors play an important role in the relationship between the two countries, the large trade imbalance with India readily becomes susceptible to exploitation by political parties, which can adversely affect future trade flows between the two countries.

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