# Indo-Bangladesh Trade: The Scenario of Export, Import and Trade Balance

**Subhasis Santra**
Ph.D Scholar, Department of Economics with Rural Development
Vidyasagar University, Midnapore

## Abstract

*The nature and composition of bilateral trade between India and Bangladesh has changed during the last three decades. Although India's exports to Bangladesh have become more diversified during this period, no significant changes have been observed in the composition of its export basket. Bangladesh's exports to India, on the other hand, remained confined within very few items with a considerable change in its composition with time. Both of them have initiated trade liberalization policies almost at the same time, Bangladesh in 1990 and India in 1991. Trading with Bangladesh, India has enjoyed increasing trade surplus always, but most importantly the growth rate of trade surplus has slowed down with the passage of time. A number of policies have been adopted by both these countries for better performances in their bilateral trade. The econometric analysis of this paper reveals that the GDP of India and the exchange rate policy of India played significant role in determining the volume and direction of trade between these two countries.*

***KEY WORDS**: Trade policies, Gross Domestic Product, Exchange Rate, Exports, Imports.*
***JEL Classification**: F14, F40*

## 1. Introduction

India and Bangladesh, the two neighbouring countries in Asia, is the centre of attraction in foreign trade literature now-a-days. Historically, the most significant years for these two countries are 1947, the year of India's independence, and 1971, when Bangladesh started its journey as an independent country. Initially, both of them were very restrictive in their foreign trade policies. Strict restrictions on imports were imposed and at the same time import substitution policies were adopted with an objective to achieve self sufficiency. Eventually, they felt the importance of opening up their economies for the better performances in foreign trade. As a result, Bangladesh adopted the trade liberalization policy in 1990 and India in 1991, the very next year. Direct controls on trade were replaced by indirect instruments like tariffs and non-tariff barriers to regulate the flow of imports and exports. In 1995 the World Trade Organization (WTO) was established with an objective of

trade cooperation among the member countries. India and Bangladesh are the members of this organization from the time of its establishment.

Continuous reduction in import tariff has been one of the frequently used instruments of trade liberalization by both these countries. After liberalization, Bangladesh has reduced its average tariff rate more aggressively than India till 2013. On an average, effectively applied tariff rate in Bangladesh for Indian products came down from 96.1% (WITS) in 1989 to 12.95% in 2013 and that in India came down from 39.45% in 1990 to 14.14% in 2013 for imports from Bangladesh. From 2014 the situation has changed, when India started to follow the SAFTA agreement and brought down the average tariff rate to almost zero level. From 14.14% in 2013 the average tariff rate was reduced to only 1.09% in 2014 and further reductions have been observed in subsequent years to reach a mere 0.09% in 2017. Bangladesh, on the other hand, although continued with its tariff reduction strategy, but not abided by the SAFTA agreement. A second policy instrument adopted by India and Bangladesh is to encourage foreign enterprises to invest in their land. In this regard India has succeeded to attract a considerable amount of FDI in last three decades. On the other hand, compared to India, Bangladesh has failed to attract a large volume of FDI due to the lack of proper planning. In 2017, FDI in Bangladesh was only 2.15 billion dollar as against 39.97 billion dollar in India. Exchange rate policy is another instrument applied intensively by these two countries after liberalization for fostering exports to each other. Both India and Bangladesh have depreciated their nominal effective exchange rates (NEER) on an average during this period. In real terms, Indian currency lost about 69% and that of Bangladesh lost almost 73% of its value between 1988 and 2017. Many other trade liberalization policies were adopted along with these for their better performances in foreign trade. The list is long enough to mention here in the short span of this paper. Whatever impact the liberalized regime has on Indo-Bangladesh bilateral trade is predominantly unidirectional, favoring Indian exports to Bangladesh (Basher, 2013).

In the past three decades the importance of foreign trade has increased enormously in these two countries. In 1988 the global trade to GDP ratio of India and Bangladesh was 11% and 4% respectively which became 28% for India and 35% for Bangladesh in 2017. Per capita GDP of both these countries have increased many times during this period. Bangladesh's per capita GDP increased by more than five times (from 263.22 $ in1988 to 1516.51 $ in 2017) and India also recorded a similar pace of increment (from 355.41 $ in1988 to 1979.36 $ in2017) with a higher per capita GDP than Bangladesh throughout the last three decades. Regarding global exports by these two countries there has always been a huge difference in favor of India. Nevertheless, one very encouraging fact for Bangladesh is that its global export has increased with a rapid pace in comparison to India during the last three decades. India's global export in 2017 (234 billion $) was almost 17 times more than what it was in 1988 (13.87 billion $), whereas Bangladesh registered a huge 180 times increment (from 0.22 billion $ in 1988 to 39.61 billion $ in 2017) during the same period. India's exports to Bangladesh in recent years have become more diversified than what it was in 1988. On the

other hand, the product range in the export basket of Bangladesh has been very narrow, comprising very few items in it. Bangladesh depends heavily on the export of items from "textile and clothing" category. In 2017, 54.10 % of its total exports to India were from this group. "Bangladesh's exports to India are highly concentrated to a few items… On the other hand, India's exports to Bangladesh are more diversified and export-base is significantly wide" (Rahman, 2005).

As a trading partner, the importance of both these countries to each other has increased over time. Bangladesh's share in India's global trade was 0.56% in 1988 which has grown up to 1.33% (computed from WITS data) in 2017 with a faster acceleration of its share in India's global imports than that in India's global exports. As a result, the growth rate of India's trade surplus with Bangladesh has slowed down with the passage of time. India has to consider this fact with priority to improve the growth rate of trade surplus again. Factors responsible for the present situation are to be identified and for this; a detailed analysis of pattern of trade, changes in composition of trade over time and prospects in trade between these two countries is needed. With this background, the objectives of this paper are:

i) To examine the changes in nature and composition of trade between India and Bangladesh.
ii) To investigate the changes in trade policy and their impact on the trade of the two countries.
iii) To examine the trade balance of India and Bangladesh in the period of trade liberalization and find explanations for the present scenario.

This paper has been arranged as follows: A brief review of literature has been given in section 2. Section 3 describes the methodology used in this paper. Section 4 analyses the changes in nature and composition of trade between these two countries. Section 5 deals with the changes in the trade policies of two countries and their impact on their bilateral trade.

## 2. Review of Literature

Bangladesh is a labour abundant and capital scarce country. Prior to 1976 Bangladesh's commodity trade was determined almost entirely by economic planning. The trade policy regime of Bangladesh can be divided into three distinct phases (Basher, 2013). The first phase (1972-1975) was characterized by heavy controls on export and import, and extensive price control. The second phase (1976-1990) was marked by a move towards market oriented economy, beginning of de-nationalization, modest tariff reductions, partial withdrawal of quantitative restriction and policy support to the ready-made garments export. The third phase (1990-to date) initiated rapid trade liberalization activities to open up the economy to the world.

The trade policy regime of India since independence, on the other hand, can also be identified into three distinct phases (Panagariya, 2004): 1950-1975, when the trend was toward tighter controls on imports and exports of the country, import substitution was encouraged to restrict

the outflow of foreign currencies; 1976-199, when moderate trade liberalization policies were adopted, especially during the last five to seven years of this phase; and from 1992 onward, when deeper and more systematic liberalization was undertaken.

Intense trade liberalization policies were initiated in these two countries almost from the same time of 1990-1991, although the trade relation between them started much earlier, when they signed the first trade agreement on March 28, 1972. Under this agreement, both countries provided most-favored nation treatment to each other (De, Bhattacharyay, 2007). Since then, the volume of trade between these two countries has grown rapidly, especially after the adoption of liberalization policy by them. From the very beginning of their trade relationship, Bangladesh has always been suffering from deficit in trade balance with India. This persistent trade deficit has become a matter of concern for Bangladesh. Number of studies has been conducted in this regard to short out the causes behind this continuous trade deficit of Bangladesh with India.

Bangladesh has initiated the program of tariff liberalization earlier than India, in the mid 1980s, and the speed of liberalization in Bangladesh is faster than that in India (Rahman, 2005). It has been accused that, over the last several years the high level of tariff by India has been a major constraint in Bangladesh's effort to expand its export. Besides, Bangladesh has not only reduced the tariff at a faster rate but has also maintained a lower tariff regime over a longer period than India (Balaji, 2016). India, as a bigger and stronger partner, should take the initiative so that Bangladesh can get better market access in India for the future relationship between these two countries (Islam, 2017).

Bangladesh imports mainly intermediate goods, raw materials, and capital goods from India which are essential for its production of manufacturing goods. "A high percentage of Bangladesh's import from India is in the nature of inputs (cotton) meant for the production of its main export item (readymade garments); an area in which the country has championed itself" (Balaji, 2016). "Bangladesh's major exports to the world are ready made garments (RMGs). The main raw material for RMGs is cotton. Indian exports to Bangladesh are dominated by cotton which accounted for 28 percent of its total exports to Bangladesh in the FY2012" (Acharya, Marwaha, 2012). Because of Bangladesh's great dependence on imported inputs for its exports, especially for manufacturing exports, low backward linkages of industries, the domestic value addition is also low (Rahman, 2005). Bangladesh has to concentrate on producing these inputs which they are importing from India to build up a strong production base inside the country and achieving self sufficiency.

Exchange rate plays a crucial role in promoting exports of a country. If the currency of the exporting country is devaluated with respect to the currency of its partner, that will make the products of the exporting country relatively cheap in the market of the partner country. The currency of Bangladesh has been consistently depreciated against the US dollar, boosting exports over the years (Acharya, Marwaha, 2012). A different view was given by Rahman in his study, though much earlier in 2005. Both Bangladesh and India depreciated their currencies over the years, but depreciation had been stronger in Indian currency than that of

Bangladesh. Hence Bangladesh's exchange rate policy is inappropriate compared to that of India resulting large trade deficit. India's products became more competitive than that of Bangladesh. Thus India has become successful to divert demand from imported goods to domestic goods (Rahman, 2005).

Indian manufacturing sector is stronger and have diversified product support than Bangladesh's counterpart. This advantageous position along with the advantage of location attract the business community of Bangladesh to import capital machinery, raw materials and finished goods from India causing high import growth of Bangladesh from India (Gazi et al. 2014). Structurally Indian economy is much larger, more diversified and technologically advanced. Indian products now have become globally competitive both in terms of price and quality. Also geographically India is very close to Bangladesh. All these factors have made Indian products very competitive in Bangladesh's market (Hassan 2002). As a result, India's exports to Bangladesh are more diversified and consists of high value added manufactured goods. On the other hand, India's imports from Bangladesh are limited to a few items, as Bangladesh does not have a large supply base to offer a wide variety of products to India. Moreover, Bangladesh lacks capacity to manufacture export quality goods. India itself is a big producer and exporter of most of the products that Bangladesh can export. The obvious result is an increase of trade imbalance between the two nations. (Rahman, 2005; Khan and Ali, 2016).

In modern days, foreign direct investment (FDI) is one of the effective instruments to fulfill the need of investment for the economic development in a poor country, where income and savings are low. Bangladesh in recent years has been trying to attract investors across the world. In order to achieve its goal of becoming a middle income country, the current savings and investments rate need to grow at a much higher rate. In this situation, investments from foreign companies may be helpful in achieving its goal. To increase the GDP growth rate of Bangladesh to 10 percent by 2021, investment rates need to increase to 38 percent level. The main sources of FDIs in Bangladesh are the United States, United Kingdom, Hong Kong, Netherlands and South Korea. India accounted for less than 3 percent of the total investments in FY2011. To remove the weakness of Bangladesh in infrastructural bottleneck, majority of these investments will have to be directed towards removing infrastructural bottlenecks in the areas like energy and power, transportation, urban infrastructure, border infrastructure, Education services and skill development etc. (Acharya, Marwaha, 2012). India, on the other hand, succeeded to attract a fairly larger amount of FDI than Bangladesh during the last three decades. Most of the inflows of investments by the foreign companies in India have been in the service sector.

Making trade between countries easier has become increasingly important for business in today's competitive world. "Excessive document requirements, burdensome customs procedures, inefficient port operations and inadequate infrastructure all lead to extra costs and delays for exporters and importers, stifling trade potential. Trade facilitation tools such as electronic data interchange systems, risk-based inspections, and single windows help

improve a country's trading environment and boost firms' international competitiveness" (Acharya, Marwaha, 2012). One of the most serious problem faced by Bangladesh's exports are existing non-tariff barrier (NTB) from India. "Bangladesh expects India to remove the NTB as it is a major hurdle to their export growth. Some of the obstacles which could be targeted for removal of the NTBs are the requirement of double laboratory test for every consignment of food product, delay in getting these test results, imposition of state tax and strengthening the infrastructural facilities at the authorized Land Custom Stations (LCS)" (Balagi, 2016). Another point has been pointed out by Md. Abul Basher regarding NTB faced by Bangladesh. "Lack of coordination between central and state government's rules and regulations also affects Bangladesh's exports to India. The Directorate General of Foreign Trade (DGFT) of India is not the only authority to impose rules and regulations regarding exports from Bangladesh to India. Even, various state agencies impose different barriers on their own" (Basher, 2013).

India shares more than 4000 kms of land border with Bangladesh. More than 80 percent of trade is carried out through land due to the geographical proximity that the countries share, within this, over 70 percent of trade is carried out through two Land Customs Stations (LCS), Petrapole-Benapole and Ranaghat-Gede. De and Bhattacharya (2007) point out that although both countries have 1 km of road for every 1 sq km, the quality of road is poor. India has a stable broad gauge railway system, whereas that of Bangladesh is unreliable and only 33 percent of it is broad gauge. Most papers suggest that there are immense opportunities in improving infrastructure, especially in the transport segment (Chakraborty 2010, Bhattacharjee 2012, Acharya and Marwaha 2012) for the smooth trade and investment flows between these two countries. Modernization of power, ports, energy, telecommunication, storage facilities on the border are the other important areas of infrastructural development where both these countries, especially Bangladesh has to take care of.

It is postulated that in an open economy, two main determinants of exports of a country are the real exchange rate and foreign (destination country) income. Md. Abul Basher pointed out that Bangladesh has started off a slow but persistent acceleration of growth whereas the India has maintained one of the highest growth rates of GDP in the world for more than a decade. He observed that, Bangladesh's export to India is growing over time, even at a faster rate than its growth to traditional export markets such as the US and EU. In search of the causes behind this he conducted a time series analysis by considering GDP of India and real exchange rate of Bangladesh as independent variables and Bangladesh's export to India as dependent variable. Significant results were found for both of them, namely, real exchange rate of Bangladesh and GDP of India. Devaluation of its own currency and the increment in the GDP of India were found the root cause of accelerated growth rate of Bangladesh's exports to India "It emerges from our econometric exercises (e.g. from Granger causality tests) that the real exchange rate and GDP of India affect the exports of Bangladesh to India…The findings seem to suggest that while Bangladesh's exports to India will continue to increase as a result of growth of the latter's economy all else remaining unchanged,

Bangladesh can also accelerate its exports by improving its competitiveness" (Basher, 2013). One of the important features of Bangladesh-India bilateral trade to be mentioned is that a large volume of informal or unrecorded trade, both in commodities and services, occurs every year, and it is growing despite unilateral or regional or multilateral trade liberalization in these two countries (Pohit and Taneja 2003, Eusufzai 2000). Ever since Bangladesh's independence there has been a substantial informal unrecorded trade across the India-Bangladesh land borders. All the literature on the India-Bangladesh informal trade confirms that this trade is essentially one-way, from India to Bangladesh (World Bank, 2006). Due to the unavailability of informal trade data it is not possible to incorporate a large part of actual trade between these two countries in any time series analysis. Still, it can be argued that the trade deficit of Bangladesh is actually more than what is reflected in its legal trade with India.

Limited literature is available which analyses the trade relation of India and Bangladesh for a long span of time to judge the changes in the nature and composition of trade between these two countries and their consequent effect on trade balance. In this paper time series analyses have been conducted using data from 1988 to 2017 comprising a 30 years span to shed light on these issues. Moreover, majority of the papers have adopted partial approaches in addressing the problems. In the present paper attempt has been made to analyze the trade relation between India and Bangladesh in a comprehensive manner so that the real problems can be identified.

**3. Data and Methodology**

Section 4 and 5 of this paper is the analytical part of the study. Broadly, there are two phases of our statistical analysis. In the first phase, a comprehensive analysis of trade data from reliable sources has been conducted to assess the changes in nature and composition of trade between India and China. The second phase is the econometric time series analysis to judge the implication of different trade policies adopted by these two countries on their trade performances. Annual data of the selected variables from 1988 to2017 for India and Bangladesh are taken from the official websites of World Integrated Trade Solution (WITS), World Bank, Trade Map Database , IMF and UN Comtrade database. Variables used in abbreviations in this paper are: export of India to Bangladesh (Exp_Ind), import of India from Bangladesh (Imp_Ind), trade balance of India with Bangladesh (Tb_Ind), GDP of India (GDP_Ind), export-import ratio of India with Bangladesh (Expi_Impi_ratio) and real exchange rate of India (R.Exch_rt_Ind).

Four basic equations have been estimated applying OLS method in this paper.

i. $Exp\_Ind_t = \alpha_1 + \beta_1 GDP\_Ind_t + \varepsilon_{1t}$
ii. $Imp\_Ind_t = \alpha_2 + \beta_2 GDP\_Ind_t + \varepsilon_{2t}$
iii. $Tb\_Ind_t = \alpha_3 + \beta_3 GDP\_Ind_t + \varepsilon_{3t}$
iv. $Expi\_Impi\_ratio_t = \alpha_4 + \beta_4 R.Exch\_rt\_Ind_t + \varepsilon_{4t}$

where $\varepsilon_{1t}$ , $\varepsilon_{2t}$ , $\varepsilon_{3t}$ and $\varepsilon_{4t}$ are white noise error terms. Before estimating the parameters of

these equations our econometric analysis comprise of three initial steps. The first and second step examines the characteristics of data by unit root test and co-integration test. The unit root tests for all dependent and independent variables are needed to check the stationarity of the series. For the robustness of the conclusions, Augmented Dickey-Fuller (ADF) tests are done in this purpose. As suggested in ADF test, following three models for testing the presence of unit root in a random variable (Y) have been tested with the inclusion of a constant (equation-b below), a constant and linear trend (equation-c below), or neither (equation–a below) in the test regression.

a. $\Delta Y_t = \delta Y_{t-1} + \sum_{i=1}^{m} \gamma_i \Delta Y_{t-i} + u_t$
b. $\Delta Y_t = \alpha + \delta Y_{t-1} + \sum_{i=1}^{m} \gamma_i \Delta Y_{t-i} + u_t$
c. $\Delta Y_t = \alpha + \beta t + \delta Y_{t-1} + \sum_{i=1}^{m} \gamma_i \Delta Y_{t-i} + u_t$

ADF test corrects for presence of serial correlation in the disturbance term by including m lags of the dependent variable ($\Delta Y_t$). Following unit root tests the co-integration test is necessary for the variables having integration of order one, i.e., I (1).Two co-integrated series implies that they are having a meaningful long run relationship between them. In this paper, Engel-Granger method is used for testing co-integrating relations for the pairs (Exp_Ind , GDP_Ind) , (Imp_Ind, GDP_Ind), (Tb_Ind , GDP_Ind) and (Expi_Impi_ratio , R.Exch_rt_Ind) separately.

Existence of relationship between variables does not necessarily prove causality, or direction of influence. Granger causality test offer a formal test of the direction of causality between the variables. In the third step of our econometric exercise the causality tests are conducted for above mentioned four pairs of variables for which co-integration tests were done. Finally, for estimating the parameters for each of the regression equations i, ii, iii and vi the OLS technique is applied. All the econometric analysis has been performed using the EVIEWS7 software.

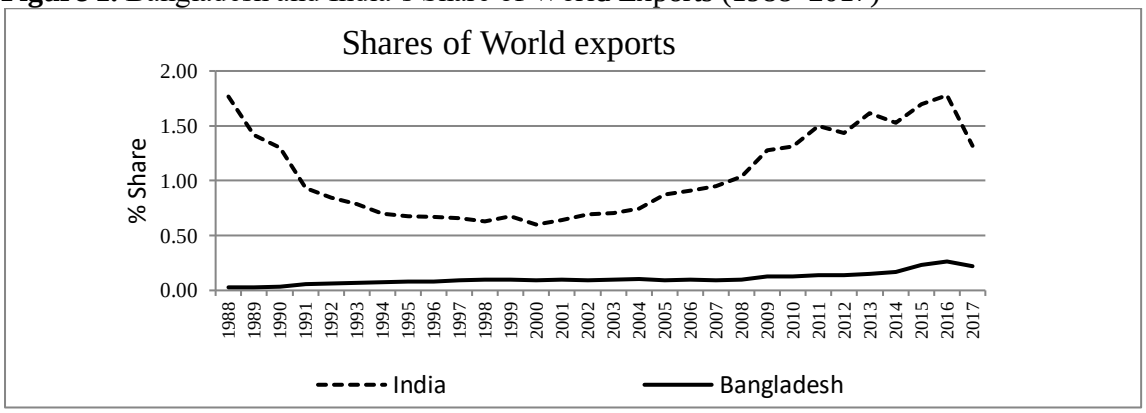
## 4. Changes in the nature and composition of trade

The volume of world trade has grown at a rapid pace during the last three decades. Total world export in 2017 was almost 23 times than what it was in 1988. Trade performances of different countries are measured by their respective shares in global exports over time. In this regard India has always been a superior performer than Bangladesh during this period. In 1988, India's share of world exports was 1.77% which has become 1.65% in 2017. Although during some years in the middle (from 1991 to 2007) there was a decline in this share below 1. On the other hand, Bangladesh could only manage to contribute not even 0.5% of global exports throughout this period (1988 to 2017). The respective shares of these two countries are shown in figure1. Clearly, India's performance has been much better than that of Bangladesh.

To India, the importance of Bangladesh as an export destination has increased over time. The share of India's global exports went to Bangladesh was 1.29% in 1988 which became 3.07%

in 2017. On the other hand, the share of Bangladesh's global exports destined to India has declined from 4% in 1988 to 1.49% in 2017(calculated from WITS data).This is an indication of greater association of Bangladesh with other trading partners in the world in recent years.

**Figure 1.** Bangladesh and India's Share of World Exports (1988–2017)




Source: WITS

Shares of different product groups (based on the level of processing) in total exports to the world as well as to the partner country by India and Bangladesh have been computed separately for 1988 and 2017. This will be helpful to assess the changes in composition of exports of each country over time. Respective shares of different product groups for these two countries are given in table 1. Bangladesh is predominately a capital scarce country, which is reflected in its shares of capital good exports to the world as well as to India. In 1988, only 0.3% of Bangladesh's global exports were capital goods and that to India was nil. The corresponding shares in 2017 were 0.39% to the World and 4.29% to India respectively, which are still very negligible. The share of capital goods in India's export basket, on the other hand, has increased over time both to the world and to Bangladesh. In 1988, 6.23% of India's global exports were capital goods, which have become 13.78% in 2017. The corresponding share of these goods to Bangladesh has increased from 19.93% to 22.45% during these two years. In 2017 India exported capital goods worth 1.62 billion $ to Bangladesh and imported it by 0.03 billion $ from there, enjoying a trade surplus of 1.59 billion $.

Bangladesh has made the most remarkable change in its export potentiality of consumer goods during the last three decades. At present almost entire global exports of Bangladesh comprise of these goods. Consumer goods accounted for 42.51% of Bangladesh's global exports in 1988, which has become 95.13% in 2017. As far as exports to India are concern, the share of these goods has increased almost 91 times (0.49% in 1988 to 44.52% in 2017) during this period.

**Table 1.** Shares of different product groups in total exports by India and Bangladesh (%)

| | | Capital Goods | | Consumer Goods | | Intermediate Goods | | Raw Materials | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1988 | 2017 | 1988 | 2017 | 1988 | 2017 | 1988 | 2017 |
| Share in India's total export to | The World | 6.23 | 13.78 | 34.32 | 44.02 | 42.37 | 33.2 | 14.74 | 8.63 |
| | to Bangladesh | 19.93 | 22.45 | 17.01 | 19.61 | 47.88 | 43.11 | 15.03 | 14.25 |
| Share in Bangladesh's total export to | The World | 0.30 | 0.39 | 42.51 | 95.13 | 16.74 | 1.68 | 38.45 | 2.57 |
| | to India | 0.00 | 4.29 | 0.49 | 44.52 | 61.74 | 29.68 | 36.09 | 21.10 |

Source: Compiled from WITS data

India also has increased the share of consumer goods in its export basket both to the world as well as to Bangladesh. Its global exports of these goods grew from 34.32% in 1988 to 44.02% in 2017 and to Bangladesh, from17.01% to 19.61% respectively. In 2017, the value of India's consumer goods export to Bangladesh was 1.41 billion $ and imported by 0.26 billion $ from there, with a trade surplus of 1.15 billion $.

With the passage of time, the importance of intermediate goods in the export basket of Bangladesh has declined gradually both to the world and to India. The share of these goods in its global exports has fallen from 16.74% in 1988 to 1.68% in 2017 and that to India from 61.74% to 29.68% respectively. In India's global exports, on the other hand, the share of intermediate goods has fallen from 42.37% to 33.2% and that to Bangladesh from 47.88% to 43.11% during this period. In spite of this downfall, intermediate goods occupy the largest share in India's exports to Bangladesh at present. India exported these goods by 3.11 billion $ to Bangladesh and imported by 0.18 billion $ from there in 2017 with a trade surplus of 2.93 billion $.

Export shares of raw materials by these two countries have also declined both to the world as well as to the partner country. In 1988, the share of these goods in Bangladesh's global exports was 38.45% and came down sharply to 2.57% in 2017. The corresponding export percentages to India were 36.09% and 21.10% respectively. India's global exports of raw materials, on the other hand, have come down from 14.74% to 8.63% and to Bangladesh, from 15.03% to 14.25% between 1988 and 2017. India's export and import values for these goods with Bangladesh in 2017 are 1.03 billion $ and 0.12 billion $ respectively, with a trade surplus of 0.9 billion $.

The export shares of different product groups between 1988 and 2017, given in table 1, reveals the fact that, there has been no considerable change in the composition of India's exports to Bangladesh in 2017 as it was in 1988, whereas, Bangladesh's export composition

for India has experienced a huge change in this period. In 1988 Bangladesh exported mainly intermediate goods and raw materials to India. Almost 98% of its total exports to India were from these two groups. With the passage of time the weightage has shifted and the importance of consumer goods has increased enormously. The share of these goods in the export basket of Bangladesh to India was highest (44.52%) among all in 2017.

Volumes of India's top ten export items and their respective shares in total exports to Bangladesh for 1988 and 2017 are presented in Table 2.1. India's top 10 export items comprise of 81.27% of total exports in 1988, among which the major share is held by the product cotton (HS-52)* at 32.28% from textile and clothing category, followed by machinery and mechanical appliances (HS-84), vehicles (HS-87), different fabric items (HS-60) among others. In 2017 the top 10 export items comprise of 72.37% of total exports to Bangladesh. Export of cotton (HS-52) again occupied the highest share of 24.07% and was followed by vehicles (HS-87), machinery and mechanical appliances (HS-84), Cereals (HS-10) etc.

Top three export items of India to Bangladesh remained unchanged in 2017 as it was in 1988 with the product "cotton" retaining its first position. A close inspection of table 2.1 reveals that the broad category "mineral products" (HS25-26) consisting salt; sulphur; stone; etc (HS-25) which was among the top 10 export items in 1988 has been replaced by "food products"(HS16-24) like Residues and waste from the food industries (HS-23) in 2017. All the other top 10 export items of 1988 and 2017 are falling under the same broad categories of HS two digit classification. This indicates that, the composition of India's exports to Bangladesh has remained almost same during the last three decades.

Volumes of India's top ten import items and their respective shares in total imports from Bangladesh in 1988 and 2017 are presented in Table 2.2. Only 8 import items consisted100% of total imports from Bangladesh in 1988. The highest share among all these imports was held by *HS stands for harmonized system of product classification. HS product classification at two digit labels has been considered in this paper.

**Table-2.1**: Volume of India's top 10 export items and their respective shares in total exports to Bangladesh in 1988 and 2017

| India's top 10 exports to Bangladesh in 1988 | | | | India's top 10 exports to Bangladesh in 2017 | | | |
|---|---|---|---|---|---|---|---|
| HS Code | Product Label | Value Thousand $ | % Share | HS Code | Product Label | Value thousand $ | % Share |
| 52 | Cotton | 57614 | 32.28 | 52 | Cotton | 1735277 | 24.07 |
| 84 | Machinery, mechanical appliances, nuclear | 21217 | 11.89 | 87 | Vehicles other than railway or tramway rolling | 946388 | 13.13 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | reactors | | | | stock, and parts… | | |
| 87 | Vehicles other than railway or tramway rolling stock, and parts… | 13928 | 7.80 | 84 | Machinery, mechanical appliances, nuclear reactors… | 534373 | 7.41 |
| 60 | Knitted or crocheted fabric | 11044 | 6.19 | 10 | Cereals | 401392 | 5.57 |
| 7 | Edible vegetables and certain roots and tubers | 10490 | 5.88 | 27 | Mineral fuels, mineral oils and products… | 382832 | 5.31 |
| 40 | Rubber and articles thereof | 8602 | 4.82 | 55 | Man-made staple fibres | 271334 | 3.76 |
| 25 | Salt; sulphur; earths and stone; plastering materials… | 6152 | 3.45 | 85 | Electrical machinery and equipment and parts thereof… | 267081 | 3.71 |
| 8 | Edible fruit, nuts, peel of citrus fruit, melons | 5572 | 3.12 | 72 | Iron and steel | 262422 | 3.64 |
| 27 | Mineral fuels, mineral oils and products … | 5258 | 2.95 | 39 | Plastics and articles thereof | 210789 | 2.92 |
| 76 | Aluminium and articles… | 5153 | 2.89 | 23 | Residues and waste from the food industries… | 204675 | 2.84 |
| Total value of top 10 exports | | 145030 | 81.27 | Total value of top 10 exports | | 5216563 | 72.37 |
| Total exports to Bangladesh | | 178458 | 100 | Total exports to Bangladesh | | 7208556 | 100 |

Source: compiled from Trade Map Database and UN Com trade Database

the products like paper and paperboard; articles of paper pulp etc. (HS-48) at 43.81%,followed by vegetable textile fibers; paper yarn etc. (HS-53) at 31.32%, raw hides and skins and leather (HS-41) at 13.97%, Animal or vegetable fats and oils (HS-15) at 7.94% among the others. In 2017, top 10 import items of India comprise of 72.60% of total imports from Bangladesh among which products from "Textile and clothing" (HS 50-63) category

like vegetable textile fibers; paper yarn etc. (HS-53) hold the highest share of 20.81%. The next three positions were occupied by the articles like apparel and clothing accessories, not knitted (HS-62), articles of apparel and clothing accessories, knitted (HS-61) and lead and articles thereof (HS-78) respectively.

**Table-2.2**: Volume of India's top 10 import items and their respective shares in total imports from Bangladesh in 1988 and 2017

| India's top 10 imports from Bangladesh in 1988 | | | | India's top 10 imports from Bangladesh in 2017 | | | |
|---|---|---|---|---|---|---|---|
| HS Code | Product Label | Value thousand $ | % Share | HS Code | Product Label | Value thousand $ | % Share |
| 48 | Paper and paperboard; articles of paper pulp… | 3873 | 43.81 | 53 | Other vegetable textile fibres; paper yarn… | 122998 | 20.81 |
| 53 | Other vegetable textile fibres; paper yarn... | 2769 | 31.32 | 62 | Articles of apparel and clothing accessories… | 116354 | 19.69 |
| 41 | Raw hides and skins and leather | 1235 | 13.97 | 61 | Articles of apparel and clothing accessories… | 41003 | 6.94 |
| 15 | Animal or vegetable fats and oils… | 702 | 7.94 | 78 | Lead and articles thereof | 34125 | 5.77 |
| 99 | Commodities not elsewhere specified | 148 | 1.67 | 63 | Other made-up textile articles; sets; worn clothing.. | 22400 | 3.79 |
| 8 | Edible fruit and nuts; peel of citrus fruit… | 57 | 0.64 | 27 | Mineral fuels, mineral oils and products of their… | 20712 | 3.50 |
| 49 | Printed books, newspapers, pictures and other products | 44 | 0.50 | 25 | Salt; sulphur; earths and stone; plastering materials | 20317 | 3.44 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 7 | Edible vegetables and certain roots and tubers | 13 | 0.15 | 72 | Iron and steel | 20082 | 3.40 |
| - | - | - | - | 52 | Cotton | 16954 | 2.87 |
| - | - | - | - | 74 | Copper and articles thereof | 14117 | 2.39 |
| Total value of top 10 imports | | 8841 | 100 | Total value of top 10 imports | | 429062 | 72.60 |
| Total imports from Bangladesh | | 8841 | 100 | Total imports from Bangladesh | | 590995 | 100 |

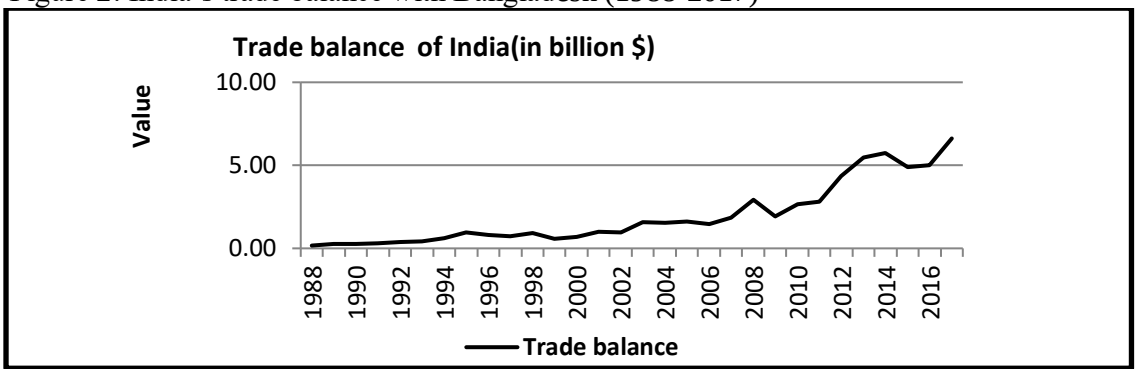
Source: compiled from Trade Map Database and UN Com trade Database

Table 2.2 reveals the fact that exports of Bangladesh to India in 1988 were highly concentrated in very few products. Only 8 items were there in the export basket to India. Not only that, the top 3 items consisted the lion share (89%) of total exports of Bangladesh. In 2017, on the other hand, although the items exported to India were more in number than that of 1988, most of the top 10 items were from two broad categories like "textile and clothing" (HS, 50-63) and "metals" (HS, 72-83). The share of "textile and clothing" was 54.10% and the corresponding share of "metals" was 11.56% of total exports to India in this year. Another noticeable fact is that, among the export items to India in 1988 and 2017 only Hs-53 is the common one. This indicates that, although concentrated in few items, there has been a considerable change in the nature and composition India's imports from Bangladesh during the last three decades.

**5. Changes in the trade policies of two countries and their impact on the bilateral trade between India and Bangladesh**

In the bilateral trade between India and Bangladesh since 1988, India's position has been very strong always. In 1988, India's export to Bangladesh was 0.18 billion $ and recorded a 40 times increment to 7.21billion $ in 2017. The trade balance of India (see 3rd column of table 3) has always been positive with huge increments in recent years. For Bangladesh, on the other hand, the volume of exports to India in absolute term has been much lower than its imports from India throughout the period. In 2017, Bangladesh exported 0.59 billion $ and imported twelve times more (7.21 billion $) than that from India with a huge trade deficit of 6.62 billion dollars. In spite of this adverse balance of trade situation, an inspiring fact for Bangladesh is that, its export to

Figure 2: India's trade balance with Bangladesh (1988-2017)




Source : WITS

India has grown at a faster rate than its imports from there. In 2017, Bangladesh exported almost 67 times more than what it exported in 1988 to India. The trade balance of India is presented graphically in figure 2. The upward rising curve indicates that the trade balance has grown steadily in favor of India in the last three decades.

India's annual exports per unit imports from Bangladesh (Exp/Imp of India) have been

**Table 3**. India's balance of trade situation with Bangladesh from 1988 to 2017 (in billion $)

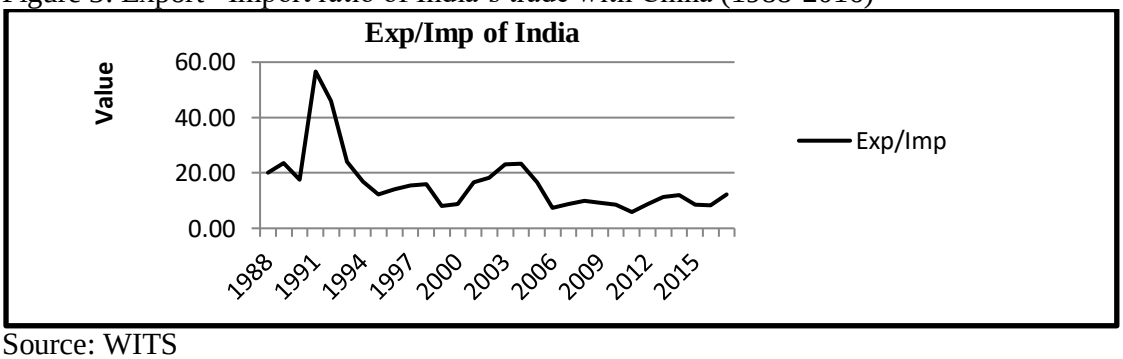
| Year | India's exports to Bangladesh | India's imports from Bangladesh | Trade balance of India | Exp/Imp of India |
|---|---|---|---|---|
| 1988 | 0.1784576 | 0.00883945 | 0.17 | 20.19 |
| 1989 | 0.28230749 | 0.01196024 | 0.27 | 23.60 |
| 1990 | 0.30168211 | 0.01724272 | 0.28 | 17.50 |
| 1991 | 0.32456573 | 0.00573341 | 0.32 | 56.61 |
| 1992 | 0.39695091 | 0.00861369 | 0.39 | 46.08 |
| 1993 | 0.43014522 | 0.01787363 | 0.41 | 24.07 |
| 1994 | 0.64462618 | 0.03815967 | 0.61 | 16.89 |
| 1995 | 1.04586893 | 0.0856715 | 0.96 | 12.21 |
| 1996 | 0.86891629 | 0.06219494 | 0.81 | 13.97 |
| 1997 | 0.7866505 | 0.05074253 | 0.74 | 15.50 |
| 1998 | 0.99528634 | 0.0624563 | 0.93 | 15.94 |
| 1999 | 0.63999907 | 0.07857784 | 0.56 | 8.14 |
| 2000 | 0.77571651 | 0.08869787 | 0.69 | 8.75 |
| 2001 | 1.06304561 | 0.06412152 | 1.00 | 16.58 |

| | | | | |
|---|---|---|---|---|
| 2002 | 1.02550179 | 0.0564287 | 0.97 | 18.17 |
| 2003 | 1.65297321 | 0.07150122 | 1.58 | 23.12 |
| 2004 | 1.61302689 | 0.06911306 | 1.54 | 23.34 |
| 2005 | 1.71978865 | 0.10369849 | 1.62 | 16.58 |
| 2006 | 1.6678094 | 0.22381254 | 1.44 | 7.45 |
| 2007 | 2.06379328 | 0.23331134 | 1.83 | 8.85 |
| 2008 | 3.24337589 | 0.32978208 | 2.91 | 9.83 |
| 2009 | 2.17737514 | 0.23442158 | 1.94 | 9.29 |
| 2010 | 3.01657471 | 0.35789627 | 2.66 | 8.43 |
| 2011 | 3.40551554 | 0.57912545 | 2.83 | 5.88 |
| 2012 | 4.9366724 | 0.56730728 | 4.37 | 8.70 |
| 2013 | 5.99394959 | 0.53075117 | 5.46 | 11.29 |
| 2014 | 6.25523493 | 0.51727911 | 5.74 | 12.09 |
| 2015 | 5.52151762 | 0.63989854 | 4.88 | 8.63 |
| 2016 | 5.66879284 | 0.67709805 | 4.99 | 8.37 |
| 2017 | 7.21009952 | 0.59157573 | 6.62 | 12.19 |

Source: compiled from WITS data

calculated for the selected period and presented in the last column of table 3. Values more than one for this ratio indicate trade surplus for India. As India has enjoyed surplus in trade balance in all the years, the values of this ratio are more than one always. The logarithm of this ratio has been regressed upon time to measure its trend and the coefficient of the independent variable, time, is found negative. With a faster acceleration of India's imports from Bangladesh over its exports, the ratio is having a declining trend over time. In figure 3, this ratio has been presented graphically.

Figure 3: Export –Import ratio of India's trade with China (1988-2016)




Source: WITS

Our above discussion reveals the fact that there is a contrasting feature between the trade balance of India and its export-import ratio with Bangladesh. While the trade balance of India with Bangladesh has grown at a rapid pace during the last three decades, its export-import ratio has declined over time due to faster acceleration of India's imports than its exports to Bangladesh.

In this section, econometric time series analysis has been conducted to identify the factors responsible for the present situation in Indo-Bangladesh trade. Selected macro economic variables, which affect exports and imports of a country, are real exchange rate,* gross domestic product (GDP), tariff rates imposed and net inflow of foreign direct investment (FDI). Yearly time series data of all these variables for India and Bangladesh are taken from reliable sources (mentioned in methodology section of this paper). The econometric analysis has been done in four steps: in the first step, ADF (Augmented Dickey Fuller) test for all the selected variables have been performed to test the stationarity of these series. In the second step, co integration test

* The real exchange rates of India and Bangladesh have been calculated as,

Real exchange of country A with country B = n. exch $^{A}$. (cpi $^{B}$ / cpi $^{A}$),

Where, n. exch $^{A}$ = nominal exchange rate of the currency of country A with us dollar, cpi $^{B}$ = consumer price index of country B and cpi $^{A}$ = consumer price index of country A.

has been conducted for the stationary series at first difference to find out the existence of meaningful long run relationship between the variables. In the third stage, Granger causality test has been done to check whether there is any causal relationship between two variables or not. Granger Causality test helps us to identify the direction of causality between the variables. In the last step, Ordinary Least Square (OLS) test has been done to estimate the parameter of relationships. If two series are co-integrated, OLS gives consistent estimator of the relationship between them.

**Table 4: Results of Unit Root and Co integration Test (First difference of the variables)**

| **A. Unit Root Test** | | | | |
|---|---|---|---|---|
| a. Level of the variables (Null hypothesis: Variables has a unit root.) | | | | |
| Variables | Augmented Dickey- Fuller test results | | | |
| | Statistics | Critical value at 1% | Critical value at 5% | Probabilities |
| Exp_Ind | -1.086892 | -4.309824 | -3.574244 | 0.9141 |
| Imp_ind | -1.95893 | -4.309824 | -3.574244 | 0.5984 |
| Tb_Ind | -1.197634 | -4.309824 | -3.574244 | 0.8923 |
| Expi_Impi_ratio | -3.477039 | -4.323979 | -3.580623 | 0.0616 |
| GDP_Ind | -0.26573 | -4.309824 | -3.574244 | 0.9879 |
| R.Exch_rt_Ind | -2.001808 | -4.309824 | -3.574244 | 0.576 |

| b. First difference of the variables (Null hypothesis: Variables has a unit root.) | | | | |
|---|---|---|---|---|
| Variables | Augmented Dickey- Fuller test results | | | |
| | Statistics | Critical value at 1% | Critical value at 5% | Probabilities |
| Exp_Ind | -4.129352 | -2.650145 | -1.953381 | 0.0002 |
| Imp_ind | -4.615982 | -2.650145 | -1.953381 | 0.0000 |
| Tb_Ind | -4.13728 | -2.650145 | -1.953381 | 0.0002 |
| Expi_Impi_ratio | -4.708973 | -2.653401 | -1.953858 | 0.0000 |
| GDP_Ind | -2.757725 | -3.689194 | -2.971853 | 0.0773 |
| R.Exch_rt_Ind | -5.153962 | -3.689194 | -2.971853 | 0.0003 |
| **B. Pairwise Cointegration Test** (Null hypothesis: Series are not co integrated) | | | | |
| Dependent Variables | z-statistics | | MacKinnon p values | |
| Exp_ind<br>GDP_Ind | -15.23953<br>-14.38939 | | 0.0809<br>0.1021 | |
| Imp_Ind<br>GDP_Ind | -25.33622<br>-25.62992 | | 0.0026<br>0.0023 | |
| Tb_Ind<br>GDP_Ind | -15.54755<br>-14.40528 | | 0.0742<br>0.1016 | |
| Expi_Impi_ratio<br>R.Exch_rt_Ind | -26.32879<br>-8.249784 | | 0.0016<br>0.4191 | |

### 5.1. Unit Root Test (Level and first difference of the variables)

The results of ADF test for the variables at level and at first difference which have given meaningful results till the end of our econometric exercise are summarized in section-A of table 4. Six such variables are export of India (Exp_Ind), import of India (Imp_Ind), trade balance of India (Tb_Ind), export- import ratio of India with Bangladesh (Expi_Impi_ratio),GDP of India (GDP_Ind) and real exchange rate of India (R.Exch_rt_Ind). Except Expi_Impi_ratio , all the other five variables are non stationary at level but stationary at first difference. On the other hand, the export-import ratio of India is found to be stationary at level with significant drift and a trend component in it, i.e, Expi_Impi_ratio is a trend stationary series. The unit root test of this series at first difference shows that the series is again stationary which is free from any trend factor. In other words, Expi_Impi_ratio is a difference stationary series too. As the probability of having a unit root in this series is less in first difference than in level we consider Expi_Impi_ratio as a stationary series at first difference in our model. In all the cases, lag length selection has been attributed to the

software to choose it automatically. Hence, all the six variables are free from the presence of unit root at first difference and therefore, will give reliable and unbiased results.

### 5.2. Bivariate Cointigration Test

Presence of co-integration for two or more time series suggests that there is a meaningful long run relationship between them. In our model, two variable Engel-Granger co integration tests have been done. Results are shown in section-B of table 4. Export, import and trade balance of India when paired as dependent variables with GDP of India separately, give significant results. If we consider GDP_Ind as dependent variable, it is co-integrated with Imp_Ind only. Export-import ratio of India also gives significant result as a dependent variable when paired with real exchange rate of India. Co-integration results indicate that, as dependent variables, India's export, import and trade balance with Bangladesh are co-integrated with GDP of India, indicating the existence of meaningful long run relationship with them. Export-import ratio of India, as a dependent variable, is also co-integrated with real exchange rate of India.

### 5.3. Granger Causality test

In the third stage, pair wise Granger causality test has been conducted to identify dependent and independent variables in our model. The null hypothesis for this test is set as; one variable does not cause the other. Rejection of null hypothesis will ensure that the variable in consideration causes the other variable and therefore, can be considered as an independent variable. The results of our causality test are shown in table 5 below. All the four pairs of variables which are found to

**Table 5: Results of pair wise Granger Causality test**

| Null hypothesis | F-Statistic | p-values |
|---|---|---|
| GDP_Ind does not Granger Cause Exp_Ind | 9.08962 | 0.0012 |
| Exp_Ind does not Granger Cause GDP_Ind | 2.0664 | 0.1495 |
| GDP_Ind does not Granger Cause Imp_Ind | 23.6909 | 3.E-06 |
| Imp_Ind does not Granger Cause GDP_Ind | 1.72256 | 0.2009 |
| GDP_Ind does not Granger Cause Tb_Ind | 8.82555 | 0.0014 |
| Tb_Ind does not Granger Cause GDP_Ind | 1.92566 | 0.1686 |
| R.Exch_rt_Ind does not Granger Cause Expi_Impi_ratio | 2.55401 | 0.0996 |
| Expi_Impi_ratio does not Granger Cause R.Exch_rt_Ind | 0.03245 | 0.9681 |

be co-integrated above are put into Granger causality test. In all the cases, one way causal relations have been found. The results give us a clear insight of our model specification. In our model the dependent variables are Exp_Ind, Imp_Ind, Tb_Ind and Expi_Impi_ratio, since, for all these as dependent variables, null hypotheses are rejected.

### 5.4. Ordinary Least Square (OLS) estimation

In the last step, OLS estimation has been done for four pairs of variables for which the dependent and independent variables are identified in the Granger causality test. Results of all the OLS estimations are presented in table 6 below. Exp_Ind, Imp_Ind and Tb_Ind, all these three variables are found significantly dependent on GDP_Ind. In all these three cases, relationships are found to be positive. This means that, with the increment in the GDP of India, its export, import and trade balance with Bangladesh also have increased individually. The coefficient of the OLS estimation for R_Exch_rt_Ind as independent variable is negative; implying that, with the depreciation of Indian currency over time, Expi_Impi_ratio has declined or, In other words, India has imported at a faster rate from Bangladesh than what has been exported there. A continuous devaluation of rupee in real terms could not produce the desired result for India as Bangladesh depreciated its currency faster than India.

**Table 6: Results of OLS estimation**

| Dependent variable | Independent variable | Coefficient | t-value | Probability |
|---|---|---|---|---|
| Exp_Ind | GDP_Ind | 2760.423 | 19.31546 | 0.0000 |
| Imp_Ind | GDP_Ind | 303.1674 | 21.72999 | 0.0000 |
| Tb_Ind | GDP_Ind | 2457.255 | 17.42546 | 0.0000 |
| Expi_Impi_ratio | R.Exch_rt_Ind | -0.50358 | -3.28388 | 0.0028 |

As discussed earlier, the composition of India's exports to Bangladesh remained almost same during the last three decades, whereas, there has been a considerable change in the composition of imports from Bangladesh during this time. Almost 80% of India's exports are industrial inputs which are needed by the manufacturing sector of Bangladesh. The combined share of capital goods, intermediate goods and raw materials in total exports to Bangladesh was 82.84% in 1988 and 79.81% in 2017. On the other hand, India's imports from Bangladesh in 1988 were dominated by Intermediate goods and raw materials. The combined share of these two categories in total imports was 97.83% which came down to 50.78% in 2017. Huge change has been observed in the share of consumer goods imported from Bangladesh. In 1988 the share of these goods was not even 1% (only 0.49%) of total imports, which has become 44.52% in 2017.

In an open economy, the national income is measured by $Y = C + I + G + (X-M)$, where, Y is the national income, C is the consumption expenditure, I represents investment expenditure, G is the government expenditure and (X-M) stands for the trade balance of the country. Our time series results reveal that, keeping all other components constant, with the increment in the GDP of India both exports (X) and imports (M) have increased with a simultaneous

increment in the trade balance (X-M) of India over time. These results can explain the trends present in the 2nd, 3rd and 4th column of table 3. The last column of table 3 shows the export-import ratio of India with Bangladesh. Both exports and imports of India have increased with the passage of time with a greater acceleration in imports than exports. As a result of which the export-import ratio is having a declining trend on an average. In our OLs estimation, this declining trend is explained by the real exchange rate of India. The coefficient of the regression equation has been found negative, which implies that as a result of devaluation in Indian currency the exports of India have increased but at a slower rate than the rate of increment in the imports. The reason behind this is, Bangladesh has devaluated its currency at a faster rate than that of India which made its products relatively cheap than Indian products causing faster acceleration of India's imports from Bangladesh. The result of OLS estimation between Expi_Impi_ratio and R.Exch_rt_Ind explains the declining export-import ratio presented in the last column of table 3 in this way. Although, Bangladesh has been able to achieve a faster growth rate in its exports to India, the volume of its exports is very less as compared to its imports from India. In 1988 Bangladesh imported 20 times more from India than what was exported and in 2017 the import was 12 times more than its export to India.

## 6. Conclusions

This paper analyses the significant changes that have taken place in the nature, volume and trade balance of Indo-Bangladesh trade during the last three decades. India's pattern of exports to Bangladesh has remained more or less same during the last three decades. Throughout the specified period (1988 to 2017), 80% of India's exports comprise of capital goods, intermediate goods and raw materials. All these products are used as inputs in the manufacturing industries of Bangladesh. Although there has been no considerable change in the composition of India's exports, it has become more diversified at present. Regarding imports from Bangladesh, a considerable change has been observed during the last three decades. In 1988 the largest share of India's imports from Bangladesh was held by intermediate goods followed by raw materials. Together these two categories contributed 98% of total imports from Bangladesh. This composition of imports has changed considerably in 2017. Most remarkable change has been observed in the imports of consumer goods. The share of these goods in total imports has changed drastically from 0.49% in 1988 to 44.52% in 2017. Most of these consumer goods are the products from "textile and clothing" group. Although the composition has changed, India's imports are confined into very few items even in recent years.

Trade liberalization policies were initiated by Bangladesh in 1990 and in 1991 by India. During the last three decades the trade balance between these two countries has been always in favor of India. In absolute term the trade surplus of India has increased continuously. In spite of that there is an area of concern from India's point of view. The growth rate of India's trade surplus has slowed down in recent years due to the greater acceleration of India's imports than its exports to Bangladesh. Different trade policies have been adopted by these

two countries after liberalization for promoting exports to the other country. Bangladesh adopted a faster tariff reduction strategy than India till 2013, after which India took the initiative to reduce it at zero level as per SAFTA agreement. Bangladesh has reduced the tariff rates for industrial inputs at a faster rate than consumer goods for its heavy dependence on imported inputs from India to produce consumer goods.

A second policy instrument which has been very effectively implemented by Bangladesh is devaluating its currency in real terms at a faster rate than India, which has made the products of Bangladesh relatively cheap in Indian market and Indian products dearer in Bangladesh. As Bangladesh is trying to promote its exports of consumer goods to India, the exchange rate policy along with the tariff rate policy seem to be a part of its well planned strategies.

The econometric time series analysis has been conducted to identify most significant factors which are responsible for the volume and direction of Indo-Bangladesh trade. Results of time series indicate that GDP of India and exchange rate of India are two most important factors controlling the trade between India and Bangladesh. Export, Import and the trade balance of India are having positive relationships with GDP of India, where as export-import ratio of India is negatively related with exchange rate of India. As GDP of India has grown, both export and import have also grown with a positive effect on the absolute value of India's trade balance. On the other hand, the Indian currency has been devaluated at a slower rate than that of Bangladesh making Bangladesh's products more competitive in Indian market. As a result of which the growth rate of India's imports has become faster than that of its exports to Bangladesh.

It is worthwhile to mention here that all the empirical and time series analysis are done by taking official data from various reliable sources, although there is a parallel trade practice between India and Bangladesh for which data are not available. It is argued in number of literature that the volume of informal trade between these two countries is quite considerable. Due to the unavailability of data this informal trade is beyond the scope of this paper.

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