FORMAL TRADE BETWEEN INDIA AND BANGLADESH: AN EMPIRICAL ANALYSIS

S.K.S. YADAV
Meerut College, Meerut, U.P., India
sudhiryadavmeerut@gmail.com
Nawazeesh Muhammad ALI
American International University, Bangladesh
nawazeeshmuhammadali111@gmail.com
Alexandru-Mircea NEDELEA
Stefan cel Mare University of Suceava, Romania
alexandrun@seap.usv.ro

Abstract
The importance of improving trade flows between India and Bangladesh is not only beneficial to them, but for the whole SAARC region, given that Bhutan and Nepal utilise Bangladesh ports as gateways to trade outside the region. Bangladesh's overall exports are dominated by labour-intensive manufacturing and its imports to India by primary commodities. The shares of manufactured goods in country's overall export were about 92 and 91 percent in 2001 and 2011 respectively. However, the composition of bilateral trade between these two countries has been changing over time. Addition and removal in the list of products of trade basket is a usual process. Consistent products in the trade basket of Bangladesh are ready made garments and sea food, whereas those of India are raw cotton, cereals and products and machinery of iron and steel. Expansion of trade of these countries with outside world, but not with each other confirms the prevalence of certain barriers, physical or non-physical in nature, rendering many potential products remain untraded. 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. Many items having high trade potential are still not able to get market exposure in the neighbouring country because of various non-tariff barriers prevailing in current trade scenario, which have hiked up the cost of doing business to unacceptable proportions and as most of the highly tradable products are still kept under the sensitive lists of Bangladesh. There are numerous bottlenecks in the current trade infrastructure which turns out to be physical barrier to trade. The present paper highlights the import export and Exchange Rate change and prospects of bilateral trade between the two countries.

Key words: *Land Boundary Agreement (LBA), Bilateral Trade, Line of credit and investment, GATT/WTO*

JEL Classification: *F1, F2, F4*

I. INTRODUCTION

Bangladesh and India are South Asian neighboring country. Generally relations have been friendly, although sometimes there are border disputes. The historic land boundary agreement was signed on 6 June 2015 which opened a new era in the relations and further stopped all irritants in ties. They are common members of SAARC, BIMSTEC, IORA and the Commonwealth. In particular, Bangladesh and the East Indian states of West Bengal and Tripura are Bengali-speaking. Bangladesh has a high commission in New Delhi with consulates in Mumbai and Kolkata. India has a high commission in Dhaka with a consulate in Chittagong. In a survey, 70% percent of Bangladeshis expressed a favorable opinion and perception of India. Historically and culturally the two nations have been considerably close to each other.

Sushma Swaraj ,Indian external affairs minister in the month of June 2014 visited Bangladesh and concluded various agreements to boost ties. They include:

- Easing of Visa regime to provide 5 year multiple entry visas to minors below 13 and elderly above 65.
- Proposal of a special economic zone in Bangladesh.
- Agreement to send back a fugitive murder accused from India.
- Provide an additional 100 MW power from Tripura.
- Increase the frequency of Maitree Express and start buses between Dhaka and Guwahati and Shillong.
- Bangladesh allowed India to ferry food and grains to the landlocked Northeast India's using its territory and infrastructure.

Thus, there is lot of potentiality to have bilateral Trade between India and Bangladesh.

As such the following are the objectives of this study:

- To find out the position of export of India and Bangladesh
- To find out the position of import of India and Bangladesh
- To find out Exchange rate of Import from Bangladesh, export from Bangladesh
- To find out Exchange rate of Import from India, export from India

The study will try to analyze the impact on trade between two countries based on empirical analysis.

II. INDIA'S POSITIVE EFFORT TO MAKE GOOD RELATIONSHIP WITH BANGLADESH

From the Indian side following are the factors which seem that there will be good relationship between two countries:

Land Boundary Agreement(LBA) On 7 May 2015 the Indian Parliament in the presence of Bangladeshi diplomats, unanimously passed the **Land Boundary Agreement (LBA)** as its 100th Constitutional amendment, thereby resolving all 68-year old border disputes since the end of the British Raj. The bill was pending ratification since the 1974 Mujib-Indira accords. During Indian Prime Minister Narendra Modi's state visit to Bangladesh during June 2015 as many as 22 agreements were signed by two sides.

Line of credit and investment. During the visit India extended a US$2 billion line of credit to Bangladesh & pledged US$5 billion worth of investments. As per the agreements, India's Reliance Power agreed to invest US$3 billion to set up a 3,000 MW LNG-based power plant (which is the single largest foreign investment ever made in Bangladesh) & Adani Power will be setting up a 1600 MW coal-fired power plant at a cost of US$1.5 billion. The two countries signed a total of 22 agreements including the ones on maritime safety co-operation and curbing human trafficking and fake Indian currency. Modi also announced a line of credit of $2 billion to Bangladesh.

At midnight on 31 July 2015, around 50,000 people became citizens of India or Bangladesh after living in limbo for decades. Ending a prolonged dispute, the two nations swapped 162 enclaves on the border region, allowing the people living there to stay or opt out to the other country. While 14,214 citizens of Bangladesh residing in 51 enclaves on the Indian side became Indians, a large number of people in the 111 Indian enclaves in Bangladesh preferred to stay with Bangladesh and just 979 opted to move to India. The total number of new Indian citizens will be 15,193.

Energy co-operation. India has recently introduced the concept of the Regional Power Trading System which will help various regions of the country in reducing the power deficit by transferring surplus power from another region. Under the Electricity Act 2003, the Indian companies could pool power in an exchange. A consumer would be free to buy it from anyone. This concept of power pool within India can also be enlarged to cover the neighboring countries like Bangladesh, Bhutan and Nepal after the establishment of a sub-regional power pool and necessary inter-connections among these countries are put in place. This can ultimately form a regional power pool thereby generating a huge opportunity for power trading in the region.

India is also looking to export electricity from its north-eastern region with potential to generate some 58,971 MW to its eastern States through Bangladesh. Bangladesh hopes to have access to Nepal and Bhutan's power through India. Bangladesh has formally requested a 'power corridor' to access the Bhutanese and Nepalese markets. It has agreed to allow India to transfer hydroelectricity from Assam to Bihar through its territory. The proposed meeting would attempt to remove irritants in project-related areas.

High level visits

President Ershad visited India in 1982. Sheikh Hasina visited India in 2010 to sign number of deals. Manmohan Singh visited Dhaka in 2011 to sign number of deals. Narendra Modi visited Bangladesh which was historic as land boundary agreement was solved in 2015.

Development cooperation

India is very active in development activity in Bangladesh.

India has recently given lots of loans to Bangladesh. It gave a $750 million for developing Bangladesh infrastructure in 2011

In 2014 India extended a $1 billion soft loan for infrastructure development.

Lines of credit: $1 billion was given for the Padma Bridge which World Bank refused. $862 million was given to buy equipment and services from Indian entities such as BHEL, RITES, small and medium enterprises.

Small development projects: India announced grant of nearly $10 million to Bangladesh for implementation of various small development projects and also assured it to address trade imbalance issue

Health. India and Bangladesh signed a memorandum of understanding for cooperation in the fields of health and medical sciences that will include joint research in health and exchange of doctors and health professionals. The MoU is aimed at promoting cooperation between the two countries in the fields of health and medical sciences through exchange of scientific materials and information and joint collaboration in research in medical science.

Scholarships. Every year 200 Bangladeshi students receive ICCR scholarships. India has offered scholarships for meritorious Bangladeshi under and post graduate students and PhD researchers to undertake

studies in traditional systems of medicines like Ayurveda, Unani and Homeopathy, according to Indian High Commission in Dhaka.

Trade and investment. The two way trade is $7 billion. The trade is set to go at $10 billion by 2018 through ports.

India is second in import destination for Bangladesh. Bilateral trade between India and Bangladesh stood at USD 6.6 billion in 2013-14 with India's exports at USD 6.1 billion and imports from Bangladesh at USD 462 million, representing more than double the value of USD 2.7 billion five years ago.

Table:1 Trade between India and Bangladesh

Year	BD's export to India (in US$mn)	BD's export to India as % of BD's total export	BD's export to India as % India's total	BD's import from India (in US$mn)	BD's import from India as % of BD's total	BD's import from India as % of total export
1991	5.49	0.33	0.03	199.85	6.37	1.12
2001	16.51	0.31	0.03	889.59	11.06	2.03
2011	512.51	1.88	0.11	4560.00	12.06	1.51

(Source:Bangladesh Bank)

Table:2 Trade Complimentarity Index of India with Bangladesh

Year	TCI
2005	50.79
2006	51.96
2007	51.36
2008	48.02
2009	47.41
2010	48.13
2011	48.08
2012	49.84

Source: Calculated using ITC Trade Map Database (September 2013)

Bangladesh Cabinet has approved a revised trade deal with India under which the two nations would be able to use each other's land and water routes for sending goods to a third country, removing a long-standing barrier in regional trade. Under the deal India would also be able to send goods to Myanmar through Bangladesh. It incorporated a provision that the deal would be renewed automatically after five years if either of the countries did not have any objection.

Table 3: India's Export Intensity with Bangladesh in Top 15 Exports

Product code (HS 07)	Product label	Bangladesh's exports to India (in US$ 1000)		
		Value in 2010	Value in 2011	Value in 2012
'53	Textile fibres, paper yarn, woven fabric	76,432	137,701	123,341
'63	Other textile articles, sets, worn clothing, etc.	51,599	65,582	79,147
'08	Edible fruit, nuts, peel of citrus fruit, melons	20,142	42,731	59,275
'62	Articles of apparel, accessories, not knit or crochet	11,315	26,506	42,801
'03	Fish, crustaceans, mollusk, aquatic invertebrates, etc.	38,668	87,565	36,395
Product code (HS 07)	Product label	India's exports to India (in US$ 1000)		
		Value in 2010	Value in 2011	Value in 2012
'52	Cotton	936,373	958,402	1,389,222
'10	Cereals	157,126	257,889	451,975
'87	Vehicles other than railway, tramway	249,885	262,200	412,692
'84	Machinery, reactors, boilers, etc.	91,216	169,813	272,534
'17	Sugar and sugar confectionery	356	184,827	263,809

Source: ITC Trade Map Database (September 2013)

III. LITERATURE REVIEW

Mandalia and Kukadia (1975) studied the economics of cotton cultivation in Baroda district, Gujarat. They made a cost-benefit analysis for a desi variety, Digvijay, and a new high-yielding variety, MCU-5, and compared the two. The study pointed out that MCU-5 cotton fetched a net return higher by Rs 53/ per quintal over Digvijay. Gangwar and Singh (1975) examined the economic feasibility of financing cotton growers in Hissar district of Haryana. The study relates to two types of cotton varieties. As the American cotton requires more pesticides, fertilizers, and irrigation, farmers were facing severe constraints of these inputs. They should prefer desi variety. the same. It was brought to light that even under adverse weather conditions; the financial institutions may consider advancing credit since these varieties assure minimum recovery of the amount invested.

Romer and Rivera (1990) state that Foreign Direct Investment (FDI) flows have greater impact on growth than mere trade flows because trade flows only increase the level of growth. Investment flows, on the other hand, increase the growth rate.. Grossman and Helpman (1991) examined economic growth from the viewpoint of 'creative destruction'. They point out that introduction of new technology (through foreign transfers, for example) renders an old technology obsolete, and firms can climb up in the 'quality ladders' of technology by investment on research. Such investment would yield innovation in technology, which in turn would lead to faster growth. Implicit in this theory is the assumption that new technology is necessarily more efficient than the one it replaces.

Kumar and Dhawan (1991), Arize et al. (2000), find a negative relationship between exchange rate volatility and trade. Ch. Suravinda (1993), examined "India's Trade Relations with Major Countries of Arab League". The present research project concerns itself with the expost facto examination of Indo-Arab trade relations. It emphasises the need for co-operation between India and the Arab countries. Such co-operation should remain as an ideal example for collective efforts for south-south co-operation in establishing a new International Economic Order (NIEO), and worthy of emulation by other developing countries. Uma Rani (1993) investigates the impact of exchange rate volatility on trade flows in India during the period January 1975 to December 1988. The study concludes that India's bilateral imports and exports have, in most of the cases, been adversely affected by the volatile nature of exchange rate.

Garten (1994) concluded that anti-dumping duties are justified because dumping prices are presumptive evidence of abnormal and temporary cheapness as the cheap prices brought about by dumping do not last long, and are followed by monopolisation and hiked pricing.

Samanta (1998), examining the long-run equilibrium relationship between exchange rate risk and the volume of foreign trade in the context of the Indian economy during the period 1953-1989, failed to find a statistically significant relationship between the exchange rate volatility and India's trade during 1960-86. Rajan and Zingales (1998) concluded that in countries with well developed financial systems, industries that are naturally heavy users of external finance grow faster. They argue that this result has implications for trade patterns because well-developed financial sector is a source of comparative advantage for a country in industries that rely more on external finance.

Howitt (2000) builds a model, in which countries depend on each other only through technology transfers. He uses this model to show that in the presence of technology transfer, there is a permanent rise in the country's per capita income vis-a-vis other countries. In addition, there is a rise in the growth rate of world income. Theoretically, there is ample reason to explain the 'spillover' effects of FDI in a developing country. Empirical studies examining the 'spillover' effect of FDI on the host country do so by examining the effect of FDI on productivity and competitiveness in the domestic industry, as they are most amenable to measurement.

The findings of empirical studies have been mixed, in the case of Canada, Caves (1974) observed that in this case, no strong or significant relationship has been found between FDI flows and productivity.

Fanelli and Medhora (2002) reveal that the competitiveness of a country depends both on the price and non-price factors. For improving the price competitiveness, devaluation can prove helpful in the short run. However, the price competitiveness can be induced in industries by enhancing the level of productivity. They explain that in an environment of efficient financial markets, the financial intermediaries are in the position of imparting the level of innovation by identifying and channeling funds to the most efficient users. The imperfections in the financial market, on the other hand, reduce the ability of the financial sector to efficiently channel funds from lenders to the borrowers; and that negatively impacts the productivity growth. Prusa and Skeath (2002) also pointed out that anti-dumping actions may be retaliatory. Bown and Crowley (2003) suggested that anti-dumping measures may be a defensive response. They reveal that trade deflection may be one of the pathways through which anti-dumping duties are multiplying. Konings and Vandenbussche (2004) provided empirical evidence that temporary anti-dumping protection on an average raises the productivity growth of domestic import-competing firms, and that trade policy under certain conditions can induce technological catching-up. Vijaya Katti (2005) points out that for India to become a major player in world trade, an all encompassing and comprehensive view needs to be taken for the overall development of the country's foreign trade. The EXIM policy was renamed as the new Foreign Trade Policy. The Foreign Trade Policy was built around two major objectives. These are to double our percentage share of global merchandise trade within

the next five years, and to act as an effective instrument of economic growth by giving a thrust to employment generation. She was of the opinion that the new trade policy was of immense use to India's foreign trade.

Syamala Gopinath (2006) tries to analyse how the regulatory environment has evolved in the Indian foreign exchange market. According to her, the main objective of markets including Foreign Exchange markets should be to support economic activity and raise the potential for economic growth. The focus of the exchange control regulations has facilitated transactions in international trade in goods and services. The number of incentives has been taken towards procedural simplification with the objective of reducing the transaction cost. Yazid and Muda (2006) studied the usage pattern of foreign exchange management strategies in multinational corporations. They found that multinationals are involved in foreign exchange risk management primarily because they sought to minimise operational overall cash flows, which are affected by currency volatility. Also, majority of multinationals centralise their risk management activities, and at the same time impose greater control by frequent reporting on derivative activities. It is likely that huge financial losses related to derivative trading in the past led to top management being extra cautious.

Guangling Liu (2007) , in his paper investigates the impact of the real effective exchange rate volatility on South Africa's exports for the period from 1978 to 2005. A General Autoregressive Conditional Heteroskedasticity (GARCH) model is used to measure exchange to exports volume. In other words, the volatility does not have impact on South Africa's exports during the study period. This study addresses these issues in the context of foreign institutional investors' (FII) trading activities in a big emerging market - India. India liberalized its financial markets, and allowed FIIs to participate in their domestic markets from 1992. Ostensibly, this opening up resulted in a number of positive effects.

Vijaya Katti et al. (2007) in their paper make an attempt to study some of the major sectors of the Indian economy. They have identified four major sectors, and analysed how export promotion councils have helped to shape the Indian economy, its export growth, and the challenges they face in an increasingly globalised world. They also focus on the employment and export intensity of the Indian economy, and highlight the industries that are in particular having low and high export and employment intensity.

Neena Malhotra (2008), says that the ratio of exports to imports, has improved over time, and the fear that liberalisation will adversely affect agriculture, doesn't seem to be valid. Rather immense export opportunities are opened by export market, and our farmers are also taking advantage of these opportunities. The structure of imports shows that major categories of import are of edible oils, fertilizers, and fertiliser manufacture. There is need for change in the cropping pattern, and domestic oil seeds production should be promoted in a big way to reduce import dependence.

Jeevan Kumar Khundrakpam (2009) in his paper investigated the exchange rate pass-through to rate volatility, and the Johansen co-integration tests and Error Correction Model (ECM) are employed to analyse the long run equilibrium and the dynamic short run relationship between exports and the real effective exchange rate volatility. The empirical evidence indicates that exports is positively related to foreign income, and negatively related to the real effective exchange rate in the long run

Ali and Medhekar (2016) argued that in order to build political, social, and economic ties to mutually benefit the SAARC as well as BIMSTEC region, it is essential to start first with building trust, disarm and focus on economic development, outward looking economic policies to attract foreign investment, improve institutions and promote growth through bilateral preferential trade agreements. It seems that for India and Bangladesh intra-regional trade is not as important, and they are more biased towards trading with Rest of the World.

First, the stock exchanges were forced to improve the quality of their trading and settlement procedures in accordance with the best practices of the world. Second, the information environment in India improved with the advent of major international financial institutional investors in India. On the negative side, we need to consider potential destabilization as a result of the trading activity of foreign institutional investors. This is especially important in an emerging country that has embarked upon reforms to open up its market.

IV. RESEARCH METHODOLOGY

To prepare this report first we have taken primary data from our respondents through preparing questionnaires and conducting survey. And secondary data has been collected from the different websites, and also some data will be collected from the publications of Bangladesh Bank and also collected from different articles published including BBS, and Bangladesh Bank.

Time period of the study was 1990 to 2014.

The study determined regression equation and analysis to understand the trade relation between the two countries using SPSS software.

In the study we have used following regression equations:

$Mbd = f(Mi, Ex, Dm)$ (1)

$Xbd = f(Xi, Ex, Dm)$ (2)

$Ex = f(Mbd, Xbd, Dm)$ (3)

$Ex = f(Mi, Xi, Dm)$ (4)

(In these model also need to consider total import, export of the both countries)

Where,

Mbd= Import to Bangladesh from India

Xi=Export from India to Bangladesh

Ex=Exchange rate of Bangladesh Taka in terms of US Dollar

Xbd=Export from Bangladesh to India

Mi=Import to India from Bangladesh

Dm=Dummy Variable

Here we will use dummy variable to see whether structural change occurs. For the period 1990 to 2003 we shall consider Dm=1 and for Dm=0 for the period 2004 to 2014.If dummy variable is positive it will indicate there is a structural change and vice versa.

A priori relationship in equation (1) is that import from Bangladesh to India is a function of Import to India from Bangladesh, Exchange rate and dummy variable. We shall consider a negative relationship among import from Bangladesh as any import from this country occurs then an import payment receipt means foreign exchange inflows to Bangladesh but if import to India is higher than it will have negative impact and in case of exchange rate appreciates import will decline and dummy variables positive indicate structural change occurs in a significant manner and vice versa.

A priori relationship in equation (2) is that export from Bangladesh to India is a function of Export from India to Bangladesh, Exchange rate and dummy variable. We shall consider a negative relationship among export from Bangladesh that means Export from India to Bangladesh will be much higher rate and ultimately lead to balance of trade deficit in favor of Bangladesh and in case of exchange rate appreciates export will decline and dummy variables positive indicate structural change occurs in a significant manner and vice versa.

A priori relationship in equation (3) is that exchange rate is a function of Import to Bangladesh, export from Bangladesh and dummy variable. We shall consider that when exchange rate appreciates import to Bangladesh will rise as more products can Bangladesh buy while export from Bangladesh will be negative as exportable commodities are costlier and dummy variables positive indicate structural change occurs in a significant manner and vice versa.

A priori relationship in equation (4) is that exchange rate is a function of Import to India, export from India and dummy variable. We shall consider that when exchange rate appreciates import to India will decline as less products can Bangladesh sell while export from India will be positive as exportable commodities of India will rise and dummy variables positive indicate structural change occurs in a significant manner and vice versa.

The study has also done some diagrammatic representation.

Analysis:

Equations No. 1

Dependent Variable: Mbd

method: Ordinary Least Squares

Regression equation before estimation will be as follows:

$Mbd = \alpha + \beta_1 Mi + \beta_2 Ex + \beta_3 DM + e \ldots (1)$

Estimation Results:

Table:1 (a) Descriptive Statistics			
	Mean	Std. Deviation	N
Mbd	1.5366E2	175.55062	25
Mi	1.9180E3	1662.26040	25
Ex	5.565142E1	14.7522915	25
DM	.4800	.50990	25
a. Dependent Variable: Mbd			

From:Table:1(a) we observed that mean value of Import from Bangladesh is .015366 and standard deviation is 175.55while import from India is .0019180 and standard deviation is 1662.26.Mean value of Exchange rate is 0.5565142 and standard deviation is 14.75.Mean value of dummy variable is .48 and standard deviation is .51.

Table 1(b) Report of the result of the Regression Equation

VARIABLE	COEFFICIENT	STD.ERROR	T-STATISTIC	PROB.
C	-140.630	148.558	-.947	.355
Mi	.100	.016	6.179	.000
Ex	1.474	2.728	.540	.595
DM	44.601	49.165	.907	.375
Adjusted R-squared		0.914	F-statistic	85.985
Durbin-Watson stat.		1.389	Prob(F-statistic)	0.0000

From Table: 1(b), we observed that only import from India is positive at 1% level of significance. But other variables including constant term are insignificant. The equation provides a good fit at 91.4% of the

observed variation in Import from Bangladesh .We found that if the import from India rises by 1%, then the import from Bangladesh will raise by 0.10%. Durbin-Watson statistics is 1.389, which indicates that no autocorrelation prevails at 5% level of significance. F statistics is significant at 1% level of significance.
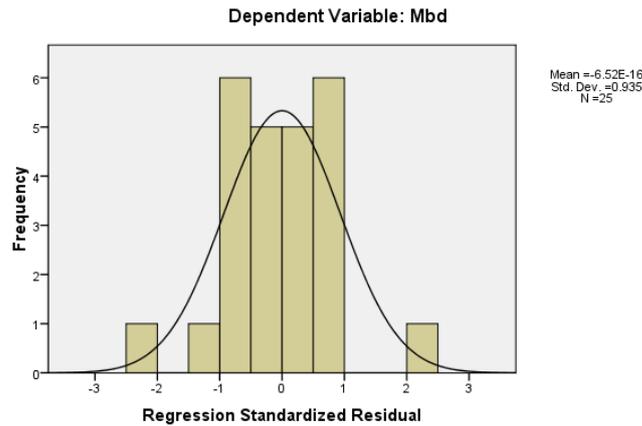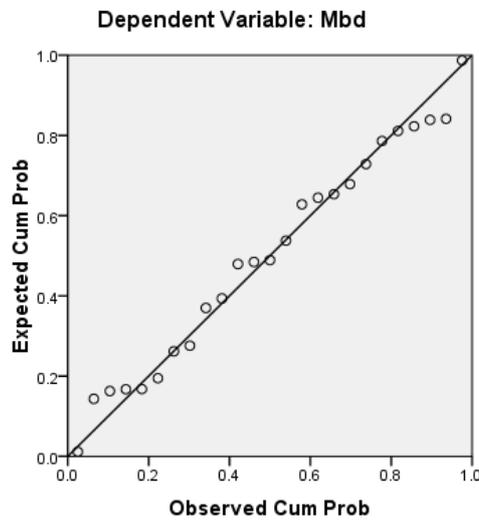
Dependent Variable: Mbd

Figure 1(a) is histogram of the numerical data used in the regression equation:1. It is a probability distribution of the continuous distribut

Dependent Variable: Mbd

From Fig. 1(b)-we observed that residuals are normally distributed.

Equations No. 2
Dependent Variable:Xbd
Method: Ordinary Least Squares
Regression equation before estimation will be as follows:
$Xbd = \alpha + \beta_1 Xi + \beta_2 Ex + \beta_3 DM + e \dots (2)$

Estimation Results:

Table 2(a): Descriptive Statistics			
	Mean	Std. Deviation	N
Xbd	1.9180E3	1662.26040	25
Xi	1.5366E2	175.55062	25
Ex	5.565142E1	14.7522915	25
DM	.4800	.50990	25

From:Table:2(a) we observe that mean value of export to Bangladesh is .001918 and standard deviation is 1662.26 while export to India is .015366 while standard deviation is 175.55 .Mean value of Exchange rate is 0.5565142 and standard deviation is 14.75.Mean value of dummy variable is .48 and standard deviation is .51.

Table 2(b) : Report of the result of the Regression Equation

VARIABLE	COEFFICIENT	STD.ERROR	T-STATISTIC	PROB.
C	-1354.701	1188.196	-1.140	.267
Xi	6.483	1.049	6.179	.000
Ex	39.721	20.406	1.947	.065
DM	137.459	403.427	.341	.737
Adjusted R-squared	0.937		F-statistic	120.963
Durbin-Watson stat.	.945		Prob(F-statistic)	0.0000

From Table: 2(b), we observed that Export to India is positive at 1% level of significance. Exchange rate is significant at 10% level of significance. But other variables including constant term are insignificant. The equation provides a good fit at 93.7% of the observed variation in Export to Bangladesh .We found that if the Export to India rises by 1%, then the Export to Bangladesh will riseby 6.483%. Durbin-Watson statistics is 0.945, which indicates that autocorrelation prevails. F statistics is significant at 1% level of significance.
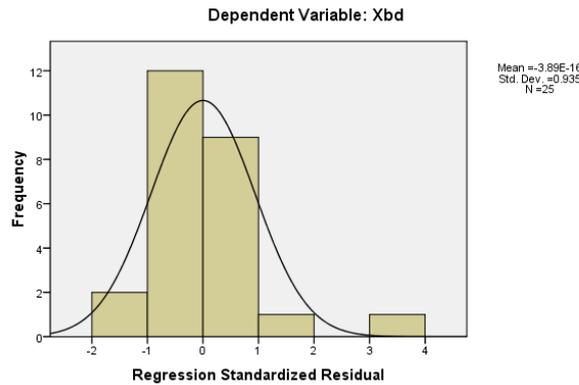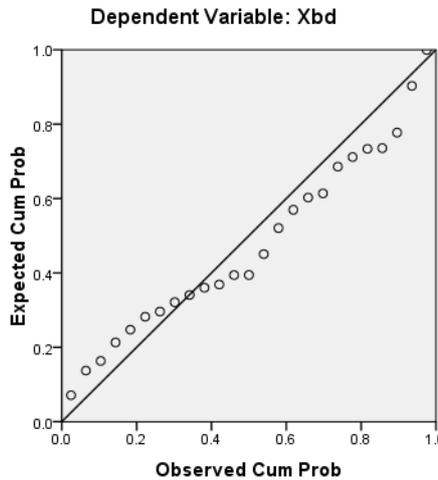

Fig:2(a) is histogram of the numerical data used in the regression equation:1. It is a probability distribution of the continuous distribution.

From Fig.2(b)-we observed that residuals are normally distributed.

Equations No. 3
Dependent Variable: EX
Method: Ordinary Least Squares
Regression equation before estimation will be as follows:
EX= α + β₁Mbd+ β₂Xbd+ β₃DM+ e … (3)

$$EX = \alpha + \beta_1 Mbd + \beta_2 Xbd + \beta_3 DM + e \ \dots \ (3)$$

Estimation Results:

| Table:3 (a) Descriptive Statistics			
Variable	Mean	Std. Deviation	N
Ex	5.565142E1	14.7522915	25
Mbd	1.5366E2	175.55062	25
Xbd	1.9180E3	1662.26040	25
DM	.4800	.50990	25

From:Table:3(a) we observed that mean value of exchange rate is .5565142 and standard deviation is 14.75229 while import from Bangladesh is .015366 while standard deviation is 175.55 .Mean value of export to

Bangladesh is .001918 and standard deviation is 1662.26.Mean value of dummy variable is .48 while standard deviation is .51.

Table 3(b) : Report of the result of the Regression Equation

VARIABLE	COEFFICIENT	STD.ERROR	T-STATISTIC	PROB.
C	53.792	2.730	19.707	.000
Mbd	.009	.017	.540	.595
Xbd	.004	.002	1.947	.065
DM	-14.480	2.423	-5.977	.000
Adjusted R-squared	0.923		F-statistic	97.036
Durbin-Watson stat.	.910		Prob(F-statistic)	0.0000

From Table:3(b), we observed that constant term is positive at 1% level of significance. Export to Bangladesh is significant at 10% level of significance. But import from Bangladesh is insignificant. The equation provides a good fit at 92.3% of the observed variation in exchange rate .We observed that if the Export to Bangladesh rises by 1%, then the exchange rate will rise by 0.004%. Durbin-Watson statistics is 0.910, which indicates that autocorrelation prevails. F statistics is significant at 1% level of significance.
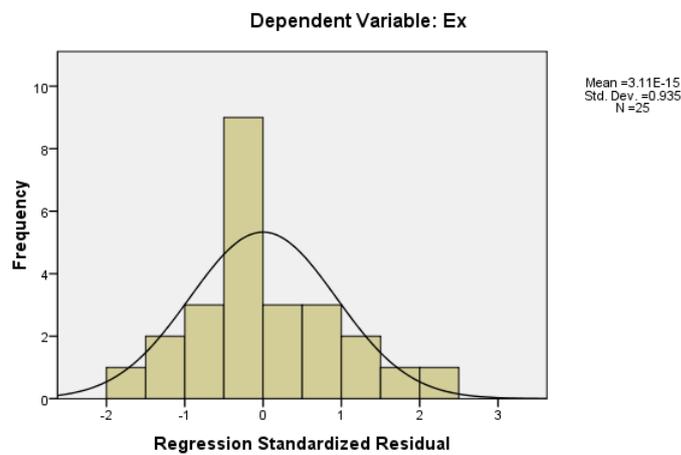
Fig:3(a) is histogram of the numerical data used in the regression equation:1. It is a probability distribution of the continuous distribution.
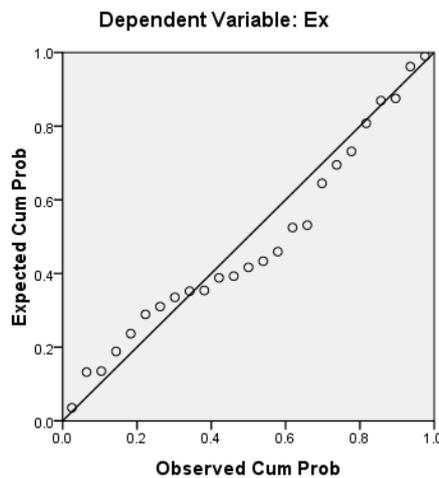
From Fig. 3(b)-we observe that residuals are normally distributed.

Equation no. 4
Dependent Variable: EX
Method: Ordinary Least Squares
Regression equation before estimation will be as follows:
EX= α+ β_1Mi+ β_2Xi+ β_3DM+ e … (4)

Estimation Results:

Table:4(a)Descriptive Statistics			
Variable	Mean	Std. Deviation	N
Ex	5.565142E1	14.7522915	25
Mi	1.9180E3	1662.26040	25
Xi	1.5366E2	175.55062	25
DM	.4800	.50990	25

From:Table:4(a) we observed that mean value of exchange rate is .5565142 and standard deviation is 14.75229 while import from India is .-0019180 and standard deviation is 1662.26040 .Mean value of export to India is .015366 and standard deviation is 175.55062.Mean value of dummy variable is .48 while standard deviation is .51.

Table 4(b) : Report of the result of the Regression Equation

VARIABLE	COEFFICIENT	STD.ERROR	T-STATISTIC	PROB.
C	53.792	2.730	19.707	.000
Mi	.004	.002	1.947	.065
Xi	.009	.017	.540	.595
DM	-14.480	2.423	-5.977	. .000
Adjusted R-squared	.923		F-statistic	97.036
Durbin-Watson stat.	.910		Prob(F-statistic)	0.0000

From Table: 4(b), we found that the constant term is significant at 1% level of significance. Import from India is significant at 10% level of significance. Dummy variable is significant at 1% level of significance which indicates structural changes. But export to India is insignificant. The equation provides a good fit at 92.3% of the observed variation in Import from Bangladesh .We observed that if the import from India rises by 1%, then the exchange rate will raise by .004. Durbin-Watson statistics is .910, which indicates that autocorrelation prevails. F statistics is significant at 1% level of significance.
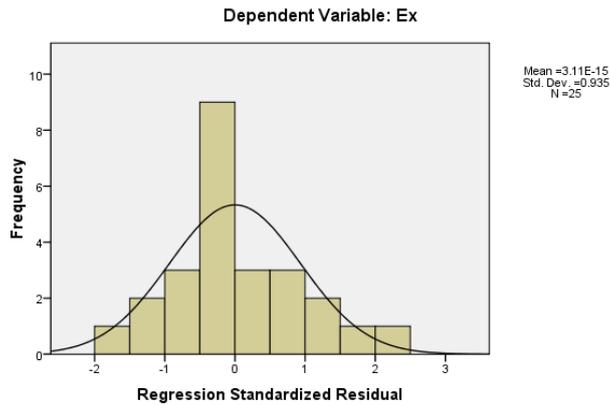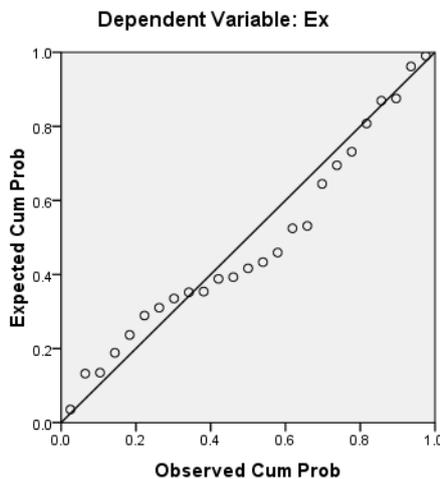

Fig:4(a) is histogram of the numerical data used in the regression equation:1. It is a probability distribution of the continuous distribution.

V. ANALYSIS OF THE FINDINGS

From the data analysis, followings our observed:
• Constitution of a high level joint study group involving government officials from various
ministries and policy experts, in order to implement current deliberations and to plan future developments strategically.
• Framing of joint action plan with the vision of successful trade facilitation, by way of responsibility sharing with time bound activities.
• Infrastructural developments and up gradation of all the LCSs with better approach roads, better parking spaces, warehousing facilities, quarantine and testing facilities etc., for trade facilitation.
• Facilitate and sign a bilateral/regional motor vehicle agreement between the nations wherein
vehicles can directly go to the final destination in both the countries/countries in the region
and then carry back consignments when travelling back. This will help in dealing with transportation bottlenecks at the LCS, ultimately reducing trade costs and enhancing consumer benefits.
• Harmonisation or mutual recognition of standards related to sanitary and phyto-sanitary regulations by both country, at least on those items that have high trade potential can help
in lowering standard related NTBs, boosting trade.
• Special attention and extra efforts towards the development of small LCSs like Srimantapur,
Sutarkandi, Demagiri, Dalu, Borosa on Indian side and Birol, Ramgarh, Bilonia on Bangladeshi side.
• Replication of border that along the India-Bangladesh border for the development and progress of the interiors of the region.
• Work and development of each LCS should be done simultaneously, at adjoining ports on
both sides of the border, so as to provide easy better facilities to trade facilitators.
• Committee of custom officials and other well informed stakeholders should be formed, with the agenda of generating awareness in the local (small and petty) traders, through consultation meetings, for updating their knowledge on documentation, inspection and other trade related procedures.

VI. CONCLUSION

In conclusion, since early 1990s India and Bangladesh have pursued trade liberalisation policies. Before that in 1985, the South Asian Association for Regional Cooperation (SAARC) was established, comprising of seven South Asian countries (Bangladesh, Bhutan, India, Nepal, Maldives, Pakistan and Sri Lanka) with the vision of accomplishing political and economic cooperation among the member countries. Afghanistan joined later.

The obvious and most relevant means of cooperation was to promote trade within the region.

However and notwithstanding efforts from member countries, the SAARC initiative to promote regional trade did not take off in a substantial way, especially when compared to similar initiatives in other regions of the world. To ameliorate this situation, an agreement was signed by the SAARC member countries in 1993, namely the SAARC Preferential Trading Agreement (SAPTA).

The SAPTA Agreement aimed at trade expansion among the member countries through mutual concessions relating to tariff, para-tariff, non-tariff measures and direct trade measures. In 2005,

SAPTA paved the way for the Agreement on South Asian Free Trade Area (SAFTA), which is expected to usher in a new era of gradual trade liberalisation.

The SAFTA Agreement resulted in significant progress on tariff liberalisation in the region. However, owing to the distinct speeds of initiating trade policy and related reforms by the respective countries, Bangladesh's bilateral trade deficit with India widened substantially over the years. This created a trade imbalance in favour of India and contributed to economic and political tensions between the two neighbours. It is important to mention that though trade imbalance has widened, over the last decade, there was not much change in the share of Bangladesh's import from India as a percentage of its global import.

India and Bangladesh offer natural markets for many products. In their mutual trade, they enjoy the advantages of reduced transaction costs and quicker delivery due to geographical proximity, common language and a heritage of common physical infrastructure. Unfortunately, though they enjoy mutual comparative advantage in many products, bilateral trade stood at US$ 5.5bn in the year 2012, which is far below the potential.

Lowering incidence of barriers such as poor trade infrastructure and services through progressive reforms could lead to substantial lowering of bilateral trade costs and estimates indicate that bilateral trade in about 60 identified high potential commodities could rise by about US$1.2bn per annum, which is more than 20 percent of the current volume of bilateral trade.

Therefore, this study underscores the development, structure and current picture of India- Bangladesh trade which happens through land routes to come out with a set of policy recommendations for trade facilitation and enhancement of greater economic cooperation between the two neighbours. It assesses the capacity and efficiency of existing trade resources and explores the possibilities of leveraging them for the betterment of cross-border trade. It delves deeper into the prevalent bottlenecks in the administration and other impediments related to trade-related services in the current cross-border trade structure to look for solutions, with a focus on

generating new market opportunities for small-scale manufacturing sector and the agrarian sector, especially at the border areas in East and North East India. Ali and Medhekar (2016) properly suggested for strengthening BIMSTEC as a regional bodies so that it can work as a catalyst of economic prosperity.

We believe that if the set of policy recommendations provided in this study are recognised and implemented, the bilateral trade scenario of India and Bangladesh stands to gain substantially.

VII. REFERENCES

1. Ali,M.M. and Medhekar,A.(2016)," Bilateral Trade through official channel between India and Bangladesh: An analysis with the use of Time series forecasting models", Journal of Economic Cooperation and Development,Vol.37,No.2 .
2. Arize, Augustine C., Thomas O., D. J. Slottje. (2000) "Exchange Rate Volatility and Foreign Trade: Evidence from Thirteen LDC's." *Journal of Business and Economic Statistics*, 18(1): 10-17.
3. Balaji, C.D. (2008), "Textiles: A Roadmap for Competitiveness in the Post-Quota Regime", in P.Rameshan (ed.), WTO, India and Emerging Areas of Trade – Challenges and Strategies, EXCEL Books, New Delhi. pp. 177-192.
4. Beck, Thorsten (2002), "Financial Development and International Trade: Is There a Link?", *Journal of International Economics*, Vol. 57 No.1, pp. 107-131.
5. Bhanumurthy and Rai (2003), Determinants of Foreign Institutional Investment in India, The role of Risk, Return and Inflation, Development Planning Centre. Institute of Economic Growth, University of Delhi, Delhi.
6. Blonigen , Bruce A. and Chad P. Bown (2003), "Anti-dumping and Retaliation Threats", *Journal of International Economics*, Vol. 60 No.2, pp. 249-273.
7. Bown, C. and M. Crowley (2003), Trade deflection lands in trade depression, Federal Reserve Bank of Chicago, Working Paper 26.
8. Caves, Richard E. (1974), "Multinational Firms, Competition, and Productivity in Host-Country Markets", Economica, Vol. 41 No.162, May.
9. Debashis chakraborty and Arup Guha (2007), "Should India opt for Full Capital Account Convertibility? Some Exploratory Results", Foreign Trade Review, Vol.42 No.1, April – June, pp.3- 27.
10. Finelli, J.M. and R. Medhora (2002), "Finance and Competitiveness: Framework and Synthesis", in J.M. Fanelli and R. Medhora (eds.), Ottawa, Finance and Competitiveness in Developing Countries, International Development Research Centre, pp. 1–19.
11. Gangwar, A.C. and I.J. Singh (1975), "Economic Feasibility of Financing Cotton Growers in Hissar District (Haryana)", Financing Agriculture, Vol. 12 No.5, April-June, pp. 13-18.
12. Garten, Jeffrey (1994), New Challenges in the World Economy: The Anti-dumping Law and U.S. Trade Policy, Speech presented at the US Chamber of Commerce, Washington D.C., April 7.
13. Grossman, G.M. and E. Helpman (1991), Innovation and Growth in the Global Economy, MIT press, Cambridge.
14. Guangling Liu (2007), "The Impact of Exchange Rate Volatility on International Trade: The Case of South Africa", Asian-African Journal of Economics and Econometrics, Vol. 7, Nos. 1-2, pp. 289-305.
15. Howitt, P.(2000), " Endogenous Growth Theory and Cross Country Differences", American Economic Review, Vol. 90.
16. Jeevan Kumar Khundrakpam (2009), "Have Economic Reforms Affected Exchange Rate Pass-Through to Prices in India? "Economic and Political Weekly", April 19, pp.71-79.
17. Konings Jozef and Vandenbussche Hylke (2004), Anti-dumping Protection and Productivity Growth of Domestic Firms, CEPR Discussion Paper No. 4620.
18. Kumar, R. and R. Dhawan (1991), "Exchange Rate Volatility and Pakistan's Exports to the Developed World, 1974-75, World Development, Vol. 19, pp. 1225-1240.
19. Mandalia, V. and J.C. Kukadia (1975), "A Study of Economics of Cotton Cultivation in Baroda District (Gujarat)", Financing Agriculture, October-December, pp. 12-18.
20. Neena Malhotra (2008), "Growth, Structure and Instability of Agricultural Exports and Imports of India," Anvesak, Volume-38 Number-1, January-June.
21. Padmanand, V. and D.P. Jadeja (2007), Strengthening Industry Value Chains-Competitiveness and Poverty Alleviation in 'Textiles' Clusters in India, Textiles Committee, Ministry of Textiles, Government of India, Mumbai.
22. Prusa, T.J. and Skeath (2002), The Economic and Strategic Motives of Anti-Dumping Filings, Weltwirtschaftliches Archiv, Vol. 138.
23. Rajan, R. and Lulgi Zingales (1998), 'Financial Dependence and Growth', The American Economic Review, Vol. 88 No.3, pp. 559-586.
24. Rivera, Luis A. and Paul M. Romer (1990), "Economic Integration and Endogenous Growth", NBER Working Paper 3528.
25. Samanta, S.K. (1998), "Exchange Rate Uncertainty and Foreign Trade for a Developing Country: An Empirical Analysis", *Indian Economic Journal*, Vol. 45, pp. 51-65.
26. Sandhya Ananthanaryanan, Chandrasekhar Krishnamurthi, and Nilajan Sen (2003), "Foreign Institutional Investors and Security Returns: Evidence from Indian Stock Exchanges".
27. Suravinda, Ch. (1993), India's Trade Relations with Major Countries of Arab League, Ph.D thesis submitted to Nagarjuna University, Guntur.
28. Syamala Gopinath (2006), "Foreign Exchange Regulations - A Review", *Reserve Bank of India Bulletin,* January, pp. 79-82.
29. Tanushree Mazumdar and T.M. Vijay (2006), "Do 'Motives' behind FDI Flows have any Implications for their Effects on the Host Country?", *The Icfai Journal of Applied Economics*, Vol. 5 No. 3, May, pp. 48-60.
30. Uma Rani (1993),"Effects of Exchange Rate Volatility on Trade: India's Trade with Developed World", *Journal of Foreign Exchange and International Finance,* Vol. 3 No. 2, pp. 302-317.
31. Vijaya Katti (2005), "Foreign Trade Policy - An Appraisal", *Yojana,* Vol. 49 No.5, May, pp.43-46.
32. Vijaya Katti, Shailja Joshi and Rahul Pacheriwala (2007) , "Sunrise Sectors in India: Role of Export Promotion Councils", *Foreign Trade Review*, January –March, Vol. 41 No. 4, pp. 3-47.
33. World Trade Organisation (WTO) (2010), World Trade Report 2010 – Trade in Natural Resources, WTO, Geneva, Switzerland.
34. Yazid, A.A. and M.S. Muda (2006), "The Role of Foreign Exchange Risk Management in Malaysia", *Irish Journal of Management,* Vol. 26 No. 2.