IMPACT ANALYSIS OF INDIA ASEAN FTA ON INDIAN TEXTILES INDUSTRY: A PARTIAL EQUILIBRIUM APPROACH

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ABSTRACT

India signed a Free Trade Agreement with ASEAN members on 13th August 2009. This paper analyses the impact of the FTA on Indian Textiles and Clothing industry. Gravity model has been used to analyse the impact. It is found that the FTA has the significant impact on India's imports compared to its exports. Tariff plays insignificant role for most of the products both for imports and exports. There has been significant impact on fabrics and yarn due to this FTA. The maximum increase in India's imports of textiles and clothing will be from Singapore followed by Thailand and Malaysia. The maximum impact on India's exports will be from Philippines followed by Thailand and Malaysia.

Keywords: Indian Textiles Industry**,** Free Trade Agreement, ASEAN, Tariff Elasticity

1. INTRODUCTION

This paper analyses the impact of India ASEAN Free Trade agreement signed on August 13, 2009, and implemented on January 1, 2010 on Indian Textiles industry. Since only eight years have been elapsed since the FTA's implementation, this paper attempts to deal with ex ante analysis. Since its conception there have been long debates in the public sphere reaching up to the level of the Indian Parliament regarding the pros and cons of the agreement on the Indian economy. The debates were mostly centralized on certain commodities like palm oil, rubber, coffee, black tea and pepper. There was widespread apprehension in India that the FTA will drastically increase the import of these goods from the ASEAN countries and this would hurt these industries in India. The debate had its effect on the outcome of the FTA. This paper tries to analyse the impact of this FTA on the Indian textiles sector due to proposed tariff cuts.

The focus on certain commodities and their alleged tariff – sensitiveness, especially in the public domain, took the attention away from the likely consequences on the rest of the commodities and

on other issues that may be more pertinent than tariffs in determining their imports. These and many other issues were however kept alive by the academic discourse on the FTA. For example Pal and Dasgupta (2008), Okamoto (2006) and Francis (2011) pointed out that production networking among Indian and ASEAN firms is expected to rise after the FTA. Pal and Dasgupta (2009) further point out that the automobile sector will emerge as one of the main beneficiaries while Chandran and Sudarsan (2012) argues that the fishing industry will be benefitted. There will be some adversely affected industry. For example Nagoor and Kumar (2010) concluded that Vietnam will enjoy huge tea market at a very low price. Also Veeramani and Gordhan (2011) pointed out that there will be significant increase in imports of plantation commodities by India from ASEAN members. The possibility of ill effect was analysed from a different perspective by Bhattacharyya and Mandal (2009) who argued that India's balance of trade will be adversely affected due to the FTA. The welfare consequence of the FTA was also addressed. Nag and Sikdar (2012) showed that there will be welfare improvement for India but the gain will materialize only after the full implementation of the tariff elimination process.

Given the above perspective the paper tries to analyse the effect of tariff reduction on Indian textiles industry in a partial equilibrium framework. The paper is arranged as follows. Section 2 introduces textiles and clothing sector in India. Section 3 briefly describes direction of India's textiles and clothing trade. The methodology of this study is covered in section 4. Section 5 deals with the impact of Indo ASEAN trade in textiles and clothing. Concluding comments are discussed in section 6.

2. TEXTILES AND CLOTHING SECTOR IN INDIA

The history of Indian textile industry extends deep into the hoary past and enriches civilized human heritage. It has been acknowledged by one and all that the textile industry was the pioneer of Indian industrialization. Even today it occupies a pivotal position as the clothier of the nation. The Indian textile industry is one of the largest segments of the Indian economy accounting for over one fifth of the industrial production and it contributes 5% of GDP. The industry besides proving the clothing requirements of the people has the distinction of being the largest foreign exchange earner to the country. It has immense potential for employment generation, particularly in the rural and remote areas of the country on account of its close linkages with agriculture. It provides direct employment of about 40 million people. It is the only industry, which is self reliant and complete in value chain i.e. from raw materials to highest value added products. i.e., garments/made-ups. As a consequence, the growth and development of the industry has a significant bearing on the overall development of the Indian economy. The health of the industry is, therefore, important not only to sustain its own growth but also to the development of the linked industrial activities.

The textile industry in India consists of mills, handlooms and more recently, power loom & hosiery. The industry began to grow in 19th century. This century saw a remarkable rise in the cotton mills industry. But the 20th century has undergone significant change. There has been a dismantling of weaving in the mills and a shift to small weaving factories called power looms. Since 1980 the organized mill sector no longer occupies the commanding heights of the of the textile industry. The textile industry more recently (after 1985) is dominated by the apparently decentralized power loom sector with its shrinkage cost advantage. This sector is called unorganized because of its small size with limited economies of scales. The power loom sector, which shows a mushroom growth, spreaded across Bhiwandi, Surat, Erode, Karur, Chennai, Salem, Coimbatore, Malegaon and Ichalkaranji. It contributes to nearly 60% to the total cloth production, followed by Handlooms (18%), Hosiery (17%) and the Mill sector (3.7%). The composite mill sector (having spinning, weaving and processing facilities under one roof) is going sick and incurring huge loss.

The knitwear and hosiery sector in India has become centre of attraction over the years. It holds the position in the Indian textile economy after handlooms. Indian handloom sector has a glorious tradition of excellence and craftsmanship dates back to our rich cultural heritage. The handloom sector comes second after powerloom, which accounted for 18% of the overall cloth production. However this sector, which suffers from inherent disadvantages in terms of productivity, adaptability and price competitiveness, is going through a declining stage over the past few years.

Readymade garment sector shows a commanding position by contributing a significant share in the Indian textile export. It gives a platform on which India's textile export can establish a strong base. After the liberalization came in 1991, the India's export of textiles has show an impressive growth. Ready made garments are now one of the most important export items in the country in terms of volume, value and net foreign exchange earnings. India's government exports were negligible in early 70's and there was quantum jump to US $ 4.7 billion in 1999-2000 accounting for about 50% of India's total textile and clothing.

Over the last two decades consumers preference for fibre and product types have undergone significant changes. These changes have attributed to the changes in manufacturing scenario, changes in the exiting fibre category increasing preference for readymade garments and also changes in price factor. There have been changes in consumer preference for fibres, additions and up-gradation of exiting fibre. In the first decade, i.e., from 1981 to 1990 cotton dominates (53%) over the man-made/mixed/blended fibre (44%) in the consumption share. From the production point of view, cotton captured the major market share as compared to blends in the first decade.

The process of liberalization was launched in 1991 in the second decade, i.e., from 1991-2000. This enables the textile industry to become free in the world market. The industry in the last decade has become gradually competitive not only in terms of prices, but also in terms of quality and quantity. So after and before liberalization textile industry had distinct differences. After 1991 when the liberalization started the market for textile has left with various opportunities to play in the international market. Indian products have become popular in abroad and domestic market also flooded with foreign product. Trade was subjected to less restriction. There have been significant changes in production and consumption fronts. Cotton is taken over by blended and 100% non cotton textile together in the both consumption as well as the production fronts in the second decade.

2.1 Trade Performance of Textiles and Clothing Sector

The textiles sector is the second largest provider of employment after agriculture. Textiles industry has made a major contribution to the national economy in terms of net foreign exchange earnings and contribution to GDP. Therefore, textiles sector in India play a very vital role for improvement of India's economy. Textiles industry enjoys competitive edge due to availability of low cost and skilled manpower. India is one of the largest exporters of yarn in the international market. India's share in the global textiles exports is 5%. China is leading the table by capturing 39% of the global exports of textiles. Vietnam and Bangladesh are also having significant share in the world textiles exports. Slowdown in Chinese economy gives the Indian textiles sector the competitive edge to grab the market share of China in the developed world, like European Union and USA (constitute 60% of the global textiles export market).

India's textiles sector is flourishing due to potential market in both national and international market. Let us first concentrate in exports of India's textiles and clothing sector. It is the largest contributor of India's exports. In contributes 13% of India's total exports. Important commodities of textiles exports are cotton yarn, manmade staple fibre, manmade filament yarn, apparel & clothing accessories, silk, wool, knitted fabrics etc. There has been significant growth in textiles exports from India. India's exports of textiles and clothing to World market are given in table 1. Textiles exports grew to 26540105 thousand USD in 2017 from 20969200 thousand USD in 2007 implying a growth rate of 3% per year. Apparel and clothing accessories are the largest contributor of total textiles and apparel exports from India in 2017. It had a share of 46%. Other major contributors are cotton yarn (18%), other made up textiles articles (14%), manmade filament yarn (6%), manmade staple fibre (5.8%) etc. Apparel and clothing accessories are growing at 3% from 2007 to 2017. Though the non woven yarn sector is having low share (1%) in the textiles exports it shows the highest growth rate of 13% during the same decade. The other high growing segments are knitted or crocheted fabrics (20%), laminated textile fabrics (8%),

special woven fabrics (5%) etc over the period from 2007 to 2017. Surprisingly silk export is showing the negative growth rate   (-8.4%) over the same decade.

Table 1: India's Exports and Imports of Textiles and Clothing to World in 2017 ('000 USD)

HS 2 Digit Level	Product Description	Exports	Imports
50	Silk.	56954.56	194228.37
51	Wool, fine/coarse animal hair, hors	114618.31	272119.13
52	Cotton.	4706546.49	991415.40
53	Other vegetable textile fibres	325896.90	245657.35
54	Man-made filaments.	1579133.41	633940.56
55	Man-made staple fibres.	1542694.98	511851.71
56	Wadding, felt & nonwoven; yarns	282056.37	239948.68
57	Carpets and other textile floor	1280347.36	80849.26
58	Special woven fab; tufted tex fab	281669.63	150236.71
59	Impregnated, coated, cover/laminate	173119.36	636896.38
60	Knitted or crocheted fabrics.	237986.40	443048.81
61	Art of apparel & clothing access	6074281.67	254444.62
62	Art of apparel & clothing access	6186914.44	287466.75
63	Other made up textile articles	3697885.18	352571.19

Source: World Integrated Trade Solution (WITS) Database

Next, turn to the import figures during the same decade from 2006 to 2016 (Table 1). India enjoys favourable balance of trade in textiles sector. Textiles imports has increased from 3039251 thousand USD in 2007 to 5294675 thousand USD in 2017. Among the textiles items cotton yarn shows the maximum imports (19%) by India from the rest of the world followed by laminated textiles fabrics (12%), manmade filament yarn (11.9%), and knitted or crocheted fabrics (8.4%). Unlike exports, apparel and clothing accessories show the highest growth rate of 67% over the decade from 2007 to 2017. Other major growing segments in imports are knitted fabrics (24%), other made up textiles articles (21%), non woven yarns (15%) etc.

3. DIRECTION OF TEXTILES AND CLOTHING TRADE

Now turn to the export markets for textiles and clothing. Important destinations for textiles exports are OECD (Organization for Economic Cooperation and Development) member countries, United States, European Union, parts of Asia and Middle East. India's exports of textiles and clothing to different markets are given in table 2. The table concludes that India's most of the textiles and clothing exports goes to OECD members (39%) followed by European

Union members (19%), North America (16%), Middle East and North Africa (12%) and East Asia (8%). India's export to ASEAN countries stood at a low level of 3%. Let us have a look at the growth rate of textiles and clothing exports in different important destinations over the decade from 2007 to 2017. During this period highest growth rate is observed for Latin American countries (7.5%) followed by ASEAN Countries (7.2%), Middle East and North African countries (7%) and East Asian countries (3%).

Table 2: India's Exports and Imports of Textiles and clothing ('000 USD)

Major Destinations	Exports		Imports	
	2007	**2017**	**2007**	**2017**
All ASEAN	603780.37	1038809.18	196847.94	523798.15
East Asia – Pacific	2409538.76	3095060.92	1940637.16	3338921.41
EU27 Members	7146271.78	6876658.44	285148.03	422534.80
Latin America	713941.34	1247729.26	15275.42	25561.68
Middle East - North Africa	2514042.46	4266954.83	109335.22	109108.28
North America	5048080.16	5950600.01	149469.05	537841.77
All OECD Members	13815947.68	14743194.58	821611.00	1554968.19

Source: WITS Database

India's imports are also reported in the table 2. It is observed form the table that East Asia Pacific countries top the table (51%) as far as India's imports of textiles and clothing industry is concerned. Other major countries for India's imports are China (39%), South Asia (10%), ASEAN countries (8%) and European Union (6.5%). India's imports from North America are growing at a highest rate of 26% as far as growth rate of India's imports are concerned over the decade from 2007 to 2017. It is followed by South Asia (19%), ASEAN countries (17%), China (11%).

India's textiles and clothing trade with ASEAN countries is represented in table 3. The growth rate of textiles trade with ASEAN countries is significantly higher than that of India's growth rate of trade with important trading partners of the world over the period from 2007 to 2017. India enjoys favourable balance trade in textiles and clothing trade with ASEAN. India's growth rates of exports and imports with ASEAN countries are same as of 13%. However, India's exports are at a much higher level that ASEAN's exports of textiles and clothing. Therefore, India penetrated ASEAN markets to a greater extent than ASEAN has been able to do for Indian markets. Thus the reduction of tariffs due to the India ASEAN FTA will have significant impact on India's exports of textiles and clothing to ASEAN markets.

Table 3: India's Textiles and Clothing Trade with ASEAN Countries ('000 USD)

Year	Exports	Imports
2007	603780.37	196847.94
2008	706548.87	249727.75
2009	610344.00	265223.56
2010	1114278.79	309565.81
2011	1150274.03	393037.97
2012	1145677.05	375232.75
2013	1620841.45	406146.70
2014	1591187.07	487149.80
2015	1312310.34	589817.46
2016	1203419.68	545635.56
2017	1038809.18	523798.15

Source: WITS Database

4. METHODOLOGY

Here we use frictionless gravity model for each HS 6-digit code under textiles and clothing sector for trade between India and the ASEAN countries. The estimated equation is then used to simulate the trade impact under the alternative scenario of a Free Trade Agreement (FTA) between the two. We first estimate the gravity for India's and the foreign country's imports where the foreign country is a member of the ASEAN. Next the predicted values are computed when the tariff the variable in these equations takes zero values and the predicted values so obtained is compared with the predicted values obtained with actual tariff rates. The time period for our analysis is 1989 to 2009.

Given the above perspective the models can be formally represented as follows. Let us start with the frictionless gravity model:

$$\text{LnImp}^{WT}_{ijt} = \beta_0 + \beta_1^I Ln(GDP_{it} * GDP_{jt}) + \beta_2^I LnTar_{ijt} + u_{ijt} \qquad (1)$$

$$\text{LnImp}^{WT}_{jit} = \beta_3 + \beta_4^A Ln(GDP_{it} * GDP_{jt}) + \beta_5^A LnTar_{jit} + u_{jit} \qquad (2)$$

(i = India, j = ASEAN 6)

Where Imp^S_{ijt} is the import of country i (in our case India) from country j (the six ASEAN members considered here) in time period t for different situations: WOT – model without tariff

and WT – model with tariff. GDP_{it} and GDP_{jt} are the income levels for country India and ASEAN 6 for time period t respectively, Tar_{ijt} is the tariff imposed by India for imports from country j (ASEAN 6) in time t , Tar_{jit} is the tariff imposed by ASEAN members on India in time t and u_{ijt} is the error term. The effect of the FTA on India's imports is measured by:

$$\delta_{ijt} = \hat{Imp}_{ijt}^{WOT} - \hat{Imp}_{ijt}^{WT} \qquad (3)$$

Where Imp^{WT}_{ijt} is the predicted value when actual tariff rates are used and $\hat{Imp}_{ijt}^{WOT}$ is the predicted value when $Tar_{ijt} = 0$.

Similarly, the influence of FTA on India's export is

$$\delta_{jit} = \hat{Imp}_{jit}^{WOT} - \hat{Imp}_{jit}^{WT} \qquad (4)$$

Note that the gravity model has been used in its frictionless version as all the countries in the ASEAN are very close to each other – though they differ significantly in terms of GDPs – making distance irrelevant as a variable that determines trade flows. The distance variable when computed turns out to be almost similar to the constant term with a correlation greater than 0.9.

Note that the estimates should ideally internalize the fact that the rates of decline in tariff (and hence the terminal year for achieving the zero tariff point) for different products are different. There are also some products for which the zero tariff point will never be reached as they are outside the ambit of the FTA. Pace of reduction of tariffs of a particular industry will depend on the tract in which it is included.

5. IMPACT ON INDO ASEAN TRADE IN TEXTILES AND CLOTHING

5.1 Impact on India's Imports

Table 4 reports the average values of the tariff elasticity and intercept term for all the regression conducted at the six digit level of the products of textiles and clothing industry. Several important points can be observed from the table. First, tariff elasticities are higher for Thailand and Philippines. Second, the table highlights the higher values of the intercept term. The higher values of intercept terms reflect the fact that the India's imports of textiles and clothing will be high even if the GDPs and tariffs are zero. This indicates that India's textiles trade relationship

with ASEAN countries has extremely firm and secure. Thus, tariff plays an insignificant role to explain the trade between India and ASEAN countries.

Table 4: Tariff Elasticity and Intercepts for Tariff Significant Products (India's Import)

Country	No. of Six Digit Products	Mean Intercept	Standard Deviation (SD) Intercept	Mean Tariff Elasticity	Standard Deviation (SD) Tariff Elasticity	Correlation between Tariff Elasticity & Intercept
Brunei	2	NA	NA	NA	NA	NA
Indonesia	514	96.78	63.65	-4.53	2.14	-0.82
Malaysia	373	141.06	126.61	-5.50	4.14	-0.62
Philippines	138	-194.49	NA	-6.62	NA	NA
Singapore	587	92.42	73.23	-6.07	4.70	-0.45
Thailand	662	225.88	645.24	-8.33	11.88	-0.83

Source: Values in the table are calculated by the author from the data available in the UN Comtrade CD Rom

The paper tries to find out the aggregate impact on textiles and clothing industry. To do this we will first distinguish between the affected industry in textile and clothing sector vis-a-vis the aggregate impact on overall imports of textiles and clothing industry. Column 2 in table 5 reports the second effect. The first effect can be found out from both the column 2 and column 5 of the table. For example, in Thailand, there will be 39% increase in imports for the tariff significant products. But these products account for only 28% of total trade in textiles and clothing with Thailand. Therefore, the aggregate impact is only 11% in India's imports of textiles and clothing products from Thailand. The table 5 clearly indicates that maximum increase in India's imports of textiles and clothing will be from Singapore followed by Thailand and Malaysia.

India has already signed a comprehensive economic cooperation agreement with Singapore in April 2003. Thus, the average tariff rates have already been reduced to a significant level. Therefore, it appears that increase in imports is higher at the lower rates of tariffs. This is also repeated in high value of imports from Thailand with which India has a free trade agreement in 2003.

Table 5: India's Import from ASEAN 6 (Analysis of Gravity Model)
('000 US$)

Country	% increase of predicted Import from Positive Tariff to zero tariff	Actual Import in 2009	Actual Import (Tariff Sig) in 2009	% Share
	Gravity Model		Gravity Model	Gravity Model
Brunei	0.00	131.52	0.00	0.00
Indonesia	6.13	360.64	73.67	20.43
Malaysia	6.78	188.07	144.47	76.82
Philippines	8.65	7.93	1.99	25.09
Singapore	85.68	76.86	10.93	14.22
Thailand	38.77	438.78	122.40	27.90

Source: Values in the table are calculated by the author from the data available in the UN Comtrade CD Rom Note
1. Actual Import (Tariff Significant)--Actual import in case of products for which tariffs are significant.
2. Actual Import means actual total import of India from ASEAN 6.

5.1.1 Product Wise Results

Table 6 reports the product wise impact on textiles and clothing sector. It lists the top 10 products which show the significant increase in India's imports from ASEAN 6. Most of the top 10 products belong to fabrics, fibre and yarn. Maximum impact will be for men's boys' jackets & blazers (HS 610333). There will be two and half times rise in India's imports of this product from Thailand. Other products of significant rise in imports are woven fabric & yarn (HS 630800), hosiery products (HS 611510), Floor cloths (HS 630710) and woven fabrics of cotton (HS 521119) etc. As far as all the textiles and clothing products are concerned the percentage of imports accounted for by intermediate goods, whose tariff elasticities are significant, is 60%. It clearly indicates that impact of the FTA will more on intermediate goods than on final products. According to BEC (Basic Economic Classification) category five of the top 10 products are intermediate processed goods. All the top ten products are covered under normal track of tariff reduction except two products. One is under sensitive track under which there will very small reduction of tariff and one under exclusion list where there will be no reduction of tariffs. 50% of the products accounted for processed goods. Four of the top 10 products are processed goods.

Table 6: India's import of top 10 six digit Textiles and Clothing products from ASEAN 6 (Values are in '000 US$) (Gravity Model)

Product Code	Product Name	BEC Category	Goods	Actual Increase in Imports	Country	Tracks
610333	Men's/boys' jackets & blazers, knitted/crocheted, of synthetic fibres	Semi-durable	Final Good	2.198264	Thailand	NT-2
630800	Sets consisting of woven fabric & yarn, whether/not with accessories, for making up into rugs/tapestries/embroidered table cloths/serviettes,/similar textile articles, put up in packings for retail sale.	Semi-durable	Final Good	0.034024	Thailand	NT-1
611510	Graduated compression hosiery (eg. stockings for varicose veins) & footwear without applied soles, knitted/crocheted.	Non-durable	Final Good	0.09971	Thailand	NT-1
630710	Floor-cloths, dish-cloths, dusters & similar cleaning cloths	Semi-durable	Final Good	0.549507	Thailand	NT-1
521119	Woven fabrics of cotton (excl. of 5211.11 & 5211.12), containing <85% by weight of cotton, mixed mainly/solely with man-made fibres, unbleached, weighing >200g/m2	Processed	Intermediate Goods	0.393081	Thailand	NT-2
550319	Synthetic staple fibres, other than of aramid, but of nylon/other polyamides; not carded, combed/othw. processed for spinning.	Processed	Intermediate Goods	7.133537	Singapore	NT-2
540419	Synthetic monofilament, other than of polypropylene/elastomeric, of 67 decitex/more & of which no cross-sectional dimension exceeds 1 mm; strip & the like (eg. artificial straw) of synthetic textile materials of an apparent width not > 5 mm.	Processed	Intermediate Goods	9.648606	Thailand	ST
611529	Panty hose, tights, stockings, socks & other hosiery, & footwear without applied soles, of other textile materials, other than of synthetic fibres, knitted/crocheted.	Non-durable	Final Good	0.035611	Thailand	NT-1
580300	Gauze, other than narrow fabrics of heading 58.06.	Processed	Intermediate Goods	0.222833	Thailand	NT-1

| 540244 | Yarn other than high tenacity/textured yarn (excl. sewing thread), single/untwisted/with a twist not >50 turns per metre, elastomeric, not put up for retail sale | Processed | Intermediate Goods | 4.801455 | Thailand | EL |

Source: Values in the table are calculated by the author from the data available in the UN Comtrade CD Rom

5.2 Impact on India's Exports

Table 7 reports the average values of tariff elasticity and the intercept term for all the regressions conducted at the HS six digit level. It is clearly observed that mean tariff elasticity for India's imports (-6.21) is much higher than exports (-2.76). Therefore, on the whole there will be asymmetry in market penetration of textiles and clothing sector as far as India ASEAN FTA is concerned. There will be significant rise in ASEAN's exports to India compared to India's exports to ASEAN. Though tariff elasticity for India's exports to Indonesia (-6.15) is higher than tariff elasticity for India's imports from Indonesia (-4.53). Therefore, there will be much higher increase in India's exports to Indonesia as compared to India's imports from Indonesia. On the other hand magnitudes of intercept terms are lower for India's exports than imports. Hence, tariffs and GDP play a bigger role for India's exports compared to India's imports.

Table 7: Tariff Elasticity and Intercepts of Tariff Significant Products
(India's Exports to ASEAN 6)

Country	No. of Six Digit Products	Mean Intercept	SD Intercept	Mean Tariff Elasticity	SD Tariff Elasticity	Correlation Tariff Elasticity & Intercept
Brunei	56	-8.02	59.22	0.53	2.54	-0.13
Indonesia	571	32.07	**66.45**	-6.15	7.93	0.00
Malaysia	641	**-10.69**	**505.53**	**-0.50**	**24.97**	-0.24
Philippines	545	12.58	**42.22**	**-3.65**	**3.04**	**-0.19**
Singapore	124	NA	NA	NA	NA	NA
Thailand	690	**76.73**	**74.56**	-2.99	2.42	-0.29

Source: Values in the table are calculated by the author from the data available in the UN Comtrade CD Rom

To find out the aggregate impact on India's exports of textiles and clothing items from ASEAN we have to first distinguish between the affected industry in textile and clothing sector vis-a-vis the aggregate impact on overall imports of textiles and clothing industry. The second effect is observed in column 2 in table 8. The first effect is culmination of the column 2 and column 5 of the table 8. For example, in Philippines, there will be 20% increase in exports of the tariff significant products. But these products account for only 32% of total trade in textiles and clothing with Philippines. Reading through the table it is clear that the maximum impact on

India's exports will be from Philippines followed by Thailand and Malaysia. It is also clear from the analysis that the FTA will have larger impact on imports than on exports.

Table 8: India's Export to ASEAN 6 (Analysis of Gravity Model)
('000 US$)

Country	% increase of predicted Export from positive Tariff to zero tariff	Actual Export in 2009	Actual Export (Tariff Sig) in 2009	% Share
	Gravity Model		Gravity Model	Gravity Model
Brunei	NA	6.43	NA	NA
Indonesia	6.00	505.60	10.93	2.16
Malaysia	6.75	199.95	8.74	4.37
Philippines	20.23	103.91	32.93	31.69
Singapore	NA	603.19	NA	NA
Thailand	18.55	376.55	19.35	5.14

Source: Values in the table are calculated by the author from the data available in the UN Comtrade CD Rom Note
1. Actual Export (Tariff Significant)--Actual import in case of products for which tariffs are significant.
2. Actual Export means actual total export of India to ASEAN 6.

5.2.1 Product Wise Results

Table 9 reports the product wise impact on textiles and clothing sector. It lists the top 10 products which show the significant increase in India's exports to ASEAN 6. Out of the top 10 products 50% belong to final goods and remaining 50% belong to intermediate goods. Most of the top 10 products are yarn, fabrics and fibre of processed goods variety. Maximum impact will be for Men's/boys' nightshirts & pyjamas of cotton (HS 620721). There will seven and half times rise in India's exports of this product to Thailand. Other products of significant rise in exports are track suits (HS 621149), knitted garments (HS 611790), woven fabrics of cotton (HS 520919), women's dresses of synthetic fibre (HS 610443) etc. As far as all the textiles and clothing products are concerned the percentage of exports accounted for by intermediate goods, whose tariff elasticities are significant, is 55%. It clearly indicates that impact of the FTA will be more on intermediate goods than on final products. According to BEC category five of the top 10 products are intermediate processed goods. Most of the the top ten products are covered under normal track of tariff reduction. Three out of top 10 products are under sensitive and highly sensitive list under which there will be very small reduction of tariff.

Table 9: India's exports of top 10 six digit Textiles and Clothing products from ASEAN 6 (Values are in '000 US$) (Gravity Model)

Product Code	Product Name	BEC Category	Goods	Actual Increase in Exports	Country	Tracks
620721	Men's/boys' nightshirts & pyjamas (excl. knitted/crocheted), of cotton	Non-durable	Final Goods	0.247508	Thailand	NT-1
621149	Track suits (excl. knitted/crocheted), women's/girls'; other garments, n.e.s. (excl. knitted/crocheted), women's/girls', other than of wool/fine animal hair/cotton/man-made fibres	Semi-durable	Final Goods	1.205729	Philippines	NT-2
611790	knitted/crocheted parts of garments/clothing accessories	Non-durable	Final Goods	1.235393	Thailand	NT-1
520919	Woven fabrics of cotton (excl. of 5209.11 & 5209.12), containing 85%/more by weight of cotton, unbleached, weighing >200g/m2	Processed	Intermediate Goods	0.733761	Philippines	NT-2
610443	Women's/girls' dresses, knitted/crocheted, of synthetic fibres	Semi-durable	Final Goods	0.02083	Thailand	ST
540781	Woven fabrics (excl. of 5407.10-5407.30), containing <85% by weight of synthetic filaments, mixed mainly/solely with cotton, unbleached/bleached	Processed	Intermediate Goods	0.255594	Indonesia	ST
550999	Yarn other than sewing thread, of synthetic staple fibres n.e.s. in 55.09 (excl. of 5509.91 & 5509.92), not put up for retail sale	Processed	Intermediate Goods	1.583097	Philippines	NT-2
620791	Men's/boys' singlets & other vests, bathrobes, dressing gowns & similar articles (excl. knitted/crocheted), of cotton	Non-durable	Final Goods	2.679414	Philippines	NT-2
600410	Knitted/crocheted fabrics of a width >30cm, containing by weight 5%/more of elastomeric yarn/rubber thread but not containing rubbr thread (excl. of 60.01)	Processed	Intermediate Goods	0.111087	Indonesia	HSL C

540349	Artificial filament yarn (other than sewing thread,excl. of 5403.10, 5403.41&5403.42), mult./cab., of cellulose acetate, incl. artificial monofilament of <67dtx., not put up for retail sale	Processed	Intermediate Goods	0.006394	Philippines	NT-1

Source: Values in the table are calculated by the author from the data available in the UN Comtrade CD Rom

6. CONCLUDING COMMENTS

The paper tries to find out set of products in textiles and clothing sector that are expected to be adversely affected as well as favourably affected by the FTA between India and ASEAN members. Adversely affected products are those whose imports have increased significantly and favourably affected products are those whose exports have increased significantly due to reduction in tariffs in FTA. At the very broad level These products will be adversely affected: manmade filaments (HS 54), manmade staple fibre (HS 55), carpets and floor coverings (HS 57), apparel and clothing accessories (HS 61) and those products which will be favourably affected due to fall in tariff are: manmade filaments (HS 54), cotton (HS 52), manmade staple fibre (HS 55), apparel and clothing accessories (HS 61). It is observed that there are several products at HS two digit level which are both favourably and adversely affected. Therefore, to identify the products in the same industry that are affected the analysis was re-conducted at HS six digit level. Some of these products are reported here. The negatively affected products are: boys' jackets & blazers (HS 610333), woven fabric & yarn (HS 630800), hosiery products (HS 611510), Floor cloths (HS 630710) and woven fabrics of cotton (HS 521119). On the other hand the benefitted products are: Men's/boys' nightshirts & pyjamas of cotton (HS 620721), track suits (HS 621149), knitted garments (HS 611790), woven fabrics of cotton (HS 520919), women's dresses of synthetic fibre (HS 610443).

The paper also highlights the fact that the India ASEAN FTA will have significant impact on intermediate textiles and clothing products. It is also observed that tariffs are insignificant for most of the products under textiles and clothing industry. The clearly indicates the importance of factors other than tariff that affect the volume of trade in textiles and clothing sector between India and ASEAN members. GDP and intercept terms play a vital role in explaining the trade between them in many cases.

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