

Analysis of ASEAN-India FTA (AIFTA)

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Abstract: *Regional integration arrangements are popular phenomenon of the present global economic order and this feature is now an acknowledged future of the international scene. Regionalism has existed for so many years in various parts of the world, but it has never risen as rapidly as in the last two decades. The ASEAN-India FTA which evolved because of the consensus of the East Asian nations. Also the complementarities of Industries of ASEAN-India raised the necessity for formation of the FTA. As the Asian countries are driving force of the world economy, FTA comprised of south east nations will further strengthen the economic and political integration of the region. This research paper tries to understand the potential of ASEAN – India regional trade arrangement. The gravity model further explains the significance of the RTA.*

Keywords: ASEAN, Trends, Gravity model, AIFTA

I. INTRODUCTION

The ASEAN-India Free Trade Area (AIFTA) is a free trade area among the ten member states of the Association of Southeast Asian Nations (ASEAN) and India. The initial framework agreement was signed on 8 October 2003 in Bali, Indonesia. and the final agreement was signed on 13 August 2009. The free trade area came into effect on 1 January 2010. India hosted the latest ASEAN-India Commemorative Summit in New Delhi on December 20-21 2012. Association of South East Asian Nations (ASEAN) and India forms the largest free trade area in the world.

The press statement released after the finalization of the deal said that the mutually agreed tariff liberalization would gradually cover 75 percent of the two-way trade, beginning from January 2010. Indian -ASEAN trade was of the order of \$40 billion in the 2007-08 accounting year. As of now, the regional bloc is India's fourth largest trading partner and it currently accounts for about 10 percent of its global trade. The two sides have set an ambitious target of achieving an increase of \$10 billion worth of trade in the first year after the agreement comes into force from January 2010¹. Under the ASEAN-India FTA (AIFTA), the ASEAN member countries and India will lift import tariffs on more than 80 percent of traded products between 2013 and 2016. The agreement has provided flexibilities to India and the ASEAN countries to exclude some of the products from tariff concessions or eliminations to address their respective domestic sensitivity. India, on its part, has excluded 489 items from the list of tariff concessions and 590 items from the list of tariff elimination to address sensitivities in agriculture, textiles, auto, chemicals, crude and refined palm oil, coffee, tea, pepper, etc. The ASEAN member countries have also maintained similar exclusion lists from the proposed tariff concessions or eliminations.

According to the agreement, the involved countries will not institute or maintain any nontariff measure on the importation of goods from other members of the FTA. They have also pledged to reduce tariff rates on a large number of tariff lines. ASEAN is India's fourth-largest trading partner after the European Union, the United States and China. Trade between ASEAN and India has risen by more than 27% annually since 2000. The agreement is key to creating an open market across the region. India is looking to boost its

(a) Imports and Exports of Member countries

The economies of ASEAN and India together comprise a \$ 2,809.58 million economy with a total population of approximately 1.8 billion. India is one of the largest economies of the Asian region and the ASEAN countries together have become both prominent and influential in Asia owing to their increased importance in trade and commerce. Hence the ASEAN-India FTA is world's largest FTA in terms of market size.

This FTA aims at opening a 1.8 billion consumer market to the member countries with a combined GDP of \$ 2.3 trillion. In addition, ASEAN-India bilateral trade has been growing steadily from 1993 and stood at US\$ 68.16 billion as

of 2011-12 with ASEAN's export to India at US\$42.53 billion and imports from India at US\$ 25.63 billion as of the same year

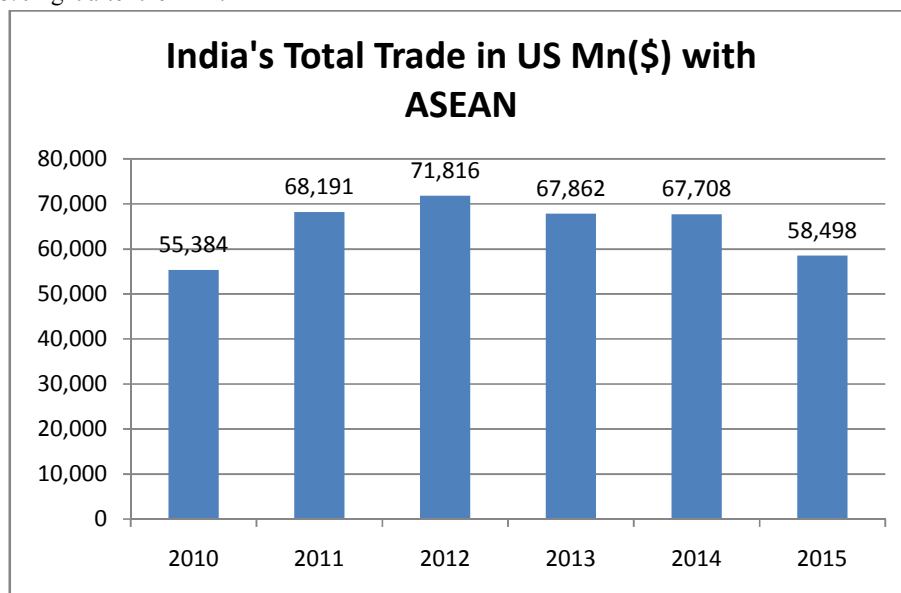
Imports and Exports of ASEAN Countries for given period

Country	2014			2015		
	Exports (US\$ million)	Imports	Total trade	Exports (US\$ million)	Imports	Total trade
Brunei Darussalam	10,584	3,597	14,181	6,354	3,238	9,592
Cambodia	10,681	18,973	29,655	8,839	10,838	19,676
Indonesia	176,293	178,179	354,471	150,366	142,695	293,061
Lao PDR	2,640	2,749	5,389	3,714	3,049	6,763
Malaysia	233,927	208,850	442,778	199,158	176,011	375,169
Myanmar	11,452	16,220	27,672	12,197	16,907	29,104
Philippines	61,810	67,757	129,567	58,648	70,295	128,944
Singapore	409,769	366,247	776,016	366,344	296,765	663,109
Thailand	227,574	227,952	455,526	214,396	202,751	417,147
Viet Nam	148,092	145,686	293,777	162,014	165,730	327,744
ASEAN	1,292,821	1,236,210	2,529,031	1,182,031	1,088,279	2,270,310

ASEAN-India Trade pattern over the last decade:

The total trade with ASEAN countries increased at Annual Average Growth rate (AAGR) of around 75% up to the year 2011-12. ASEAN-India Free Trade Agreements in Goods came into effect on 1st Jan 2010. So there is sudden rise in the total trade during year 2009-11 to 2011-12

Total exports of India to the ASEAN countries increased at AAGR of 64%, whereas imports of India from ASEAN countries increased at AAGR of 86%. Also export from India to whole of ASEAN countries increased at more than 100% growth rate. Exports almost doubled after the formation of the FTA. Imports of India from ASEAN countries increased by 18% right after the FTA.



(c) Intra-regional V/s Extra-regional Trade

Total trade (exports and imports) as a percentage of GDP for India stands at 45.84%, while for ASEAN the figure stands at 102.5 %. For certain individual economies of ASEAN this figure goes up to as high as 282.2% (Singapore), 145% (Malaysia) 130% (Vietnam) and 108.3 %(Thailand). On an aggregate level, intra-ASEAN trade comprises of 24.5% of the total trade of the region. Moreover, the ASEAN region is highly involved in intra-industry trade. An inspection of its top trading partners reveal that ASEAN is the biggest trading partner for the ASEAN region both in export and import categories. EU(27),USA and China are the biggest export destination for ASEAN and China, Japan and EU(27) are the top import sources. India is ASEAN’s ninth largest export destination (comprising 3% of total ASEAN exports) and the 10th largest import source (comprising 3% of total ASEAN exports).

Intra and Extra regional trade for ASEAN.

Intra-ASEAN Trade	2010	2011	2012	2013	2014	2015
Value (US\$ million)	511,020	598,377	602,048	608,558	608,207	543,351
Growth (%)	35.80	17.10	0.60	1.10	-0.06	-10.66
Share to total trade (%)	25.60	25.10	24.30	24.20	24.10	23.90
Extra-ASEAN Trade						
Value (US\$ million)	1,449,736	1,790,067	1,874,379	1,902,958	1,920,409	1,725,947
Growth (%)	24.90	19.50	4.70	1.50	0.90	-10.10
Share to total trade (%)	72.60	74.90	75.70	75.80	75.90	76.10

Country	2010	2011	2012	2013	2014	2015
In US\$ million						
Intra ASEAN	511,020	598,377	602,048	608,558	608,207	543,351
Australia	55,389	59,685	69,499	68,057	70,373	51,742
Canada	9,864	10,774	12,335	13,466	13,155	11,714
China	231,856	280,150	319,485	350,508	366,526	345,443
EU-28	208,588	234,621	242,599	246,228	248,308	227,587
India	55,384	68,191	71,816	67,862	67,708	58,498
Japan	206,534	273,867	262,884	240,767	229,042	237,988
Republic of Korea	98,560	124,403	131,030	134,963	131,439	122,458
New Zealand	7,331	8,244	9,225	9,785	10,708	8,348
Pakistan	6,254	6,763	6,306	6,138	6,698	6,356
Russia	9,056	13,927	18,158	19,950	22,543	13,381
USA	186,543	198,767	200,027	206,855	212,429	212,335
Rest of the World	422,737	510,672	531,016	538,377	541,481	430,097
Total	2,009,116	2,388,444	2,476,427	2,511,517	2,528,616	2,269,298

Gravity Model - An Illustrative Exercise

a. Specification of Gravity Model

In addition to the basic gravity model equation we estimate an augmented gravity model equation to first analyze international trade flows to the RTA countries. The model is “augmented” in that, several conditioning variables that account for other factors that may affect trade have been included over and above the (natural logarithms of) income and distance. The models-basic and augmented as formulated for estimation are as follows:

Basic Gravity Model

Basic form explains bilateral trade (T_{ij}) as being proportional to the product of GDP_i and GDP_j and inversely related to the distance between them

$$\text{Log}(T_{ij}) = \alpha + \beta_1 \log(GDP_i, GDP_j) + \beta_2 \log(GDP_i / \text{pop}_i * GDP_j / \text{pop}_j) + \beta_3 \log(\text{Dist}_{ij})$$

To account for other factors that may influence trade levels dummy variables have been added to the basic model. The augmented gravity equation is thus expressed as follows:

Augmented gravity model:

$$\text{Log}(T_{ij}) = \alpha + \beta_1 \log(Y_i, Y_j) + \beta_2 \log(Y_i / \text{pop}_i * Y_j / \text{pop}_j) + \beta_3 \log(\text{Dist}_{ij}) + \beta_4 \log(\text{Border}_{ij}) + \beta_5 \log(\text{Lang}_{ij}) + \gamma_1 (\text{Comcol}) + \gamma_2 (\text{Smcnt}) + \delta (\text{RTA}) + u_{ij}$$

Where I and j denotes countries and T_{ij} denotes the value of bilateral trade between I and j . The explanatory variables in the gravity model are defined as follows:

GDP(Y)/Population(Pop): There are two standard ways of measuring the size of countries in the gravity model: GDP or Population. Here we have estimated the model using nominal GDP in US Dollars

Distance: Dist_{ij} is the distance between country I and j measured “as the crow flies” technically called the great-circle distance measured between the two latitude-longitude combinations.

Border/Adjacency: Contig_{ij} A dummy variable to identify a pair of countries that are adjacent or contiguous or share a border.

Common language : Lang_{ij} is equal to one when two countries share a common language (official). Common language is crucial for bilateral trade as it can reduce the transaction costs

Colonial links: ComCol : Shared history is expected to reduce transaction costs caused by cultural differences.

Data Sample

The dependent variable in our analysis is the natural log of total bilateral trade (exports + imports) of the year 2012, measured in current international prices (dollar value). Bilateral trade values are derived from Direction of Trade Statistics (DOTS) book of IMF. GDP value for the year 2012 is taken from CIA World Factbook. Bilateral distance is taken from the data set developed by CEPII (www.cepii.fr)

Estimation of Gravity Model

Effect of Coefficient Estimates Std. Err t-statistics

Output β_1 0.91 0.03 25.39

Output per capita β_2 0.34 0.03 9.00

Distance β_3 -1.70 0.13 -12.91

Contiguity β_4 -0.64 0.40 -1.59

Language β_5 0.31 0.21 1.42

Same nation γ_1 1.08 0.65 -1.66

Same Colonizer γ_2 0.36 0.19 3.51

RTA δ 0.36 0.23 1.54

No. of Obs 285

R-squared 0.77

Adj R-squared 0.76

c. Interpretation of Estimated Model

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Gravity Model can be presented in a following manner

$$\begin{aligned} \text{Log}(T_{ij}) = & 9.47 + 0.91 \log(Y_i Y_j) + 0.91 \log(Y_i / \text{pop}_i * Y_j / \text{pop}_j) + (-1.70) \log(\text{Dist}_{ij}) + \\ & (0.36) (0.03) (0.03) (0.13) \\ & (-0.64) \log(\text{Border}_{ij}) + 0.31 (\text{Lang}_{ij}) + 0.36 (\text{Comcol}) + 1.08 (\text{Smcnt}) + 0.36 (\text{RTA}) + u_{ij} \\ & (0.40) (0.40) (0.19) (0.65) (0.23) \end{aligned}$$

(Figures in the parenthesis are the standards errors of the estimated coefficients)

The augmented gravity model is estimated using the OLS technique with cross section data for the year 2012. This particular model is built to measure the effects of RTA on trade. For the illustrative exercise we have taken (Asean-India FTA) AIFTA and the major partner countries of the world. Model incorporates around 60 partner countries and 10 RTA member countries.

The OLS estimates of the augmented model are presented in above table. The augmented gravity model fits the data well and explains the 76 percent variation in bilateral trade across our sample countries. The standard features of the gravity model work well. The baseline variables (both GDP and distance) are highly significant, have the expected signs and are of reasonable magnitude. In our case one percent increase in GDP increases trade by around one percent. And one percent increase in distance decreases trade by 1.71 percent. The estimated coefficient on log distance has the anticipated negative sign. We find that dummy variable for intra-regional trade is marginally insignificant statistically. This signifies the fact that RTA has not improvised the trade in the region. As the estimation is done only for the year 2012, so one year is hardly any time to predict such effects. May be if we extend the model up to the year of inception of the RTA then we might be in much more comfortable position to infer the effect of RTA on the trade.

Also the past colonial relationship among the trading countries is not helping to increase the trade except for the dummy variable of same colonizer. The countries having same colonizer are expected to trade 1.43 times more than those countries who don't have same colonizer. Again the estimated coefficient of language variable is statistically insignificant and thus we can interpret in our case common official language does not have trade increasing effects.

II. CONCLUSION

The ASEAN-India FTA which evolved because of the consensus of the East Asian nations. Also the complementarities of Industries of ASEAN-India raised the necessity for formation of the FTA. But many authors also raised concerns of the agricultural sector of South India which is very much hit by the FTA. But having said that there are long term benefits which are likely to come by as time will pass. Statistical profile of the RTA brought out some key findings about the overall trade pattern of the RTA. The illustrative gravity model of the RTA and partner countries revealed interesting results regarding the effects of RTA on the overall trade. As the RTA in our study is still in nascent stage and therefore it will little early to announce the trade effects and welfare relating to the RTA.

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