



MERCHANDISE TRADE BETWEEN INDIA AND ASEAN MEMBERS

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ABSTRACT

The ASEAN India Free Trade Agreement brings strategic gains to India; however, economic gains can be substantial only if supply chains are developed with a focus towards intra-industry trade. The AIFTA agreement provides increased scope for integration of supply chains in the machinery, electrical and electronics sectors and transport, which could be further supplemented by services trade and investment. These paper deals with trends in India's export to the ASEAN countries and India's imports from the ASEAN countries during the period 2005-2006 to 2015-2016. This paper outlines the product wise India's export to the ASEAN countries and India's imports from the ASEAN countries during the period 2005-2006 to 2015-2016. This paper concludes with some interesting findings.

KEYWORDS: ASEAN, electronics sectors, imports, information technology, Trade

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.

After six years of negotiations, the ASEAN-India FTA was signed on August 13, 2009, in Bangkok, Thailand. The agreement was only for trade-in-goods, and did not include software and information technology. Negotiations on an FTA with regards to the services and investment sectors started in October 2008 and were finalized on December 20, 2012. ASEAN is India's fourth-largest trading partner after the European Union, the United States and China. Trade between India and ASEAN presently stands at US\$80 billion, but is likely to receive a significant boost with the finalization of the services and investment FTA.

The trade-in-goods FTA eliminated tariffs for about 4,000 products (including electronics, chemicals, machinery and textiles) between the regions. There are a total of 489 items excluded from the list of tariff concessions, and 590 items excluded from the list of tariff eliminations pertaining to farm products, automobiles, certain auto-parts, machinery, chemicals, and crude and textile products. ASEAN and India have agreed to allow between 7 percent and 9 percent of tariff lines or products to be excluded from tariff reduction commitments.

INDONESIA-INDIA TRADE

As early as 1950, the first President of Indonesia, Sukarno, recognized the importance of the Indonesian-Indian relationship, and called for greater trade ties. In November 2005, Indonesia and India signed a bilateral

strategic partnership agreement in which the two countries agreed to increase bilateral trade to \$10 billion by 2010. This target was actually exceeded that year with total trade amounting to roughly \$12 billion, tripling the \$4 billion amount set in 2005. Bilateral trade between India and Indonesia topped out at \$20 billion in 2012, and is expected to grow to \$25 billion by 2015.

In addition, in 2005, Indonesia and India signed a memorandum of understanding (MoU) to establish a joint study group (JSG) to examine the positive aspects that would arise from signing a Comprehensive Economic Cooperation Agreement (CECA). The CECA is to be an agreement that covers economic cooperation and trade in goods and services and investments, which would lead to a higher-level of mutually beneficial economic cooperation between the two countries. The JSG projected that CECA would raise total exports between India and Indonesia to \$17.5 billion in 2020, with exports from India raising to \$7.8 billion and exports from Indonesia reaching \$9.7 billion.

Over the years, CECA talks have progressed with discussions covering tariff reductions and the lifting of non-trade barriers on various goods of interest, including palm oil products from Indonesia and pharmaceuticals and buffalo meat from India. The CECA, however, has yet to be executed. In 2010, India implemented a FTA with Indonesia which cut import duties on products such as seafood, chemicals and apparel. In return Indonesia slashed import duties on Indian goods. By 2011, India and Indonesia had signed a total of 18 agreements in the mining, infrastructure and manufacturing sectors worth a total of \$15.1 billion, in addition to a FTA on goods.

VIETNAM-INDIA TRADE

Since India granted Vietnam "Most Favored Nation" status in 1975, trade relations have been robust. In 1978 the two countries signed a bilateral trade agreement, followed by the Bilateral Investment Promotion and Protection Agreement (BIPPA) on March 8, 1997. Then, in 2003, both nations promulgated a Joint Declaration on Comprehensive Cooperation in addition to negotiating a free trade agreement.

Bilateral trade has increased since then, and India has taken a place among the ten largest exporters to Vietnam. Two-way trade reached \$4 billion in 2012, with Indian exports accounting for \$2.34 billion while Vietnam's exports accounted for \$1.56 billion up from \$178 million in 2002. The two sides have set a target of \$7 billion for bilateral trade by 2015, and, with the signing of the India-ASEAN FTA on trade in goods in 2010, bilateral trade is poised to grow at an even faster rate.

Vietnam continues to be an attractive investment destination for Indian companies in sectors ranging from oil and gas, steel, minerals, tea, coffee, sugar and food processing. India and Vietnam have also expanded cooperation in information technology and education, and are collaborating on their respective national space programs. In 2010, India implemented a FTA with Vietnam to cut import duties on products such as seafood, chemicals and apparel and, in return, Vietnam slashed import duties on Indian goods.

MYANMAR-INDIA TRADE

The Indian government has been cultivating ties with Myanmar since 1993 as part of a wider foreign policy to increase India's participation and influence in Southeast Asia. Since then, India has grown to become one of the largest market for Burmese exports. India is Burma's fourth largest trading partner, and is also its second largest export market taking in 25 percent of total exports. The Indian government has further worked to extend air, land and sea routes to strengthen trade links with Myanmar, in addition to establishing a gas pipeline. The countries also signed a bilateral border trade agreement in 1994 for border trade to be carried out from designated points in Manipur, Mizoram and Nagaland. The two countries have primarily cooperated in agriculture, health, education, pharmaceuticals, telecommunications, information technology, steel, oil, natural gas, hydrocarbons and food processing.

In 2001, India and Burma co-constructed a 160-kilometer highway called the Indo-Myanmar Friendship Road to open up a commercial transport route connecting Northeast India and South Asia to Southeast Asia. Based on the success of this trade route, India and Myanmar have agreed to construct a new triangular 4-lane highway running 3200 kilometer through India, Myanmar and Thailand. This project, including a number of road condition improvements, is expected to be completed by 2016.

In 2012, India and Myanmar signed 12 MoUs extending cooperation on border development, defense and analysis and joint trade and investment. Bilateral trade between India and Burma is expected to more than double by 2015, growing from \$1.28 billion in 2011 to \$3 billion.

CAMBODIA-INDIA TRADE

India-Cambodia relations picked up in 1981 when India officially recognized Cambodia's new government and opened up an embassy in Phnom Penh. In contemporary times, there has been an effort to expand their cooperation through institutional capacity building,

human resource development, infrastructure development and security and defense. Furthermore, India and Cambodia have enhanced bilateral cooperation through increased interactions at regional and international forums.

Positive relations were built upon during the first India-Cambodia Trade and Investment Business Forum, Exhibition and Buyer/Seller Meet in 2009, which sought to enhance economic engagement between the two countries. India extended duty free tariff preference schemes to Cambodia that same year. Indian businesspeople in Cambodia have also established an Indian Chamber of Commerce to promote bilateral trade and investment ties.

India and Cambodia ties were further bolstered in 2011 when they held the first round of Foreign Office Consultations (FOC). These consultations were in regard to trade and bilateral cooperation, with a focus on policy, economy, security, education and vocational training, culture, IT and agriculture.

BRUNEI-INDIA TRADE

The discovery of oil in 1929 brought a substantial number of Indians seeking their fortune to Brunei. Bilateral diplomatic relations between India and Brunei, however, were not formally established until 1984. In 2008, India-Brunei relations were enhanced in sectors ranging from agriculture and defense during the Sultan of Brunei's visit to India. During his visit, five agreements were signed, such as the Bilateral Investment and Protection Agreement (BIPA) and the memorandum of understanding (MoU) on Cooperation in Information and Communication Technology.

India also signed a free trade agreement (FTA) on goods with Brunei in 2010, which effectively slashed import duties on products ranging from seafood to chemicals and apparel. In return, Brunei also reduced import duties on various Indian goods.

The main export from Brunei to India has been crude oil, while Brunei predominately imports textile products and vehicle parts from India. However, with relatively high shipping costs between the two countries and limited connections between Indian and Brunei business communities, coupled with the limited needs of Brunei's smaller population, bilateral trade has been somewhat inhibited. Plans to further strengthen bilateral and economic ties have led India and Brunei to explore the possibilities of joint ventures in hospitality and infrastructural development in addition to joint ventures in the energy sector.

LAOS-INDIA TRADE

Due to having many common views on major international issues, a mutually beneficial bilateral trade relationship has developed between India and the Lao People's Democratic Republic. In recognition of the close ties between the two countries, the Lao Government established the Lao-India Friendship Association in 1997. An FTA has also been implemented, which has seen both nations slash import duties on thousands of products. In 2010, trade relations were further bolstered as the Indian Chamber of Commerce in Laos signed multiple agreements and MoUs with organizations such as the Lao Chamber of Commerce, the Confederation of Indian Industry and the Federation of Indian Chambers of Commerce and Industry.

Metals, ores, machinery and electronic equipment account for most of the products imported and exported between India and Laos. In 2011, Indian entrepreneurs committed a combined US\$950 million in a plantation, iron ore and agarwood project, which skyrocketed India from 22nd to 6th in terms of foreign direct investment in Laos. India has previously invested in Laos' hydro-power, IT, human resource development and mining sectors.

THE PHILIPPINES-INDIA TRADE

Business relations between India and the Philippines began to prosper when a trade agreement was signed on May 29, 1979. Adding to this, in 1995, following the first Philippine Trade Mission to India, a Joint Working Group and a Joint Business Council were set up to assess and identify potential avenues for trade, and to identify new areas for collaboration.

The agreement to establish a Joint Commission on Bilateral Cooperation was signed during President Gloria Macapagal Arroyo's state visit to India on October 5, 2007, with an aim to further strengthen and develop cooperation in the fields of trade, economic, science and technology. Its inaugural session was held on March 15, 2011, in New Delhi, during which both sides agreed to continue with and expand on cooperative initiatives in various sectors such as trade, agriculture and defense. India and the Philippines have also been negotiating to revise and clarify certain aspects of their double taxation avoidance agreement (DTAA), with regard to the taxation of income derived from professional services. The newly revised DTAA is set to be signed sometime this year. Indian business interest in the Philippines primarily lies in the mining, information and communication technology, and business process outsourcing sectors.

INDIA AND THAILAND

The Framework Agreement covers the liberalization trade in goods, trade in services and investment, as well as expansion of economic cooperation. Under the Framework Agreement, it was agreed that Thailand and India commence the negotiation on Trade in Goods in January 2004 in order to establish the India - Thailand FTA covering trade in goods by 2010. Initially, with a view to accelerating tariff reduction, both countries agreed to implement an Early Harvest Program (EHS). The tariff reduction or elimination of the remaining products other than those under the EHS will be categorized into two tracks, namely Normal Track and Sensitive Track. Under the Framework Agreement, it was also agreed that the negotiations on Trade in Services and Investment be started in January 2004. Both sides concurred to instigate a progressive liberalization of Trade in Services and an establishment of open and competitive investment regimes that facilitate and promote investment within and between the two countries.

Thailand and India agreed to promote and enhance economic cooperation in the areas that would be beneficial to both countries, such as information and communication technology, tourism, banking and finance, healthcare, construction, etc. Thailand and India have reached an accord on Trade in Goods that incorporates tariff reduction and/or elimination under the Normal Track and Sensitive Track. Other than that, some of the products will be listed in the Exclusion List, to which no tariff reduction will be granted for a period of three years, and will be reviewed thereafter.

INDIA AND INDONESIA

India and Indonesia have shared two millennia of close cultural and commercial contacts. During our respective struggles for independence, the national leaderships of India and Indonesia led by Jawaharlal Nehru and President Sukarno collaborated closely in supporting the cause of Asian and African independence and later laid the foundation of the Afro-Asian and Non-Aligned Movements at the Bandung Conference in 1955. Since the adoption of India's 'Look East Policy' in 1991, there has

been a rapid development of bilateral relations in political, security, defence, commercial and cultural fields. The current Government wants to further deepen the relationship with East Asia and has therefore rightly titled its policy as "Act East".

ASEAN-India Comprehensive Economic Cooperation Agreement:-

This agreement was signed by ASEAN member states and India on 13th August 2009 and came into effect on 1st January 2010. India and Indonesia registered a total trade value of \$14.4 billion USD in 2015.

India and Cambodia:-

India-Cambodia relations picked up in 1981 when India officially recognized Cambodia's new government and opened up an embassy in Phnom Penh. In contemporary times, there has been an effort to expand their cooperation through institutional capacity building, human resource development, infrastructure development and security and defense. Furthermore, India and Cambodia have enhanced bilateral cooperation through increased interactions at regional and international forums.

Positive relations were built upon during the first India-Cambodia Trade and Investment Business Forum, Exhibition and Buyer/Seller Meet in 2009, which sought to enhance economic engagement between the two countries. India extended duty free tariff preference schemes to Cambodia that same year. Indian businesspeople in Cambodia have also established an Indian Chamber of Commerce to promote bilateral trade and investment ties.

METHODS AND MATERIALS

This paper examines the India's Merchandise Trade with ASEAN countries with reference to country wise export trade and import trade and product wise export trade and import trade between India and ASEAN member countries during the period 2005-2006 to 2015-2016. The relevant data are collected from the department commerce government of India and export import data bank government of India. The data analysis is carried out with help of compound annual growth rate and T test.

RESULTS AND DISCUSSION**Table:1 India's Merchandise Trade with ASEAN countries**

	2005-06			2015-16			CAGR	
	Exports	Imports	TD	Exports	Imports	TD	2015-16/2005-06	
	\$ Million	Exports	Imports					
Brunei	43	1	42	28	554	-526	-4.0	90.5
Cambodia	24	1	23	143	54	89	19.4	52.9
Indonesia	1380	3008	-1628	2841	13068	-10227	7.5	15.8
Lao	5	0	5	38	180	-142	21.4	111.6
Malaysia	1162	2416	-1254	3707	9084	-5377	12.3	14.2
Myanmar	111	526	-415	1068	984	84	25.4	6.5
Philippines	495	235	259	1369	542	826	10.7	8.7
Singapore	5425	3354	2072	7722	7306	416	3.6	8.1
Thailand	1075	1212	-136	3009	5510	-2501	10.8	16.4
Vietnam	691	131	559	5270	2560	2710	22.5	34.6
Total ASEAN	10411	10884	-472	25195	39843	-14648	9.2	13.9
Total Global	103091	149166	-46075	262031	380665	-118634	9.8	9.8

Source: Department of Commerce, Government of India; <http://commerce.nic.in/MOC/index.asp>

2005-06 to 2015-2016 Exports

T statistical Value -3.26, df 9, T Critical Value 1.83

2005-06 to 2015-2016 Imports

T statistical Value -2.71, df 9, T Critical Value 1.83

Table 1 present's data on the India's Merchandise Trade with ASEAN countries. It could be noted that. India exported goods and services worth of 43 million USD in 2005-2006 to the Brunei country and it declined to 28 million USD, indicating on annual short fall of 4 percent. Contrastingly, India imported goods and services worth of 1 million USD from the Brunei country in 2005-2006 and it rose to 554 million USD in 2015-2016, reflecting a 90.5 percent annual growth rate in imported goods and services from the Brunei country. India had 42 million USD trade deficit with Brunei country in 2005-2006 and it went up to 526 million USD. The trade deficit is an indicator of import promotion and export downfall. Such condition leads to balance of payment problem in India.

India exported goods and services worth of 24 million USD to the Cambodia in 2005-2006 and it enhanced to 143 million USD in 2015-2016, recording an annual growth of 19.4 percent during the period. It is a good sign of trade development in India. India imported goods and services worth of 1 million USD from the Cambodia in 2005-2006 and it increased to 54 million USD in 2015-2016, indicating a growth of 52.9 percent per year in the period of analysis. India had 23 million USD trade deficit with the Cambodia in 2005-2006 and it moved to 89 million USD in 2015-2016

India had import trade worth of 1380 million USD with Indonesia in 2005-2006 and it rose to 2841 million USD in 2015-2016 showing a growth of 7.5 percent per annum. India imported goods and services worth of 3008 million USD from the Indonesia in 2005-2006 and it went up to 10227 million USD in 2015-2016, recording an annual growth of 15.8 percent during the period of analysis. The

trade deficit of India with Indonesia was 1628 million USD in 2005-2006 and it moved to 10227 million USD in 2015-2016.

The export of India with Lao PDR was 5 million USD in 2005-2006 and it moved to 38 million USD in 2015-2016, registering an annual growth of 21.4 percent during the period. India didn't import goods and services from the Lao PDR in 2005-2006 but India imported goods and services worth of 180 million USD in 2015-2016, indicating an annual growth of 111.6 percent. India had 5 million USD trade deficit with Lao PDR in 2005-2006 and it moved to 142 million USD in 2015-2016.

India exported goods and services worth of 1162 million USD to the Malaysia in 2005-2006 and it rose to 3707 million USD in 2015-2016, recording growth of 12.3 percent per year. In the mean time, India imported goods and services worth of 2416 million USD from the Malaysia in 2005-2006 and it increased to 9084 million USD in 2015-2016, reflecting an annual growth of 14.2 percent in the period of analysis. India had trade deficit of 1254 million USD with Malaysia in 2005-2006 and it moved to 5327 million USD in 2015-2016.

India exported goods and services worth of 111 million USD in 2005-2006 to the Myanmar country and it rose to 1068 million USD, indicating an annual growth of 84 percent. Contrastingly India imported goods and services worth of 526 million USD from the Myanmar country in 2005-2006 and it rose to 984 million USD in 2015-2016, reflecting a 6.5 percent annual growth rate of imported goods and services from the Myanmar country. India had 415 million USD trade deficit with Myanmar country in 2005-2006 and it went down to 84 million USD

India exported goods and services worth of 495 million USD to the Philippines in 2005-2006 and it enhanced to 1369 million USD in 2015-2016, recording an annual growth of 10.7 percent during the period. India imported goods and services worth of 235 million USD from the Philippines in 2005-2006 and it increased to 542 million USD in 2015-2016, indicating a growth of 8.7 percent in the period of analysis. India had 259 million USD trade deficit with the Philippines in 2005-2006 and it moved to 826 million USD in 2015-2016

India had export trade worth of 5425 million USD with Singapore in 2005-2006 and it rose to 7722 million USD in 2015-2016 showing a growth of 3.6 percent per annum. India imported goods and services worth of 3354 million USD from the Singapore in 2005-2006 and it went up to 7306 million USD in 2015-2016, recording an annual growth of 8.1 percent during the period of analysis. The trade deficit of India with Singapore was 2022 million USD in 2005-2006 and it moved down to 416 million USD in 2015-2016. It could be noted that decline trade deficit is an indicator of better performance of bilateral trade.

The export of India with Thailand was 1075 million USD in 2005-2006 and it moved to 3009 million USD in 2015-2016, registering an annual growth of 10.8 percent during the period. India imported goods and services worth of 1212 million USD from the Thailand in

2005-2006 and rose to 5510 million USD in 2015-2016, indicating an annual growth of 16.4 percent. India had 136 million USD trade deficits with Thailand in 2005-2006 and it moved down to 2501 million USD in 2015-2016.

India exported goods and services worth of 691 million USD to the Vietnam in 2005-2006 and it rose to 5270 million USD in 2015-2016, recording growth of 22.5 percent per year. In the mean time, India imported goods and services worth of 131 million USD from the Vietnam in 2005-2006 and it increased to 2570 million USD in 2015-2016, reflecting an annual growth of 34.6 percent in the period of analysis. India had trade deficit of 131 million USD with Vietnam in 2005-2006 and it moved to 2710 million USD in 2015-2016.

The T test is applied for further discussion. At one point, the computed t value 3.26 is greater than its tabulated value of 5 per cent level significant. Hence, there is a significant difference between exports or goods and service from India to the ASEAN countries during the period 2005-2006 to 2015-2016. In another point, the computed 't' value 2.71 is greater than its tabulated value at 5 per cent level significance. Hence, there is a significant difference between India's import of goods and services from the ASEAN countries during the period 2005-2006 to 2015-2016.

Table: 2 India's Exports to ASEAN

	2005-06		2015-16		CAGR
	U.S. \$	% share in total	U.S. \$	% share in total	2015-16 2005-06
1.Fresh Vegetables & fruits	76	0.7	216	0.9	11.0
2. Meat products	193	1.9	2649	10.5	29.9
3.Fish products.	97	0.9	1089	4.3	27.4
4.Spices	46	0.4	499	2/0	26.9
5.Sugar	22	0.2	488	1.9	36.3
6.Oil cakes & fodder	527	5.1	225	0.9	-8.2
6.Petroleum products	2463	23.7	3766	14.9	4.3
5.Chemicals	1071	10.3	1698	6.7	4.7
a.Inorganic	84	0.8	130	0.5	4.5
b. Organic	834	8.0	1234	4.9	4.0
c.Special chemicals	153	1.5	334	1.3	8.0
7.Pharmaceuticals	163	1.6	717	2.8	16.0
8.Plastic & raw materials	148	1.4	348	1.4	8.9
9.Rubber & products	88	0.8	226	0.9	9.9
10.Precious stones & Jwly	1590	15.3	1106	4.4	-3.6
11.Paper & pulp	25	0.2	131	0.5	18.0
12.Cotton	165	1.6	602	2.4	13.8
13.MM filaments//fibre	108	1.0	273	1.1	9.7
14.Iron & steel & articles	675	6.5	723	2.9	0.7
15.Non ferrous metals	469	4.5	1322	5.2	10.9
13.Mechanical appliances	348	3.3	1617	6.4	16.6
16.Electrical &electronics	280	2.7	798	3.2	11.0
17.Transport equipment	698	6.7	2150	8.5	11.9
a.Rail equipment	2	2.3	7	-	-
b.Autos & component	240	4.4	1051	4.2	15.9
c.Aircraft & parts	3	0.7	115	0.4	44.0
d.Ships	453	89.6	977	3.9	8.0
18.Optical/photo instrmn	78	10.1*	356	1.4	16.4
Sub total 1 to 18	9330	3.3	20999	83.3	8.5
Total ASEAN	10411	2.7	25195	9.6*	9.2
Total global	103091	6.7	262031		9.8

Note:*share of exports to ASEAN in total exports; CAGR-compound annual growth rate

Source: Import Export Data Bank, Government of India, Department of Commerce

<http://www.commerce.nic.in/eidb/default.asp>

T statistical Value -4.34, df 27, T Critical Value 1.70

Table 2 presents data on the commodity wise India's exports to ASEAN countries. It could be noted that India exported fresh vegetables and fruits worth of 76 million USD in 2005-2006 and it rose to 216 million USD in 2015-2016, indicating an annual growth of 11 percent during the period of analysis.

India exported meat products worth of 193 million USD to the ASEAN countries in 2005-2006 and it significantly increased to 2649 million USD in 2015-2016, recording a growth of 29.9 per cent per year. The fish product export from the India to the ASEAN countries was 97 million USD in 2005-2006 and it enhanced to 1089 million USD, registering a growth of 27.4 percent per year. The species export from the India to ASERAN countries was 46 million USD in 2005-2006 and it rose to 499 million

USD in 2015-2016, recording an annual growth of 26.9 percent in the period of analysis.

India exported sugar worth of 22 million USD to the ASEAN countries in 2005-2006 and it went up to 488 million USD in 2015-2016, indicating an annual growth of 36.3 percent. The oil cakes and fodder export from the India to the ASEAN countries was 527 million USD in 2005-2006 and it declined to 2025 million USD, showing a short fall of 8.2 per cent per year. India exported petroleum products worth of 2463 million USD in 2005-2006 and it rose to 3766 million USD in 2015-2016, showing a growth of 4.3 percent per year.

The chemical product export from the India to the ASEAN countries was 1071 million USD in 2005-2006 and it run over to 1698 million USD in 2015-2016, indicating

a growth of 4.7 percent per year. India exported inorganic chemicals worth of 84 million USD to the ASEAN countries in 2005-2006 and it rose to 130 million USD in 2015-2016, recording a growth of 4.5 percent per year. The organic chemicals export of India to the ASEAN countries was 834 million USD in 2005-2006 and it increased to 1234 million USD in 2015-2016, indicating a growth of 4 percent per year. India exported special chemicals worth of 153 million USD in 2005-2006 and it enhanced to 334 million USD in 2015-2016, showing a growth of 8 percent per year.

India made Pharmaceutical export of 148 million USD to the ASEAN countries in 2005-2006 and it moved to 717 million USD in 2015-2016, recording a growth of 16 percent in the period of analysis. India exported plastic and raw materials worth of 148 million USD in 2005-2006 to the ASEAN countries and it moved up to 348 million USD in 2015-2016, showing a growth of 8.9 percent during the period of analysis. India exported rubber and products worth of 88 million USD in 2005-2006 and it rose to 226 million USD in 2015-2016 to the ASEAN countries, indicating a growth of 9.9 percent per year. India made precious stones and jewelry export worth of 1590 million USD to the ASEAN countries in 2005-2006 and it declined to 1106 million USD, showing a short fall of 3.6 percent per year.

India exported paper and pulp products to the ASEAN countries worth of 25 million USD in 2005-2006 and it rose to 131 million USD in 2015-2016, indicating a growth of 18 percent per year. India made export of cotton products to the ASEAN countries worth of 165 million USD to the ASEAN countries in 2005-2006 and it rose to 602 million USD in 2015-2016, indicating a growth of 13.8 percent per year.

India exported MM filaments and fiber to the ASEAN countries worth of 108 million USD in 2005-2006 and it increased to 273 million USD in 2015-2016, indicating a growth of 9.7 percent per year. India made

export of Iron steel and articles to the ASEAN countries worth of 675 million USD in 2005-2006 and it rose to 723 million USD in 2015-2016, showing a growth of 0.7 percent per year.

India exported Non-ferrous metals worth of 469 million USD in 2005-2006 and it rose to 1322 million USD in 2015-2016 to the ASEAN countries, showing a growth of 10.9 percent per year. India exported Mechanical appliances worth of 348 million USD in 2005-2006 and it moved up to 1617 million USD in 2015-2016 to the ASEAN countries, registering a growth of 16.6 percent per year.

The electrical and electronics goods export of India to the ASEAN countries was 280 million USD in 2005-2006 and it rose to 798 million USD in 2015-2016, indicating a growth of 11 percent per year. India exported transport equipment to the ASEAN countries worth of 698 million USD in 2005-2006 and it rose to 2150 million USD in 2015-2016, reporting a growth of 11.9 percent per year. India's rail equipment export is negligible. India exported Autos and components worth of 240 million USD in 2005-2006 and it rose to 1051 million USD in 2015-2016 to the ASEAN countries, indicating a growth of 15.9 percent per year. India's export of Aircrafts and parts is negligible. India exported ships to the ASEAN countries worth of 453 million USD in 2005-2006 and it rose to 977 million USD in 2015-2016, indicating a growth of 8 percent per annum. India made export of Optical and photo instruments worth of 78 million USD in 2005-2006 and it rose to 656 million USD to the ASEAN countries, showing a growth of 16.4 percent per year.

The 'T' test is applied for further discussion. At one point, the computed t value 4.34 is greater than its tabulated value of 5 percent level significant. Hence, there is a significant difference between India's export to the ASEAN countries between 2005-2006 to 2015-2016.

Table: 3 India's Imports from ASEAN

	2005-06		2015-16		CAGR
	U.S.\$ Million	% share in total	U.S.\$ Million	% share in total	2015-16 2005-06
1.Pulses	254	2.3	835	2.1	12.6
2.Palm oil	1025	9.4	5782	14.5	18.9
3.Petroleum products	9	-	2806	7.0	77.6
4.Coal	843	7.7	4842	12.2	19.1
5.Chemicals	1062	9.8	3053	7.7	11.1
a. Inorganic	85	0.8	329	0.8	14.5
b. Organic	802	7.4	2075	5.2	10.0
c. Special chemicals	175	1.6	649	1.6	14.0
6.Pharmaceuticals	5	-	136	0.3	39.1
7.Plastic & raw materials	369	3.4	1759	4.4	16.9
8.Rubber & products	123	1.1	995	2.5	23.3
7.Precious stones & Jewlry	69	0.6	817	2.1	28.0
8.Wood & products	571	5.2	973	2.4	5.4
9.Paper & pulp	163	1.5	358	0.9	8.2
10.MM filaments & fibres	137	1.3	321	0.8	8.9
11.Iron & steel & articles	353	3.2	1272	3.2	13.7
12.Non ferrous metals	202	1.9	1602	4.0	23.0
13.Mechanical appliances	1989	18.3	3741	9.4	6.5
14.Electrical &electronics	1298	11.9	4142	10.4	12.3
15.Transport equipment	502	4.6	1908	4.8	14.3
a. Rail equipment	0.3	-	1	-	-
b. Autos & component	70	0.6	598	1.5	23.9
c. Aircraft & parts	139	1.3	209	0.5	4.2
d. Ships	293	2.7	1100	2.8	14.1
16.Optical/photo instrmn	200	1.8	617	1.5	11.9
Total 1 to 16	9174	84.3	35959	90.3	14.6
Total ASEAN	10884	10.6*	39843	15.2*	13.9
Total global	103091	-	262031	-	9.8

Note: *share of exports to ASEAN in total exports; CAGR-compound annual growth rate

Source: Import Export Data Bank, Government of India, Department of Commerce

<http://www.commerce.nic.in/eidb/default.asp>

T statistical Value -4.87, df 24, T Critical Value 1.71

Table 3 presents data on the commodity wise India's imports from the ASEAN countries. It could be noted that India imported pulses worth of 284 million USD in 2005-2006 and it rose to 835 million USD in 2015-2016 from the ASEAN countries, indicating an annual growth of 12.6 percent during the period of analysis.

India imported Palm oil worth of 1025 million USD from the ASEAN countries in 2005-2006 and it significantly increased to 5782 million USD in 2015-2016, recording a growth of 18.9 per cent per year. The Petroleum products imported by India from the ASEAN countries were 9 million USD in 2005-2006 and it enhanced to 2806 million USD, registering a growth of 77.6 percent per year. The Coal imported by India from the ASEAN countries was 843 million USD in 2005-2006 and it rose to 4242 million USD in 2015-2016, recording an annual growth of 19.1 percent in the period of analysis.

India imported Chemicals worth of 1062 million USD from the ASEAN countries in 2005-2006 and it went up to 3053 million USD in 2015-2016, indicating an annual

growth of 11.1 percent. The inorganic product imported by India from the ASEAN countries was 85 million USD in 2005-2006 and it declined to 329 million USD, showing a short fall of 14.5 per cent per year. India imported organic products worth of 802 million USD in 2005-2006 from the ASEAN countries and it rose to 2025 million USD in 2015-2016, showing a growth of 10 percent per year.

The special chemical product imported by India from the ASEAN countries was 175 million USD in 2005-2006 and it run over to 649 million USD in 2015-2016, indicating a growth of 14 percent per year. India imported Pharmaceuticals products worth of 5 million USD from the ASEAN countries in 2005-2006 and it rose to 136 million USD in 2015-2016, recording a growth of 39.1 percent per year. The Plastic and raw materials imported by India from the ASEAN countries was 369 million USD in 2005-2006 and it increased to 1759 million USD in 2015-2016, indicating a growth of 16.9 percent per year. India imported Rubber and products worth of 123 million USD in 2005-2006 from the ASEAN countries and it enhanced to 995

million USD in 2015-2016, showing a growth of 23.6 percent per year.

India made Precious stone and jewelry import of 69 million USD from the ASEAN countries in 2005-2006 and it moved to 817 million USD in 2015-2016, recording a growth of 28 percent in the period of analysis. India imported Wood and wood products worth of 571 million USD in 2005-2006 from the ASEAN countries and it moved up to 971 million USD in 2015-2016, showing a growth of 5.4 percent during the period of analysis. India imported Paper and pulp products from the ASEAN countries worth of 163 million USD in 2005-2006 and it rose to 358 million USD in 2015-2016, indicating a growth of 8.2 percent per year. India made MM filaments and fibers import worth of 137 million USD in 2005-2006 from the ASEAN countries and it increased to 321 million USD, showing a growth of 8.9 percent per year.

India imported Iron steel articles worth of 353 million USD in 2005-2006 from the ASEAN countries and it rose to 1272 million USD in 2015-2016, indicating a growth of 13.7 percent per year. India made import of Non-ferrous metals worth of 202 million USD from the ASEAN countries in 2005-2006 and it rose to 1602 million USD in 2015-2016, indicating a growth of 23 percent per year.

India imported Mechanical appliances worth of 1989 million USD in 2005-2006 from the ASEAN countries and it increased to 3741 million USD in 2015-2016, indicating a growth of 6.5 percent per year. India made import of Electrical and electronics goods worth of 1298 million USD in 2005-2006 and it rose to 4142 million USD in 2015-2016 from the ASEAN countries, showing a growth of 12.3 per cent per year.

India imported Transport equipment worth of 502 million USD in 2005-2006 and it rose to 1908 million USD in 2015-2016 from the ASEAN countries, showing a growth of 14.3 per cent per year. India imported Rail equipment worth of 0.3 million USD in 2005-2006 and it moved up to 1 million USD in 2015-2016 from the ASEAN countries, registering a growth of 0.001 percent per year.

The Auto and component equipment import by India from the ASEAN countries was 70 million USD in 2005-2006 and it rose to 598 million USD in 2015-2016, indicating a growth of 23.9 percent per year. India imported Aircrafts and parts worth of 139 million USD in 2005-2006 from the ASEAN countries and it rose to 209 million USD in 2015-2016, reporting a growth of 4.2 per cent per year. India made a Ships import worth of 293 million USD in 2005-2006 and it rose to 1100 million USD in 2015-2016, indicating a growth of 14.1 percent per year. India made import of Optics and photo instrument worth of 200 million

USD in 2005-2006 and it rose to 617 million USD in 2015-2016, indicating a growth of 11.9 percent per annum.

The 'T' test is applied for further discussion. At one point, the computed 't' value 4.87 is greater than its tabulated value of 5 per cent level significance. Hence, there is a significant difference between India's import from the ASEAN countries between 2005-2006 to 2015-2016.

CONCLUSION

It could be seen clearly from the above discussion that the total India's export to the ASEAN countries increased by 9.25 percent per annum and India imported from the ASEAN countries increased by 13.9 percent during the period 2005-2006 to 2015-2016. Among the ASEAN countries India exported more amounts of goods and services to the Vietnam, Singapore, Philippines and Myanmar and India has no trade deficit with these countries. However, India has trade deficit with Brunei, Indonesia, Lao PDR, Malaysia and Thailand. India's export to Cambodia, Lao PDR, Myanmar and Vietnam has shown a more than 15 percent of annual growth during the period 2005-2006 to 2015-2016.

It is observed that in total India exported goods and services to the ASEAN countries worth of 9330 million USD in 2005-2006 and it rose to 2050 million USD in 2015-2016, indicating a growth of 8.5 percent per year. In general India shared 89.62 percent of export to the ASEAN countries. At the global level, ASEAN countries shared 10.09 percent of export from the other countries of the world. A more than 10 percent of the India's export is received in the form of Meat products and Petroleum products. A more than 5 percent of the India's export is received in the form of chemicals, Mechanical appliance and Transport equipment. Below 1 percent export share of Indian products are Fresh vegetables and fruits inorganic chemicals, rubber and rubber products, paper and pulp products and Aircraft parts. A more than 25 percent of growth in Indian exports products are observed in Meat products, Fish products, Species, Sugar and Aircrafts during the period 2005-2006 to 2015-2016. The growth of Indian exports becomes negative in oil cakes and fodder and Precious stones and jewelry during the period 2005-2006 to 2015-2016. A more than 10 percent of growth in Indian exports are observed in fresh vegetables and fruits, Pharmaceuticals, paper and pulp product, cotton Non-ferrous metals, Mechanical appliances, Electricals and Electronics, Transport equipments, Autos and components and Optical photo instruments during the period 2005-2006 to 2015-2016.

It is learnt from the study that in total India imported goods and services worth of 9171 million USD in 2005-2006 and it rose to 35959 million USD in 2015-2016, indicating a growth of 14.6 percent per year. In general India shared 84.28 percent of import from the ASEAN countries. At the global level, ASEAN countries shared 10.55 percent of import from the other countries of the world.

India imported a more than 10 percent of Palm oil, Coal and Electrical and electronics from the ASEAN countries. India imported a more than 5 percent of the Petroleum products, Chemicals, Organic products and Mechanical appliances from the ASEAN countries. India shared less than 3 percent of Imported goods of Pulses, Inorganic products, Special chemicals, Pharmaceutical, Rubber and products, Precious stone and jewelry, Wood and wood products, Paper and Pulp products, MM filaments and fibers, Autos and components, Ships and Optical and photo instrument from the ASEAN countries during the period 2005-2006 to 2015-2016. A more than 12 percent of growth in India's imported goods from the ASEAN countries have been observed in Palm oil, Petroleum products, Coal, Pharmaceuticals, Plastic and raw materials, Rubber and products, Non-ferrous metals and Autos and components. The growth of India's import from the ASEAN

countries has been observed in the range of 15-10 percent in Pulses, Chemicals, Inorganic products, Organic products, Special chemicals, Iron, steel and articles, Electrical and electronics, Transport equipment, ships, Optical and photo instrument.

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