



Special article

Complementarities in Production and Trade between ASEAN Countries and India

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I Introduction: The post-World War II era has witnessed the emergence and growing importance of regional economic groupings in many different parts of the world to overcome obstacles to international trade and to isolate the region from the fluctuations of the world economy. The process of regional economic cooperation was initiated by Western Europe in the late 1940s (first wave of regionalism) with the formation of the European Coal and Steel Community and subsequently the Treaty of Rome in 1957 that established the European Economic Community (EEC). The formation of the EEC encouraged some other countries outside the EEC to form the European Free Trade Area (EFTA). The spectacular success of the EEC in the immediate aftermath provided an added impetus to the growing tide of regional integration. Actually, second wave of regional integration started during roughly the second half of the 1960s. The origin of this regionalism has been attributed to the drawn out nature and slow progress of GATT Uruguay Round negotiations, to the apparent success and fears aroused by the EU's initiative aimed at establishing a Single European Market, and to the conversion of United States to regionalism with its

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negotiation of the North American Free Trade Agreement (NAFTA) (Matthews, 2003).

However, this second wave of regionalism was weak and did not go far. Regional Trade Agreements (RTAs) of this period were neither large in number nor as successful as those of recent years. One of the important reasons was that US, the largest trading economy, was philosophically opposed to regionalism. During 1990s, regionalism returned with a vengeance. The third wave of regionalism surfaced during late 1980s, with the weakening of American regionalism, breakdown of USSR in 1991 and uprisings and regional conflicts in Africa and South East Asia. This third global wave of regionalism has also come to be known as 'New Regionalism'. It had elements of North-South integration (NAFTA, enlargement of EC in 1986 by incorporating Greece, Portugal and Spain) where as regional integration in 1950s and 1960s consisted of regional arrangements that were either North or South type (EC, EFTA industrial countries), CACM, ANDEAN Pact, ASEAN and ECOWAS (developing countries). Recent regionalism is entirely different from traditional regionalism in the sense that new regional arrangements are taking place among countries who are more open, export and market oriented and private-sector dominated (Galal, 2003).

There are a large number of RTAs in the world trading system and mostly world trade is affected by one or more of them. RTAs differ greatly in their effectiveness. Many RTAs unite developing countries like MERCOSUR. RTAs have become in recent years a very prominent feature of the Multilateral Trading System (MTS). The surge in RTAs has continued unabated since the early 1990s. Some 462 RTAs have been notified to the GATT / WTO up to February 2010. Of these, 345 RTAs were notified under Article XXIV of the GATT 1947 or GATT 1994; 31 under the Enabling clause and 86 under Article V of the GATT. At the same time 271 agreements were in force. The overall no. of RTAs in force has been increasing steadily, a trend likely to be strengthened by many RTAs currently under negotiations. Of these RTAs, Free Trade Agreements (FTAs) and partial scope agreements account for 90% while custom unions account for 10% (www.wto.org).

ASEAN is one of these RTAs. It was established on 8 August 1967 by the 5 original member countries (ASEAN-5), namely Indonesia, Malaysia, Philippines, Singapore & Thailand. Brunei Darussalam joined on 8 January 1984, Vietnam on 28 July 1995. Lao PDR & Myanmar on 23 July 1997 and Cambodia on 30 April 1999. India became a sectoral dialogue partner of ASEAN in 1992 & became a full dialogue

partner 3 years later in December 1995. This elevated the interaction between ASEAN and India from the senior official to the ministerial level & enabled co – operation in the political & security field, including India’s participation in the ASEAN Regional Forum (ARF). The ASEAN & Indian Leaders also agreed to their annual summit in 2002. Till October, 2009, 7 India- ASEAN Summits have been held. The financial crisis of 1997 and the development in South Asia also affected the dialogue relations b/w ASEAN and India. However, ASEAN- India dialogue relations endured these challenges & are now on the upswing (www.asean.org).

The share of India’s export to WANA (West Asia and North Africa) is 22.5 percent, followed by EU (European Union) 21.2 percent and North America 15.5 Percent, ASEAN (Association of South East Asian Nations) 10.3 percent, South Asia 4.6 percent and Latin America 3.3 percent (Government of India, Economic survey 2010-11). As compared to other blocs (WANA, North America and EU) the share of India’s exports to ASEAN is low. Thus there is need to examine the reasons for low trade of India with ASEAN nations. In the light of above issues, the present paper has been undertaken to study competitiveness or complementarities in production and trade among India and ASEAN nations and to study the pattern of intra – regional trade of ASEAN nations. Paper has been divided into five sections including present one. Section II deals with data base and methodology. Section III calculates the complementarities in production and trade among ASEAN and India by computing different indices and shares. Section IV gives conclusions and policy implications.

II Data Base and Methodology

Data Base

The study mainly covers the period of 15 years i.e 1993-94 to 2007-08. Keeping in mind the nature of study, secondary data have been calculated from the following sources.

1. Data on direction of trade of India with ASEAN countries have been obtained from the *CMIE Reports*.
2. Date on structure of GDP has been collected from *Key Indicators of Asia and Pacific Countries*.
3. Data on average annual growth rate have been collected from *UNCTAD Hand Book of Statistics, UN*.

Methodology

Different indices have been used to find out complementarities in production and trade among India and ASEAN nations. The indices are:

Commodity Diversification Index

Diversification Index measures the extent of difference between the structure of trade of a country and the world average. More is the value of index more are the differences between the export structure of a country and the world export structure. Less is the value of the index; less is the difference between export structure of a country and the world export structure. This Index assigns a value of zero to the most diversified economies and a value of one to the least. This index value has been calculated for India and ASEAN nations at two points of time 1995 and 2006 by measuring the absolute deviation of the country share from world structure as follows (Finger, J.M. and M.E. Kreinin, 1979):

$$S_j = \sum_{i=1}^n \frac{|h_{ij} - h_i|}{2}$$

h_{ij} = Share of commodity i in total exports (or imports) of country j .

h_i = Share of commodity i in total world exports (or imports).

Revealed Comparative Advantage

Revealed comparative advantage index (RCAI) is one of the most applied tools to measure the export competitiveness. It is defined as ratio of the share of a particular industry (or products) in a country's total exports to the share of the industry's exports (or products) in world's total exports. This index for top 10 export items of India and ASEAN nations has been calculated for the year 2006 with the help of following formula (Balassa, 1965):

$$RCA_{ij} = \frac{X_{ij} / X_i}{X_{jw} / X_w}$$

RCA_{ij} = Revealed comparative advantage of commodity j for country i

X_{ij} = Exports of commodity j in country i

X_i = Country i 's total exports

X_{jw} = Exports of commodity j of the world

X_w = Total exports of the world.

A country has a revealed comparative advantage only in those products for which its market share of world exports is above its average share of world exports. RCA_{ij} ranges from 0 to ∞ . A value of less than unity implies that the country has a revealed comparative disadvantage in the product. Similarly if the index exceeds unity the country is said to have revealed comparative advantage in the product (Mahmood 2000).

Trade Intensity Index

The trade intensity index is used to determine whether the value of trade between two countries is greater or smaller than would be expected on the basis of their importance in world trade. It is defined as the share of one country's exports going to a partner dividing by the share of world exports going to the partner. Trade Intensity of India and ASEAN nations, ASEAN as a whole has been calculated by divided the intra-country share by the share of country to total world trade at three points of time 1995, 2000 and 2008 in the following manner (Kojima, 1964):

$$I_{ij} = \frac{X_{ij} / X_i}{M_j / (M_w M_i)}$$

Where I_{ij} = Trade Intensity Index of country i with j

X_{ij}/X_i = Share of country j in i^{th} country's exports

M_j , M_i , and M_w = Imports of country j , i and world respectively.

It ranges between 0 to $+\infty$. Values greater than 1 indicate an intense trade relationship and vice versa. In other words, an index of more (less) than one indicates a bilateral trade flow that is larger (smaller) than expected given the partner country's importance in world trade.

Market Concentration Index

Market concentration index for India and ASEAN nations has been calculated at two points of time 1995 and 2006 with the help of Herfindahl – Hirschmann index (Hirschmann, 1940)

$$H_j = \frac{\sqrt{\sum_{i=1}^n (X_i / X)^2} - \sqrt{1/n}}{1 - \sqrt{1/n}}$$

H_j = Country concentration index

X_i = value of exports (imports) of product i

$$X = \sum_{i=1}^n x$$

n = number of products at the three – digit Standard International Trade Classification (SITC), revision 3 level.

This index has been normalized to obtain values ranking from 0 to 1 (maximum concentration). Number of products exported/imported includes only those products whose value greater than \$ 100,000 or which constitute more than 0.3 percent of the country's total exports (imports). The lower the index, the less concentrated are a country's exports / imports (United Nations, 2005).

III. Complementarities in Production and Trade among ASEAN Countries and India

Performance of ASEAN countries and India

Table 1 shows the selected indicators of ASEAN countries and India in comparison to world in 2008. Table depicts that the ASEAN countries accounted for 9 percent of world population while ASEAN +India accounted for 26 percent of world population. The share in GDP of ASEAN countries was merely 2.49 percent but ASEAN + India had 4.49 percent. Among ASEAN countries + India, India had the highest population and GDP while the Brunei had least population and Lao PDR had least GDP. The inward flows of FDI were highest in Singapore followed by India and Thailand. Export earnings were also highest in India as compared to ASEAN countries. Among ASEAN countries, five countries had deficit trade account balance in 2008 namely Cambodia, Lao PDR, Philippines, Thailand and Vietnam. The

openness ratio among ASEAN countries + India ranged from 38.32 percent in Myanmar to 256.44 percent in Singapore while the India's openness ratio (trade to GDP ratio) found to be 162.20 percent. Thus, it is clear from the table if India attains full member status, ASEAN's performance will be better.

Table 1
Selected Indicators of ASEAN Countries and India (2008)

	Populati on (thousan ds)	GDP (millions of dollars)	GDP Per Capita (dollars)	FDI Inward Flow (millions of dollars)	Export US \$ (millions)	Import US \$ (millions)	Trade balance US \$ (millions)	Openn ess ratio
World	6697254	60557010	9042	1823281.61	16129607.39	16300527.48	-	-
Share of India + ASEAN world	26.35	4.49	40.37	35.67	15.91	6.86	-	-
Share of ASEAN World	8.71	2.49	28.56	26.82	5.45	5.09	-	-
ASEAN	583651	1506807	2582	488946.5	879142.6	831229.1		-
Brunei	397	14147	35623	9926.3	8754.2	3106.0	5648.2	83.84
Cambodia	14656	11082	756	4293.0	4249.2	4476.3	-227.1	78.73
Indonesia	228523	511174	2237	34249.6	137020.4	129197.3	7823.1	52.08
Lao PDR	5763	5289	918	1285.7	827.7	1803.2	-975.5	49.74
Malaysia	27863	222674	7992	67263.6	194495.9	144298.8	50197.1	152.15
Myanmar	58510	27182	465	5534.6	6620.6	3794.9	2825.7	38.32
Philippines	90457	166773	1844	22228.2	49025.4	56645.6	-7620.2	63.36
Singapore	4839	184120	38046	225456.8	241404.7	230760.3	10644.4	256.44
Thailand	66482	273666	4116	83294.9	174966.7	177567.5	-2600.8	128.82
Vietnam	86160	90701	1053	35413.8	61777.8	79579.2	-17801.4	155.85
India	1181412	1217490	1068	161481	1687040	287759.4	1399280.6	162.20

Source: ASEAN Statistical Yearbook, 2008.

Production Structure

Structure of production given in Table 2 shows that in 1995, GDP of most of ASEAN countries as well as India was dominated by service sector namely Malaysia (46.8 percent), Philippines (46.3 percent), Singapore(66.8 percent),Thailand (49.7 percent), Vietnam (44.1 percent) and India (45.7percent) while GDP of Brunei (54.3 percent) and Indonesia (41.8 percent) was dominated by Industrial sector & GDP of Cambodia, Lao PDR and Myanmar dominated by agriculture sector (49.6 percent, 55.0 percent and 60.0 percent). In 2000, same pattern was followed except in Malaysia (again same countries dominated service sector namely Philippines, Singapore, Thailand, Vietnam and India). In 2000, Cambodia was also dominated by service sector while Lao and Myanmar remained as earlier. In 2000, Malaysia was dominated by industrial sector. Share of service sector in GDP was maximum in Singapore (66.3 percent), share of industrial sector in GDP was maximum in Brunei (63.7 percent), share of agriculture sector in GDP was maximum in Myanmar (57.2 percent). In 2008, most of ASEAN countries and India was dominated by service sector. Share of service sector in GDP was maximum in Singapore (74.0 percent) followed by Philippines (53.5 percent)and India (53.4 percent) while other countries were dominated by industrial sector as Indonesia (48.1 percent) followed by Malaysia (47.6 percent) and Thailand (45.1 percent). In 2008, not a single country was dominated by agriculture sector. Thus table depicts that structure of GDP of India as well as most of ASEAN countries namely Philippines, Singapore, Vietnam was dominated by service sector. Similar production structure of these countries indicated lack of complementarities in production at sectoral level among India and ASEAN nations.

Table 2

Structure of GDP of ASEAN Nations and India (percentage of GDP)

Country	Agriculture			Industry			Services		
	1995	2000	2008	1995	2000	2008	1995	2000	2008
Brunei	1.2	1.0	-	54.3	63.7	-	44.6	35.3	-
Cambodia	49.6	37.9	32.5	14.8	23.0	22.4	35.5	39.1	45.1

Indonesia	17.1	15.6	14.4	41.8	45.9	48.1	41.1	38.5	37.5
Lao PDR	55.0	48.5	32.1	19.0	19.1	27.8	26.0	32.4	40.1
Malaysia	12.7	8.3	10.1	40.5	46.8	47.6	46.8	44.9	42.3
Myanmar	60.0	57.2	-	9.9	9.7	-	30.1	33.1	-
Philippines	21.6	15.8	14.9	32.1	32.3	31.6	46.3	52.0	53.5
Singapore	0.2	0.1	0.1	33.1	33.6	26.0	66.8	66.3	74.0
Thailand	9.5	9.0	11.6	40.7	42.0	45.1	49.7	49.0	43.3
Vietnam	27.2	24.5	22.1	28.8	36.7	39.7	44.1	38.7	38.2
India	26.5	23.4	17.6	27.8	26.2	29.0	45.7	50.5	53.4

Source: *Key Indicators of Asia and Pacific Countries*, 2009.

Growth of Exports and Imports of ASEAN countries and India

Table 3 shows that the growth rate of exports was highest in Vietnam during 1995-00 (19.72 percent) followed by Philippines (18.78 percent) and Myanmar (14.33 percent). While in 2000-05 the growth rate of exports was highest in India (19.18 percent). Same trend was followed by India in 2000-08. During this period, the growth rate of exports was again highest in India (21.37 percent).

Regarding the import performance of ASEAN countries and India, Myanmar experienced higher growth rate of imports as compared to ASEAN countries and India during 1995-00. In the period 2000-05 and 2000-08 India had highest growth rate of imports as compared to ASEAN countries (as 23.54 percent and 26.80 percent). However in case of trade balance ratio as percentage of imports in 1995, only Brunei had positive trade balance while all ASEAN countries and India as well had negative trade balance. In 2000, the countries namely Cambodia, Lao PDR, Myanmar, Vietnam and India had negative trade balance. While in 2008, countries namely Cambodia, Lao PDR, Philippines, Thailand, Vietnam and India had negative trade balance. Brunei experienced continuous growth in trade balance ratio as percentage of

imports. Thus table depicts that average annual growth of exports and imports of India is more as compared to ASEAN as a whole but had negative trade balance (-39.58 percent) while ASEAN had positive trade balance (5.88 percent) in 2000-08

Complementarities in Trade

Table 4 shows that in 1995, export basket for most of ASEAN countries and India had been dominated by manufactured goods. In Singapore, manufactures accounted for 83.6 percent of total exports, 74.5 percent in Malaysia and 70.9 percent in Thailand. In manufactures, other manufactured goods played an important role. In spite of these, machinery and transport also constituted large part in export basket. Chemical products as well as ores and metals amounted for minimum share in export basket for all the ASEAN countries and India. In 2006, exports of manufactures of all ASEAN countries (except Thailand and Vietnam) and India declined as compared to 2000.

Import basket for all ASEAN countries and India had been dominated by manufactured goods in 1995. In imports, maximum share was of Malaysia (83.4 percent) followed by Singapore (82.6 percent) and Brunei (81.8 percent). However, in case of machinery and transport, maximum share was of Malaysia (60.0 percent) followed by Singapore (57.9 percent) and Thailand (47.5 percent). In 2006, import basket for all of the ASEAN countries and India again had been dominated by manufactured goods. The maximum share was of Cambodia (81.1 percent) followed by Brunei (79.3 percent) and Malaysia (77 percent). Thus the huge complementarities in trade had been found lacking at section level.

Table 3

Average Annual Growth Rate of Merchandise Trade and Trade Balance Ratio of ASEAN Countries & India

Country	Exports			Imports			Trade balance ratio as % of imports		
	1995-00	2000-05	2000-08	1995-00	2000-05	2000-08	1995	2000	2008
Brunei	6.98	10.57	14.63	-14.27	5.71	9.28	14.87	252.56	340.48
Cambodia	12.34	16.46	16.60	11.14	15.35	17.04	-27.94	-27.82	-32.41
Indonesia	-	-	-	-	-	-	-	-	13.77
Lao PDR	0.62	9.18	19.27	-4.31	10.62	15.03	-47.18	-38.29	-22.30

Malaysia	4.62	8.75	11.53	-1.65	8.20	10.83	-4.86	19.85	27.53
Myanmar	14.33	12.10	18.01	14.50	-5.63	4.81	-36.21	-31.47	61.66
Philippines	18.78	1.70	4.69	2.88	5.36	7.57	-38.24	7.44	-18.66
Singapore	1.08	12.63	14.85	-1.00	9.30	13.89	-5.01	2.42	5.76
Thailand	3.18	11.12	14.02	-5.92	14.22	15.27	-20.27	11.37	-3.31
Vietnam	19.72	18.43	21.34	10.21	20.70	23.44	-33.19	-7.39	-21.77
India	5.28	19.18	21.37	7.87	23.54	26.80	-11.75	-17.75	-39.58
ASEAN	4.55	9.96	13.16	-1.82	10.39	13.92	-8.97	14.44	5.88

Source: UN, UNCTAD Hand book of Trade Statistics.

Table 4

Trade Structure of ASEAN Countries and India (percent)

	All Food Items		Agricultural Raw Material		Fuels		Ores and Metals		Manufactured Goods		Chemical Products		Other Man. Goods		Machinery and Transport	
	Exp	Imp	Exp	Imp	Exp	Imp	Exp	Imp	Exp	Imp	Exp	Imp	Exp	Imp	Exp	Imp
Brunei																
1995	0.1	13.6	0.0	0.6	91.1	0.2	0.0	3.3	8.2	81.8	0.1	6.4	3.6	36.5	4.5	39.0
2000	0.0	17.9	0.0	0.3	89.3	0.2	0.0	1.2	10.4	80.3	0.1	7.7	6.4	41.8	4.0	30.8
2006	0.1	17.0	0.0	0.2	96.3	1.6	0.1	1.4	3.3	79.3	0.0	10.5	2.1	33.7	1.2	35.1
Cambodia																
1995	3.5	24.9	72.1	1.6	0.0	7.8	0.3	7.7	23.5	56.6	0.3	6.1	22.4	16.3	0.7	34.2
2000	1.0	9.5	2.9	3.3	0.0	12.7	0.4	2.8	95.6	71.0	0.0	6.7	94.9	48.1	0.7	16.2
2006	5.7	7.8	2.5	1.3	0.0	8.2	1.7	0.7	89.8	81.1	0.2	5.5	85.0	55.0	4.7	20.5
Indonesia																
1995	11.4	8.8	6.7	6.2	25.3	7.4	6.1	4.6	50.5	72.9	3.4	15.4	38.7	17.4	8.4	40.1
2000	8.9	10.0	3.6	7.1	25.2	18.1	5.6	3.6	56.7	61.2	5.1	17.6	34.3	16.1	17.3	27.5
2006	11.6	8.8	6.4	3.5	27.4	31.2	10.5	3.9	44.1	52.7	5.1	14.3	25.0	13.2	14.0	25.2

Lao PDR																	
1995	9.8	18.4	28.9	0.3	0.2	8.5	5.8	0.8	55.2	69.0	1.5	6.8	44.2	27.2	9.6	35.0	
2000	8.0	14.1	32.7	0.6	0.4	21.4	1.4	0.9	57.5	62.5	0.2	6.7	38.9	24.0	18.4	31.8	
2006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Malaysia																	
1995	9.5	4.8	6.2	1.2	7.0	2.3	1.5	5.9	74.5	83.4	3.0	7.1	16.4	16.3	55.1	60.0	
2000	5.5	4.3	2.6	1.3	9.6	4.8	1.2	4.2	80.3	83.7	3.8	7.2	14.0	13.9	62.5	62.6	
2006	7.0	5.2	2.7	1.3	13.7	9.0	1.7	5.8	73.4	77.0	5.4	7.8	15.4	14.0	52.6	55.2	
Myanmar																	
1995	41.9	21.7	38.5	0.7	0.2	4.0	7.4	1.8	11.9	71.0	1.0	9.5	10.0	28.7	0.9	32.8	
2000	20.0	11.6	22.2	0.4	6.1	15.0	4.6	0.7	46.7	71.6	0.5	11.6	44.9	32.9	1.3	27.1	
2006	19.2	14.1	16.0	0.6	47.2	10.1	4.4	1.1	11.6	70.4	0.1	14.0	11.1	32.7	0.4	23.7	
Philippines																	
1995	12.8	8.3	1.2	2.2	1.5	9.2	5.4	3.2	40.8	57.8	2.0	9.2	16.7	16.2	22.2	32.5	
2000	4.8	7.0	0.6	1.4	1.3	11.1	2.0	2.6	91.3	77.9	0.9	8.0	14.3	13.3	76.1	56.5	
2006	5.5	6.7	0.5	0.8	2.3	15.3	5.1	2.8	86.1	74.3	1.6	7.4	15.0	10.8	69.5	56.2	
Singapore																	
1995	3.9	4.6	1.1	0.9	6.8	8.1	2.3	2.9	83.6	82.6	6.0	6.5	12.0	18.3	65.6	57.9	
2000	2.2	3.2	0.5	0.4	7.4	12.1	1.5	2.2	85.3	81.3	7.0	5.7	10.9	14.8	67.4	60.7	
2006	1.6	2.6	0.3	0.4	13.1	18.8	2.1	3.3	78.6	73.0	11.3	6.0	9.6	12.4	57.7	54.7	
Thailand																	
1995	19.3	3.8	5.4	4.1	0.7	6.7	2.9	5.4	70.9	78.7	4.4	10.5	32.9	20.7	33.7	47.5	

2000	14.4	4.3	3.3	2.9	3.2	12.2	2.1	5.5	74.2	74.4	5.9	11.0	24.7	18.3	43.6	45.0
2006	11.2	3.9	5.3	1.8	5.0	19.9	2.8	7.7	74.4	65.7	8.0	10.3	21.7	19.0	44.7	36.4
Vietnam																
1995	30.2	4.9	3.1	2.4	18.0	10.3	0.8	2.4	43.7	75.9	1.1	16.7	35.6	30.9	7.0	28.3
2000	25.3	5.2	2.0	2.9	26.4	13.5	0.7	2.6	42.4	72.6	1.0	15.3	32.8	27.2	8.7	30.0
2006	19.3	6.0	4.1	3.8	24.4	14.9	0.8	8.5	51.1	66.3	2.0	14.0	38.6	28.4	10.5	24.0
India																
1995	18.7	4.2	1.3	4.0	1.7	23.7	18.6	14.1	58.2	47.0	8.1	15.4	42.5	11.5	7.5	20.2
2000	12.9	4.4	1.2	3.2	4.3	34.7	17.2	22.6	62.1	33.3	10.5	9.0	43.8	9.2	7.9	15.1
2006	8.6	3.3	2.0	1.7	15.0	33.3	16.9	18.3	56.4	42.1	11.4	9.0	33.8	10.5	11.1	22.5

Source: UN, *UNCTAD Handbook of Statistics*, 2008.

Commodity Diversification Index

This index reveals the extent of the difference between the structure of trade of the country and the world average. This index closer to 1 indicates a bigger difference from the world average. Table 5 depicts the diversification index of ASEAN countries and India in 1995 and 2006. The export diversification index of Brunei, Myanmar and Cambodia was 0.81 percent, 0.81 percent and 0.79 percent in 1995, showing that there is smaller difference between the structure of export of these countries and world average. As compared to 1995, export diversification Index of Cambodia, Indonesia, Malaysia, Thailand, Vietnam and India has decreased and of Singapore remained constant. In the case of import diversification index, all ASEAN countries and India had less than 0.60 percent in 1995 indicating that there is big difference between the structure of imports of these countries and world average. In 2006, import diversification index of Cambodia, Malaysia, Vietnam and India has decreased as compared to 1995 indicating that decreasing difference of the structure of import from world average.

Table 5

Commodity Diversification Index of ASEAN Countries and India

Country	1995		2006	
	Export	Import	Export	Import

Brunei	0.81 (87)	0.45 (212)	0.84 (86)	0.45 (204)
Cambodia	0.79 (150)	0.59 (128)	0.76 (97)	0.54 (200)
Indonesia	0.59 (230)	0.42 (254)	0.49 (245)	0.43 (249)
Lao PDR	-	-	-	-
Malaysia	0.52 (247)	0.39 (254)	0.45 (254)	0.37 (256)
Myanmar	0.81 (88)	0.48 (201)	0.82 (105)	0.50 (214)
Philippines	0.57 (203)	0.31 (247)	0.61 (225)	0.44 (245)
Singapore	0.49 (249)	0.36 (248)	0.49 (247)	0.37 (250)
Thailand	0.48 (241)	0.31 (247)	0.39 (244)	0.31 (255)
Vietnam	0.68 (198)	0.47 (234)	0.62 (237)	0.41 (250)
India	0.59 (240)	0.48 (233)	0.54 (254)	0.46 (251)

Source: UN, *UNCTAD Handbook of Statistics*, 2008.

Revealed Comparative Advantage

Besides the trade competitiveness of different sections of the commodities, RCA indices of ten top export items had also been measured for the year 2006. Table 4.6 shows that in 2006, of the 66 export commodities with highest revealed comparative advantage, Brunei had revealed comparative advantage in narrow range of commodities (2 out of 10 top exported items). Countries namely Malaysia, Philippines and Singapore had revealed comparative advantage in 4 (out of 10) range of commodities. Thailand and Indonesia had revealed comparative advantage in 5 and 6 (out of 10) range of commodities. Countries namely Myanmar and India had revealed comparative advantage in 7 (out of 10) range of commodities while Vietnam, Lao PDR and Cambodia had revealed comparative advantage in 9 (out of 10) range of commodities. Most of items with highest revealed comparative advantage entered

under miscellaneous manufactured articles section (20 out of 66) followed by machinery and transport equipment (12 items) (Table 7).

In food and live animals, Vietnam had highest revealed comparative advantage in rice (41.11), Myanmar in vegetable and vegetable products nes (32.90). In animals and vegetable oils and fats, RCA of Indonesia was highest in fixed veg fat and oil, excl. 'soft' (43.07) and Malaysia also in fixed veg. fat and oil excl. 'soft' (26.15). In miscellaneous manufactured goods, Cambodia had highest revealed comparative advantage in female clothing, knitted crocheted (48.85) and Lao PDR in male clothing, woven (27.9) respectively indicating existence of complementarities in export structure in 2006.

Table 6

Revealed Comparative Advantage Indices of ASEAN Countries & India (2006)

Country	Commodities	
Brunei	Natural gas liquefied or not (18.78), crude petroleum and bituminous oil (8.36).	2
Cambodia	Female clothing, knitted crocheted (48.85), male clothing, knitted crocheted (46), articles of apparel nes (33.44), female clothing woven (28.98), crustacean mollusc aquat in vertebra (23.89), male clothing woven (21.91), knitted or crocheted fabrics nes (6.67), footwear (5.57), textile yarn (3.51)	9
Indonesia	Fixed veg fat and oil excl. 'soft' (43.08), natural rubber, latex gum etc. (28.46), copper ores and concentrates (15.93), coal excluding non-agglomerated (13.66), veneer plywood & other wood nes (7.41), natural gas liquefied or not (6.13).	6
Lao PDR	Wood simply worked, railway sleeper (87.82), wood in rough or roughly squared (63.2), male clothing, woven (27.9), coffee and coffee substitutes (23.67), male clothing, knitted crocheted (22.57), articles of apparel nes (20.55), female clothing, woven (9.68) veneer plywood & other wood nes (6.03), female clothing, knitted crocheted (5.76)	9
Malaysia	Fixed veg. fat & oil excl. 'soft' (26.15), valves tubes, diodes, transistors (4.58), computer equipment nes (4.02), office equipment part & accessories (3.55)	4

Myanmar	Wood in rough or roughly squared (132), vegetable and vegetable products nes (32.90), natural gas, liquefied or not (26.19), crustacean mollusc aquat invertebra (21.11), wood simply worked, railway sleeper (10.62), male clothing, woven (8.94), fish, fresh live chilled frozen (7.19).	7
Philippines	Valves tubes, diodes, transistors (10.14), Office equipment part & accessories (4.30), computer equipment nes (3.94), electrical machinery apparatus nes (3.21_	4
Singapore	Valves tubes, diodes, transistors (6.82), office equipment part & accessories (3.81), music instrument (3.18), heavy petroleum & bituminous oil (3.10)	4
Thailand	Natural rubber, latex gum etc. (29.23), fish shellfish, prepared preserved (16.43), Goods & service vehicles (3.33), computer equipment nes (3.19), heating-cooling equipment nes (3.13)	5
Vietnam	Rice (41.11), crustacean mollusc aquat invertebra (27.22), natural rubber, latex gum etc. (20) coffee & coffee substitutes (18), footwear (15.24), male clothing, woven (8.94), female clothing, woven (5.93) furniture part, bedding furnishing (4.89), articles of apparel nes (3.33)	9
India	Pearl precious semi precious stone (12.69), iron ore and concentrates (12.14), jewellery nes (9.51), made up textile article nes (7.14), textile yarn (5.67), female clothing woven (4.74), heavy petroleum & bituminous oil (3.36).	7

Source: UN, *UNCTAD Handbook of Statistics*, 2008.

Table 7 Section wise Revealed Comparative Advantages

Country	Food and live animal	Crude materials inedible, except fuels	Mineral fuels lubricants and related material	Animal and vegetable oil, fats and waxes	Chemical and related products	Manufactured goods	Machinery and transport equipment	Miscellaneous manufactured articles	No. of commodities
Brunei	-	-	2	-	-	-	-	-	2
Cambodia	1	-	-	-	-	2	-	6	9
Indonesia	-	2	2	1	-	1	-	-	6
Lao PDR	1	2	-	-	-	1	-	5	9
Malaysia	-	-	-	1	-	-	3	-	4
Myanmar	3	2	1	-	-	-	-	1	7
Philippines	-	-	-	-	-	-	4	-	4

Singapore	-	-	1	-	-	-	2	1	4
Thailand	1	1	-	-	-	-	3	-	5
Vietnam	3	1	-	-	-	-	-	5	9
India	-	1	1	-	-	3	-	2	7
No. of Commodities	9	9	7	2	-	7	12	20	66

Source: UN, *UNCTAD Handbook of Statistics*, 2008

Table 8
Market Concentration Index of ASEAN Countries and India

Country	1995		2006	
	Export	Import	Export	Import
Brunei	0.61 (87)	0.08 (212)	0.72 (86)	0.08 (204)
Cambodia	0.40 (150)	0.17 (128)	0.36 (97)	0.19 (200)
Indonesia	0.14 (230)	0.06 (254)	0.13 (245)	0.18 (249)
Lao PDR	-	-	-	-
Malaysia	0.18 (247)	0.18 (254)	0.19 (254)	0.22 (256)
Myanmar	0.31 (88)	0.08 (201)	0.46 (105)	0.08 (214)
Philippines	0.16 (203)	0.09 (247)	0.35 (225)	0.32 (245)
Singapore	0.22 (249)	0.16 (248)	0.27 (247)	0.22 (250)
Thailand	0.09 (241)	0.08 (247)	0.09 (244)	0.15 (255)
Vietnam	0.21 (198)	0.09 (234)	0.21 (237)	0.12 (250)

India	0.14 (240)	0.13 (233)	0.14 (254)	0.24 (251)
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Source: UN, *UNCTAD Handbook of Statistics*, 2008.

Market Concentration Index

This index is a measure of the degree of market concentration. It has been normalized to obtain values ranking from 0 to 1 (maximum concentration). Table 4.8 depicts the concentration index for exports as well as concentration index for imports of ASEAN countries and India during the period 1995 and 2006. In 1995, its value was less than 0.50 in all ASEAN nations (except Brunei i.e. 0.61 percent) as well as in India indicating that exports is geographically diversified. It was 0.40, 0.31 and 0.14 for Cambodia, Myanmar and India respectively. In 2006, export market concentration index of ASEAN countries namely Cambodia & Indonesia had decreased depicting the market diversification of their exports. While the index of Thailand, Vietnam and India has remained constant.

In case of import market concentration index its value was highest for Malaysia (0.18 percent) followed by Cambodia (0.17 percent) and Singapore (0.16 percent) in 1995. In 2006, all ASEAN nations (except Brunei and Myanmar) & India experienced an increase in index indicating the increasing geographic concentration of import items of these countries.

Direction of Exports

Export share is percentage of exports going to a partner to total exports of country/region. A higher share indicates a higher degree of integration b/w partner countries/region. Regarding the direction of exports, Table 4.9 shows that maximum share was of Cambodia (63.12 percent) followed by Lao PDR (54.98 percent) and Singapore (30.32 percent) to ASEAN in 1995. In 2000, all ASEAN countries (except Indonesia and Philippines) as well as India experienced decline in exports to ASEAN countries. Cambodia witnessed a rapid decline in exports to ASEAN (as share decreased from 63.12 percent in 1995 to 6.78 percent in 2000). In 2008, the maximum share was of Myanmar (57.52 percent) followed by Lao PDR (51.32 percent) and Singapore (31.99 percent). In 2008, all ASEAN countries (except Malaysia, Philippines and Vietnam) and India experienced an increase in share.

ASEAN countries and India's exports show that for Brunei & Cambodia, Thailand constituted main export market with share being 10.98 percent & 40.87

percent while for Indonesia, Malaysia, Myanmar, Philippines, Thailand, Vietnam and India, Singapore constituted main export market with share 8.28 percent, 20.29 percent, 16.03 percent, 5.72 percent, 13.15 percent, 12.27 percent and 2.64 percent respectively in 1995. In 2000, the share of some countries increased and of some countries decreased. In 2008, for most of the countries namely Brunei, Cambodia, Indonesia, Myanmar, Singapore and Thailand, India constituted the market with share being 2.45 percent, 0.06 percent, 5.23 percent, 12.65 percent, 3.52 percent and 1.94 percent respectively. For India, Singapore constituted the main market with share being 3.89 percent in 2008. Thus for India, Singapore constituted the main export market with share 2.64 percent in 1995, 1.94 percent in 2000 and 3.89 percent in 2008 and for other countries, Singapore and Thailand constituted the main export market indicating lack of market diversification of exports of ASEAN countries and India.

Table 9
Direction of ASEAN Countries and India's Export (% share)

Country	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam	India	ASEAN
Brunei												
1995	-	0.00	0.39	0.00	0.98	0.00	0.63	9.23	10.98	0.00	0.00	26.16
2000	-	0.00	0.81	0.00	0.21	0.00	0.00	7.55	14.58	0.00	0.01	23.16
2008	-	0.00	21.56	0.00	0.91	0.00	0.74	1.70	0.79	0.00	2.45	25.70
Cambodia												
1995	0.00	-	1.12	0.71	3.69	0.00	0.00	10.74	40.87	5.99	7.35	63.12
2000	0.01	-	0.15	0.28	0.87	0.00	0.10	1.60	2.04	1.73	0.01	6.78
2008	0.00	-	0.04	0.01	0.30	0.00	0.03	2.48	1.92	4.49	0.06	9.28
Indonesia												
1995	0.00	0.18	-	0.00	2.17	0.13	1.30	8.28	1.55	0.63	0.84	14.24
2000	0.04	0.08	-	0.00	3.17	0.10	1.32	10.56	1.65	0.58	1.85	17.52
2008	0.04	0.13	-	0.00	4.69	0.18	1.50	9.39	2.67	1.22	5.23	19.83

Lao PDR												
1995	N/A	0.00	0.00	-	0.00	0.00	0.00	0.03	26.77	28.18	0.00	54.98
2000	0.00	0.01	0.27	-	0.04	0.00	0.00	0.21	17.60	24.57	0.00	42.69
2008	0.00	0.08	0.01	-	0.17	0.00	0.00	0.05	35.51	15.50	0.01	51.32
Malaysia												
1995	0.39	0.11	1.32	0.00	-	0.31	0.88	20.29	3.89	0.36	1.11	27.55
2000	0.26	0.07	1.74	0.00	-	0.24	1.76	18.39	3.62	0.48	1.96	26.56
2008	0.23	0.08	3.13	0.00	-	0.16	1.47	14.74	4.80	1.22	3.72	25.83
Myanmar												
1995	0.04	0.00	7.97	0.00	3.14	-	0.05	16.03	3.05	0.00	12.18	30.27
2000	0.01	0.01	1.01	0.00	3.19	-	0.10	5.04	11.76	0.17	8.23	21.29
2008	0.00	0.00	0.41	0.00	2.47	-	0.05	1.22	52.33	1.04	12.65	57.52
Philippines												
1995	0.01	0.00	0.73	0.00	1.81	0.01	-	5.72	4.59	0.71	0.12	13.58
2000	0.01	0.01	0.48	0.00	3.60	0.03	-	8.17	3.16	0.20	0.17	15.65
2008	0.02	0.01	1.23	0.00	3.98	0.02	-	5.30	3.07	0.78	0.39	14.43
Singapore												
1995	1.24	0.42	N/A	0.03	19.17	0.54	1.63	-	5.77	1.51	1.59	30.32
2000	0.35	0.31	0.00	0.02	18.13	0.32	2.45	-	4.25	1.51	2.08	27.34
2008	0.25	0.15	10.53	0.01	12.05	0.38	2.15	-	3.89	2.58	3.52	31.99
Thailand												
1995	0.11	0.55	1.35	0.59	2.58	0.00	0.69	13.15	-	0.78	0.48	19.79
2000	0.06	0.50	1.94	0.55	4.08	0.73	1.57	8.70	-	1.21	0.82	19.34
2008	0.07	1.17	3.54	1.01	5.61	0.76	1.90	5.68	-	2.86	1.94	22.61
Vietnam												
1995	0.00	1.68	0.96	0.37	1.97	0.00	0.74	12.27	1.80	-	0.19	19.79
2000	0.01	0.98	1.72	0.49	2.86	0.04	3.30	6.12	2.57	-	0.33	18.09
2008	0.00	2.28	1.27	0.24	3.12	0.05	2.91	4.24	2.15	-	0.62	16.26

India												
1995	0.02	0.01	1.64	0.00	1.16	0.07	0.40	2.64	1.51	0.32	-	7.77
2000	0.01	0.02	0.91	0.01	1.33	0.11	0.44	1.94	1.20	0.49	-	6.45
2008	0.01	0.03	1.33	0.00	1.42	0.10	0.30	3.89	1.17	0.96	-	9.21

Source: *Asia Regional Integration Centre.*

Direction of Imports

Import share is the percentage of imports from a partner to total imports of a country/region. A higher share indicates a higher degree of integration b/w partner countries / regions. Regarding the direction of imports, Table 10 shows that maximum share to ASEAN was of Cambodia (75.97 percent) followed by Lao PDR (56.08 percent) and Brunei (47.74 percent) in 1995. In 2000, all ASEAN countries (except Cambodia and Vietnam) and India experienced increase in imports to ASEAN. Lao PDR witnessed a rapid increase (from 56.08 percent to 77.71 percent) in imports. In 2008, the maximum share was of Lao PDR (75.85 percent) followed by Brunei (63.42 percent) and Cambodia (57.22 percent). In 2008, all ASEAN countries (except Lao PDR, Singapore and Vietnam) and India experienced an increase in share.

ASEAN countries and India's imports show that for most of ASEAN countries namely Brunei, Cambodia, Malaysia, Myanmar, Philippines, Thailand, Vietnam as well as for India also, Singapore constituted main import market with share 31.67 percent, 34.97percent,12.38 percent, 29.95 percent, 4.51 percent, 5.17percent, 17.05 percent and 2.80 respectively in 1995. In 2000, again Singapore constituted main import market share for above mentioned ASEAN countries (except Cambodia and Myanmar) as well as for India also. In 2008, for all ASEAN countries namely Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, & Vietnam, India constituted the market with share being 0.48 percent,0.80 percent, 2.25 percent, 0.15 percent, 1.98 percent, 3.20 percent, 1.08 percent, 2.65 percent, 1.43 percent & 2.59 percent respectively. For India, Singapore constituted the main market with share being 4.20 percent in 2008.

Thus table shows that for India, Singapore constituted the main import market with share 2.80 percent in1995, 2.94 percent in 2000 and 4.20 in 2008. For other countries, Singapore and Thailand constituted the main import market indicating lack of market diversification of imports of ASEAN countries and India.

Table 10 Direction of ASEAN Countries and India's Import (% share)

Country	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam	India	ASEAN
Brunei												
1995	-	0.00	2.05	0.00	13.72	0.02	0.25	31.67	2.58	0.01	0.21	47.74
2000	-	0.00	1.83	0.00	18.90	0.02	0.29	33.25	3.20	0.14	0.26	57.64
2008	-	0.01	2.52	0.00	18.96	0.01	0.42	36.47	5.03	0.00	0.48	63.42
Cambodia												
1995	0.00	-	5.59	0.00	5.42	0.00	0.02	34.97	23.35	6.62	0.13	75.97
2000	0.00	-	4.80	0.00	4.50	0.01	0.16	7.44	15.57	6.43	0.65	38.92
2008	0.00	-	2.31	0.02	2.19	0.00	0.10	6.88	26.77	18.96	0.80	57.22
Indonesia												
1995	0.00	0.01	-	0.00	6.39	0.26	0.20	5.83	1.81	0.39	1.18	14.88
2000	0.05	0.00	-	0.00	3.37	0.07	0.34	11.30	3.31	0.90	1.57	19.35
2008	1.87	0.00	-	0.00	6.90	0.02	0.58	16.86	4.90	0.56	2.25	31.69
Lao PDR												
1995	N/A	0.48	0.00	-	0.00	0.00	0.00	2.67	48.88	4.06	0.00	56.08
2000	0.00	0.50	0.14	-	0.28	0.00	0.01	4.77	60.75	11.27	0.80	77.71
2008	0.00	0.02	0.16	-	0.33	0.00	0.03	1.00	68.48	5.84	0.15	75.85
Malaysia												
1995	0.01	0.02	1.56	0.00	-	0.05	0.59	12.38	2.62	0.16	0.71	17.40
2000	0.00	0.02	2.76	0.00	-	0.08	2.42	14.31	3.86	0.55	0.88	24.01
2008	0.06	0.01	4.63	0.00	-	0.11	1.34	11.02	5.61	1.49	1.98	24.28
Myanmar												
1995	0.00	0.00	2.84	0.00	10.77	-	0.07	29.95	0.00	0.00	1.00	43.63
2000	0.00	0.00	2.34	0.00	8.36	-	0.37	15.78	18.25	0.20	1.74	45.31
2008	0.00	0.00	4.04	0.00	5.08	-	0.18	20.75	21.24	0.53	3.20	51.81
Philippines												
1995	0.03	0.00	2.19	0.00	2.20	0.00	-	4.51	1.49	0.15	0.62	10.57
2000	0.00	0.00	2.01	0.00	3.79	0.01	-	6.74	2.55	0.45	0.48	15.55
2008	0.14	0.00	2.65	0.00	4.27	0.01	-	10.29	4.96	2.98	1.08	25.30
Singapore												

1995	0.18	0.03	N/A	0.01	15.47	0.17	0.88	-	5.16	0.36	0.74	22.27
2000	0.20	0.06	0.00	0.00	16.97	0.08	2.49	-	4.31	0.61	0.80	24.72
2008	0.06	0.04	5.50	0.00	11.93	0.03	1.54	-	3.53	0.75	2.65	23.36
Thailand												
1995	0.36	0.20	0.84	0.09	4.02	0.05	0.72	5.17	-	0.05	0.78	11.50
2000	0.79	0.01	2.10	0.12	5.40	0.41	1.77	5.52	-	0.54	1.00	16.66
2008	0.05	0.05	3.02	0.35	5.53	2.12	1.25	4.02	-	0.77	1.43	17.15
Vietnam												
1995	0.00	0.28	2.27	1.01	2.28	0.00	0.30	17.05	5.26	-	0.74	28.45
2000	0.00	0.24	2.21	0.68	2.49	0.02	0.40	17.23	5.19	-	1.14	28.45
2008	0.00	0.26	2.14	0.34	3.22	0.09	0.48	11.64	6.08	-	2.59	24.25
India												
1995	0.00	0.08	1.11	0.00	2.23	0.47	0.04	2.80	0.42	0.04	-	7.20
2000	0.00	0.00	1.83	0.00	2.76	0.36	0.12	2.94	0.67	0.02	-	8.70
2008	0.09	0.00	2.51	0.00	2.60	0.29	0.07	4.20	1.18	0.14	-	11.07

Source: Asia Regional Integration Centre

Trade Intensity Index

Trade intensity indices highlight the importance of secular changes in bilateral trade flows. If it takes a value above (below) unity, the countries have greater (smaller) bilateral trade than world. Trade intensity indices of different ASEAN countries and India have been shown in Table 4.11. Table depicts that in 1995, trade intensity index of Cambodia with ASEAN was maximum i.e. 11.63 percent followed by Lao PDR (8.80percent) and Myanmar (6.18 percent). Trade intensity index of India with ASEAN was 1.18 percent in 1995 which shows that India have greater bilateral trade with ASEAN than world. Country-wise analysis shows that Brunei's trade was most intense with Singapore (9.92 percent), Cambodia with Vietnam (41.23 percent), Indonesia with Myanmar (5.93 percent), Lao PDR with Vietnam (78.63 percent), Malaysia with Singapore (8.18 percent), Myanmar with Singapore (12.71 percent), Philippines with Singapore (2.50 percent), Singapore with Brunei (12.57 percent), Thailand with Lao PDR (32.89 percent), Vietnam with Lao PDR (81.64 percent), India with Myanmar (8.63 percent). As compared to 1995, intensity index of all ASEAN countries (except Brunei, Cambodia, Myanmar & Vietnam) as well as of India has increased in 2000. Cambodia witnessed a rapid decline from 11.63 percent

in 1995 to 4.00 percent in 2000. In 2008, index of Lao PDR was maximum with ASEAN i.e. 11.41 percent followed by Myanmar (9.31percent) and Cambodia (6.99 percent). Country-wise analysis shows that Brunei's trade was more intense with Indonesia (19.16 percent), of Cambodia with Vietnam (33.08 percent), of Indonesia with Brunei (22.40percent), of Lao PDR with Thailand (51.82 percent), of Malaysia with Singapore (8.33 percent), of Myanmar with Thailand (33.47 percent), of Philippines with Singapore (5.12 percent), of Singapore with Malaysia (9.42 percent), of Thailand with Lao PDR (56.24 percent), of Vietnam with Cambodia (30.59 percent), of India with Myanmar (5.45 percent).

Thus Table depicts that most of the ASEAN countries depend on only one or two markets like Philippines depends only on Singapore, Thailand and Vietnam only on Lao PDR, India only on Myanmar in 1995, 2000 and 2008. This has concluded that there is lack of complementarities in trade. But in ASEAN some of the countries do not depend on only one market like Brunei, Cambodia, Indonesia etc. indicating that there exist complementarities at trade level.

Table 11 Trade Intensity Index of ASEAN Countries and India

	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam	India	ASEAN	World
Brunei													
1995	-	N/A	1.41	N/A	4.35	0.28	0.94	9.92	5.99	0.06	0.24	5.58	1.00
2000	-	0.04	1.46	N/A	3.87	0.16	0.13	8.74	10.79	0.21	0.12	5.48	1.00
2008	-	0.04	19.16	N/A	3.60	0.08	1.49	5.59	1.51	N/A	1.33	5.69	1.00
Cambodia													
1995	N/A	-	5.80	14.41	3.21	N/A	0.04	15.36	22.55	41.23	2.12	11.63	1.00
2000	0.06	-	3.57	16.88	1.86	0.14	0.19	2.74	9.38	19.85	0.52	4.00	1.00
2008	0.03	-	1.67	1.16	1.22	0.05	0.17	3.43	16.82	33.08	0.36	6.99	1.00
Indonesia													
1995	N/A	5.50	-	0.19	2.62	5.93	1.63	3.59	1.42	3.27	1.45	2.30	1.00
2000	1.11	2.04	-	0.29	2.08	2.50	1.35	6.09	2.18	3.16	2.45	2.94	1.00
2008	22.40	1.77	-	0.13	4.53	2.63	2.33	8.27	3.44	2.11	2.46	4.36	1.00
Lao PDR													
1995	N/A	17.46	N/A	-	N/A	N/A	N/A	0.88	34.96	78.63	N/A	8.80	1.00
2000	N/A	12.02	0.24	-	0.12	N/A	0.01	1.75	44.08	73.29	0.71	10.52	1.00

2008	N/A	1.00	0.11	-	0.22	N/A	0.04	0.42	51.82	21.96	0.07	11.41	1.00
Malaysia													
1995	3.50	3.41	1.75	0.08	-	5.52	1.53	8.18	2.75	1.65	1.31	3.53	1.00
2000	3.61	1.83	2.86	0.14	-	4.59	2.85	9.30	3.64	2.35	2.05	4.11	1.00
2008	3.73	1.34	4.11	0.27	-	3.46	3.13	8.33	4.72	3.15	1.92	4.29	1.00
Myanmar													
1995	0.27	N/A	5.57	N/A	5.15	-	0.13	12.71	0.87	0.02	6.93	6.18	1.00
2000	0.12	0.09	2.36	N/A	4.06	-	0.36	6.49	15.32	0.86	6.01	5.80	1.00
2008	0.07	0.04	2.45	N/A	2.98	-	0.25	7.09	33.47	1.84	5.11	9.31	1.00
Philippines													
1995	0.41	0.04	1.99	N/A	1.29	0.14	-	2.50	2.26	2.31	0.62	1.85	1.00
2000	0.14	0.16	1.56	0.01	2.37	0.47	-	4.21	2.80	1.45	0.44	2.52	1.00
2008	2.04	0.22	2.18	0.05	3.26	0.33	-	5.12	3.77	4.69	0.50	3.48	1.00
Singapore													
1995	12.57	12.54	N/A	2.31	10.87	10.80	2.60	-	4.63	5.85	1.67	4.14	1.00
2000	6.96	6.86	N/A	1.53	11.28	5.51	3.41	-	4.18	4.86	2.02	4.21	1.00
2008	3.86	2.58	8.77	0.33	9.42	5.21	4.10	-	3.40	3.97	2.02	4.74	1.00
Thailand													
1995	4.53	19.73	1.28	32.89	2.14	0.88	1.47	4.32	-	2.30	0.95	2.38	1.00
2000	10.22	10.13	2.62	47.32	3.02	15.99	2.30	4.04	-	4.07	1.27	2.92	1.00
2008	1.42	16.03	3.55	56.24	4.38	36.29	3.47	3.08	-	4.23	1.09	3.38	1.00
Vietnam													
1995	0.00	47.45	2.12	81.64	1.35	0.02	0.99	7.62	3.28	-	0.75	3.94	1.00
2000	0.17	22.18	2.56	79.42	1.71	0.85	2.48	6.69	3.84	-	1.05	3.80	1.00
2008	N/A	30.59	1.91	24.49	2.49	1.89	3.42	5.34	4.00	-	1.13	3.54	1.00
India													
1995	0.14	2.65	1.65	0.06	1.09	8.63	0.44	1.37	0.79	1.10	-	1.18	1.00
2000	0.08	0.36	1.83	0.73	1.35	6.73	0.37	1.40	0.89	1.08	-	1.24	1.00
2008	1.35	0.33	2.23	0.07	1.69	5.45	0.35	2.59	1.07	1.07	-	1.76	1.00

Source: *Asia Regional Integration Centre.*

IV Conclusions and Policy Implications:

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The range of existing complementarities between ASEAN and India are substantial and still are not fully exploited. The groundwork for a significant expansion and identification of economic ties is now in place with establishment of the Framework Agreement for establishing a FTA. If India is permitted to be an observer of various technical committees in ASEAN, that would facilitate the negotiations for an ASEAN-India FTA. It is therefore urged that both sides should urgently consider effective steps in this direction. There is significant complementarity between India's service oriented economy and ASEAN's light manufacturing-driven economy. Therefore an Indo-ASEAN FTA should thrive to balance these complementarities and bring out a mutually beneficial deal covering both goods and services.

India could also cooperate with ASEAN in pharmaceutical and health care service sectors as most of the ASEAN countries are heavily dependent on imported drugs and health care equipments. ASEAN and India should also look at expanding air, sea and land transport linkages to promote trade, tourism and other economic activities. Trade fairs and business summits should be held on regular basis to assist each other's business communities to find right partners for joint ventures and business deals. Improving travel related regulations will also help to spur tourism and boost the travel business industry.

Trade complementarities can be developed within the region if countries achieve vertical specialization through production sharing arrangements. It would allow the regional trading partners to strengthen their trade ties and enable them to reap economies of scale by concentrating on a specific production process in the value addition chain India Shares Sea boundaries with three ASEAN countries namely Indonesia, Myanmar and Thailand. Thus in terms of transport cost, India has benefit to trade with ASEAN. So, India should look at expanding sea transport linkages to promote trade, tourism and other economic activities. There is tremendous potential between India and ASEAN in various fields including trade and investment, science and technology, tourism, human resource and infrastructure development. Such cooperation contains the scope for greater economic integration between the two.

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