

Growth performance of India's exports of goods to individual ASEAN-6 countries

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ABSTRACT

India announced its "Look East" policy in 1991 in an attempt to increase its engagement with the East Asian countries. Consequently, in 1992, it became a sectoral dialogue partner of the Association of Southeast Asian Nations (ASEAN). India-ASEAN Trade in Goods (TIG) Agreement which came into force since January, 2010 has been another landmark development in greater integration of Indian economy with that of ASEAN. The ASEAN-India Free Trade Area emerged from a mutual interest of both parties to expand their economic ties in the Asia-Pacific region. India's Look East policy was reciprocated by similar interests of many ASEAN countries to expand their interactions westward. Much of India's trade with ASEAN is directed towards Singapore, Indonesia, Malaysia, Vietnam, Thailand and Philippines with whom India holds strong economic relations. In the present study our aim is to find out the growth performance of India's exports to these individual ASEAN-6 countries

Keywords:

Introduction

The ASEAN-India Free Trade Area emerged from a mutual interest of both parties to expand their economic ties in the Asia-Pacific region. India's Look East policy was reciprocated by similar interests of many ASEAN countries to expand their interactions westward. India and Singapore have signed the Comprehensive Economic Cooperation Agreement (CECA) and strategic-relationship agreement in order to increase trade, investments and economic cooperation, and expanded bilateral cooperation on maritime security, training forces, joint naval exercises, developing military technology and fighting terrorism. ASEAN consists of ten nations i.e. Singapore, Malaysia, Thailand, Philippines, Indonesia, Vietnam, Brunei Darussalam, Cambodia, the Lao People's Democratic Republic, Myanmar. As it is clear from the export to ASEAN data of India given in table 1, Singapore, Malaysia, Thailand, Philippines, Indonesia, Vietnam are the major ASEAN countries trading with India.

Table:1
Share of ASEAN Countries in India's Total Exports (values in %)

Year	Singapore	Indonesia	Malaysia	Vietnam	Thailand	Philippines	Myanmar	Cambodia	Brunei	Laos
1992	3.17	0.75	1.02	0.09	1.37	0.29	0.04	0.00	0.00	0.00
1993	3.38	1.06	1.11	0.13	1.61	0.26	0.10	0.01	0.00	0.00
1994	2.93	1.05	1.09	0.22	1.54	0.38	0.09	0.00	0.01	0.00
1995	2.84	2.08	1.24	0.39	1.49	0.45	0.09	0.01	0.02	0.00
1996	2.92	1.77	1.59	0.35	1.34	0.55	0.14	0.00	0.02	0.00
1997	2.23	1.26	1.41	0.36	0.99	0.69	0.14	0.01	0.01	0.00
1998	1.56	0.56	0.97	0.38	0.97	0.36	0.09	0.02	0.01	0.00
1999	1.82	0.88	1.22	0.42	1.22	0.39	0.09	0.02	0.00	0.00
2000	1.86	0.92	1.25	0.46	1.24	0.41	0.10	0.02	0.01	0.01
2001	2.11	1.09	1.80	0.50	1.36	0.53	0.13	0.02	0.01	0.01
2002	2.76	1.54	1.48	0.61	1.48	0.93	0.15	0.03	0.01	0.00
2003	2.87	1.75	1.34	0.64	1.23	0.55	0.13	0.03	0.01	0.00
2004	4.50	1.59	1.37	0.70	1.13	0.48	0.15	0.02	0.01	0.00
2005	5.41	1.39	1.14	0.63	1.06	0.48	0.12	0.02	0.00	0.01
2006	5.06	1.54	1.10	0.72	1.11	0.49	0.10	0.04	0.04	0.00
2007	4.38	1.29	1.27	0.85	1.15	0.39	0.11	0.03	0.01	0.00
2008	4.87	1.46	1.67	1.00	1.10	0.42	0.13	0.03	0.01	0.00
2009	3.86	1.70	1.99	1.04	0.97	0.39	0.12	0.02	0.01	0.02
2010	4.11	2.07	1.61	1.12	0.97	0.36	0.12	0.03	0.01	0.00

2011	5.18	2.12	1.26	1.15	0.92	0.33	0.15	0.03	0.29	0.00
2012	4.68	2.08	1.31	1.26	1.19	0.39	0.18	0.04	0.01	0.01

Source: Computed from data of UNCOMTRADE Data Base & Department of Commerce.

Accordingly, so as to avoid unnecessary details, the present paper focuses on analyzing the growth performance of exports with these six major countries of ASEAN. The growth performance has been studied on the basis of Compound Annual Growth Rate (CAGR) of exports to Singapore, Indonesia, Malaysia, Vietnam, Thailand and Philippines.

Review of Literature

Ambatkar (1999) in his paper assessed the outcome of India-ASEAN economic partnership since 1985 by highlighting two-way trade and investment transactions between them. This paper revealed that India's annual exports to ASEAN-5 were US\$ 13 million which increased to US\$ 59 million in 1992-98. India's exports to ASEAN-5 increased by 4.2 times during 1985-91 respectively. In 1992-98, among ASEAN-5 countries, Singapore was the most important export destination (or market) for the Indian products; the single market absorbing about 34 per cent of India's exports to ASEAN-5. The corresponding figures for Thailand and Indonesia were 19 per cent each; for Malaysia it was 18 per cent. Even during 1985-91, Singapore was the most important market for India's exports. Only visible change is Indonesia, which was not so prominent in 1985-91 but turned out to be one of the important markets for India's exports. Philippines too gained reasonable significance in 1992-98 for India's exports which was not so in 1985-91. Thus under the "look east policy" India could increase export penetration in all ASEAN-5 markets. The rise in exports can be attributed to massive devaluation of the Indian rupee effected by the government in August 1991 to give fillip to exports.

Sarkar (2006), in his study revealed the major commodities in India's export basket to ASEAN. The top ten products of India's exports to the ASEAN during 2004-05 were gems & jewellery, machinery & instruments, dyes & intermediates, primary & semi-finished iron & steel, oil meal, drugs/pharmaceuticals & fine chemicals, transport equipment, electronic goods, inorganic/organic/agro-based chemicals and manufactures of metals. During the period, the share of gems & jewellery had occupied the top position in the export basket followed by machinery & instruments, although it had registered a downward trend from 1998 to 2002-03. The two sub-sample periods of the study were pre-crisis period (1991-1997) and post-crisis period (1998-2004). To estimate the exponential growth rate of India's different products to ASEAN, semi-loglinear function was used. The products which had recorded very high growth in the pre-crisis period (1991-98) were transport equipment (36.88 %) and dyes/intermediates (35.19 %), electronic goods (30.69%) and drugs, pharmaceuticals & fine chemicals (24.65%), The growth rate of India's all commodity exports to the ASEAN was higher in post-crisis period than that in pre-crisis period. Among the top ten products under the study, the products which registered impressive growth rate in post-crisis period (1998-2005) were gems & jewellery (20.51%), machinery & instruments (19.38%), manufactures of metals (18.57%) and oil meal (16.06%).

Palit (2009) in his paper revealed that India's exports to ASEAN increased rapidly since 2001-02. Indeed, the annual growth of exports since 2001-02 had been 28 per cent, with exports amounting to US\$ 15.7 billion in 2007-08. The Southeast Asian markets presently account for a tenth of total Indian exports. Singapore absorbed 43.6 per cent of India's exports to the region, followed by Malaysia (16.1 per cent), Indonesia (13.1 per cent), Thailand (11.5 per cent) and Vietnam (10.1 per cent). India's trade with Singapore has increased much faster than with those in the rest of ASEAN, with Singapore emerging to become India's fourth largest export market in the world.

Mondal et al. (2012) in their paper used the ex-ante partial equilibrium approach, analysed the Indian exports of dairy products to ASEAN countries and found that the exports picked up in real earnest after 2003-04 registering a compound annual growth rate of 47 per cent during 2003-04 to 2009-10. The growth momentum in terms of quantity and value received a setback in 2009-10, partly as a result of slackening demand situation due to economic crisis and partly because of ban on exports of milk powder imposed by the Indian Government. The other products like Cheese and curd, whey based products and curdled milk and buttermilk products were also exported by India but to a limited extent.

With the above reviews in background, the present paper is an outcome of analysis of growth performance of export of goods to six major countries of ASEAN for a period of twenty one years in post liberalization era.

Methodology

*Area and time period of the study:*The study focuses on export of goods to six selected economies of the ASEAN (Singapore, Indonesia, Malaysia, Vietnam, Thailand and Philippines). The period of the research has been from 1992-2012 which witnessed important trade changes.

*Source of data:*Data have been constructed using annual aggregate data from different secondary sources, handbook of RBI, journals, websites such as UNCOMTRADE.

*Analytical technique for examining the growth performance of India's export to ASEAN:*Compound growth rate (CGR) of different export products have been worked out by fitting exponential function. Using the least square method, the following form of exponential function has been used to calculate the compound growth rate.

$$Y = AB^t$$

Where, Y= Export
 A= Constant
 B= 1+r Where r =Compound growth rate
 t =time variable in years (1, 2 ----- 21)

The compound growth rate (r) is equal to (B-1) x 100. In log form B has been calculated by the following formula:

$$\text{Log } B = \frac{\sum T \log Y - \sum t \sum \log Y / N}{\sum t^2 - (\sum t)^2 / N}$$

The growth rates have been tested for significance by calculating 't' value where t = r/s, 's' is the standard error. The value of standard error has been calculated by following formula:

$$\text{S.E. (r)} = \frac{100B}{\text{Log}_{10}e} \sqrt{\frac{\sum (\log Y)^2 - (\sum \log Y)^2 / N - (\log 10^b)^2 \sum T^2}{(N-2) \sum T^2}}$$

Where; T= t - t̄

Findings of the study

As mentioned earlier, the present study analyses the growth performance of exports to six major ASEAN countries i.e. Singapore, Indonesia, Malaysia, Vietnam, Thailand and Philippines. Further, the analysis is restricted to top ten commodities exported to ASEAN countries in discussion.

In table 2 and 3, Compound Growth Rate (CGR) of India's major exports to Singapore and Indonesia during the study period has been calculated and presented in table 2 and 3. The results reveal that maximum growth rate of export(74.7 per cent) has been observed in case of ships, boats and floating structures followed by mineral fuels, mineral oils and products of their distillation, bituminous substances 63.5 per cent, aircraft, spacecraft, and parts thereof,(50.5 per cent), works of art collectors' pieces and antiques (41.5 per cent) beverages, spirits and vinegar (38.4 per cent). Further growth rates of 34.3 per cent in export have been observed in case of zinc and articles thereof followed by dairy produce, birds' eggs, natural honey, edible production of animal origin, not elsewhere specified or included (34 per cent), clocks and watches and parts thereof (26.8 per cent), UN Special Code (26.6 per cent), Optical,photographic, cinematographic, measuring, checking precision, medical or surgical inst. and apparatus parts and accessories thereof (26.4 per cent).

Table: 2
Growth Performance of India's Major Exportsto Singapore during (1992-2012)

Sr. No.	HS Code	Name of the Commodity	CGR (%)
1	89	Ships, boats and floating structures	74.7
2	27	Mineral fuels, mineral oils and products of their distillation, bituminous substances	63.5
3	88	Aircraft, spacecraft, and parts thereof	50.5
4	97	Works of art collectors' pieces and antiques	41.5
5	22	Beverages, spirits and vinegar	38.4

6	79	Zinc and articles thereof	34.3
7	04	Dairy produce, birds' eggs, natural honey, edible production of animal origin, not elsewhere specified or included	34.0
8	91	Clocks and watches and parts thereof	26.8
9	99	UN Special Code	26.6
10	90	Optical, photographic, cinematographic, measuring, checking precision, medical or surgical inst. and apparatus parts and accessories thereof	26.4

Source: Computed from data of UNCOMTRADE Data Base & Department of Commerce.

During the study period (1992-2012), the growth performance in relation to India's major (top ten) exports to Indonesia is depicted through table 3. It is noticed in the results that 135.3 per cent compound growth rate of exports has been found in case of ships, boats and floating structures. Further, 75.6 per cent of growth rate of exports has been observed in case of mineral fuels, mineral oils and products of their distillation, bituminous substances followed by zinc and articles thereof (71.6 per cent), lead and articles thereof (58.4 per cent), aircraft, spacecraft, and parts thereof (52.5 per cent), essential oils and resinoids, perfumery, cosmetic or toilet preparations (45.6 per cent). In case of paper and paperboard, articles of paper pulp, of paper or of paperboard, the CGR has been 42.5 per cent. Compound growth rate of 39.9 per cent has been observed for cocoa and cocoa preparations, while CGR of 39.7 per cent has been observed for dairy produce, birds' eggs, natural honey, edible production of animal origin, not elsewhere specified or included.

Table: 3
Growth Performance of India's Major Exports to Indonesia during (1992-2012)

Sr. No.	HS Code	Name of the Commodity	CGR (%)
1	89	Ships, boats and floating structures	135.3
2	27	Mineral fuels, mineral oils and products of their distillation, bituminous substances	75.6
3	79	Zinc and articles thereof	71.6
4	78	Lead and articles thereof	58.4
5	88	Aircraft, spacecraft, and parts thereof	52.5
6	33	Essential oils and resinoids, perfumery, cosmetic or toilet preparations	45.6
7	07	Edible vegetables and certain roots and tubers	44.5
8	48	Paper and paperboard, articles of paper pulp, of paper or of paperboard	42.5
9	18	Cocoa and cocoa preparations	39.9
10	04	Dairy produce, birds' eggs, natural honey, edible production of animal origin, not elsewhere specified or included	39.7

Source: Computed from data of UNCOMTRADE Data Base & Department of Commerce.

Table 4 depicts the case of Malaysia, maximum compound growth rate was observed for items in HS code 89 i.e. ships, boats and floating structures (115.4 per cent) followed by mineral fuels, mineral oils and products of their distillation, bituminous substances (76.7 per cent), lead and articles thereof (61 per cent) and works of art collectors' pieces and antiques (58.2 per cent).

Table: 4
Growth Performance of India's Major Exports to Malaysia during (1992-2012)

Sr. No.	HS Code	Name of the Commodity	CGR (%)
1	89	Ships, boats and floating structures	115.4
2	27	Mineral fuels, mineral oils and products of their distillation, bituminous substances	76.7
3	79	Zinc and articles thereof	68.7
4	78	Lead and articles thereof	61.0
5	97	Works of art collectors' pieces and antiques	58.2
6	22	Beverages, spirits and vinegar	42.0

7	18	Cocoa and cocoa preparations	36.9
8	21	Miscellaneous edible preparations	34.8
9	10	Cereals	33.7
10	35	Albuminoidal substances, modified starches, glues, enzymes	30.9

Source: Computed from data of UNCOMTRADE Data Base & Department of Commerce.

Further, the results show that CGRof42 per cent was observed in case of beverages, spirits and vinegar followed by cocoa and cocoa preparations (36.9 per cent) miscellaneous edible preparations (34.8 per cent), cereals (33.7 per cent) and albuminoidal substances, modified starches, glues, enzymes (30.9 per cent).

The furnished results related to growth rate of India's major (top ten) exports to Vietnam (1992-2012) have been depicted in table 5. It can be seen from the table that maximum compound growth rate of exports has been observed in case of meat and edible meat offal(110.5 per cent). In case of coffee, tea, mate and spices, growth rate has been observed (76.3 per cent).

Further, it can be seen that compound growth rateof 68.2 per cent is observed for edible fruit and nuts, peel or citrus fruit or melons followed by beverages, spirits and vinegar (65.3 per cent) and manufactures of straw, of esparto or of other plaiting materials, basketware and wickerwork as 64.8 per cent. In case of miscellaneous edible preparations compound annual growth rate has been found to be as 61.1 per cent. Almost equal growth rate of export has been observed in case of oil seeds and oleaginous fruits, miscellaneous grains, seeds and fruit, industrial or medicinal plants, straw and fodder (58.6 per cent), fertilisers(58.4 per cent) and albuminoidal substances, modified starches, glues, enzymes (58.3 per cent). In case of zinc and articles thereof, 52.8 per cent of compound growth rate has been observed.

Table: 5

Growth Performance of India's Major Exports to Vietnam during(1992-2012)

Sr. No.	HS Code	Name of the Commodity	CGR (%)
1	02	Meat and edible meat offal	110.5
2	09	Coffee, tea, mate and spices	76.3
3	08	Edible fruit and nuts, peel or citrus fruit or melons	68.2
4	22	Beverages, spirits and vinegar	65.3
5	46	Manufactures of straw, of esparto or of other plaiting materials, basketware and wickerwork	64.8
6	21	Miscellaneous edible preparations	61.1
7	12	Oil seeds and oleaginous fruits, miscellaneous grains, seeds and fruit, industrial or medicinal plants, straw and fodder	58.6
8	31	Fertilisers	58.4
9	35	Albuminoidal substances, modified starches, glues, enzymes	58.3
10	79	Zinc and articles thereof	52.8

Source: Computed from data of UNCOMTRADE Data Base & Department of Commerce

The findings on compound growth rate of India's major (top ten) exports to Thailand have been given in table 6. The results reveal that commodities such as preparations of meat, fish and crustaceans, molluscs or other aquatic invertebrates have registered a high compound growth rate as 54.3 per cent followed by cereals (52.5 per cent) and preparations of cereals, flour, starch or milk, pastry cooks products (50.3 per cent).

Almost similar compound growth rates have been observed incase ofbeverages, spirits and vinegar; copper and articles thereof; meat and edible meat offal; mineral fuels, mineral oils and products of their distillation, bituminous substances as 49.4 , 48.8, 48.3 and 47.3 per cent respectively. 44 per cent of growth rate of export has been observed in case ofworks of art collectors' pieces and antiques followed by CGR of 42.6per centin case of zinc and articles thereof and 42 per cent in case of Ships, boats and floating structures.

Table: 6**Growth Performance of India's Major Exports to Thailand during (1992-2012)**

Sr. No.	HS Code	Name of the Commodity	CGR (%)
1	16	Preparations of meat, fish and crustaceans, molluscs or other aquatic invertebrates	54.3
2	10	Cereals	52.5
3	19	Preparations of cereals, flour, starch or milk, pastry cooks products	50.3
4	22	Beverages, spirits and vinegar	49.4
5	74	Copper and articles thereof	48.8
6	02	Meat and edible meat offal	48.3
7	27	Mineral fuels, mineral oils and products of their distillation, bituminous substances	47.3
8	97	Works of art collectors' pieces and antiques	44.0
9	79	Zinc and articles thereof	42.6
10	89	Ships, boats and floating structures	42.0

Source: Computed from data of UNCOMTRADE Data Base & Department of Commerce.

If we see the case of Philippines in table 7, 61.7 per cent compound growth rate of export has been found in case of tobacco and manufactured tobacco substitutes during the study period 1992-2012 followed by arms and ammunition, parts and accessories thereof (59.6 per cent).

In case of works of art collectors' pieces and antiques; aircraft, spacecraft, and parts thereof; paper and paperboard, articles of paper pulp, of paper or of paperboard the compound growth rate of export has been observed as 46.2, 45.6 and 44.7 per cent respectively. Almost equal growth rate has been noticed in case of mineral fuels, mineral oils and products of their distillation, bituminous substances as 42.5 per cent and essential oils and resinoids, perfumery, cosmetic or toilet preparations as 42.2 per cent. In case of albuminoidal substances, modified starches, glues, enzymes; copper and articles thereof and fertilizers, compound annual growth rate of export has been observed as 39.5, 37.4 and 30.7 per cent respectively.

Table: 7**Growth Performance of India's Major Exports to Philippines during (1992-2012)**

Sr. No.	HS Code	Name of the Commodity	CGR (%)
1	24	Tobacco and manufactured tobacco substitutes	61.7
2	93	Arms and ammunition, parts and accessories thereof	59.6
3	97	Works of art collectors' pieces and antiques	46.2
4	88	Aircraft, spacecraft, and parts thereof	45.6
5	48	Paper and paperboard, articles of paper pulp, of paper or of paperboard	44.7
6	27	Mineral fuels, mineral oils and products of their distillation, bituminous substances	42.5
7	33	Essential oils and resinoids, perfumery, cosmetic or toilet preparations	42.2
8	35	Albuminoidal substances, modified starches, glues, enzymes	39.5
9	74	Copper and articles thereof	37.4
10	31	Fertilisers	30.7

Source: Computed from data of UNCOMTRADE Data Base & Department of Commerce.

Conclusion

The study covers India's major (top ten) exports to individual ASEAN-6 countries during 1992-2012. It is a good sign that the exports of certain products have increased as ships, boats and floating structures, works of art collectors' pieces and antiques, mineral fuels, mineral oils and products of tobacco and manufactured tobacco substitutes their distillation, bituminous substances, aircraft, spacecraft, and parts thereof, zinc and articles thereof, preparations of meat, fish and crustaceans, molluscs or other aquatic invertebrates, Meat and edible meat offal have increased tremendously. Effective liberalized policy should be adopted to improve the exports of for other commodities which are not in the top ten list of India's

export to ASEAN-6 countries *so that they can have greater opportunity to become the 'cash cows' for future. India can enhance its trade relations with ASEAN countries by adopting cooperative and transparent attitude in dealing with investment and business projects. Commodity specific programs aiming at export development should be initiated. To develop the comparative advantage in exports, development of infrastructure and transportation facilities is required to reduce trade costs. We should work towards establishing more industrial collaboration with ASEAN in near future. Efforts should be made by government and other agencies to improve product quality, through improved design, development and building brand loyalties for Indian products. Export Promotion Council, a representative body of the trade, should take other steps to improve exports and enhance competitiveness.*

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