

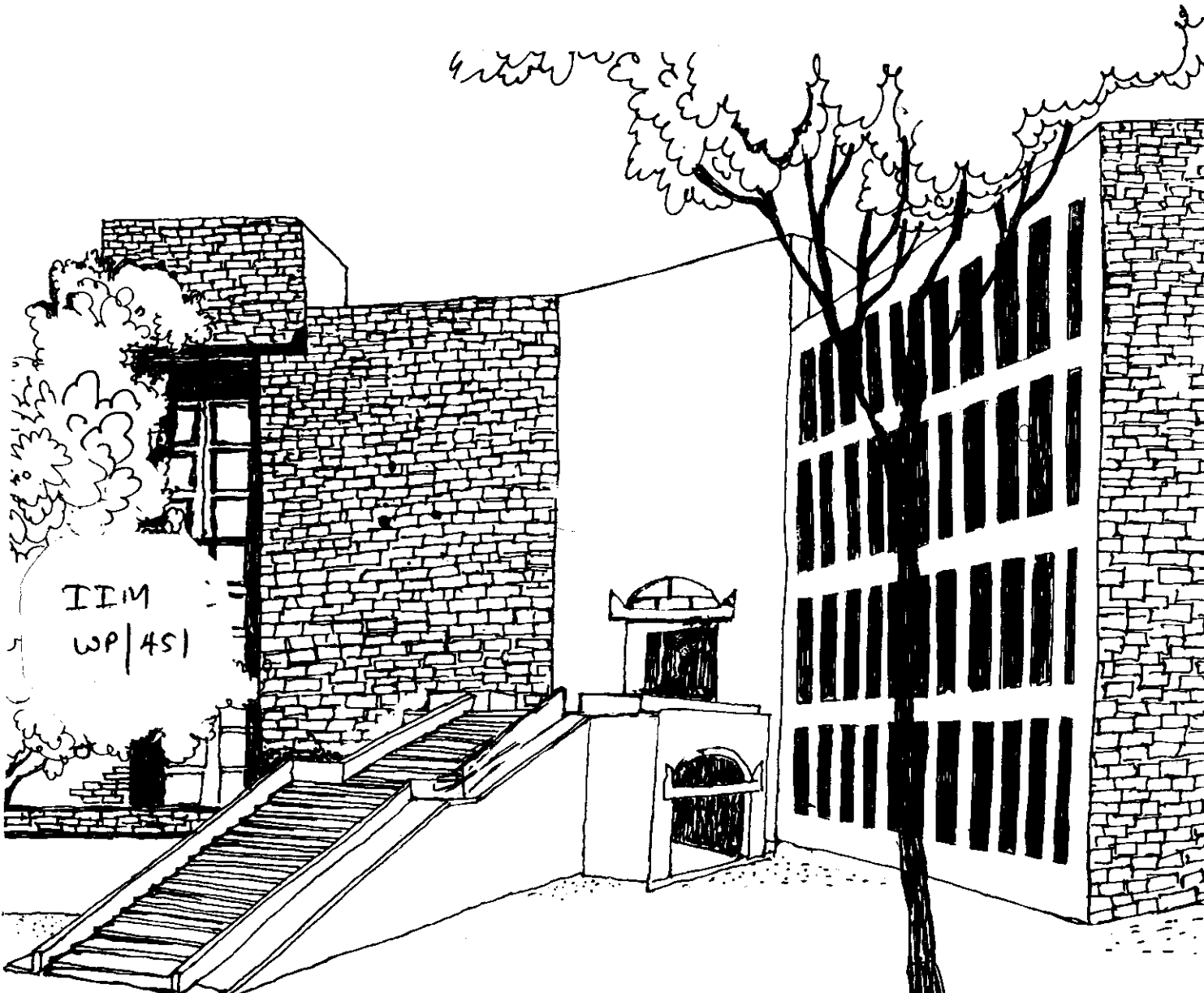


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INDIA - ASEAN ECONOMIC RELATIONS

by

Charan D. Wadhva



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ABSTRACT

This paper highlights the salient features of economic relations between India and the five member countries of the ASEAN (Association of South-East Asian Nations) grouping, namely, Indonesia, Malaysia, Philippines, Singapore and Thailand since 1970. The paper is divided into four sections. Section I deals with the survey of trade relations; Section II with the survey of investment relations with special reference to the joint industrial ventures; and Section III with the survey of "other" economic relations (such as shipping, tourism and banking). Section IV speculates on some of the prospective areas of expanding economic cooperation between India and the ASEAN countries.

Besides analysing the recent trends in the exports, imports and balance of trade of India with each of the member countries of the ASEAN grouping in detail, we have also computed and analysed the behaviour of three types of analytical measures to survey the trends in the trade relations of the countries concerned. These measures are:

- (1) Kojima indices of trade (export and import) intensities;
- (2) Grubel-Lloyd indices of movements in intra-industry trade; and
- (3) Trade Reciprocity Index developed by us.

A survey of the economic relations between India and the ASEAN countries leads us to the conclusion that there is a large scope for expanding economic cooperation among these countries in the years to come especially in the area of investment cooperation involving exports of Indian technology, consultancy, management and banking services.

INDIA - ASEAN ECONOMIC RELATIONS*

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Economic relations through trade between India and the five-member countries of the Association of South-East Asian Nations (ASEAN) - formed in 1967 - namely, Indonesia, Malaysia, Philippines, Singapore and Thailand, have a long history. This is especially so in the case of Indonesia, Malaysia, Singapore and Thailand where the influence of Indian culture is readily evident even today and is reinforced by a sizeable population of Indian origin living in these countries. Even the settlement of some Indians in the Philippines is a story which is a few decades old. Our purpose is not to authenticate this part of the world history but - within this historical background - to trace the present state of economic relations between India and the ASEAN countries especially since 1970 and to analyse the prospects for

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economic cooperation among these countries in the near future.

In this context, economic relations can be conveniently divided into three parts, namely, trade-based relations, investment (and joint-ventures)-based relations, and all other economic relations based on services such as tourism, shipping and banking. Accordingly, this paper is divided into three main sections. Section I deals with the survey of trade relations; Section II with the survey of investment relations with special reference to the joint industrial ventures; and Section III with the survey of "other" economic relations. The concluding section (Section IV) highlights some of the prospective areas for expanding economic cooperation between India and the ASEAN countries.

I

TRADE RELATIONS

Table 1 presents data relating to India's Exports, Imports and Trade Balance with the ASEAN countries and the World for the years 1971-72 and 1976-77 to 1979-80. Table 2 presents the rates of growth of exports and imports based on Table 1.

Growth of Trade

• Trade between India and the ASEAN countries as a regional grouping as well as with the individual countries of this grouping has grown at a high rate during the decade 1971-72 to 1979-80. Thus, as can be seen from Table 1, the value of India's exports to all ASEAN countries increased from (Indian) Rupees 244.9 million to Rs. 2238.9 million during this period. This works out to an increase of 814.2 per cent. Put in another way, India's exports to the ASEAN during the period 1971-72 to 1979-80, as shown in

Table 2, have grown at an annual compound rate of growth of 28.0 per cent per annum. This is higher than the comparable rate of growth of India's exports to the world as a whole of 16.7 per cent per annum. The growth of India's imports from the ASEAN grouping during the same period has been still higher compared to that of exports. Thus, the total value of India's imports from all the ASEAN countries, as shown in Table 1, has increased from Rs 70.3 million in 1971-72 to Rs. 3998.2 million in 1979-80 showing an increase of 5587.3 per cent. On the basis of these figures, the compound rate of growth of these imports can be computed as 50.0 per cent per annum. India's imports from the ASEAN grouping have grown much faster than from the world as a whole during this period. The comparable annual compound rate of growth of India's imports from the world has been 19.2 per cent per annum.

India's exports to the ASEAN grouping during the decade 1971-72 to 1979-80 have grown at the highest rate of 43.5 per cent with Indonesia and the lowest rate of 24.0 per cent with Malaysia. Thus, the rate of growth of India's exports to all member countries of ASEAN has been high during the 1970's as shown in Table 2. The comparable rates of growth of India's imports from all ASEAN countries have in general been much higher ranging from a high of 77.0 per cent in the case of Indonesia to a low of 26.4 per cent per annum in the case of Thailand. Thus, the period 1971-72 to 1979-80 has, in general, witnessed high rates of growth of trade between India and the trading partners from the ASEAN grouping. This is partly due to the low base levels of trade in 1971-72. It is also due to the relatively high rates of growth of real Gross Domestic Products and world trade enjoyed by most of the ASEAN countries during the 1970's as documented in the Introduction to this volume. It also

reflects the changing pattern of India's trade in terms of composition of export and import products during this period - a subject to which we will pay some attention a little later in this section.

There have, of course, been noticeable fluctuations in the year to year growth of exports and imports between India and the ASEAN and its constituent member countries. We have selected the latest four years (1976-77 to 1979-80) for review for which detailed statistics are available. These statistics are provided in Tables 1 and 2 and are self-explanatory. They reflect the erratic nature of the year to year changes in the overall exports and imports.

As can be seen from Table 2, the average annual rate of growth of India's exports during 1976-77 to 1979-80 to the ASEAN grouping has been much lower at 7.9 per cent per annum (compared to the 16.7 per cent per annum rate for the period 1971-72 to 1979-80). Thus, India has not been able to maintain the rate of growth of its exports to the ASEAN countries in the later years of the 1970's. Throughout the period 1976-77 to 1979-80, India's exports to the Philippines have declined in value terms, the decline over previous year being 41.0 per cent in 1977-78, 19.0 per cent in 1978-79 and 7.2 per cent in 1979-80. In fact, India's exports to all the ASEAN countries declined in 1977-78 over 1976-77. The fastest rates of growth of exports have been achieved by India within the ASEAN markets in Indonesia and the next highest in Malaysia, the annual rate being as high as 551.9 per cent in the case of Indonesia in 1979-80 and 33.2 per cent in the case of Malaysia in 1978-79. Table 2 presents these and other rates relevant for each of the ASEAN countries for the period under consideration.

On the side of imports, India has substantially increased its imports from the ASEAN countries on year-to-year basis during

the period 1976-77 to 1979-80, especially from Indonesia, Malaysia, and Singapore. Thus, as Table 2 reveals, the average annual rate of growth of India's imports from the ASEAN grouping increased to 172.9 per cent per annum during this later period (compared to 50.0 per cent rate for the period 1971-72 to 1979-80). Among the year-to-year rates of growth of imports from ASEAN countries, the highest rate was achieved in 1977-78 at 702.1 per cent in case of Indonesia followed by 551.4 per cent rate in case of Malaysia and followed by 480.2 per cent rate in case of Singapore. It is noticeable that the annual average rate of growth of India's imports from the Philippines during 1976-77 to 1979-80 has been 61.4 per cent and from the Thailand at 60.6 per cent which are relatively on the low side.

India's Trade with ASEAN and Share in World Trade

India's trade with the ASEAN countries as a proportion of its world trade was very small in 1971-72 at 1.5 per cent in terms of value of exports and 0.39 per cent in terms of value of imports (See Table 1). As a result of the growth of India's trade with the ASEAN countries in the 1970's discussed above, these shares rose to a high of 4.2 per cent in the case of exports in 1978-79 (ending up with a 3.5 per cent share in 1979-80) and a high of 5.2 per cent in the case of imports in 1978-79 (again ending up with a lower figure of 4.5 per cent in 1979-80). Despite year-to-year fluctuations in these shares, there is no doubt about the upward trend in these shares over the last decade, especially in imports, reflecting growing complementarities at the margin in the trade structures of the Indian and the ASEAN economies. We will be able to discuss this point further in the sub-section on composition of trade between the Indian and the ASEAN economies.

Balance of Trade

As may be seen from Table 1, India had a trade surplus with the ASEAN as a whole and also with most of the member countries of this regional grouping in the early 70's. This situation lasted until 1976-77 when the balance of trade with ASEAN as a whole was in India's favour to the extent of Rs 1476.1 million. The trade balance had turned into a deficit for India since 1977-78. The deficit amounted to Rs 1195.6 million in 1977-78 and was Rs 1132.7 million in 1978-79 and reached maximum deficit figure of Rs 1759.3 million in 1979-80. In terms of bilateral trade balances, India has been facing deficits with Malaysia and Singapore which have together been larger than the surpluses with the other three members of the ASEAN grouping (namely, Indonesia, Philippines and Thailand).

Commodity Composition of India's Trade with the ASEAN Trading Partners

The following are the salient features of the composition of major products of India's exports and imports with Indonesia, Malaysia, Philippines, Singapore and Thailand for the years 1976-77 to 1979-80 as seen from Tables 3 to 12.

India's Trade with Indonesia

India's exports to Indonesia in the period 1976-77 to 1979-80 have mainly consisted of engineering goods, iron and steel, machinery and transport equipment and sugar and honey. As can be seen from Table 3, non-traditional products consisting of engineering goods, iron and steel, non-metallic mineral manufactures and machinery and transport equipment constituted around 35 per cent of India's total exports to Indonesia in 1976-77 and around

73 per cent in 1977-78 but were much smaller in share in 1978-79 (21 per cent) and 1979-80 (37 per cent). Sugar (including honey) has occupied a special place in the exports from India to Indonesia in 1977-78 (accounting for 21 per cent of total exports) and in 1978-79 (accounting for as much as 60 per cent of total exports) and also in 1979-80 (accounting for nearly 58 per cent of total exports).

Table 4 highlights the pattern of major imports of India from Indonesia in recent years. India has been a major importer of traditional (primary) goods from Indonesia like spices, vegetable oil, etc., in the past. However, non-traditional products like chemical and related products have acquired prominent place in India's total imports from Indonesia recently accounting for as high a percentage as 71 per cent in 1978-79. In 1979-80, cement emerged as a new item in India's imports from Indonesia claiming a share of 25 per cent in total imports.

India's Trade with Malaysia

As in the case of Indonesia, India's major exports to Malaysia in recent years have consisted largely of engineering goods, manufactures of metal and machinery and transport equipment accounting for a little over 50 per cent share in total exports in 1979-80 as shown in Table 5. The other major categories of products have been fruits and vegetables and textiles as can also be seen from Table 5.

India's imports from Malaysia are concentrated primarily in the vegetable oils and fats and rubber and related products, tin and other non-ferrous base metals. All these products constitute the main export items of Malaysia to the world. India is one of the

major buyers of Malaysian palm oil (and related products) in the world. Thus, as Table 6 shows, the category "Fixed vegetable oils and fats" accounted for over 75 per cent of India's total imports from Malaysia in 1978-79 as well as 1979-80.

India's Trade with the Philippines

The composition of India's exports to the Philippines in recent years by principal commodities is presented in Table 7. Chemicals and related products (including inorganic chemicals) have increased in importance in India's export basket to the Philippines reaching a share of around 25 per cent in total exports in 1979-80. "Food and live animals" exports as well as the category of "Feeding Stuff for animals" also grew in importance in recent years - these items together accounted for nearly 46 per cent of India's total exports to the Philippines in 1979-80. There has been a steady decline in the relative share of exports of iron and steel items to the Philippines from 58 per cent in 1976-77 to only 9 per cent in 1979-80. The share of machinery and transport equipment based engineering goods in total exports to the Philippines increased to 51 per cent in 1978-79 but went down to 27 per cent in 1979-80. It is not clear whether these movements represent any trend. The decline in these ratios in some years appears to be significant. The reasons for this need to be investigated further.

India's imports from the Philippines in 1976-77 and 1977-78 were heavily concentrated in the category "Crude materials inedible except fuels" (including vegetable, textile fibres other than cotton and jute). As Table 8 shows, this main category accounted for nearly 89 per cent of total imports in 1976-77 and 46 per cent in 1977-78

but its importance declined in 1978-79 (to 15 per cent) and 1979-80 (to 26 per cent). The composition of India's imports from the Philippines changed in favour of the categories "manufactured goods" especially "Chemicals and related products" and "Non-ferrous metallic based manufactured goods." These categories together accounted for nearly 46 per cent of India's total imports from the Philippines in 1979-80.

India's Trade with Singapore

India's exports to Singapore in recent years have displayed a diversity in both traditional and non-traditional products, though the latter are clearly gaining in importance over time as seen from Table 9. Thus, in 1979-80, the main categories accounted for the following share in India's total exports to Singapore: (i) Non-metallic mineral manufactures: 19 per cent; (ii) Textile Fibres, yarn and related products: 14 per cent; (iii) Machinery and transport equipment: 12 per cent; (iv) Spices: 9 per cent; (v) Feeding stuff for animals: 9 per cent; (vi) Crude animal and vegetable materials: 5 per cent; (vii) Chemicals and related products: 4 per cent; and (viii) Fruits and vegetables: 4 per cent.

India's imports from Singapore in recent years have primarily been of the nature of engineering goods, petroleum products and fixed vegetable oils and fats as shown in Table 10. The newest high valued item of imports from Singapore to India which has emerged in the 80's relates to oil rigs for prospecting offshore oil.

India's Trade with Thailand

India's exports to Thailand by principal commodities during the period 1976-77 to 1979-80 are presented in Table 11. The pattern

is fairly consistent, though proportions of various product categories in total exports have obviously varied from year-to-year. For the purpose of illustration of the pattern of India's exports to Thailand, the picture prevailing in 1979-80 would suffice. The following were the major export products/product categories and their shares in total exports from India to Thailand in 1979-80: (i) Marine products: 19 per cent; (ii) Feeding stuff for animals: 13 per cent; (iii) Chemicals and related products: 11 per cent; (iv) Manufactured goods: 26.5 per cent; and (v) Machinery and transport equipment: 21 per cent, of which Road vehicles: 8 per cent.

India's imports from Thailand have been concentrated in food items including rice and pulses. As can be seen from Table 12, food products constitute nearly 75 per cent of India's total imports from Thailand in 1979-80 and nearly 66 per cent in 1978-79. The erratic nature of food imports by India can also be seen from Table 12 which shows that food imports constituted negligible proportion of India's total imports from Thailand in 1976-77 and 1977-78. India is relatively self-sufficient in food-grains (including rice). Food imports by India are, therefore, expected to be a temporary phenomenon. The other major imports from Thailand in 1976-77 and 1977-78 were in the category "Crude material inedible except fuel" (including textile fibres and tungsten ores and concentrates).

Export Structure of ASEAN Countries in World Perspective

The above review of the commodity composition of bilateral trade (both exports and imports) of India with each of the ASEAN countries clearly points towards the existence of and growing tendency towards complementarities in the trade structure of India and the ASEAN countries in recent years. India can not only look to ASEAN

for markets for its exports but also for its much needed imports. The latter point can be further substantiated by looking at the export structure of ASEAN countries to the world as presented in Table 13 for the year 1977. India can negotiate long term contract for importing several products from the ASEAN countries in its national interest as well as in the interest of promoting economic cooperation with the ASEAN grouping. The following is an illustrative list of products which ASEAN countries can offer considering their world-wide exports:

- Indonesia: Crude petroleum; petroleum products; rubber; tin and fixed vegetable oils and products;
- Malaysia: Rubber; fixed vegetable oils especially palm oil; and tin.
- Philippines: Fixed vegetable oil (especially copra); Non-ferrous base metal ore; and oil seeds, nuts, kernels (including cashew kernels).
- Singapore: Petroleum products; rubber; fixed vegetable oils; and special products like electronics based high technology items and rigs.
- Thailand: Rice; Rubber; pulses; etc.

India's Terms of Trade with each ASEAN Country and the World

We have already seen from Table 1 that the India's trade balance with the ASEAN countries has recently moved in favour of Malaysia and Singapore over-swamping the small surpluses in India's trade balance with Indonesia, Philippines and the Thailand. It would be worthwhile examining this experience in the context of

the bilateral terms of trade of India with each of the ASEAN countries and compare this with India's terms of trade with the world as a whole.

Since no ready-made series on India's terms of trade with the individual member countries of the ASEAN exists in the official statistics of the countries concerned or in the publications of the United Nations and its agencies and other international organizations, we have specially computed such a series for three points of time, namely, 1970-71, 1975-76, and 1979-80 using various concepts of "terms of trade" from the literature in International Economics. In carrying out this exercise, we have had to make some adjustments. We have computed the trade weighted indices of unit values of exports (reflecting export price, P_x) and unit values of imports (reflecting import price, P_m) using value weights of various products in total exports (V_x) and imports (V_m) as prevailing in the base year 1970-71. We have ignored the changing composition of traded goods since 1970-71 in the weighting procedure for the convenience of computing the relevant terms of trade. The results of this exercise are provided in Table 14. It needs to be pointed out here that due to several problems faced and assumptions made by us as mentioned above, the results of this exercise should not be treated as authoritative but only/as indicative of the direction of the relevant "terms of trade."

Table 14 also provides an idea of the growth of India's bilateral trade with each of the ASEAN countries in real (Volume) terms through the Quantum index of exports (Q_x) and the Quantum index of imports (Q_m) which are better indicators of the true rate of growth of such exports and imports (than the growth in merely value terms).

Of the various measures of terms of trade provided in Table 14, we will comment here on the most popular measure among them; namely, the net barter terms of trade given by the ratio (P_x/P_m) . India's net barter terms of trade with the world deteriorated from a base value of 100 in 1968-69 to 70 in 1975-76 and further deteriorated to 66 in 1979-80. Using 1970-71 = 100, India's net barter terms of trade deteriorated with Malaysia to 94 in 1975-76 and further to 42 in 1979-80. The same trend can be observed in the case of India's net terms of trade with the Philippines which deteriorated to 72 in 1975-76 and further to 59 in 1979-80. There has been significant improvement in this respect with Indonesia, the relevant index being 115 in 1975-76 and 319 in 1979-80. In the case of Singapore, this index deteriorated for India to 98 in 1975-76 but improved to about 127 in 1979-80. And in the case of Thailand, this index improved for India to 175 in 1975-76 but ended up in 1979-80 at 163 showing deterioration compared to the 1975-76 level.

Intensities of Imports and Exports of India's Bilateral Trade with the ASEAN Countries

Tables 15 and 17 present the results of our computations of the import intensity and the export intensity indices (defined and elaborated in the Appendix to this paper) of India's bilateral trade at the aggregate level with each of the ASEAN countries over the years 1965-80.

While there have been fluctuations in the computed values of the import-intensity indices as seen from Table 15, the trend for the period 1970-80 has been positive and statistically significant (at 1 per cent level) in the case of India's imports from Indonesia, Malaysia and Singapore; and positive but statistically insignificant

in the case of the Philippines; and negative but statistically insignificant in the case of Thailand as revealed in Table 16.

The indices have a value of higher than unity (showing over-representation) in the case of Malaysia for 1973 and throughout 1977 to 1980 period; and in the case of Singapore for 1966 and from 1978 to 1980 and in the case of Thailand for the years 1971, 1972 and 1975.

Similarly, despite the year-to-year fluctuation in India's export intensity indices with each of the ASEAN countries in the 1965-80 period (see Table 17), the trend for the period 1970-80 has been positive and significant in the case of Indonesia and the Philippines; and negative and significant for Singapore; and negative but insignificant for Malaysia; while no trend was evident for Thailand as shown in Table 18. The value of the export intensity has been higher than unity showing over-representation in the following cases: Indonesia for the period 1973 to 1980; Malaysia for all the years; Singapore for the year 1966 to 1978; and Thailand for the years 1972, 1974 and 1976 to 1978.

We have also computed the trade intensity indices for the above countries at disaggregated level at one digit SITC level classification (See Tables 19 and 20) and also at the Three Digit SITC level for 1970 and 1977 (See Tables 21 and 22). The most noticeable and disturbing feature that emerges from this analysis relates to a substantial decline in India's export intensity of machinery and transport equipment to all ASEAN countries in 1977 compared to 1970. On the import side, there has been a noticeable increase in 1977 over 1970 in the import intensity of fixed vegetable oils from Malaysia and of chemicals from Indonesia to India.

Intra-Industry Trade

So far we have largely concentrated our attention on the analysis of inter-industry trade between India and each of the trading partners from the ASEAN grouping. To complete the analysis of such trade, we will now examine the changing nature of the intra-industry trade for selected commodities during the period 1970 and 1980. For this purpose, we will compute the index B_i also known as Grubel-Lloyd (G-L) index (as defined and elaborated in the Appendix to this paper).

We have computed the values of the index B_i for India's trade with each of the ASEAN countries for the year 1970 and 1980 for 19 selected industries at the Six Digit SITC level. Table 23 shows these computations. The problems associated with the measurement of G-L index as pointed out in the Appendix to this paper need to be borne in mind before drawing inferences.

As can be seen from Table 23, most of the cells in this table depict zeros for both 1970 and 1980 indicating that the countries involved are reaping the advantages of complete specialization in trade in these products. G-L index reached close to 100 only in the case of Paper and paper board in the case of Thailand ($B_i = 93.88$) in 1970. The other high values of G-L index were: Iron and Steel tubes, pipes, etc., in the case of Singapore in 1980 ($B_i = 79.42$); and Materials of Rubber in the case of Malaysia in 1980 ($B_i = 42.88$). The values of G-L index for all other selected products were relatively low both in 1970 and 1980. The picture could change if we were to compute G-L indices for these products in the years 1971-79.

Trade Reciprocity Index

We have presented the computed values of the Trade Reciprocity Index θ (defined and elaborated in the Appendix to this paper) in Table 24 between India on the one side and ASEAN as a grouping on the other side for the years 1965 to 1980. The index has been on the high side for most of the years (above 0.6) and was nearer to its maximum value of 0.971 in 1969. As shown in Table 24, this index of trade reciprocity has shown a somewhat negative but statistically insignificant trend during the period 1965-80. This reflects the growing imbalances of India's balance of trade with the ASEAN grouping especially in the more recent years.

II

INVESTMENT RELATIONS

Indian investment in the form of joint ventures in the ASEAN countries approved by both the Government of India and the Government of the concerned ASEAN country is a relatively recent phenomenon beginning in the late 60's. Entrepreneurs from India have undertaken joint ventures of both industrial and purely commercial nature (such as trading and services like consultancy) into various parts of the world especially in South and South-East Asia and Africa (including nearby countries like Mauritius where population of Indian origin accounts for a sizeable proportion of total population).

The focus of this part of our study is on joint industrial ventures. Large private sector business houses from India like the Birlas and Tatas (and also some of the more well-known business and industrial units from not-so-large business houses) have constituted the majority of the entrepreneurs from India who have set up manufacturing joint ventures abroad mostly with local partners. These Indian units have an established name in their respective main businesses within India. It is remarkable that such entrepreneurs have set up joint industrial ventures abroad (especially in the ASEAN countries) not only in the lines of products in which they have successfully been operating in India for long time but also diversified into new lines of products.

Motivating Factors for the Setting up of Indian Joint Ventures

During the field trip to the ASEAN countries, we interviewed

the top managers of nearly 25 Indian joint venture units with manufacturing operations. We asked them about the factors which motivated them to set up joint ventures in these countries. According to them, several factors have been responsible for the growth of Indian joint ventures in the ASEAN countries. These include the following:

- (i) The desire to protect the export markets for their products which have been threatened by the measures of import substitution under the policy of industrialization of the host countries;
- (ii) The attractive packages of incentives offered by the host countries to the foreign investors;
- (iii) Geographical proximity of ASEAN countries to India;
- (iv) Relatively stable and favourable investment climate in the host countries;
- (v) The search for more profitable avenues of business in more prosperous and faster growing ASEAN markets;
- (vi) The prestige attached to going "international" as seen by the Indian consumers;
- (vii) Diversification to counter possible recessions in Indian markets;
- (viii) The restrictive policies of the Government of India towards expansion of industrial business by large Indian business houses and the foreign companies and companies with foreign collaboration operating in India under various Acts like the Monopolies and Restrictive Trade Practices (MRTP) Act and the Foreign Exchange Regulation Act (FERA);

- (ix) The prevalence of tight exchange control regime in India in the late 60's and 70's at least up to 1976 or so.
- (x) The desire to maintain some control on foreign exchange in their own hands; and
- (xi) Lastly, but not the least, the encouragement given by the Government of India to the Indian entrepreneurs to set up joint ventures abroad (generally under minority equity participation) as a part of its export promotion policy by insisting that such participation should be in the form of exports of Indian machinery, components and materials; and of late, Government of India's liberalisation of its policy towards Indian joint ventures abroad by allowing cash participation to some extent in the equity to be held abroad in deserving cases (linked generally to the prospects of increased Indian exports over time).¹

1. For details of the current policy of the Government of India for approving Indian joint ventures abroad, see, Indian Investment Centre, Indian Joint Ventures Abroad: Status and Guidelines, New Delhi: 1982. A study by the Indian Investment Centre has shown that for the 117 Indian joint ventures which were in production (or operation) as of August 1980, cash remittances constituted 10 per cent of the total equity contributed by these units while export of capital equipment constituted 59 per cent of the total equity contributions. See, Indian Investment Centre, Indian Joint Ventures Abroad: An Appraisal, New Delhi, 1981, p.3.

There is a need to systematically study the motives and experiences of Indian joint ventures and also compare them with the experiences of foreign investors from other countries. Undoubtedly these are difficult areas for quantitative research. However, our interviews with some of the top managers of the Indian joint ventures in the ASEAN countries confirm that all of the above-mentioned factors have contributed in varying degrees towards the setting up and growth of Indian joint industrial ventures² in these countries.

Table 25 presents the data on the Indian joint ventures in the ASEAN countries and the world and also gives their distribution industry-wise as on December 31, 1982. As may be seen from this table, a total of 86 joint ventures, had obtained the approval of the Government of India in the ASEAN region out of a total of 222 such approved units throughout the world. Thus, approved joint ventures in the ASEAN countries alone constituted nearly 40 per cent of all such units in the world. Only 56 per cent of such units (125 out of 222 such units) in the world were in production/operation, the remaining being under "implementation" in various stages (including the possibility of planning disinvestment). Sixtyone out of 125 such units (or only 49 per cent)

2. There is also a further problem of defining "Indian" industrial ventures in the foreign (ASEAN) countries. Much of the investment in "Indian" ventures may not have originated from India at all. It could have been largely (or totally) financed by Indians settled abroad, Indian companies registered in a foreign country, Indians (or their children and relatives) who have taken citizenship of the other country of their residence, etc. In this study, however, only the Indian joint ventures approved by the Government of India are included.

were in production/operation in the ASEAN countries. This shows a large gap even if we take into account the fact that several joint ventures in the ASEAN countries were approved in the period 1979 onwards. Out of these 61 operating joint ventures, 56 (or 92 per cent) were industrial ventures whereas the remaining 6 units were in the "services" sector (such as consultancy, trading, leasing, etc.). This compares with 99 out of 125 operating units (or 79 per cent) being industrial ventures at the global level. Of the 61 operating units in the ASEAN, 30 are located in Malaysia, 12 in Indonesia, 12 in Singapore, 5 in Thailand and 2 in the Philippines.

Indian joint industrial ventures have been set up in the ASEAN countries as well as in the world in different industries. The distribution of such joint ventures reflects a diversified structure in the ASEAN countries as can be seen from Table 25. The engineering and electrical industries encompass 25 out of 61 such operating units. Fourteen of these 25 units are located in Malaysia. As can be expected, out of 8 such units in the oil refining business in the ASEAN countries, 6 are located in Malaysia. Out of 11 operating units in the textiles and related products in the ASEAN grouping, 6 are located in Indonesia. Thus, there is a pattern of concentration of location in industries in accordance with either the local resource availability or nature of demand in the local market. Indian investments in Singapore are increasingly going in relatively high technology areas. There are very few units which have been set up by the Indian entrepreneurs to tap the ASEAN market as a whole. This is explainable partly because ASEAN countries have not yet made much progress towards the harmonization of their industries investment policies. In general, Indian joint ventures have been set up in ASEAN countries in areas specified by the host governments.

Table 26 provides the details of the investment by each of the operating Indian industrial joint ventures at the global level (including ASEAN grouping) as at the end of 1981. As can be seen from this table, most of the Indian joint industrial ventures abroad (and in the ASEAN countries) own a minority share (49 per cent or less) in the equity of these organisations. The contribution in equity has been largely in the form of machinery, know-how and the bonus shares held on the basis of equity held earlier. In a few cases, cash remittances have also been permitted by the Government of India for contribution towards equity in the ASEAN countries and elsewhere in the world.

Table 26 also reveals the pattern of earnings repatriated by each of the operating Indian industrial joint ventures abroad. In general, the earnings repatriated have been on the low side compared to the investment made by the Indian entrepreneurs during the last decade or more. This is also true of most Indian industrial joint ventures in the ASEAN countries. The Indian joint ventures have also shown preference for retaining earnings in the ASEAN countries to be used for future expansion of these ventures.

From the Indian point of view, the major gains from the Indian joint industrial ventures have been one time exports of Indian machinery at the time of contribution (or again at the time of additional contribution) towards equity, additional exports of raw materials, spares and components from India over time, repatriation of corporate earnings, employment of Indian entrepreneurs and technicians and repatriation of part of their earnings to India. We do not have data on the extent of "additional" exports generated for India by the Indian joint ventures in each

of the ASEAN countries every year during the years of their operation. We also cannot calculate whether exports for India would have been higher in the concerned products if these ventures were not set up.

In the light of the above comments, a systematic and detailed research study needs to be conducted on the costs and benefits of Indian joint ventures in the ASEAN countries to India. Despite the low overall rate of earnings repatriated to India from such ventures, these ventures appear to have benefited India at least marginally. They certainly appear to have benefited the investing Indian entrepreneurs in some ways as otherwise they would have neither continued to expand their ongoing businesses nor desired to set up new units in the ASEAN countries.

The above tentative evaluation of the working of Indian joint industrial ventures in the ASEAN countries is not meant either to undermine the achievements or to underestimate the problem faced by the Indian joint ventures in operating their businesses in a totally different environment. Indeed, such units have generally faced a far more open and competitive environment than what they were used to for their business in the relatively highly sheltered Indian economy. More research needs to be undertaken to evaluate the performance of these units and to formulate an optimal policy towards the setting up of Indian joint ventures taking into account the interests of the Indian nation, the Indian entrepreneurs and the host nation.

Besides the operating Indian joint ventures, 25 new ventures are under implementation in the ASEAN countries. As

Table 25 shows, out of these 25 proposed units, 11 of them are in Singapore alone; 5 in Thailand; 4 each in Indonesia and Malaysia; and 1 in the Philippines. We would like to single out one of these units located in Thailand for special mention. This unit has been promoted by Ballarpur Industries of India Limited. The name of the Thai company is Phoenix Pulp and Paper Company. This venture was approved by the Government of India in June 1978 and - despite delays - is expected to be ready for going into commercial production before the end of 1982. The novel feature of this venture is the unique Indian contribution through Indian research and development in evolving most appropriate technology to manufacture pulp (for producing paper) using the kanaf leaf available locally in abundance. This is also an import substitution project and will help to save foreign exchange for Thailand. It will also generate permanent employment for the Thais in the industrially backward district of Khon Kaen where the pulp plant is located.

It needs to be pointed out that not all Indian industrial joint ventures have had a successful commercial run after they have been operationalised. Some of the ventures have been abandoned or closed down by the entrepreneurs. Examples of the failures include some big names like the N.S. Gula (sugar) unit in Malaysia promoted by the Apte Group (Phalton Sugar Works, Bombay); and Kirloskar Industries (Philippines) Incorporated producing diesel engines - though this unit has not been formally closed down. The most recent failure has been that of the Camlin's unit in Malaysia producing stationery and allied products. This is not the place to go into the reasons for these and other "failures." Here again, a detailed research study needs to be undertaken to fully understand and appreciate the reasons for abandoning or closing down of the Indian joint ventures.

However, two general points can be made while analysing "failure" cases among Indian joint ventures in the ASEAN countries. Firstly, the so-called "failures" are a normal feature of business. So long as the proportion of "failures" in total ventures is not too large and failures have occurred for reasons beyond the control of the entrepreneurs, one need not be over-concerned about them.³ The Government of India, can and should extend all possible support to Indian entrepreneurs to revive their "sick" joint ventures abroad wherever feasible. However, there are clear limits to such a policy. Secondly, the few Indian "failures" in Malaysia (and elsewhere in the ASEAN countries) have attracted far more attention of critics both in comparison to the Indian success stories and also in comparison to the "failures" of the joint ventures promoted by the foreign investors from other countries. The embassies of India can help in issuing clarifications to counter the biases exhibited by the local media and properly explain the Indian point of view.

On the whole, the Indian industrial joint ventures in the ASEAN countries appear to have benefited the economy of the host countries in several ways including: (i) contribution to industrial development in general and also in some relatively industrially

3. According to the figures provided by the Indian Investment Centre (New Delhi), of the total 126 Indian joint ventures approved by the Government of India for location in the ASEAN countries as of August 1980, only 7 such ventures (or 6 per cent of total ventures approved), which were taken up for implementation, were "abandoned" by the promoters (5 of them in Malaysia and 2 in the Philippines). In addition, 38 of these approved ventures (or 30 per cent) were "not implemented" at all as the concerned entrepreneurs revised their judgment on their feasibility during the time since their approval. See, Indian Joint Ventures Abroad: An Appraisal, op cit, Annexure I.

backward areas; (ii) transfer of "appropriate" technology; (iii) employment generation; (iv) training of local workers; (v) letting the nationals retain majority ownership; (vi) saving of foreign exchange through import substitution; and (vii) earning of foreign exchange through some degree of export orientation. These units have been set up in the priority areas of industrial development as approved by the governments of these countries. Thus, they have contributed towards meeting the developmental needs of these countries.

Possibilities of Investment in India by Persons of Indian Origin Settled in ASEAN Countries

The Government of India has recognised the relevance and importance of attracting remittances, savings and investments into India by persons of Indian origin settled abroad for accelerating the pace of industrialization and economic development of the country. The government has been offering several facilities/concessions for the last few years for attracting such funds especially for investment purposes. These include facilities like the holding of deposits in foreign currency in the Non-Resident(External) Accounts and investments by Non-Resident Indians in the equity shares of new companies to any extent desired by them with repatriation privileges.⁴ Special treatment is given by the Government of India to all parties for setting up 100 per cent-export-oriented units. Recognising the special importance of attracting such investment in India, efforts have been made recently to streamline the procedures for the issue of

4. For latest details of the Special Scheme for Investment in India by Non-Resident Indians, refer to the relevant publications of the Indian Investment Centre (New Delhi). One such publication of this Centre is entitled, "Investing in India by Non-Resident Indians: Why and How."

industrial licences for Non-Resident Indians. The most recent step in this direction has been the creation of a special cell in the Secretariat of Industrial Approvals in the Union Ministry of Industry for speedy clearance of industrial licence applications of Non-Resident Indians as announced on January 13, 1983.⁵ The Indian Investment Centre (with Head Office at New Delhi and overseas offices at Abu Dhabi, Dusseldorf, London, New York and Tokyo) which has already been functioning as the focal point for attracting foreign investment into India for several years now has been designated as one of the agencies to facilitate the procedural work under this Scheme.

We do not have data on the region-wise/country-wise break-up of the actual pattern of investment in India by Non-Resident Indians for the last few years. However, it appears that the potential of ASEAN countries in this respect has not been adequately recognised so far by the Government of India. One evidence for substantiating this statement is that the Indian Investment Centre has not yet set up any overseas office in the ASEAN region. We did not find much evidence of publicity given to this Scheme in all the ASEAN countries visited by us in 1982. It is necessary to vigorously "market" the idea of investment in India by Non-Resident Indians in all the ASEAN countries.

It is also necessary to understand the difficulties/inhibiting factors experienced by those Non-Resident Indians from the ASEAN countries who have actually invested or have shown interest for investment in India by applying for industrial

5. For further details, see the Economic Times (Bombay) January 13, 1983, p.1.

licences. A Madras Stock Exchange delegation which recently visited Bangkok, Kuala Lumpur and Singapore - the three capitals out of five ASEAN countries (and also visited Hong Kong) - contacted Non-Resident Indians there to seek their views on the possibilities of further investment in India. This delegation is reported to have been told that "cumbersome procedures" and "high taxation rates" (compared to those prevailing in other countries such as Japan and West Germany) were the major irritants faced by the Non-Resident Indians in the Far East wanting to invest in India.⁶ These and other related problems need to be examined and corrective remedial action taken by the Government of India for more effectively tapping the potential of investment in India by Non-Resident Indians abroad in general and in the ASEAN countries in particular.

III

OTHER ECONOMIC RELATIONS

The "other" economic relations between India and the ASEAN countries to be briefly studied by us include the areas of (i) Tourism; (ii) Shipping; and (iii) Banking.

Tourism

Table 27 presents statistics on the number of tourists from the ASEAN countries, from two neighbouring countries Nepal and Sri Lanka - and from the world as a whole - for the years 1971 to 1979. It can be seen from Table 27 that despite a

6, The Economic Times (Bombay), January 6, 1983, p.3.

sizeable population from India or of Indian origin residing in most ASEAN countries, tourists from ASEAN region constitute less than 10 per cent of annual tourist arrivals from the world. A disturbing feature that emerges from Table 27 relates to the steadily declining share of tourists from the ASEAN region and from most of the member countries of the ASEAN in the total tourists arrivals into India. Thus, the share of tourists from the ASEAN grouping has fallen from 10 per cent in 1971 to 6.6 per cent in 1979. India has not been able to reap the benefits of higher earnings from tourism from the ASEAN countries which exist potentially.

Recognising the above potential on two-way basis, an apex body called South Asia Tourism Association (SATA) has been formed recently with its Secretariat in Bombay (India) to promote intra-regional tourism.⁷ The membership of SATA will comprise of national travel agents' associations, national hotels associations, international airlines and government bodies involved in tourism. The Travel Agents Association of India (TAAI) in Bombay will look after the working of the Secretariat of SATA. The TAAI is already promoting tourism in South-East Asia (including ASEAN countries). It has planned its 32nd Annual Convention at Singapore from May 14, to 17, 1983. The highlights of this Convention will be a "Buyer-Seller meeting between Indian and ASEAN organisations, a tourism exhibition and a poster exhibition."⁸ However, these efforts need to be supplemented by the efforts of the Government of India and its related offices to formulate and implement a more clear and liberal policy and procedures for promoting tourism

7. The Economic Times (Bombay), January 1, 1983, p.12.

8. Ibid, p.12.

between India and the ASEAN countries as a device for increasing net foreign exchange earnings and facilitating intra-regional economic cooperation.

Shipping

Our interviews with some of the exporters and importers in the ASEAN countries during June-July 1982 have revealed that one of the obstacles in the way of expanding mutual trade between India and the ASEAN grouping is the inadequacy of the availability of the shipping services. The Shipping Corporation of India has very few sailings and cannot meet the annual requirements of cargo to be traded between India and each of the ASEAN countries. The national airlines Air India also does not provide adequate services to all the capitals of the ASEAN countries. However, the exporters and importers in India and each of the ASEAN countries do not appear to be facing as much problems in transporting goods by air as by sea.

Banking

Our personal interviews in June-July 1982 with some of the representatives of the Indian joint ventures as well as the representatives of Indian banks based in the ASEAN countries revealed that satisfactory banking services were available for channelising trade and investment among the countries concerned. According to some of the top managers of the Indian industrial joint ventures contacted by us, the Indian based banks in the ASEAN countries (including an Indian joint banking venture in Malaysia) have been extremely helpful in providing services for the promotion of Indian joint ventures in those countries.

Indian banks are not allowed to undertake fullfledged banking operations in most of the ASEAN countries. Some of the large nationalised Indian banks (like the State Bank of India and the Bank of India) have, therefore, been operating only regional representative offices in the ASEAN countries. Such offices exist in Indonesia, Singapore and the Philippines. Some of the Indian banks also operate their Offshore Banking Units in some of the ASEAN countries. The State Bank of India has been quite successful in running its offshore banking business in Singapore and Manila. There is, however, a great deal of scope for developing further business in offshore banking by the Indian banks in the ASEAN countries. This can increase India's exchange earnings from this category of "invisibles."

IV

AVENUES FOR FUTURE COOPERATION

Our analysis of the state of current economic relations between India and the ASEAN countries in the 70's in the above three sections has revealed the growing complementarities in the trade, investment in joint industrial ventures and services among these countries. We have supplemented, the above analysis with the results of our interviews (conducted in June-July 1982) with the officials of the governments and other official agencies of the ASEAN countries, the officials of the Indian embassies, and some of the units actually engaged in trade and investment between India and the ASEAN countries. Based on the above analysis, we can indicate some of the broad areas where mutual economic cooperation can be further strengthened. Admittedly, the suggested areas are

only indicative as they are not the results of a detailed research study. Further exploratory research needs to be undertaken before drawing up concrete action-oriented proposals for the consideration of the policy makers.

To begin with, in the field of trade, India can continue to look for markets for its exports (especially for its non-traditional products like engineering products and chemical products) in the geographically close and faster growing ASEAN markets. On the side of imports, good scope exists for negotiating mutually beneficial long term procurement contracts/agreements particularly with Malaysia and Indonesia for the imports of palm oil and related products, rubber, tin and other metals and with the Philippines for copra and cashew kernels. Preferential arrangements for procurement and tariffs supplemented by the minimum necessary supportive payments arrangements can help in promoting mutual trade expansion. The Export-Import Bank of India (established in 1982) can play a special role in helping the promotion of India's exports of capital goods and turnkey projects to the ASEAN countries by providing long and medium term credit on terms which will enable Indian exporting units to compete on fair commercial terms with the suppliers from the developed countries, especially Japan.

Greater scope for mutual economic cooperation between India and the ASEAN countries exists through investments in joint ventures in industrial and services sectors. "Appropriate technology" argument is still largely valid for exports of technology from India in a few selected areas at least in Indonesia, Malaysia and Thailand. It should, however, be noted that the degree of appeal of the

"appropriate technology" argument is gradually fading away on account of large balance of payments surpluses usually enjoyed by most of the ASEAN countries. India and Singapore can invest in each other's market for producing goods in high technology areas. There is a need to carefully identify new areas of such investment especially if they are of trade-creating nature. The ASEAN policy makers' preferences for relatively "open economy" by encouraging competition among the foreign investors and for the "look East" (towards Japan) direction for trading and investing partners in the ASEAN countries would place limits on the scope for new joint industrial ventures from India in these markets in the coming years. Indian entrepreneurs and technicians will increasingly find their comparative advantage shifting away from "turnkey projects" which are based largely on Indian machinery, equipment and materials to providing consultancy services for projects using more and more of machinery, equipment and materials from Japan, Australia and other developed countries from the Western Europe and USA and Canada. There will be greater scope for exports of other "services" from India to the ASEAN countries like management services (for example for reviving "sick" industrial units) and for offshore banking. India and ASEAN countries can also mutually benefit by the expansion of tourism. India can benefit by attracting more investment in India from ASEAN countries especially from persons of Indian origin. India can also learn the importance of providing efficient infrastructure which now exists in countries like Singapore.

**

TECHNICAL APPENDIX

"SELECTED INDICES TO MEASURE MUTUALITY OF TRADE RELATIONSHIP
AMONG COUNTRIES OF AN EXISTING OR A POTENTIAL REGIONAL
GROUPING ILLUSTRATED WITH REFERENCE TO INDIA-ASEAN
TRADE RELATIONS"

The following selected indices will be defined and elaborated in this appendix:

I. Trade Intensity Indices

- (i) Import Intensity Index
- (ii) Export Intensity Index

II. Grubel-Lloyd Index for Intra-Industry Trade

III. Trade Reciprocity Index

We now turn to these three sets of indices one by one.

I. Trade Intensity Indices

An analysis of the bilateral trade orientation of India with each of the ASEAN countries can be undertaken by computing the trade intensity indices on both imports and the exports side.*

The import intensity index (m_{ij}) is defined as:

$$m_{ij} = \frac{\left(\frac{M_{ij}}{M_i} \right)}{\left(\frac{X_j}{X_w - X_i} \right)} \dots\dots\dots (1)$$

where,

m_{ij} = import intensity index of trade of country i with country j.

M_{ij} = imports of country i from trading partner j.

Contd..2

* These indices are given in K.Kojima, "The Pattern of International Trade Among Advanced Countries," Hitotsubshi Journal of Economics, Vol.5, No.1, June 1964.

$$\begin{aligned}
 M_i &= \text{total imports of country } i \\
 X_j &= \text{total exports of country } j \\
 X_w &= \text{total world exports} \\
 X_i &= \text{total exports of country } i.
 \end{aligned}$$

The first term on the right hand side of (1) above shows the proportion of total imports of country i accounted for by imports from country j . The second term shows the proportion of world exports net of country i 's share. It should be obvious that if $m_{ij} = 1$ (unity), i.e., when these two terms are equal, this would imply that country i accounts for the proportion of country j 's exports identical to country j 's importance in the total (net) world exports. If this index is numerically greater than unity, this would imply over-representation of country j in country i 's imports; on the other hand, a value of less than unity of this index would imply under-representation.

Similarly, export intensity index (x_{ij}) can be defined as:

$$x_{ij} = \frac{\left(\frac{X_{ij}}{X_i} \right)}{\left(\frac{M_j}{M_w - M_i} \right)} \quad \dots\dots (2)$$

where,

$$\begin{aligned}
 x_{ij} &= \text{export intensity index of trade of country } i \\
 &\quad \text{with country } j. \\
 X_{ij} &= \text{exports of country } i \text{ to trading partner } j \\
 X_i &= \text{total exports of country } i \\
 M_j &= \text{total imports of country } j \\
 M_w &= \text{total world imports} \\
 M_i &= \text{total imports of country } i.
 \end{aligned}$$

Contd....3

The first term on the right hand side of (2) above indicates the proportion of total exports of country i accounted for by country j . The second term there shows the proportion of world imports net of country i 's share accounted for by country j . The equality of these two terms would again lead to the value of this index to be unity which would imply that country j accounts for country i 's exports in the same proportion as country i 's share in total (net) world imports. Again, a value of this index which is greater than unity would imply over-representation of country j in country i 's exports, while a value less than unity would imply under-representation.

It should be noted that the values of the above trade intensity indices are influenced by several factors such as the historical patterns of trade, geographical proximity, political relationships among nations, degree of competitiveness and/or complementarities in the trade and economic structures of the partner countries, trade barriers (especially quotas, etc.) brand loyalties, and the competitiveness of the products in international trade.

II. Grubel-Lloyd Index for Intra-industry Trade

The trade intensity indices defined in Section I primarily dealt with inter-industry trade. To complete the picture, the changing nature of bilateral trade on intra-industry basis can be examined by computing the following Grubel-Lloyd (G-L) index* (denoted by B_i):

Contd...4

* H.G. Grubel and P.J. Lloyd, Intra-Industry Trade: The Theory and Measurement of International Trade in Differentiated Products, London: The Macmillan Press, 1975, p.21.

$$B_i = \left[\frac{X_i + M_i - |X_i - M_i|}{(X_i + M_i)} \right] \cdot 100 \dots (3)$$

where,

B_i = intra-industry trade index (or G-L index) for industry i ; X_i & M_i = Value of exports and imports for industry i respectively

$i = 1, \dots, n$ where n is the number of industries at a chosen level of disaggregation.

It can be noted that the value of B_i will always lie between zero and 100. The index $B_i = 100$ when the exports are exactly equal to the imports of an industry. $B_i = 0$ (Zero) when there are exports but no imports or vice-versa. This shows complete specialisation in trade between two countries in a selected product. In this case intra-industry trade is said to be at its optimum.* Whenever the value of exports equals one half the value of imports or vice-versa, $B_i = 0.666$.

Contd...5

*There are several problems in the measurement of the G-L indices of which we list two major ones here. The first one relates to the definition of the "industry" itself for empirical measurement. The index is sensitive to the definition of industry adopted. In general, the proper (more aggregative) the product grouping, the greater the extent of over-estimation of intra-industry trade. Keeping this in mind, we have only computed G-L indices at the most disaggregative level available (Six Digit Level) in trade statistics. The other set of measurement problems arise when trade imbalances are very large at the level of the industry being considered. We have ignored these problems for our purpose.

III Index of Trade Reciprocity

In order to measure the reciprocity in the overall balance of trade of any two partner countries (or groups of countries not including all trade partners at the global level), we have devised the trade reciprocity index (θ) as follows:*

$$\theta = 1 - \frac{\sum_{j=1}^n \left[\frac{|a_{ij} - a_{ji}|}{(a_{ij} + a_{ji})} \cdot \sum_{i=1}^n a_{ij} \right]}{(n-1) \left[\sum_{i=1}^n \sum_{j=1}^n a_{ij} \right]}$$

where, a_{ij} = exports of country i to partner j

a_{ji} = exports of country j to partner i

n = total number of countries involved in the context of bilateral or regional grouping being considered.

The index θ will always lie between zero and one. When every pair of countries in a group tends to have a balanced bilateral trade (case of perfectly balanced two-way trade), the value of θ reaches its maximum (i.e., unity). On the other hand, when there

Contd...6

* Charan Wadhva, "Note on the Revised Index of Complementarity Considering Trade Values," Mimeo, March 1982. The earlier version of this note was presented for discussion at a Workshop on UNCTAD (Asian) Studies at Marga Institute, Colombo, during December 14-17, 1981. This index can be computed either at the overall level of balance of trade or sectoral level of trade (industry-wise) for any pair of trading partners. It can be better called as an index of trade reciprocity rather than as an "index of complementarity" as called by us earlier as its link with complementarity at the disaggregate level of trade is at best indirect and only implicit by assumption.

exists only one-way flow of trade between the pair of trading partners (say, complete dependence of country A on country B for its imports or exports), the value of θ is at its minimum (i.e., zero). This index thus measures the degree of trade reciprocity. It can be measured at bilateral as well as multilateral levels for a group of countries. It is extremely useful in the context of schemes of regional trade cooperation among partners who are facing (or apprehending) balance of trade difficulties. These countries would like to enter into schemes for further mutual trade expansion (such as negotiated reductions in tariffs on each other's products or preferential procurement say, through their State Trading Organisations) only if the degree of multilateral reciprocity in trade increases on the whole or at least at the margin so that the two-way additional trade created is balanced (or nearly balanced); and further if this process is supported by multilateral schemes of payments arrangements so that it does not add to the stress on their existing balance of payments difficulties. This would generally require the cooperating trading partners to carefully plan trade in products which are complementary to the trade and economic structure of the concerned countries (or group(s) of countries).

It needs to be pointed out that the index θ suffers from some limitations. One of the limitations of this index is that by itself it measures trade reciprocity at a given (static) level of trade between the partner countries. Thus, it cannot clearly distinguish between the degree of trade reciprocity prevailing at varying levels of trade between trading partners. Thus, for example, compared to an initial situation in year 1 when $\theta = 1$ at the then prevailing levels (values) of trade between partner countries, θ can be equal to unity (again) in the next year (year 2) under severe recessionary conditions when the relevant levels of trade may have in fact been much lower. While comparing the computed values of θ over time, it is also essential to simultaneously examine the trends in the overall growth of trade between various pairs of trading partners before drawing inferences regarding increase (or decrease) in the degree of trade reciprocity over time.

TABLE 1

India's Exports, Imports and Trade Balance with ASEAN Countries and
the World, 1971-72 to 1979-80

(Value in million Rupees)

	<u>Exports (to)</u>	<u>Imports (from)</u>	<u>Balance of Trade</u>
<u>1971-72 (World)</u>	<u>16080.0</u>	<u>18250.0</u>	<u>-2170.0</u>
1. Indonesia	20.4	1.1	+19.3
2. Malaysia	74.5	24.4	+50.1
3. Philippines	9.0	1.9	+ 7.4
4. Singapore	111.7	19.0	+92.7
5. Thailand	29.3	23.9	+ 5.4
6. <u>ASEAN (1 to 5)</u>	<u>244.9</u>	<u>70.3</u>	<u>+174.9</u>
<u>1976-77 (World)</u>	<u>51460.0</u>	<u>50740.0</u>	<u>+720.0</u>
1. Indonesia	605.9	28.8	+577.1
2. Malaysia	304.5	339.3	- 34.8
3. Philippines	227.1	8.8	+218.3
4. Singapore	591.2	87.9	+503.3
5. Thailand	260.7	48.5	+212.2
6. <u>ASEAN</u>	<u>1989.4</u>	<u>513.3</u>	<u>+1476.1</u>
<u>1977-78 (World)</u>	<u>54040.0</u>	<u>60250.0</u>	<u>-6210.0</u>
1. Indonesia	507.4	231.0	+176.7
2. Malaysia	336.3	2210.3	+1874.0
3. Philippines	134.5	5.9	+128.6
4. Singapore	689.8	510.0	+180.0
5. Thailand	258.9	65.8	+193.1
6. <u>ASEAN</u>	<u>1826.9</u>	<u>3023.0</u>	<u>-1195.6</u>
<u>1978-79 (World)</u>	<u>57260.0</u>	<u>68140.0</u>	<u>-10880.0</u>
1. Indonesia	807.2	124.8	+683.1
2. Malaysia	448.0	2397.0	-1949.0
3. Philippines	109.0	7.4	+108.9
4. Singapore	782.1	871.1	-89.0
5. Thailand	238.2	124.9	+113.3
6. <u>ASEAN</u>	<u>2385.2</u>	<u>3525.2</u>	<u>-1132.7</u>
<u>1979-80 (World)</u>	<u>64590.0</u>	<u>89080.0</u>	<u>-24490.0</u>
1. Indonesia	526.7	199.4	+327.3
2. Malaysia	526.2	2073.6	-1547.4
3. Philippines	101.1	21.6	+79.5
4. Singapore	795.4	1508.4	-713.0
5. Thailand	289.5	195.2	+94.3
6. <u>ASEAN</u>	<u>2238.9</u>	<u>3998.2</u>	<u>-1759.3</u>

Note : 1 U.S. dollar = Rs.7.50 for 1971-72 and Rs.8 approximately from 1976-77 to 1979-80.

Source : Director General of Commercial Intelligence & Statistics, (DGCI&S), Calcutta.

TABLE 2

Annual Rates of Growth of India's Exports to and Imports from the
ASEAN Countries and the World

<u>Period</u> Terminal year/ Base year	<u>World</u>	ASEAN	Indone- sia	Malay- sia	Phili- ppines	Singa- pore	Thai- land
<u>EXPORTS:</u>							
1979-80/1971-72*	16.7	28.0	43.5	24.0	31.0	24.2	29.0
1977-78/1976-77	5.0	-8.2	-33.0	10.0	-41.0	16.7	-0.7
1978-79/1977-78	6.0	30.6	98.3	33.2	-19.0	13.4	-8.0
1979-80/1978-79	12.8	-6.1	551.9	17.5	-7.2	1.7	21.5
1979-80/1976-77@	7.9	5.4	205.7	20.2	-22.4	10.6	4.3
<u>IMPORTS:</u>							
1979-80/1971-72*	19.2	50.0	77.0	65.0	31.0	64.0	26.4
1977-78/1976-77	18.7	488.9	702.1	551.4	-33.0	480.2	35.7
1978-79/1977-78	13.1	16.6	-46.0	8.5	25.4	70.8	89.8
1979-80/1978-79	30.7	13.4	59.8	86.5	191.9	73.2	56.3
1979-80/1976-77@	20.8	172.9	238.6	215.4	61.4	208.1	60.6

* Average annual compound rate of growth

@ Average annual rate of growth

Source: Computed from data in Table 1.

TABLE 3

India's Exports to Indonesia by Principal Commodities 1976-77 to 1979-80

(Value in Rs. lakhs)

Principal Commodities	1976-77	1977-78	1978-79	1979-80
Rice	1	8,46	6,51	-
Sugar and honey	34,70	-	48,30	28,37
Feeding stuff for animal	25	8	58	3
Tobacco unmanufactured	-	40	7	3
Oil seeds, oil nuts and oil kernels	29	-	-	-
Cotton	35	-	-	53
Crude vegetable materials	21	9	59	-
Chemicals and related products	95	1,06	1,83	1,87
Textile yarn fabrics and made-up articles	53	27	11	41
Non-metallic minerals manufactures	73	2,98	1,00	1,30
Iron and steel	9,03	9,04	3,23	90
Metal manufactures	41	54	2,19	1,49
Machinery & transport equipment	11,17	17,85	10,69	15,69
Misc. manufactured articles	41	47	1,80	48
Others	66	50	3,89	1,57
Total Exports	60,59	40,74	80,79	52,67

Source: DGCI & S, Calcutta.

TABLE 4

India's Imports from Indonesia by Principal Commodities 1976-77 to
1979-80

(Value in Rs. lakhs)

Principal Commodities	1976-77	1977-78	1978-79	1979-80
Spices	31	34	60	49
Crude vegetable materials	19	15	25	20
Fixed vegetable oils and fats	2,11	2,42	2,45	4,13
Chemicals and related products	26	8,41	8,83	5,40
Cement	-	-	-	4,72
Others	1	11,75	35	5,00
Total Imports	2,88	23,07	12,48	19,94

Source : DGCI & S, Calcutta

TABLE 5

India's Exports to Malaysia by Principal Commodities 1976-77 to 1979-80

(Value in Rs. lakhs)

Principal Commodities	1976-77	1977-78	1978-79	1979-80
Cereal & cereal preparations	1,14	19	9	7
Fruits and vegetables	3,61	3,15	7,68	4,38
Sugar	-	1	22	21
Tea and mate	-	-	23	-
Spices	58	86	1,44	1,38
Oil seeds, oil nuts and oil kernels	36	4	8	16
Feeding stuff for animals	2,09	1,37	2,43	4,22
Cotton (Raw & Waste)	43	1	1	1,34
Fixed vegetable oil and fats	30	9	9	1
Chemicals and allied products	1,84	1,52	1,54	2,23
Crude vegetable materials	23	18	20	30
Leather and leather manufactures	30	10	-	9
Paper and paper board	30	46	19	6
Textile fabrics yarn & related products	4,07	5,93	4,59	6,06
Non-metallic minerals manufactures	74	85	1,26	1,29
Non-ferrous metals	11	31	70	71
Iron and steel	1,73	48	36	32
Manufactures of metals	2,83	1,95	2,24	2,91
Machinery and transport equipment	7,36	14,00	19,23	24,29
Articles of apparel & clothing accessories	- 11	19	11	6
Miscellaneous manufactured articles	92	94	1,08	1,57
Other articles	95	86	1,03	90
Total Exports	30,02	33,49	44,80	52,62

Source: DCCI & S, Calcutta.

TABLE 6

India's Imports from Malaysia by Principal Commodities, 1976-77 to 1979-80

(Value in Rs. Lakhs)

Principal Commodities	1976-77	1977-78	1978-79	1979-80
Cocoa beans, raw or roasted	60	14	23	8
Copra (excl. flour and meal)	65	8,26	12,34	1
Crude vegetable materials	14	51	64	22
Fixed vegetable oils and fats	11,67	100,17	183,48	157,03
Chemicals and related products	1	22	2,05	1,06
Tin	20,25	7,57	24,64	17,49
Metal manufactures	18	2	10	13
Machinery and transport equipment	18	1,73	1,83	29
Natural rubber latex, natural rubber and similar naturals gums	1	5,92	11,28	29,78
Non-ferrous base metals waste	11	45	1,07	-
Others	13	96,04	2,02	11,27
Total Imports	33,93	221,03	230,68	207,36

Source: DGCI & S, Calcutta.

Table 7

India's Exports to the Philippines by Principal Commodities1976-77 to 1979-80

(Value in Rs. '000)

Articles	1976-77	1977-78	1978-79	1979-80
<u>Food and live animals</u>	<u>2800</u>	<u>6752</u>	<u>9767</u>	<u>22961</u>
Rice	-	92	-	-
Cereal preparations and preparations of flour of starch of fruits or vegetables	38	1138	593	-
Tea and mate	38	8	86	-
Spices	-	14	57	-
Feeding stuff for animals (not including unmilled cereals)	20726	5500	9031	22961
Beverages and tobacco	-	-	2	-
<u>Crude materials inedible except fuels</u>	<u>5567</u>	<u>16876</u>	<u>2365</u>	<u>5506</u>
Natural abrasives (n.e.s. incl. industrial)	-	27	122	-
Other crude minerals	-	551	1047	1032
Iron ore and concentrates	-	11162	-	-
Waste and scrap metal of iron or steel	-	49	-	-
Ores and concentrates of base metal n.e.s.	-	4003	-	-
Mineral fuels, lubricants and related materials	-	-	-	-
Crude vegetable materials, n.e.s.	1058	1084	1196	1575
<u>Mineral and vegetable oils, fats & waxes</u>	<u>54</u>	-	-	-
<u>Chemicals and related products, n.e.s</u>	<u>5708</u>	<u>6372</u>	<u>13179</u>	<u>16000</u>
Organic chemicals	1645	716	888	195
Inorganic chemicals	-	1289	2874	8013

Contd..

TABLE 7 (Contd.)

(Value in '000)

Articles	1976-77	1977-78	1978-79	1979-80
Dyeing, tanning and colouring materials	1660	1215	3079	3845
Medicinal & pharmaceutical products	1891	1970	4582	2440
Essential oils and perfume & cleansing preparations	206	175	134	584
Explosive and pyrotechnic products	-	588	1139	650
<u>Manufactured goods classified chiefly by materials</u>	<u>179006</u>	<u>89411</u>	<u>26252</u>	<u>25373</u>
Leather	81	406	1352	1797
Paper and paper board	-	322	462	535
Textile yarn, fabrics, made up articles n.e.s. and related products	721	441	913	36
Non-metallic mineral manufactures	2589	6319	3447	2609
Iron and Steel	132153	67057	10315	8713
Manufactures of metals	36904	14506	8433	7679
<u>Machinery and transport equipment</u>	<u>32044</u>	<u>13752</u>	<u>55715</u>	<u>26508</u>
Internal combustion piston engines and parts thereof	-	2244	4625	2333
Rotating electric plant and parts thereof	-	128	1409	742
Machinery specialised for particular industries	1123	2286	456	1456
Machine-tools for working metal and metal carbides, and parts and accessories thereof n.e.s.	-	2036	1399	1795
General industrial machinery and equipment, n.e.s. and machines parts n.e.s.	-	503	1804	5546
Office machines and automatic data processing equipment	-	197	347	49
Telecommunication and sound recording and reproducing	-	101	3	-
Electrical machinery, apparatus and appliances n.e.s. & electrical parts thereof	-	2517	3824	3713
Road vehicles (incl. air-cushion vehicles)	-	3740	4063	3235

.....contd.

TABLE 7 (Contd.)

(Value in Rs. '000)

Articles	1976-77	1977-78	1978-79	1979-80
Railway vehicles (incl. boverrains and associated equipment)	-	-	37766	6701
Miscellaneous manufactured articles	891	1243	2038	2862
Professional, scientific and controlling instruments and apparatus	-	846	1384	1946
Photographic apparatus, equipment and supplies and optical goods n.e.s. watches and clocks	-	116	22	18
Misc. manufactures articles n.e.s.	253	261	495	824
Commodities and transactions not classified elsewhere	<u>20</u>	<u>19</u>	<u>59</u>	<u>344</u>
Total Exports to Phillipines (including others)	226090	134455	109377	99554

Source: DGC I&S, Calcutta.

TABLE 8

India's Imports from the Philippines by Principal Commodities

1976-77 to 1979-80

(Value in Rs. '000)

Articles	1976-77	1977-78	1978-79	1979-80
Crude materials inedible except fuels	<u>7926</u>	<u>3872</u>	<u>1105</u>	<u>5628</u>
Vegetable textile fibres (other than cotton and jute) and waste of such fibres	6371	2886	725	5032
Synthetic fibres suitable for spinning	-	217	-	-
Non-ferrous base metal waste and scrap n.e.s.	-	766	86	591
Chemicals and related products n.e.s.	2	164	1218	5822
Artificial resins and plastic materials	-	148	-	-
Chemical materials & products n.e.s.	-	16	1128	2168
Manufactured goods classified chiefly by materials	831	1666	5000	9883
Paper and paper board	-	-	105	-
Textile yarn	10	47	-	-
Special textile fabrics and related products	-	1619	1399	548
Non-ferrous metal nickel	-	-	-	7914
Machinery and transport equipment	58	560	85	234
Paper mill and pulp mill machinery, paper cutting machines and other machinery for the manufacture of paper articles, and parts thereof n.e.s.	-	518	-	-
Miscellaneous manufactured articles	23	24	31	-
Commodities and transactions not classified elsewhere	2	67	4	6
Special transactions and commodities not classified according to kind	2	67	4	6
Total Imports from Philippines (including others)	8842	8353	7373	21574

Source: DGCI&S, Calcutta.

TABLE 9

India's Exports to Singapore by Principal Commodities 1976-77 to 1979-80

(Value in Rs. lakhs)

Principal Commodities	1976-77	1977-78	1978-79	1979-80
Fish and fish preparations	38	35	95	65
Cereals and cereals preparations	51	66	118	16
Fruits and vegetables	293	196	378	301
Tea	2	-	51	104
Spices	187	438	411	711
Coffee	4	-	35	1
Feeding stuff for animals	799	700	826	705
Oil seeds, oil nuts and oil kernels	413	7	9	72
Crude rubber (incl. synthetic and reclaimed)	186	135	-	-
Fixed vegetable oil and fats	25	148	139	4
Cotton	25	-	-	169
Wood timber and cork	44	51	42	50
Crude fertilizers and crude minerals	110	34	63	64
Crude animal & vegetable materials	253	295	354	401
Chemicals & related products	167	339	265	329
Leather	24	39	72	156
Rubber manufactures	38	5	7	10
Textile fibres yarn & related products	717	1019	981	1079
Non-metallic mineral manufactures	714	1109	1415	1468
Iron and steel	437	823	861	291
Metal manufactures n.e.s.	144	279	336	344
Machinery & transport equipment	647	695	1025	930
Clothings	56	56	62	86
Developed cinematographic film	66	106	73	47
Misc. manufactured articles n.e.s.	104	157	240	366
Others	346	107	163	187
Total Exports	5892	6898	7821	7821

Source: DGCI&S, Calcutta.

TABLE 10

India's Imports from Singapore by Principal Commodities 1976-77 to 1979-80

(Value in Rs. lakhs)

Principal Commodities	1976-77	1977-78	1978-79	1979-80
Metaliferrous ores and metal scrap	205	242	599	792
Crude vegetable materials	26	24	49	64
Chemicals and related products	30	62	118	371
Iron and steel	20	123	119	186
Non-ferrous metal	34	20	47	16
Metal manufactures	18	7	12	24
Machinery & transport equipment	385	253	599	794
Misc. manufactured articles	61	79	204	257
Fixed vegetable oils and fats	4	175	1525	1584
Others ^A	96	4112	5359	10996
Total Imports	879	5099	8711	15084

Note: A includes figures for petroleum products, except for 1976-77.

Source: DGCI&S, Calcutta.

TABLE 14

India's Exports to Thailand by Principal Commodities 1976-77 to 1979-80

(Value in Rs. '000)

Principal Commodities	1976-77	1977-78	1978-79	1979-80
<u>Section 1: Food and live-animal</u> <u>Chiefly for food</u>	<u>52052</u>	<u>51222</u>	<u>65308</u>	<u>92951</u>
Fish crustaceans and molluscs and preparations thereof	-	49	36337	55190
Coffee, tea, cocoa, spices and manufactured unmilled cereals	92	95	326	290
Feeding stuff for animals not including unmilled cereals	51928	51035	28608	37116
<u>Section 2: Crude material inedible</u> <u>except fuels</u>	<u>57279</u>	<u>2841</u>	<u>3917</u>	<u>20623</u>
Crude materials	622	223	567	1430
Crude vegetable materials	622	542	1679	913
Coal coke and briquettes	-	-	-	-
Petroleum oils, crude, crude oils obtained from bituminous minerals	-	-	-	-
Gas, natural and manufactured	-	-	-	-
<u>Section 3: Animal & vegetable oils,</u> <u>fats and waxes</u>	<u>35</u>	<u>43</u>	<u>47</u>	<u>43</u>
<u>Section 4: Chemicals and related</u> <u>products</u>	<u>20745</u>	<u>29879</u>	<u>31559</u>	<u>3266</u>
Inorganic chemicals elements, egides and balagen salts	2955	3184	6668	4258
Synthetic organic dyestuff etc. natural indigo and colour lakes	7384	12801	8084	11848
Pigments, paints, varnishes and related materials	576	909	1650	3028

Contd.

TABLE 14 (Contd.)

(Value in Rs.'000)

Principal Commodities	1976-77-	1977-78	1978-79	1979-80
Medicinal & pharmaceutical products	5585	5554	6969	4208
Essential oils, perfumes and flavour materials	4	161	432	898
Perfumery and cosmetics and toilet preparations	226	483	308	772
Soap, cleansing, polishing preparations	2350	1543	1718	3054
Regenerated cellulose, cellulose-nitrate, cellulose meants etc.	-	-	112	34
Disinfectants, insecticides, fungicides, used killers etc.	586	1361	1332	400
Misc. chemicals products	630	822	1277	1543
<u>Section 5: Manufactured goods classified chiefly by materials</u>	<u>79165</u>	<u>121898</u>	<u>72062</u>	<u>76753</u>
Leather	-	119	1885	1569
Paper and paper board cut to size or shape and articles of paper or board	640	504	330	231
Cotton fabrics, woven (not including narrow or special fabrics)	3670	1654	139	683
Special textile fabrics and related products	61	607	539	1172
Mineral manufactures n.e.s.	3434	2706	3310	2497
Glass	259	4260	186	389
Glassware	1679	1399	744	1260
Pearls, precious and semi-precious stones	1068	2720	4597	3730
Pig-iron, sponge iron, iron-steel powders and shorts and ferro alloys	6557	13548	1110	2174
Iron or steel wire (excluding wire rod) whether or not coated but not insulated	602	51	675	1250
Tubes, pipes and fitting of iron and steel	383	746	558	303

Contd.

TABLE 10 (Contd.)

(Value in Rs. '000)

Principal Commodities	1976-77	1977-78	1978-79	1979-80
Structure & parts of structures n.e.s. or iron steel or aluminium	7294	8766	5514	19818
Wire products & fencing grills	5522	7538	4106	5767
Tools for use in the hand or in machines	6065	7019	9554	7660
Manufactures of materials	1587	2886	2704	7015
<u>Section 6: Machinery and transport equipment</u>	<u>40676</u>	<u>47251</u>	<u>57876</u>	<u>60755</u>
Internal combustion engines and parts thereof n.e.s.	5913	9915	14916	8577
Other power generating machinery and parts thereof n.e.s.	3763	-	107	-
Textile and leather machinery and parts thereof	9027	3318	3465	7177
Fruit processing machinery	-	366	911	483
Machine tools for working metal or metal carbides and parts etc. thereof	-	1168	987	1612
General industrial machinery and equipment and machine parts	3573	9694	10655	9601
Electrical machinery apparatus and appliances	6697	3938	2857	4379
Road vehicles (including air-cushion vehicles)	9984	9714	15493	22415
Iron and steel bars, rods, angles, shapes and sections (including sheet pitting)	32184	33489	30521	1022

Contd.

TABLE 11 (Contd.)

(Value in Rs. '000)

Principal Commodities	1976-77	1977-78	1978-79	1979-80
<u>Section 7: Miscellaneous manufactured articles</u>	<u>4604</u>	<u>4900</u>	<u>4952</u>	<u>5502</u>
Sanitary, plumbing, heating and lighting fixtures and fittings	135	65	134	230
Furniture and parts thereof	30	5	247	35
Clothing (including ready-made garments)	311	283	786	467
Professional, scientific and controlling instruments and apparatus	684	515	767	801
Miscellaneous manufactured articles	1304	2758	3960	3397
Total of Exports (including others)	259986	258455	237569	289473

Source: DGCI&S, Calcutta.

TABLE 12

India's Imports from Thailand by Principal Commodities 1976-77 to 1979-80

(Value in Rs. '000)

Principal Commodities	1976-77	1977-78	1978-79	1979-80
<u>Section 1: Food and live animals</u> <u>Chiefly for food</u>	54	120	83882	143036
Vegetables, fresh, chilled or frozen or simple preserved etc., moong.	-	-	61788	60803
Urad	-	-	-	-
<u>Section 2: Crude material in edible</u> <u>except fuels</u>	<u>46386</u>	<u>61621</u>	<u>35574</u>	<u>38297</u>
Textile fibres (other than wool-tops) and their wastes not manufactured into yarn or fabrics	26684	20080	6596	3249
Natural rubber latex natural rubber and similar natural gums	-	-	-	9687
Tungsten (or wolfram) ores and concentrates	-	39402	21799	18475
<u>Section 5: Chemical and related products</u> <u>n.e.s.</u>	<u>620</u>	<u>1111</u>	<u>2665</u>	<u>833</u>
Polymerization and copolymerization products	-	771	1083	510
<u>Section 6: Manufactured goods classified</u> <u>chiefly by materials</u>	-	-	<u>1542</u>	<u>10554</u>
Rubber tyres, tyre interchangeable turn trade etc.	-	-	-	921
Paper and paper board	114	120	792	1
Pearls precious and semi-precious stones	-	-	-	1031
<u>Section 7: Machinery and transport</u> <u>equipment</u>	-	-	<u>456</u>	<u>1946</u>
General industrial machinery and equipment n.e.s. and machine parts	-	-	<u>115</u>	<u>1735</u>
<u>Section 8: Misc. Manufactured articles</u>	-	-	826	555
Works or art collectors pieces and antiques	-	-	8	-
Zip fasteners	-	-	635	-
Misc. manufactured articles, n.e.s.	-	-	-	473
Total of Imports (including others)	48549	65490	124870	195235

Source: DGCI&S, Calcutta .

TABLE 13

Export Structure of ASEAN Countries, 1977

(Value '000 US \$)

<u>SITC Group</u>	<u>Commodities</u>	<u>1977</u>
	1. <u>Indonesia</u>	
	All commodities	10852625
331	Crude petroleum etc.	6826473
242	Wood rough	900973
071	Coffee	599279
231	Rubber crude, synthetic	589498
332	Petroleum products	471372
687	Tin	206414
422	Fixed vegetable oil, nonsoft	192944
031	Fish fresh, simply preserved	152493
283	Nonferrous base metal ore	142908
074	Tea and mate	118481
075	Spices	83123
341	Gas, natural and manufactured	80260
081	Animal feeding stuff	71753
121	Tobacco unmanufactured	54930
243	Wood shaped	50997
	Remainder	311427
	2. <u>Malaysia</u>	
	All commodities	6079319
231	Rubber crude, synthetic	1372908
331	Crude petroleum etc.	812273
422	Fixed vegetable oil, nonsoft	756469
687	Tin	692776
242	Wood rough	617499
243	Wood shaped	344648
722	Elect. power machine, switchgear	175226
631	Veneers, flywood etc.	110410
729	Electrical machinery	104753
861	Instruments, apparatus	82509
031	Fish fresh, simply preserved	76820
841	Clothing not of fur	64710
075	Spices	60448
332	Petroleum products	55808
072	Cocoa	53578
	Remainder	697484

TABLE 13 (Contd.)

(Value '000 US \$)

<u>SITC Group</u>	<u>Commodities</u>	<u>1977</u>
	3. <u>Philippines</u>	
	All commodities	3065360
061	Sugar and honey	532179
422	Fixed vegetable oil non-soft	412254
283	Non fer. base metal ore	312401
931	Special transaction	267452
221	Oilseeds, nuts, kernels	202867
051	Fruit fresh nuts fresh dry	171774
242	Wood rough	133731
841	Clothing not of fur	113704
685	Nickel	77096
053	Fruit preserved prepared	72582
243	Wood shaped	66992
631	Veneer, plywood etc.	63110
081	Animal feeding stuff	59396
281	Iron ore, concentrates	57362
899	Other manufactured goods	48848
	Remainder	473612
	4. <u>Singapore</u>	
	All commodities	8241570
332	Petroleum products	2443734
231	Rubber crude, synthetic	925330
729	Electrical, machinery	708141
724	Telecommunication equipment	329798
735	Ships and boats	218284
841	Clothing not of fur	210879
719	Machines non-electric	177279
422	Fixed vegetable oil non-soft	152341
243	Wood shaped	130983
732	Road motor vehicles	113358
631	Veneers, fly wood etc.	109952
718	Machines for special industries	109231
071	Coffee	109177
931	Special transactions	107668
075	Spices	99729
	Remainder	2295686

Contd.

TABLE 13 (Contd.)

(Value '000 US \$)

<u>SITC Group</u>	<u>Commodities</u>	<u>1977</u>
	<u>5. Thailand</u>	
	All commodities	3450886
042	Rice	656027
054	Vegetables etc. fresh simply	409645
061	preserved sugar and honey	401725
231	Rubber crude, synthetic	302572
687	Tin	241117
044	Maize unmilled	161103
031	Fish fresh, simply preserved	123761
841	Clothing not of fur	92200
431	Special transactions	72716
653	Woven textiles non-cotton	60127
722	Electric power machinery, switchgear	57847
667	Peark, precious, semiprecious stone	52002
283	Nonfer. base metal ore, concentrate	49356
053	Fruit preserved, prepared	48604
652	Cotton fabrics, woven	48037
	Remainder	674045

Source: UNCTAD

India's Terms of Trade with ASEAN Countries, 1970-71=100 and World 1968-69=100

Index	Indonesia		Malaysia		Philippines		Singapore		Thailand		World	
	1975-76	1979-80	1975-76	1979-80	1975-76	1979-80	1975-76	1979-80	1975-76	1979-80	1975-76	1979-80
1. Export Price Index (Px)	235	497	194	180	133	144	166	225	227	293	197	236
2. Import Price Index (Pm)	205	156	206	431	185	243	169	177	129	180	280	360
3. Export Value Index (Vx)	1427	1475	289	437	808	801	292	447	227	508	297	475
4. Import value Index (Vm)	1407	4233	374	5217	443	221	990	12847	202	206	276	466
5. Export Volume Index (Qx) = Vx/Px	607	297	149	243	606	556	176	199	122	174	147	199
6. Import Volume Index (Qm) = Vm/Pm	686	2714	168	1210	276	92	582	7258	156	114	111	135
7. Net Barter Terms of Trade = Px/Pm	115	319	94	42	72	59	98	127*	175	163	70	66
8. Gross Barter Terms of Trade = Qm/Qx	113	914	113	498	46	17	331	3647	128	66	76	68
9. Income Terms of Trade = $PxQx/Pm$	696	8646.5	140	101	438	330	173	252	486	826	103	130

* Subject to certain adjustments made by us for the trade basket for 1970-71.

Source: Computed from the DGCIS (Calcutta, India), Monthly Statistics of Foreign Trade of India, Vol.I and Vol.II, March issues of relevant years.

TABLE 15

Intensity of India's Export Trade with ASEAN Countries, 1965-80

Year	Indonesia	Malaysia	Philippines	Singapore	Thailand
1965	0.385	-	0.015	-	3.493
1966	-	1.276	-	5.222	-
1970	0.036	0.524	0.169	0.135	0.732
1971	0.031	0.618	0.065	0.248	2.157
1972	0.032	0.680	0.045	0.296	1.125
1973	0.025	1.697	0.043	0.281	0.165
1974	0.041	0.826	0.039	0.288	0.187
1975	0.108	0.573	0.231	0.285	1.161
1976	0.062	0.903	0.070	0.376	0.297
1977	0.356	5.245	0.195	0.729	0.398
1978	0.325	5.237	0.000	2.228	0.529
1979	0.172	2.511	0.148	2.356	0.639
1980	0.157	3.671	0.191	3.450	0.637

Estimates are based on IMF Data on Direction of Trade.

TABLE 16

Time Trend Equations of India's Import Intensities with ASEAN
Countries: 1970-80

1. India with Indonesia

$$\begin{aligned} \text{Log } m_i &= -4.0 + 0.244 T \\ &\quad (4.452)** \\ R^2 &= 0.688, \quad F = 19.82 \end{aligned}$$

2. India with Malaysia

$$\begin{aligned} \text{Log } m_i &= -0.962 + 0.216 T \\ &\quad (3.892)** \\ R^2 &= 0.627 \quad F = 15.15 \end{aligned}$$

3. India with the Philippines

$$\begin{aligned} m_i &= 0.074 + 0.006T \\ &\quad (0.76) \\ R^2 &= 0.604 \quad F = 0.58 \end{aligned}$$

4. India with Singapore

$$\begin{aligned} \text{Log } m_i &= -2.446 + 0.305 T \\ &\quad (7.166)** \\ R^2 &= 0.85 \quad F = 51.34 \end{aligned}$$

5. India with Thailand

$$\begin{aligned} m_i &= 1.226 - 0.074 T \\ &\quad (1.26) \\ R^2 &= 0.150 \quad F = 1.6 \end{aligned}$$

Notes: We have reported here the better of the linear or semi-log trend as per R^2 - criterion. T denotes Time variable (For data on m_i see Table 14)

- * t - ratios significant at 5 per^{cent}/level
- ** t - ratios significant at 1 per cent level
- *** t - ratios significant at 10 per cent level

TABLE 17

Intensity of India's Export Trade with ASEAN Countries:1965-1980

Year	Indonesia	Malaysia	Philippines	Singapore	Thailand
1965	0.402	-	0.113	-	0.522
1966	-	3.775	-	1.367	-
1970	0.864	2.264	0.219	1.263	0.890
1971	0.604	2.173	0.200	1.420	0.800
1972	0.702	1.240	0.245	1.036	1.072
1973	1.160	1.443	0.241	1.505	0.796
1974	2.364	1.846	0.352	1.255	1.028
1975	2.186	1.848	0.554	1.214	0.818
1976	2.522	1.726	0.929	1.255	1.489
1977	1.685	1.436	0.845	1.265	1.155
1978	2.698	1.770	0.345	1.125	1.093
1979	2.940	1.883	0.340	0.966	0.861
1980	2.366	1.974	0.287	0.935	0.603

Source: IMF, Direction of Trade Year Book.

TABLE 18

Time Trend Equations of India's Export Intensities with ASEAN

Countries 1970-80

1. India with Indonesia

$$X_i = 0.514 + 0.218 T$$

(4.77)**

$$R^2 = 0.717 \quad F = 22.75$$

2. India with Malaysia

$$\text{Log } X_i = 0.657 - 0.06 \log T$$

(0.75)

$$R^2 = 0.595 \quad F = 0.57$$

3. India with Phillipines

$$\text{Log } X_i = -1.645 + 0.393 T$$

(2.000)***

$$R^2 = 0.309 \quad F = 4.02$$

4. India with Singapore

$$X_i = 1.40 - 0.032 T$$

(2.358)*

$$R^2 = 0.38 \quad F = 5.56$$

5. India with Thailand

No trend depicted

Notes: We have reported here only the better of the linear or semi-log trend as per R^2 - criterion. T denotes Time Variable. (For data on X_i , see Table 15).

* t-ratios significant at 5 per cent level
 ** t-ratios significant at 1 per cent level
 *** t-ratios significant at 10 per cent level.

Import Intensity of India's Trade with ASEAN Countries by One-Digit SITC Level: 1970 and 1977

Section Description	Indonesia		Malaysia		Philippines		Singapore		Thailand	
	1970	1977	1970	1977	1970	1977	1970	1977	1970	1977
0 Food and live animals	0.052	0.053	0.046	0.937	0.000	0.000	0.003	0.607	0.568	0.002
1 Beverages & Tobacco	0.000	0.000	0.000	0.000	0.000	0.000	0.000	24.688	0.000	0.000
2. Crude Materials excluding Fuels	0.029	0.019	0.200	0.068	0.025	0.061	0.130	0.333	0.580	1.678
3. Mineral Fuels etc.	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000
4. Animal, Vegetable oil, Fat	0.000	0.356	0.002	1.929	0.000	0.000	0.000	0.558	0.000	0.000
5. Chemicals	1.691	15.240	0.176	0.335	0.000	0.039	0.038	0.484	0.008	0.846
6. Basic Manufactures	0.000	0.000	0.376	4.398	0.000	0.104	0.293	0.310	0.335	0.064
7. Machines, Transport equipments	0.000	0.000	1.497	0.383	0.000	0.181	0.636	0.162	0.000	0.025
8. Misc. Manufactured goods	0.000	0.000	0.454	0.000	0.057	0.000	0.075	0.117	0.000	0.004
9. Goods not classified by kind	0.000	0.000	0.524	0.081	5.046	0.008	0.032	0.050	0.010	0.030

Source: Computed from the United Nations Data.

TABLE 20

Export Intensity of India's Trade with ASEAN Countries by One Digit SITC Level
1970 and 1977

Sec- tion	Description	Indonesia		Malaysia		Philippines		Singapore		Thailand	
		1970	1977	1970	1977	1970	1977	1970	1977	1970	1977
0	Food & Live animals	0.570	1.614	2.029	0.599	0.002	0.103	0.873	1.238	0.095	2.905
1	Beverages & Tobacco	7.502	0.367	0.674	0.121	0.063	0.000	2.225	0.136	0.000	0.000
2	Crude Materials excluding Fuels	0.000	0.335	0.109	0.365	0.184	1.111	0.540	1.014	0.627	0.893
3	Mineral Fuel etc.	0.000	0.000	0.093	0.000	0.000	0.000	7.280	0.000	0.000	0.000
4.	Animal Vegetable oil Fat	0.000	0.000	0.278	2.747	0.180	0.000	0.038	0.010	0.148	0.000
5	Chemicals	3.500	8.439	2.430	1.667	0.932	0.532	3.438	2.688	1.796	2.011
6	Basic manufactures	0.451	0.706	1.649	1.041	0.208	1.781	1.099	1.563	1.024	1.267
7	Machines Transport equipments	3.844	0.038	4.979	0.403	1.056	0.063	0.805	0.102	12.731	0.152
8	Misc. Manufactured goods	0.177	0.064	1.693	0.820	0.328	0.181	1.782	0.844	2.174	0.677
9	Goods not classified by kind	0.000	0.194	0.011	0.413	0.037	0.000	0.343	0.390	0.092	0.050

Source: Computed from the United Nations Data.

TABLE 21

Import Intensity of India's Trade with ASEAN Countries by Three Digit SITC Level:
1970 and 1977

SITC Sec- tion	Description	Indonesia		Malaysia		Philippines		Singapore		Thailand	
		1970	1977	1970	1977	1970	1977	1970	1977	1970	1977
074	Tea and Mate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
231	Rubber Crude Natural Synthetic	0.00	0.00	0.68	0.03	0.00	0.00	0.00	0.13	0.00	0.00
263	Cotton	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
264	Jute	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
331	Crude Petroleum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.00	0.00
332	Petroleum Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
421	Fixed vegetable oil, soft	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
422	Fixed vegetable oil, non-soft	0.00	0.00	0.03	1.96	0.00	0.00	0.00	0.00	0.00	0.00
621	Materials of Rubber	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00
629	Rubber Articles Nes	0.00	0.00	0.00	5.22	0.00	0.00	0.00	0.00	0.00	0.00
631	Veneers, Plywood etc.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.02
632	Wood Manufactures, Nes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.40	0.00	0.00
641	Paper & Paper board	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
652	Cotton Fabrics, Woven	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.51	6.74
677	Iron Steel Wire Exclu- ding Wiring Rod	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
678	Iron Steel Tubes, Pipes, etc.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
691	Structures & Parts Nes	0.00	0.00	0.00	8.43	0.00	0.00	0.00	0.00	0.40	0.00
695	Tools	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
732	Road Motor Vehicles	0.00	0.00	0.46	14.13	0.00	0.00	0.00	0.00	2.28	0.00
									0.16	1.64	0.00

Source: Computed from UN Data.

TABLE 22

Export Intensity of India's Trade with ASEAN Countries by Three Digit SITC LEVEL: 1970 and 1977

SITC Sec- tion	Description	Indonesia		Malaysia		Philippines		Singapore		Thailand	
		1970	1977	1970	1977	1970	1977	1970	1977	1970	1977
		074	Tea & Mate	1.66	0.74	0.02	0.00	0.00	0.00	0.025	0.01
231	Rubber Crude Natural Synthetic	0.00	0.00	33.07	0.07	0.00	0.00	0.00	0.00	0.00	0.00
263	Cotton	0.00	0.00	0.02	0.11	0.00	0.00	0.00	0.00	0.00	0.00
264	Jute	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
331	Crude Petroleum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
332	Petroleum Products	0.00	0.00	0.05	0.00	0.00	0.00	0.00	3.41	0.00	0.00
421	Fixed Vegetable oil, soft	0.00	0.00	1.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
422	Fixed vegetable oil, non-soft	0.00	0.00	0.11	2.20	0.06	0.00	0.00	0.01	0.00	0.00
621	Materials of Rubber	0.00	0.00	24.69	0.44	1.26	0.00	0.00	2.10	0.56	0.02
629	Rubber Articles Nes.	0.56	0.72	1.60	1.31	0.86	0.20	0.33	0.02	1.88	1.48
631	Veneers, Plywood etc.	0.00	3.17	1.01	7.10	0.00	0.00	2.09	0.61	0.15	55.51
632	Wood Manufactures Nes.	2.99	0.00	10.84	0.45	66.97	0.00	1.54	0.29	6.45	2.83
641	Paper & paper board	3.66	0.00	5.59	7.00	0.03	2.45	4.88	7.84	2.76	0.00
652	Cotton Fabrics, Woven	0.02	0.00	2.43	2.38	0.02	0.00	0.83	1.07	1.16	4.17
677	Iron Steel Wire EX- cluding Wiring Rod	0.00	0.00	1.05	0.75	0.00	2.97	0.00	0.00	0.00	0.19
678	Iron Steel Tubes, Pipes etc.	4.58	0.30	6.63	0.90	0.17	0.00	2.38	17.42	0.00	1.42
691	Structures & Parts Nes.	0.00	0.59	1.65	5.39	3.01	22.44	0.68	1.29	1.21	2.92
695	Tools	3.98	0.63	11.02	1.19	2.61	0.79	1.77	1.55	3.92	19.42
732	Road Motor vehicles	3.80	15.83	1.22	10.16	1.41	1.77	5.63	10.07	3.11	2.84
										0.66	0.34

Source: Computed From UN Data.

TABLE 23

Grubel-Llyod Index of India's Intra-Industry Trade with ASEAN Countries for Selected Commodities
(6-Digit Level): 1970 and 1980

Sl. No.	Description	Indonesia		Malaysia		Philippines		Singapore		Thailand	
		1970	1980	1970	1980	1970	1980	1970	1980	1970	1980
1.	Tea and mate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2.	Rubber crude, synthetic and natural	0.00	0.00	5.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3.	Cotton	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4.	Jute	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5.	Crude petroleum etc.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6.	Petroleum products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7.	Fixed vegetable oils, soft	0.00	0.00	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8.	Fixed vegetable oils, non-soft	0.00	0.00	0.00	42.88	0.00	0.00	0.00	2.52	0.00	0.00
9.	Materials of rubber	0.97	0.00	0.00	0.00	0.00	0.00	0.00	1.09	0.00	0.00
10.	Rubber articles, Nes.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11.	Veneers, plywood etc.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12.	Wood Manufactures, Nes.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.50	0.00	0.00
13.	Paper and paper board	0.00	1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	93.88
14.	Cotton fabrics, woven	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.	Iron steel wire excluding wiring rod	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16.	Iron steel tubes, pipes etc.	0.00	0.00	0.00	28.35	0.00	0.00	0.00	0.02	0.00	0.00
17.	Structures and parts Nes.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18.	Tools	0.00	0.00	0.00	0.005	0.00	0.00	0.00	0.00	0.00	0.00
19.	Road motor vehicles	0.00	0.00	7.63	0.00	0.00	0.00	0.00	1.79	0.00	0.00

Source: Computed from the DGI&S (Monthly Statistics of the Foreign Trade of India) Data. (Various Issues).

TABLE 24

Computed Values of Index θ for India's Export Trade with
ASEAN as a Group: 1965-80

Year	θ
1965	0.885
1966	0.428
1967	0.840
1968	0.946
1969	0.971
1970	0.598
1971	0.638
1972	0.874
1973	0.760
1974	0.576
1975	0.840
1976	0.588
1977	0.779
1978	0.633
1979	0.748
1980	0.638

Source: Based on data from the International Monetary Fund,
Direction of Trade Statistics Yearbook (various issues).

Note: The estimated trend equation to above θ values with
respect to time (T) is as follows:

$$\begin{aligned} \text{Log } \theta &= -0.272 - 0.007 T \\ &\quad (0.6) \\ R^2 &= 0.23 \end{aligned}$$

TABLE 25

Industrywise Distribution of Indian Joint Ventures in ASEAN Region

(As on December 31, 1981)

Industry/Activity	Indo- nesia	Malay- sia	Phili- ppines	Singa- pore	Thai- land	ASEAN	World
<u>In Operation:</u>							
1. Engineering & Electrical	3	14	1	6	2	25	40
2. Chemicals including dye-stuffs		1			1	2	7
3. Textiles including man-made synthetics	6	2	1		2	11	15
4. Paper	1					1	2
5. Oil refining, kernel processing/fracturation, etc.	1	6		1		8	9
6. Glass		2				2	3
7. Plastics		1				1	
8. Pharmaceuticals	1	1				2	4
9. Stationery		1				1	1
10. Food products and Soft drinks				1		1	1
11. Hotels, Restaurants and Confectionaries							12
12. Services*		2		4		6	26
13. Others							5
14. <u>Total of above</u>	<u>12</u>	<u>30</u>	<u>2</u>	<u>12</u>	<u>5</u>	<u>61</u>	<u>125</u>
15. Under Implemen- tation	4	4	1	11	5	25	97
16. <u>Grand Total</u>	<u>16</u>	<u>34</u>	<u>3</u>	<u>23</u>	<u>10</u>	<u>86</u>	<u>222</u>

* Services include: Construction, Consultancy, Leasing, Trading/
Marketing/Shipping, Banking, etc.

Source: India Investment Centre (New Delhi).

Indian Industrial Joint Ventures in Production in ASEAN Region (As on December 31, 1981).

Sr. No.	Country of location/ Indian promoter	Name of the Industry	Indian equity (Rs. LCU)	Mode of equity participation (Rs. 000)	Earnings repatriated (Rs. 000)
<u>I. Indonesia</u>					
1.	The Century Spg.&Mfg. Co.Ltd.	Textile yarn	3850	Machinery	942
2.	Bharat Commerce & Ind. Ltd.	Textile yarn	6911	Machinery	1574
3.	Shahibag Entrepreneurs P. Ltd.	Polyester blended yarn	14142	Machinery	11589
4.	Raymond Woolen Mills Ltd.	Engineer's steel files	1063	Machinery	382
5.	ASC Engineers & Allied Ind. Ltd.	Wire rods, tor steel round bars etc.	9320	Machinery	381
6.	Ballarpur Industries Ltd.	Coated art paper	11000	Machinery	3118
7.	Kusum Products Ltd.	Solvent, extraction, margarine etc.	7710	Machinery	2021
8.	Sarabhai M. Chemicals	Pharmaceuticals	4727	Machinery	4855
9.	Godrej & Boyce Mfg. Co.P.Ltd.	Steel furniture etc.	4840	Cash remittance	2855
10.	Amar Dye-chem Ltd.	Dye stuffs	1504	Machinery	3934
11.	Gokak Patel Volkart Ltd.	Textile Mill	15632	Cash remittance	793
12.	Bombay Dyeing & Mfg. Co.Ltd.	Textile Mill	14794	Machinery	1144
<u>II. Malaysia</u>					
1.	Godrej & Boyce Mfg.Co. P. Ltd.	Steel furniture	2889	Machinery	740
2.	Gupta Machine Tools Ltd.	Precision tools	740	Machinery	201
3.	Ajit Wire Industries P. Ltd.	Enamelled Copper wire and aluminium wire	590	Bonus shares	500
4.	Kirloskar Electric Co. Ltd.	Electric motors, pumps & diesel engines	3590	Machinery	240
5.	Muruajappa and Sons	Cycle & Indl. chains	98	Machinery	747
6.	Birla Cotton Spg.Wvg.Mills Ltd.	Synthetic blended fabric	8330	Cash remittance	116
7.	L.G. Balakrishna & Bros. Ltd.	Chains for bicycle etc.	440	Machinery	2850
				Preliminary exp. Machinery	740
				Machinery	7654
				Preliminary exp. Machinery	676
					1012
					16

TABLE 2B (Contd.)

Sr. No.	Country of location/Name of the Indian promoter	Name of the Industry	Indian equity (Rs. 000)	Mode of equity participation (Rs.000)	Earnings repatriated
Malaysia (contd.)					
8.	Berar Oil Industries	Fractionation of palmoil	3880	Machinery 1762 Know-how 250 Bonus shares 1868 Machinery 5024 Cash remittance 212 Preliminary exp. 404	2436
9.	J.G. Glass Inds. Ltd.	Glass containers	5640	Machinery	-
10.	Chemicals Construction	Fractionation of palm oil	1266	Machinery	-
11.	Tata Oil Mills Co. Ltd.	Naturalised oil, palm olein etc.	48136	Machinery 5436 Bonus shares 42700	15258
12.	Bombay Auto Ancillary & Inv.P.Ltd.	Tube valves	735	Machinery 613 Cash remittance 122	631
13.	Hindustan Safety Glass works	Automobile glass	372	Machinery	603
14.	Camlin P. Ltd.	Stationery Products	2315	Machinery 2230 Preliminary exp. 85	-
15.	India Pistons Ltd.	Pistons & Cylinder liners	1899	Machinery	558
16.	Excel Process P. Ltd.	Andodised aluminium prod.	410	Machinery	-
17.	Electric Enterprises P. Ltd.	Automobile & elect. parts	109	Machinery	41
18.	A. Gaikwad Pvt. Ltd.	Metal flexible tubes	385	Machinery 260 Know-how 125	99
19.	N. Textile Associates Pvt. Ltd.	Cotton yarn & blended	2332	Machinery	938
20.	Sarabhai M. Chemicals	Pharmaceutical products	2870	Machinery 2700 Cash remittance 170	-
21.	TELCO Ltd.	Assembly of commercial vehicles	5435	Machinery	-
22.	Polyolefins Ind. Ltd.	H.D. Polyethylene pipes & fittings	583	Machinery	1113
23.	Universal Radiators Ltd.	Radiators, heat exchangers	1689	Machinery	35

Sr. No.	Country of location/ Name of the Indian promoter	Name of the Industry	Indian equity (Rs. 000)	Name of equity participation (Rs. 000)	Earning repatriated (Rs. 000)
<u>Malaysia contd.</u>					
24.	Liberty Chemical Works Overseas P. Ltd.	Photographic and fine chemicals	420	Machinery	-
25.	Century Spg. & Mfg. Co. Ltd.	Palm oil refining	3863	Machinery 3659 Cash remittance 204	1326
26.	Gajra Gears P. Ltd.	Automobile gears	11396	Machinery 3206 Know-how 1894 Cash remittance 6296	167
27.	Birla Eastern Ltd.	Palm oil processing	4123	Machinery 3891 Cash remittance 232	658
28.	Godrej Soaps Ltd.	Palm oil refining	5040	Machinery 3930 Cash remittance 1110	
<u>III. Philippines</u>					
1.	Kirloskar Oil Engines Ltd.	Diesel engines	1200	Machinery	-
2.	Eastern Spg. Mills Ltd.	Yarn	3298	Machinery 2640 Bonus shares 658	192
<u>IV. Singapore</u>					
1.	Teksons Ltd.	Auto ancillaries	2075	Machinery 1170	-
2.	TELCO Ltd.	High precision toolings	6388	Cash remittance 905 Machinery 709 Know-how 866 Cash remittance 4813	-
3.	Southern Indl. Corpn. Ltd.	Enamelled wires	650	Machinery	736
4.	Parle (Exports) P. Ltd.	Concentrates for soft drinks	153	Know-how	-
5.	Chemical Corpn. Co. F. Ltd.	Palm kernel processing	712	Machinery	-
6.	Godrej and Boyce Mfg. Co. P. Ltd.	Steel furniture	939	Gifted by the joint venture in Malaysia	98
7.	Hindustan Computers Ltd.	Micro & mini computers	1400	Machinery 600 Know-how 400 Cash remittance 400	-

TABLE 26 (Contd.)

Sr. No.	Country of location/Name of the Indian promoter	Name of the industry	Indian equity (Rs.000)	Name of equity participation (Rs. 000)	Earning repatriated (Rs.000)
8.	Larsen & Toubro Ltd.	Bottle closures	11200	Machinery 10000 Cash remittance 1200	-
V. Thailand					
1.	Birla Brothers P. Ltd.	Synthetic & cotton yarn	750	Machinery	2042
2.	The Gwalior Rayon Silk Mfg.	Viscose staple fibre	4792	Machinery	9052
3.	Sacha Exporters & Invs. P.Ltd.	Steel rolling mill	3060	Machinery	-
4.	Hada Steel Products Ltd.	Hacksaw blades	1069	Machinery	193
5.	Gwalior Rayon Silk Mfg. Co. Ltd.	Carbon black	5706	Machinery	2636
Grand Total			397595	397595**	118577 (000)

Note:

a. Earnings repatriated includes dividends, technical know-how fees, engineering services fees; management fees; etc. repatriated into India.

b. Indian equity represents the paid-up portion of the Indian share capital in the joint venture. As the equity share capital of the joint venture set up abroad has to be in terms of the local currency the Rupee equivalents given in the statement are approximations.

** Machinery Rs.262626 ('000) cash Rs. 27972 ('000) know-how Rs.23655 ('000) and others Rs. 83342('000).

Source: Economic Times, July 19, 1982, pp.7.

TABLE 27

Number of Foreign Tourists to India from World and ASEAN Region
1971 and 1974 to 1979

Origin	1971	1974	1975	1976	1977	1978	1979
1. World	3,00,995	4,23,161	4,65,275	5,33,951	6,40,422	7,47,995	7,64,781
2. Indonesia	1,228 (0.4)	1,397 (0.3)	1,804 (0.4)	1,796 (0.3)	1,676 (0.3)	1,849 (0.2)	1,878 (0.2)
3. Malaysia	17,752 (5.9)	18,413 (4.4)	17,966 (3.9)	18,774 (3.5)	23,333 (3.6)	21,982 (2.9)	23,877 (3.1)
4. Philippines	1,050 (0.3)	1,522 (0.4)	2,020 (0.4)	1,798 (0.3)	2,057 (0.3)	2,692 (0.4)	2,698 (0.4)
5. Singapore	7,623 (2.5)	9,055 (2.1)	9,053 (1.9)	10,446 (2.0)	11,746 (1.8)	12,521 (1.7)	14,222 (1.9)
6. Thailand	3,477 (1.2)	4,108 (1.0)	4,239 (0.9)	6,097 (1.1)	6,995 (1.1)	7,071 (0.9)	8,106 (1.1)
7. ASEAN (2 to 6)	31,130 (10.3)	34,495 (8.2)	35,082 (7.5)	38,911 (7.3)	45,807 (7.2)	46,115 (6.2)	50,781 (6.6)
8. Nepal	2,419 (0.8)	3,333 (0.8)	3,784 (0.8)	3,874 (0.7)	4,868 (0.8)	6,038 (0.8)	6,744 (1.1)
9. Sri Lanka	16,577 (5.5)	28,176 (6.7)	31,584 (6.8)	30,963 (5.8)	32,843 (5.1)	66,370 (8.9)	61,263 (8.0)

Note: Figures within brackets indicate percentages to total

Source: Reproduced in Government of India, Ministry of Tourism and Civil Aviation, Statistical Abstract, India, 1979, Table 117.