CHAPTER V

COMPARATIVE ADVANTAGE AND PATTERN OF TRADE: SOUTH ASIA

5.1 INTRODUCTION

The empirical verification of South Asian countries’ pattern of trade (Chapter IV) revealed that as per the factor endowment proposition of comparative advantage (in static as well as in dynamic sense), South Asian countries have comparative advantage in agricultural products and labour intensive products. An attempt is made in this chapter to examine the extent to which South Asian countries’ composition of trade conforms to this structure of comparative advantage i.e. to examine the proposition as to whether the agricultural exports are in conformity with present and potential comparative advantage of South Asian countries. The analysis proceeds as follows:

First: Revealed Comparative Advantage (RCA), an index of comparative advantage is worked out for South Asian countries, NIC-4 and ASEAN-4 for measuring comparative advantage in these countries.

Second: Comparison between ideal comparative advantage (based on resource endowment structure) and the RCA (based on observed pattern of trade) is made to see the concordance between the two. The concordance between ideal comparative advantage and RCA is necessary if we want to use RCA index as an index of comparative advantage for intercountry and intersectoral comparisons.

Third: Composition of exports are worked out for South Asia, NIC-4 and ASEAN-4
Fourth: Intercountry and intersectoral comparisons of composition of exports vis-a-vis comparative advantage are made to observe whether the composition of trade has been as per comparative advantage.

Before we proceed to empirical analysis, the concept of RCA and commodity composition of exports is given in the following paragraphs.

5.2 BASIC CONCEPTS

5.2.1 Revealed Comparative Advantage - A Measure of Comparative Advantage

Empirical verification of South Asian countries’ pattern of trade as per resource endowment structure revealed that ideal comparative advantage for these countries lies in agricultural products and labour intensive manufactures. The rigorous analysis of ideal comparative advantage, however, requires cost comparisons across countries. The data required for such analysis are rarely available as the concept of comparative advantage is usually defined in terms of autarkik price relationships and all empirical economic data are based on events in the world of trade. As a consequence, "true" indices based on pretrade prices cannot be obtained and all "measures" of comparative advantage have to be considered as approximations of the underlying "true" relationships.

Three alternative approaches have been suggested for estimating comparative advantage:\(^1\)

1. Input-output technique
2. Factor Intensity measured by elasticities of substitution; and
3. Export performance index.

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\(^1\) Panchmukhi (1978) : Trade Policy of India.
With regard to first and second approach, a number of criticisms have been offered. The most common among all is that these have over emphasized cost elements ignoring thereby the consideration of non-price factors in the determination of comparative cost advantage. As pointed out by Balassa, "cost considerations will not be sufficient... and a complete explanation of comparative advantage would have to take account of the effects of non-price factors"....... "The export performance index is an indicator which reflects all types of costs and non-price factors like goodwill, quality, service facilities etc. and is based on empirical data pertaining to trade flows".2 "Since this pattern in comparative advantage is revealed by the observed pattern of trade flows, it is called revealed comparative advantage".3 Our study will consider this ratio for assessing comparative advantage.

So far, two types of trade indices have been developed by economists.

5.2.1.1 Trade-cum-Production Index: RACGO and BOWEN Indices

Trade-cum-production indices comprise the four obvious and directly observable quantitative relations used i.e. ratios of:

(a) Exports to Production (X/P)
(b) Imports to Consumption (M/C)
(c) Net Trade to production (X-M/P)
(d) Production to Consumption (P/C)

A major problem with trade-cum-production indices is that for many products and countries production data are not available. Even when they are available they

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2 Balassa, Bela (1965) : Trade Liberalization and Revealed Comparative Advantage.
often can not be concorded with data on imports and exports. The alternative left is to use trade only indices.

5.2.1.2 Trade only Indices

Trade only indices are solely based on trade data and comprise:

(a) RNX and Donges and Riedel Index - The ratio of net exports to the sum of exports and imports (T/XM).

(b) Bela Balassa Index - Ratio of an industry’s share in a given country’s exports of manufactures to the world exports of that industry as a share of world trade in manufactures.

In view of the impossibility of specifying which index is best, and also of the alternative interpretations that may be given to them, the question of consistency among the indices is of considerable relevance. Three types of consistency tests were employed by U.N.⁴ to accord with the three different ways of interpreting the revealed comparative advantage indices. These were: simple correlations or cardinal measures, Rank correlations or ordinal measures and counts of consistent versus inconsistent indications of comparative advantage (or comparative disadvantage) by dichotomous measures.

The results of the tests indicated the following:

The trade-cum-production indices proved to be acceptably consistent in the cardinal as well as in the ordinal sense. Moreover, they were perfectly consistent as dichotomous indicators of comparative advantage. The trade only indices were not very consistent as cardinal measures. However, a higher degree of consistency was

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achieved when used as ordinal interpretations and very high when they were used as
dichotomous interpretations.

Thus far, at least three different ways of interpreting an index of comparative
advantage have been mentioned. The first one is the "dichotomous" interpretation
whose objective is to determine whether comparative advantage (vis-a-vis the "rest
of world") prevails for a given product and a given country. A second one is the
"ordinal" interpretation, which employs an index to rank countries by their degree of
comparative advantage in a particular product. The third and most stringent one is the
"cardinal" interpretation, which allows conclusions to be drawn concerning
differences in comparative advantage in terms of a notion of "size".

Any approach to an empirical assessment of patterns of comparative advantage
is largely determined by the purpose of the assessment and the suitability of the data
available. In the present case, our objective was to draw a comprehensive version of
the South Asian countries competitiveness for different product groups as compared
to NICs and ASEAN-4. The use of trade data as a basic source of information was
therefore almost predetermined. Such data are not only comparable for countries and
industries (or product groups) and time frames, they are also acceptably detailed with
respect to product categories. While the latter characteristic reduces the risk of
patterns of comparative advantage becoming obscured through aggregation, the
former allows for wide-ranging comparisons to be made in terms of countries and
time. These comparisons assume added importance when attempts are being made to
identify generally valid rules concerning the determination of comparative advantage
by country and industry characteristics. Thus it becomes pertinent to use trade only
indices for the intersectoral and intercountry comparisons of comparative advantage vis-a-vis composition of trade of South Asian countries as compared to NICs and ASEAN-4.

The most popular trade only index is Bela Balassa’s Export Performance Ratio. According to Balassa (1965) a country’s comparative advantage (CA) in the trade of a particular commodity can be measured by the share of that commodity in the country’s total exports relative to the commodity’s share in total world exports, i.e.

$$\text{RCA}_{ij} = \frac{X_{ij}}{X_j} / \frac{X_{iw}}{X_w}$$

where

- RCA$_{ij}$ denotes revealed comparative advantage (RCA) of country j for product i;
- $X_{ij}$ - the value of country j’s exports of commodity i
- $X_j$ - total commodity exports of country j
- $X_{iw}$ - value of world exports of commodity i
- $X_w$ - value of total world exports.

If ratio RCA$_{ij}$ is greater than unity, it is generally interpreted to mean that the country is at a comparative advantage in the export of the product in question. However, if the RCA index is less than unity it is taken to indicate that the country is at a comparative disadvantage in the export of that product.

5.2.2 The Commodity Composition of Exports

The commodity composition of exports has been structured under four groups namely Raw Materials (fuel and non fuel), Agricultural products, Labour Intensive

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5 Balasa, Bela (1965): Trade Liberalization and revealed comparative advantage.
manufactures and Capital intensive manufactures. The grouping used in the text is based on ten commodity aggregates by Leamer (1985). The ten commodity aggregates are petroleum (PETRO), Raw Materials (MAT), Forest Products (FOR), Tropical Agriculture (TROP), Animal Products (ANL), Cereals (CER), Labour Intensive Manufactures (LAB), Capital Intensive Manufactures (CAP), Machinery (MACH) and Chemical (CHEM). Leamer grouped the ten commodity aggregates into three groups. The first group comprised of the natural resource product: PETRO and MAT, which are expected to be related to the natural resources coal, minerals and oils. The next four aggregates: FOR, TROP, ANL and CER are grouped as crops and are expected to be positively related to the land variables. The last four aggregates: LAB, CAP, MACH and CHEM are grouped as manufactured commodities and are expected to be related positively to capital and labour. We have subgrouped Leamer’s third group i.e. manufactures into two i.e. (1) Labour Intensive Manufactures and (2) Capital Intensive Manufactures. Thus the four groups in our study are -


The ten commodity aggregates by Leamer (1984) are formed from 61 two digit SITC categories on the basis of two methods (1) an algorithm based on the correlation matrix alone. The aggregation analysis begins with the 61x61 matrix of cross country correlations of the net export data using trade data from as many as 60 countries. A high correlation in a given year between two commodity classes indicates that these commodities behave similarly in international trade in the sense that if a country has large positive net exports of one, then it also has large net exports of the other. When such a high correlation is found, these classes are combined into one, since the forces that determine trade in a component are likely to be the same as those that determine trade in the corresponding aggregate. (2) A set of cross section regressions of the export data on a list of resources, and commodities are aggregated that have similar regression co-efficients.

Machinery and chemicals are not only capital intensive but skill intensive too which requires still more capital in the form of human capital.
these aggregates, as per two digit SITC aggregations is described in Table 5.1.

Table 5.1
Composition of Trade Aggregates

<table>
<thead>
<tr>
<th>Group S.No.</th>
<th>SITC Division</th>
<th>Leamer's Aggregates</th>
<th>Aggregates in the present study</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>33</td>
<td>Petroleum (PETRO)</td>
<td>Raw Materials (Fuel+non-fuel)</td>
</tr>
<tr>
<td>II</td>
<td>27,28,32,34,35,68</td>
<td>Raw Material (MAT)</td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>24,25,63,64</td>
<td>FOREST Products (FOR)</td>
<td>Agricultural products</td>
</tr>
<tr>
<td>IV</td>
<td>05,06,07,11,23</td>
<td>Tropical Agriculture (TROP)</td>
<td></td>
</tr>
<tr>
<td>V</td>
<td>00,01,02,03,21,29,43,94</td>
<td>Animal Products (ANL)</td>
<td></td>
</tr>
<tr>
<td>VI</td>
<td>04,08,09,12,22,26,41,42</td>
<td>Cereals etc. (CER)</td>
<td></td>
</tr>
<tr>
<td>VII</td>
<td>66,82,83,84,85,89,91,93,96</td>
<td>Labour-Intensive Manufactures (LAB)</td>
<td>Labour Intensive Manufactures</td>
</tr>
<tr>
<td>IX</td>
<td>71,72,73,86,95</td>
<td>Machinery (MACH)</td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>51,52,53,54,55,56,57,58,59</td>
<td>Chemicals</td>
<td></td>
</tr>
</tbody>
</table>
5.3 **EMPIRICAL RESULTS**

5.3.1 Revealed Comparative Advantage (RCA)

The indices of RCA - Balassa’s export performance ratios - were computed for agricultural products, labour-intensive products, and capital intensive products for South Asia, NIC-4 and ASEAN-4 (Table 5.2).

**Table 5.2**

Revealed Comparative Advantage: South Asia, NICs and ASEAN-4

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture/Allied</td>
<td>1966</td>
<td>1.566</td>
<td>1.739</td>
<td>22.403</td>
<td>2.263</td>
<td>3.260</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1975</td>
<td>0.944</td>
<td>1.087</td>
<td>3.437</td>
<td>3.173</td>
<td>3.520</td>
<td>1.62</td>
<td>0.931</td>
<td>1.99</td>
<td>1.269</td>
<td>1.594</td>
<td>1.594</td>
<td>1.594</td>
<td>3.887</td>
</tr>
<tr>
<td>1980</td>
<td>0.694</td>
<td>1.145</td>
<td>2.824</td>
<td>2.684</td>
<td>3.494</td>
<td>1.313</td>
<td>0.097</td>
<td>1.99</td>
<td>1.269</td>
<td>2.304</td>
<td>2.304</td>
<td>2.304</td>
<td>3.916</td>
</tr>
<tr>
<td>1985</td>
<td>0.329</td>
<td>0.847</td>
<td>2.600</td>
<td>1.738</td>
<td>1.458</td>
<td>1.96</td>
<td>2.143</td>
<td>2.263</td>
<td>2.065</td>
<td>2.065</td>
<td>2.065</td>
<td>2.065</td>
<td>3.587</td>
</tr>
<tr>
<td>Labour Intensive</td>
<td>1970</td>
<td>5.697</td>
<td>1.071</td>
<td>0.384</td>
<td>0.097</td>
<td>0.990</td>
<td>1.476</td>
<td>0.26</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Products</td>
<td>1975</td>
<td>5.761</td>
<td>1.000</td>
<td>0.381</td>
<td>0.902</td>
<td>0.969</td>
<td>-</td>
<td>1.67</td>
<td>1.269</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1.308</td>
</tr>
<tr>
<td>1980</td>
<td>3.328</td>
<td>1.342</td>
<td>0.284</td>
<td>2.952</td>
<td>1.436</td>
<td>0.049</td>
<td>2.18</td>
<td>0.748</td>
<td>-</td>
<td>1.551</td>
<td>1.551</td>
<td>1.551</td>
<td>-</td>
</tr>
<tr>
<td>1985</td>
<td>2.858</td>
<td>1.357</td>
<td>0.326</td>
<td>5.724</td>
<td>1.715</td>
<td>0.220</td>
<td>-</td>
<td>1.430</td>
<td>1.964</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2.906</td>
</tr>
<tr>
<td>Capital Intensive</td>
<td>1970</td>
<td>0.471</td>
<td>0.720</td>
<td>0.117</td>
<td>0.043</td>
<td>0.057</td>
<td>0.018</td>
<td>0.91</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Products</td>
<td>1975</td>
<td>0.828</td>
<td>0.741</td>
<td>0.258</td>
<td>0.053</td>
<td>0.150</td>
<td>0.017</td>
<td>0.87</td>
<td>0.964</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1.431</td>
</tr>
<tr>
<td>1980</td>
<td>1.129</td>
<td>0.810</td>
<td>0.326</td>
<td>0.151</td>
<td>0.326</td>
<td>0.026</td>
<td>0.85</td>
<td>0.943</td>
<td>1.498</td>
<td>-</td>
<td>-</td>
<td>0.004</td>
<td>-</td>
</tr>
<tr>
<td>1985</td>
<td>1.223</td>
<td>0.850</td>
<td>0.428</td>
<td>0.236</td>
<td>0.541</td>
<td>0.58</td>
<td>-</td>
<td>0.951</td>
<td>0.937</td>
<td>1.498</td>
<td>1.964</td>
<td>1.964</td>
<td>0.0101</td>
</tr>
</tbody>
</table>


Note: Figures in brackets (column 9, 10, 11 and 12) show ranks of three broad product groups i.e. agricultural labour intensive and capital intensive products in India, Pakistan Bangladesh and Sri Lanka.
The RCA indices (Table 5.2) indicate that till the beginning of 1970s, South Asia, NIC-4 and ASEAN-4 all had comparative advantage in agricultural products. The RCA index for these products was above unity for all these countries. A fall in this index for agricultural products and an increase in this index for labour-intensive products was observed from mid-1970s for Korea and Singapore. Similarly from beginning of 1980s for Malaysia, the Philippines and Thailand this index was declining for agricultural products and increasing for labour intensive products. Further, there was slight increase in the index for capital intensive products for Korea since mid 1970s and it was above unity in 1980 and 1985. In the case of Singapore, Malaysia, the Philippines and Thailand though the RCA index was below unity it showed upward movement from beginning of 1980s. However, in the case of Korea increase in index of capital intensive products was accompanied by fall in index of labour intensive products as well as with primary products. In the case of ASEAN-4 the increase in index of capital intensive products was accompanied by fall in RCA index of primary products only. The index for labour intensive product showed upward movement till mid 1980s.

In the case of South Asian countries, the change in RCA index was insignificant. There was marginal increase, instead of decrease, in this index for agricultural products from 1.35 in 1970 to 1.96 in 1985 (India), 2.01 in 1970 to 2.26 in 1985 (Pakistan). For capital intensive products, there was marginal decrease from 0.91 in 1970 to 0.85 in 1985 (India) and 0.96 in 1970 to 0.95 in 1985 (Pakistan). However, there was some increase in this index for labour intensive products from 0.26 in 1970 to 2.18 in 1985 (India) and 1.26 in 1970 to 1.43 in 1985 (Pakistan). In
Sri Lanka, there was marginal decline in this index from 3.7 in 1970 to 3.58 in 1985 for agricultural products, and some increase in the index for labour intensive products from 1.30 in 1970 to 2.90 in 1985. The index for capital intensive products, in case of Sri Lanka, has however, been insignificant for throughout the period i.e. 1970 to 1985.

The changes in RCA index in Korea, Singapore and ASEAN-4 were consistent with the hypothesis that with economic development, comparative advantage shifts from agricultural products to labour intensive manufactures, to skill and capital intensive manufactures. The shift in comparative advantage in Korea, Singapore and ASEAN-4 was as per increases in relative endowment of capital and skilled labour in these countries. In case of South Asia, specially India and Pakistan, there was insignificant shift in comparative advantage as the increase in endowment of capital and skilled labour was lowest and quite insignificant as compared to other countries in the study for the period 1970-1985 (See Chapter IV, Section 4.4 & Table 4.5).

5.3.2 Ideal Comparative Advantage and Revealed Comparative Advantage.

The empirical verification of H-O model of trade for South Asian countries (Chapter IV) revealed that the ideal comparative advantage (based on interaction between factor endowment and factor intensity) for these countries lies in agricultural products and not in capital intensive products. Hence the composition of exports of these countries, as per H-O proposition, should reflect higher percentage of agricultural exports as compared to capital intensive manufactures. The rigorous analysis of patterns of ideal comparative advantage, however, requires cost comparisons across countries and the data required for such an analysis are rarely
available. Thus the concept of RCA (based on observed pattern of trade) is used for most of the economic analysis. Moreover, comparison between ideal comparative advantage and RCA reveal (in the present study) concordance between the two in case of South Asian countries. The RCA index (Table 5.2) was in accordance with the results of interaction between factor abundance and factor intensity (Table 4.5). The RCA index was above unity for agricultural and allied products and below unity for capital intensive products depicting comparative advantage for these countries in agricultural and allied products in 1970s and 1980s. The interaction between endowment and intensity (Chapter IV, Table 4.5) also showed comparative advantage for South Asian countries in agricultural and allied products in 1970s and 1980s. The consistency between ideal comparative advantage and RCA, may be due to the fact that the difference in the two concepts results from differences in trade policies for agriculture. The revealed comparative advantage is the net result of (a) the ideal comparative advantage determined by the resource endowment structure and (b) trade policies. In the case of NIC-4 and ASEAN-4, the trade policies have been as per the resource endowment structure and in South Asian countries at least till end of 1980s, the policy thrust has been to encourage the export of non-traditional commodities by various policy measures i.e. subsidies, import entitlement and replenishment schemes etc. The agricultural sector has not received much policy stimuli which implied insignificant difference between RCA index and ideal comparative advantage. Thus, in order to evaluate the extent to which South Asian countries composition of trade conforms to the structure of comparative advantage i.e. to examine as to whether the agricultural exports of South Asian countries are in conformity with their present and
potential comparative advantage, the export performance ratio (RCA) is used for inter-country and intersectoral comparisons of composition of exports vis-a-vis comparative advantage in the following analysis.

5.3.3 Composition of Exports: NIC-4, ASEAN-4 and South Asia

The NIC-4 opted for export orientation by beginning of 1960s. The composition of exports of NIC-4 (Table 5.3) indicates that exports of agricultural commodities constituted more than 45 percent of total exports in Korea and 50 percent of total exports in Singapore. By mid 1960s, their share started declining but still accounted for more than 40 percent for Korea and 45 percent for Singapore. By mid 1970s, their share decreased to 20 percent for Korea and around 25 percent for Singapore. The share of labour intensive exports was around 4 percent in the beginning of 1960 (except Hong Kong) increased to more than 30 percent in the 1970s and then fell to less than 30 percent by the middle of 1980s. As for chemicals, machinery and capital intensive products, the share was around 20 percent in the 1960s, around 30 percent in the 1970s and more than 40 percent in the late 1970s and 1980s.
Table 5.3
Composition of Exports: South Asia, NICs and ASEAN-4

<table>
<thead>
<tr>
<th>Aggregate</th>
<th>Year</th>
<th>Korea</th>
<th>Singapore</th>
<th>Malaysia</th>
<th>Philippines</th>
<th>Thailand</th>
<th>Indonesia</th>
<th>India</th>
<th>Pakistan</th>
<th>Bangladesh</th>
<th>Sri Lanka</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum and Raw Materials</td>
<td>1962</td>
<td>19.82</td>
<td>17.68</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>7.74</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>SITC Div.: 27,32,33, 34,35, 68</td>
<td>1966</td>
<td>11.90</td>
<td>24.58</td>
<td>30.60</td>
<td>2.52</td>
<td>12.19</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>1970</td>
<td>6.68</td>
<td>24.65</td>
<td>29.34</td>
<td>22.51</td>
<td>14.86</td>
<td>44.24</td>
<td>11.36</td>
<td>12.67</td>
<td>1.40</td>
<td>0.66</td>
</tr>
<tr>
<td></td>
<td>1975</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4.01</td>
<td>Nil</td>
<td>5.33</td>
</tr>
<tr>
<td></td>
<td>1980</td>
<td>1.06</td>
<td>31.12</td>
<td>34.78</td>
<td>21.23</td>
<td>13.94</td>
<td>75.75</td>
<td>7.84</td>
<td>7.40</td>
<td>Nil</td>
<td>18.69</td>
</tr>
<tr>
<td></td>
<td>1985</td>
<td>3.56</td>
<td>29.10</td>
<td>33.68</td>
<td>11.40</td>
<td>4.96</td>
<td>78.58</td>
<td>14.20</td>
<td>-</td>
<td>2.5459</td>
<td>11.76</td>
</tr>
<tr>
<td>Agricultural and allied Products</td>
<td>1962</td>
<td>45.27</td>
<td>49.90</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>47.58</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>SITC Div.: 00,01,02,03,04,05,06,07,08,09,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,29,41</td>
<td>1966</td>
<td>40.16</td>
<td>44.58</td>
<td>64.62</td>
<td>83.68</td>
<td>83.59</td>
<td>-</td>
<td>-</td>
<td>40.15</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>1970</td>
<td>27.26</td>
<td>40.02</td>
<td>60.63</td>
<td>73.25</td>
<td>74.28</td>
<td>54.09</td>
<td>34.91</td>
<td>-</td>
<td>42.92(2)</td>
<td>33.79</td>
</tr>
<tr>
<td></td>
<td>1975</td>
<td>20.01</td>
<td>23.04</td>
<td>72.43</td>
<td>67.24</td>
<td>74.60</td>
<td>19.73</td>
<td>34.27</td>
<td>14.07</td>
<td>(2)</td>
<td>82.39</td>
</tr>
<tr>
<td></td>
<td>1980</td>
<td>11.45</td>
<td>18.91</td>
<td>46.66</td>
<td>44.31</td>
<td>57.52</td>
<td>21.67</td>
<td>49.99(1)</td>
<td>38.05</td>
<td>(2)</td>
<td>64.66</td>
</tr>
<tr>
<td></td>
<td>1985</td>
<td>5.02</td>
<td>12.92</td>
<td>39.65</td>
<td>33.03</td>
<td>55.05</td>
<td>22.23</td>
<td>34.52(2)</td>
<td>55.72</td>
<td>(2)</td>
<td>55.69</td>
</tr>
<tr>
<td>Labour intensive Products SITC</td>
<td>1962</td>
<td>3.59</td>
<td>3.97</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1.78</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Div.: 66,82,83,84,85,86,87,9,9,9,193,96</td>
<td>1966</td>
<td>23.94</td>
<td>6.85</td>
<td>1.39</td>
<td>0.39</td>
<td>1.20</td>
<td>10.98</td>
<td>1.95</td>
<td>-</td>
<td>0.56</td>
<td>0.39</td>
</tr>
<tr>
<td></td>
<td>1970</td>
<td>43.34</td>
<td>7.96</td>
<td>2.85</td>
<td>0.72</td>
<td>7.36</td>
<td>10.98</td>
<td>1.95</td>
<td>0.56</td>
<td>8.85</td>
<td>(3)</td>
</tr>
<tr>
<td></td>
<td>1975</td>
<td>37.79</td>
<td>6.56</td>
<td>2.50</td>
<td>5.92</td>
<td>6.35</td>
<td>-</td>
<td>10.97</td>
<td>8.32</td>
<td>(3)</td>
<td>14.07</td>
</tr>
<tr>
<td></td>
<td>1980</td>
<td>30.19</td>
<td>12.18</td>
<td>2.25</td>
<td>26.78</td>
<td>13.02</td>
<td>0.45</td>
<td>19.76</td>
<td>6.78</td>
<td>(3)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>1985</td>
<td>25.92</td>
<td>12.31</td>
<td>2.96</td>
<td>51.91</td>
<td>15.55</td>
<td>2.00</td>
<td>12.97(3)</td>
<td>17.81</td>
<td>(3)</td>
<td>26.35</td>
</tr>
<tr>
<td>Capital intensive Products SITC</td>
<td>1962</td>
<td>10.94</td>
<td>20.51</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>40.40</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Div.: 61,62,65,69,81,95, Total of sections 5 and 7</td>
<td>1966</td>
<td>23.85</td>
<td>21.71</td>
<td>4.66</td>
<td>1.16</td>
<td>1.55</td>
<td>43.16</td>
<td>-</td>
<td>-</td>
<td>44.03</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>1970</td>
<td>22.82</td>
<td>20.34</td>
<td>5.70</td>
<td>2.11</td>
<td>2.74</td>
<td>0.85</td>
<td>-</td>
<td>0.98</td>
<td>44.71(1)</td>
<td>66.34</td>
</tr>
<tr>
<td></td>
<td>1975</td>
<td>38.39</td>
<td>34.35</td>
<td>11.96</td>
<td>2.47</td>
<td>6.99</td>
<td>0.79</td>
<td>-</td>
<td>4.01</td>
<td>41.70(2)</td>
<td>17.77</td>
</tr>
<tr>
<td></td>
<td>1980</td>
<td>54.37</td>
<td>35.82</td>
<td>14.39</td>
<td>6.67</td>
<td>14.43</td>
<td>1.17</td>
<td>-</td>
<td>48.20(1)</td>
<td>47.44</td>
<td>(3)</td>
</tr>
<tr>
<td></td>
<td>1985</td>
<td>61.96</td>
<td>43.04</td>
<td>21.70</td>
<td>11.92</td>
<td>27.42</td>
<td>2.95</td>
<td>-</td>
<td>-</td>
<td>(1)</td>
<td>5.14</td>
</tr>
</tbody>
</table>

Source: 1962 and 1966 - Foreign Trade Statistics of Asia and the Far East, UN

Note: (i) Figures in brackets (column 9,10,11 and 12) show ranks of three broad product groups i.e. agricultural labour intensive and capital intensive products in India, Pakistan Bangladesh and Sri Lanka.

(ii) Figures for 1985, India, exclude division 63 and 64.
ASEAN-4 shifted to export orientation by middle of 1960s. Being rich in agricultural and natural resources, these economies specialized in agricultural commodities and raw materials. Tropical products, cereals and raw materials were the three major export aggregates of ASEAN-4. Agricultural commodities comprised 60 to 80 percent of total exports from mid 1960s to mid 1970s (Table 5.3). A decline started from late 1970s and this share varied between 45 to 58 percent in 1980. The share of labour intensive exports in total exports was around 1 percent for Malaysia, the Philippines and Thailand in mid 1960s, less than 2 percent for the Philippines and 12 percent for Thailand in late 1970s and still more to more than 50 percent for the Philippines and 16 percent for Thailand by middle of 1980s. The share of chemicals, machinery and capital intensive exports which was less than 1 percent till middle of 1960s, increased to around 4 percent by beginning of 1970s (1972) and around 2 percent by middle of 1980s (1985).

In South Asia, though Sri Lanka specialized in exports of agricultural and raw material products, the capital intensive exports were more important than agricultural exports in India, Pakistan and Bangladesh since middle of 1960s. Table 5.3 depicts that the share of capital intensive products in total exports of India, Pakistan and Bangladesh were more than 40 percent, till the middle of 1970s. By beginning of 1980s, though there was slight increase in the relative share of labour intensive exports in India and Pakistan the share of agricultural exports showed little decline. The share of agricultural exports was around 30 percent in 1970s and less than 30 percent in 1980s in India. In Pakistan though their share was above 40 percent in 1970s, it was mainly due to cereal exports. The exports of agricultural products
exports other than cereals were quite insignificant. By middle of 1980s, however, the share of cereal exports too came down, leading to fall in the share of total agricultural exports in Pakistan to 34 percent only. The share of capital intensive exports and labour intensive exports increased at the cost of cereals in 1985.

5.4 COMPOSITION OF EXPORTS VIS-A-VIS COMPARATIVE ADVANTAGE

5.4.1 Intersectoral Comparisons

Intersectoral comparisons of South Asian countries composition of exports vis-a-vis RCA depict that the share of capital intensive exports in India, Pakistan and Bangladesh were always higher than the share of agricultural exports and were comprising around 40 percent or more of total exports of India, Pakistan and Bangladesh till the beginning of 1980s. Ranking of the three broad product groups as per their RCA and composition of exports for India, Pakistan and Bangladesh reveals that the capital intensive products get the third rank as per RCA but first rank as per the composition of exports for the period 1970 to 1985. On the other hand, agricultural products get the first rank as per RCA but second as per composition of exports for the period 1970 to 1985. Though the share of labour intensive exports showed a little upward trend during 1980s, the share of agricultural exports in these countries showed decline.

Sri Lanka is the only South Asian country which, in accordance with the comparative advantage, specialized in agricultural and raw material products. The

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8 We show ranks of three broad product groups i.e., agricultural, labour intensive and capital intensive products in South Asian countries in brackets of Table 5.2 and 5.3 column 9,10,11,12.
ranks of three product groups as per the RCA and composition of the exports show consistency in the case of Sri Lanka i.e. agricultural and allied products get the first rank for RCA as well as for composition of exports and capital intensive products get third rank for the same in this country. The share of agricultural products in total exports of Sri Lanka accounted for 96 percent in 1970, 82 percent in 1975, 65 percent in 1980 and 56 percent in 1985 (Table 5.3). There was some decline in share of agricultural exports and a certain amount of manufacturing exports has taken place in 1970s and 1980s. Agricultural export sector, however, is still the leading sector in the economy. Plantations are still the major export earners. When the world price remains high, tea, rubber and coconut account for more than 70 percent of the island's export earnings. Moreover, the increase in the amount of manufacturing exports is also achieved by adding value to their traditional products, such as bagging and packing. In coconut they have started adding value in shape of fibre. They are also trying for a higher clove price in the world markets.

5.4.2 Intercountry Comparisons

Comparing export performance ratios (RCA) and composition of exports of South Asian countries with those of NIC-4 and ASEAN-4 (Tables 5.2 and 5.3) indicate the consistency between the composition of exports and RCA in the case of NIC-4 and ASEAN-4 and inconsistency for the same in the case of South Asian countries (except Sri Lanka).

The RCA indices (Table 5.2) indicate that till the beginning of 1970s, South Asia, NIC-4 and ASEAN-4, all had comparative advantage in agricultural products. With development, the relative endowment of capital and skilled labour increased in
Korea, Singapore and ASEAN-4 (Chapter IV, Table 4.4) and thus the comparative advantage (RCA) for Korea, Singapore and ASEAN-4 countries shifted, in the first phase, from agricultural products to labour intensive products (beginning of 1970s for Korea, late 1970s for Singapore, Malaysia, the Philippines and Thailand) and to capital intensive products in the second phase (mid 1970s for Korea and beginning of 1980s for Malaysia, the Philippines, Thailand and Singapore). In accordance with this shift in comparative advantage the composition of exports shifted from primary exports to labour intensive and then to capital intensive exports. The composition of exports (Table 5.3) indicates that exports of agricultural commodities increased in the beginning of 1960s and constituted more than 45 percent of total exports in Korea and 50 percent of total exports in Singapore. By mid 1960s, their share started declining but still accounted for more than 40 percent for Korea and 45 percent for Singapore. By mid 1970s, their share decreased to 20 percent for Korea and around 25 percent for Singapore. Similarly in ASEAN-4 countries (except Indonesia) agricultural commodities comprised 60 to 80 percent of total exports from mid 1960s to mid 1970s. A decline started from late 1970s and this share varied between 45 to 58 percent in 1980.

In the case of South Asian countries, the relative endowment of capital and skilled labour (Chapter IV, Table 4.4) was lowest and quite insignificant as compared to other countries in the study and thus the change in comparative advantage (RCA index) was insignificant. There was marginal increase, instead of decline, in this index for agricultural products from 1.35 in 1970 to 1.96 in 1985 (India), 2.01 in 1975 to 2.26 in 1985 (Pakistan), 1.59 in 1975 to 2.06 in 1985 (Bangladesh) and
marginal decline from 3.70 in 1970 to 3.59 in 1985 (Sri Lanka). For capital intensive products there was marginal decrease from 0.91 in 1970 to 0.85 (India), 0.96 in 1975 to 0.95 in 1985 (Pakistan), 1.43 in 1975 to 0.93 in 1985 (Bangladesh) and 0.02 in 1970 to 0.01 in 1985 (Sri Lanka). The composition of exports of South Asian countries (except Sri Lanka) unlike NIC-4 and ASEAN-4, were not consistent with this insignificant change in RCA index from 1970 to 1985. The share of agricultural exports declined from 35 percent in 1970 to 28 percent in 1985 and further to 17 percent by 1990 (India), 43 percent in 1975 to 35 percent in 1985 (Pakistan) and 34 percent in 1975 to 31 percent in 1985 (Bangladesh). Per capita exports of agricultural products were very low in South Asia (except Sri Lanka) compared to NICs and ASEAN-4 countries.

5.5 CONCLUSION

The overall industrialisation and trade strategy of the NIC-4 and ASEAN-4 supported an output mix that conformed to domestic factor endowments and hence comparative advantage. These countries could manage to evolve competitiveness in world trade by changing composition of trade as per changes in comparative advantage based on resource endowment structure. Korea, Singapore and ASEAN-4 countries, having realized that an expanding industrial sector cannot be fueled for long by resource transfers from a static agricultural sector, improved their competitiveness in world trade by mobilizing potential of agriculture in the initial stages of development. These countries, following the theory of shifting comparative advantage, relied on high percentage of primary exports (mainly agricultural) in the initial stages of development (Korea in early 1960s, Singapore and ASEAN-4 in late
1960s and early 1970s), shifting to labour intensive exports (mainly resource based) in the second stage (Korea in the early 1970s and ASEAN-4 in late 1970s) and highly skilled and capital intensive exports in the third stage (Korea in the early 1980s and ASEAN-4 and Singapore by mid 1980s).

In South Asian countries (except Sri Lanka), the industrialization and trade strategy, in a haste to catch up with the world, aimed at industrial self-sufficiency (especially in basic industries, e.g. chemicals, metal products and machinery) while disregarding the country's factor endowments and bottlenecks to industrial development and hence comparative advantage. The comparative advantage for South Asian countries, as per neo-classical doctrine, lies in agricultural products and labour intensive products. The composition of exports of these countries (especially India, Pakistan and Bangladesh), however, depict higher percentage of capital intensive exports in the initial stages of development. Though, as regard labour intensive exports there was some awareness on the part of these countries and the share of labour intensive exports showed little upward trend from beginning of 1980s, the share of agricultural exports showed decline not only in 1970s but even in 1980s. There is considerable potential for increasing agricultural exports from South Asia. Thus, an increase in the share of agricultural exports in the export basket of these countries may, lead to better performance of their exports. In other words, performance of South Asian countries exports may be improved by realizing greater foreign exchange earnings and improving the linkage between agriculture and other sectors by expanding agricultural exports.