

## PROSPECTS OF TRADE EXPANSION IN THE SAARC REGION

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ONE of the most pervasive and characteristic features of the post-World War II era has been the emergence and growing importance of regional economic groups in different parts of the world. These largely combine the elements of "export oriented" and "inward-looking" import-substitution policies at the regional level to (1) boost trade within and outside the region, (2) promote industrialization more efficiently particularly in the basic and heavy goods sector by overcoming the limitation of narrow national markets, (3) increase efficiency and improve the allocation of scarce resources through the removal of trade barriers, and (4) speed up the process of overall economic progress through collective self-reliance on a regional and subregional basis [1] [3] [17] [8] [14] [19]. The process of regional economic cooperation was initiated by Western Europe in the 1950s with the formation of the European Economic Community (EEC) and European Free Trade Association (EFTA), and thereafter several other regional economic groups were formed in the various areas of the Southern World. The South Asian Association for Regional Cooperation (SAARC) comprising the seven countries of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka was formed with the signing of its charter by the head of states/governments at Dhaka in December 1985. The association was set up to accelerate the process of economic, social, and cultural development, and promote and strengthen collective self-reliance through joint action in certain agreed areas of cooperation [20].

The idea of regional cooperation in the South Asian region is not new. The countries of the region have worked together on bilateral and multilateral bases under the Economic and Social Commission for Asia and Pacific (ESCAP), the Non-Aligned Movement and within the Commonwealth. Realizing that the existing efforts have not fully exploited the vast potential of regional cooperation that exists [5] (regional cooperation among the countries of South Asia is not only mutually beneficial and desirable under the present circumstances but also would contribute significantly in their efforts to achieve national and collective self-reliance and provide an opportunity for them to have an effective voice in international forums

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We are grateful to Professor V. R. Panchmukhi, Director, Research and Information System for the Non-Aligned and Other Development Countries, New Delhi; Professor P. R. Bramhanda, National Fellow, ICSSR, New Delhi; and anonymous referees for their scholarly comments on an earlier draft of this paper. Our thanks are also due to Professor Vikas Mishra and the senior most Professor T. N. Kapoor for their very useful and incisive comments.

[21]), a fresh initiative in this regard was expressed in November 1980 by Bangladesh. Thereafter, a series of meetings among the foreign secretaries of the members of the region took place for the formation of a regional group. An Integrated Programme of Action through the adoption of a Declaration on South Asian Regional Cooperation (SARC) was formally launched by the foreign ministers in 1983, and in 1985, SAARC came into existence. The broad areas of cooperation which have been identified so far are: agriculture and forestry, health and population activities, meteorology, rural development, telecommunication, transportation, science and technology, postal services, sports, arts and culture, women in development, drug trafficking and abuse, anti-terrorism, control of environment degradation and disaster management, food security, and audiovisual exchange. However, the vital areas of "trade and industry" have been kept out which have been the major sectors for cooperation in the Association of South East Asian Nations (ASEAN),<sup>1</sup> a neighboring and comparatively mature regional organization. In particular, the basic aims of ASEAN, as defined in the Declaration of ASEAN Concord (1967) and the Preferential Tariff Arrangement (PTA) concluded in 1977, are the expansion of intra-regional trade particularly in: (1) basic manufactures through the reduction of tariff and non-tariff barriers on a product-by-product basis over a period of time, (2) short- and long-term bilateral and multilateral trade agreements within and outside the region, and (3) the creation of industrial complementarity particularly through the setting up of joint industries/projects involving two or more countries.

This paper primarily explores the prospects of intra-regional trade expansion among the countries of the SAARC region, identifying the major products in the broad sectors in which mutual trade could be expanded under the present economic, trade and tariffs structures in the region. The paper also outlines economic measures which may be taken in this direction at the regional level, both individually and collectively.

## I

Table I, which provides the basic economic and trade indicators of SAARC member countries, shows that the level of per capita gross national product (GNP) of the region as compared to the industrialized nations is extremely low and its growth rate between 1980 and 1987 has been quite disappointing. Figures for Bangladesh, Nepal, and Sri Lanka have been particularly disappointing (below 3 per cent) chiefly because of the high rate of population growth ranging between 1.5 to 3.2 per cent. However, the relative performance of the region and the countries individually, except Bangladesh, as measured by the growth of gross domestic product (GDP), has been quite satisfying. This growth has ranged between 4.6 and 12.5 per cent, and the share of the industrial sector in total GDP for all the countries, except Bhutan, has increased significantly ranging between 13 and 30 per cent in 1987. This indicates that the region has been gradually undergoing

<sup>1</sup> The Association of South East Asian Nations (ASEAN) was established in 1967 with the signing of ASEAN Declaration by the ministers of foreign affairs of Indonesia, Malaysia, the Philippines, Singapore, and Thailand. Brunei joined in January 1984.

TABLE I  
BASIC ECONOMIC AND TRADE INDICATORS OF SAARC MEMBER COUNTRIES, 1987

	GDP (U.S.\$ Million) (1987)	Rate of Growth of GDP (1980-87)	GNP Per Capita (U.S.\$) (1987)	Average Annual Growth Rate of Per Capita GNP (1980-87)	Average Annual Growth Rate of Population (1980-87)	Share of Industry in GDP (%)  (1970) (1987)	Gross Domestic Saving As a % of GDP (1987)
Bangladesh	17,600	3.8	160	1.6	2.8	11 13	2
Bhutan	250	6.1	150	3.9	2.0	.. 6	..
India	220,830	4.6	300	3.1	2.1	22 30	22
Maldives	87 <sup>a</sup>	12.5	300	9.0	3.2	.. 13 <sup>a</sup>	..
Nepal	2,560	4.7	160	2.0	2.7	11 14	11
Pakistan	31,650	6.6	350	3.7	3.1	20 28	11
Sri Lanka	6,040	4.6	400	2.9	1.5	11 27	13
SAARC region	279,017	4.8	260	3.9	2.3	21 28	19
Developed countries	10,780,345 <sup>a</sup>	2.5	13,552	2.7	0.8 <sup>b</sup>	34 <sup>a</sup> 30 <sup>a</sup>	20 <sup>ac</sup>

TABLE I (Continued)

	Total Trade As a % of GDP (1987)	Average Annual Growth Rate of Exports (1980-87)	Share of Machinery and Transport in Total Exports (%) (1987)	Share of Manufactures in Total Exports (%) (1987)	Exports As a % of Imports (1987)	Balance in Current Account (U.S.\$ Million)	
						(1970)	(1987)
Bangladesh	19	16.4	17	33	40.3	-610.3	-1,041.3
Bhutan	61	..	0	29	35.2	..	-84.1
India	16	20.5	10	59	68.6	-531.0	-5,027.0
Maldives	149	25.3	..	..	38.7	-24.9	-9.1
Nepal	36	18.6	2	70	27.5	-113.6	-196.9
Pakistan	32	20.4	3	64	70.2	-705.0	-967.2
Sri Lanka	56	17.7	2	68	64.2	-71.4	-524.4
SAARC region	19	20.0	8	59	65.2	-2,056.2	-7,765.9
Developed countries	33	4.3	..	..	94.3	..	..

Sources: World Bank, *World Development Report, 1989* (Washington, D.C., 1989); [23, 1988 edition]; United Nations, Economic and Social Commission for Asia and the Pacific, *Economic and Social Survey of Asia and the Pacific, 1988* (1989); Bhutan, Planning Commission, Central Statistical Office, *Statistical Yearbook of Bhutan, 1988* (Thimphu, 1989).

Notes: 1. Figures for SAARC region are weighted average.

2. .. = Not available.

a 1986.

b 1970-86.

c Gross domestic investment.

TABLE II  
BILATERAL TRADE BALANCE OF SAARC MEMBER COUNTRIES WITHIN  
SAARC REGION, 1980 AND 1987

		(U.S.\$ Million)					
To\From		Bangladesh	India	Maldives	Nepal	Pakistan	Sri Lanka
Bangladesh	1980	—	52.0	—	0.4	-21.2	1.0
	1987	—	56.0	—	-5.4	41.0	7.3
India	1980	-47.6	—	-3.3	-70.6	66.8	-62.4
	1987	-63.4	—	-0.4	-62.4	9.6	-74.4
Maldives	1980	—	2.0	—	—	-0.2	-0.7
	1987	0.1	1.0	—	—	0.3	1.4
Nepal	1980	-0.5	57.0	—	—	-3.6	-0.4
	1987	4.9	48.0	—	—	0.5	-4.4
Pakistan	1980	20.4	-70.0	0.2	3.2	—	4.3
	1987	-9.4	-13.0	-0.3	-0.7	—	-16.3
Sri Lanka	1980	0.1	51.0	0.4	0.4	-1.2	—
	1987	-4.8	65.0	-2.4	4.1	18.4	—
SAARC Region	1980	-27.6	92.0	-2.7	-66.6	40.6	-58.2
	1987	-72.6	157.0	-3.1	-64.4	69.8	-86.4

Source: [12, various issues].

Note: Negative sign signifies deficit.

a process of structural transformation, but the slow rate of change does not raise much expectations for an early restructuring of the economies in the region. The importance of trade in the economies of the region as revealed by the ratio of total trade to GDP is quite high ranging between 32 and 149 per cent, except in India and Bangladesh where it was 16 and 19 per cent respectively in 1987. Though the trade performance of the region and the countries individually has been quite impressive (they achieved far higher rates of export growth during the 1980-87 period than the developed countries), they have experienced huge and progressively increasing trade deficits which may be partly explained by their inability to create export surplus and partly because of a weak world growth environment. However, within the region, India and Pakistan have had continuously increasing trade surplus, while Sri Lanka, Bangladesh, Nepal, and Maldives have had continuous sizeable deficits (Table II).

Table III presents the direction of trade for the region during the period 1980-87. It reveals the following four points. (1) The magnitude of intra-regional trade is very low, 2.98 per cent in export trade and 1.79 per cent in import trade, and was below 10 per cent in 1987 in all the countries, except for Maldives in exports and Nepal in both exports and imports. (2) Intra-regional trade has continuously declined except for minor deviations, showing that the countries of the region have been moving away rather than coming together in their economic relations. The high magnitude of regional trade for Nepal and Maldives gives a distorted picture. Nepal is importing 22 per cent of its total imports from and exporting 29 per cent of total exports to a single trading partner, India. The situation is similar for

TABLE III  
DIRECTION OF TRADE OF SAARC MEMBER COUNTRIES, 1980 AND 1987

From To	Bangladesh		India		Maldives		Nepal		Pakistan		Sri Lanka		SAARC Region	
	1980	1987	1980	1987	1980	1987	1980	1987	1980	1987	1980	1987	1980	1987
Bangladesh														
Exports	—	—	26.09*	25.56*	...	...	4.62*	0.19*	33.17*	55.41*	5.43*	14.42*	12.31*	7.72*
Imports	—	—	5.71*	12.12*	...	...	0.58*	4.66*	61.06*	52.93*	2.27*	0.14*	16.49*	20.39*
India														
Exports	11.66*	24.83*	—	—	...	...	74.87*	90.28*	42.87*	13.07*	46.54*	16.92*	41.14*	44.61*
Imports	57.80*	63.64*	—	—	68.75*	5.41*	98.95*	93.98*	3.13*	12.57*	73.31*	60.03*	24.00*	17.27*
Maldives														
Exports	...	0.23*	0.87*	0.39*	—	—	...	...	0.18*	0.18*	1.63*	12.12*	0.38*	0.75*
Imports	...	...	...	...	—	—	...	...	0.40*	...	1.44*	3.55*	0.82*	1.29*
Nepal														
Exports	0.73*	11.51*	33.91*	39.45*	...	...	—	—	0.24*	0.98*	...	0.19*	3.49*	9.32*
Imports	1.04*	0.17*	15.00*	53.54*	...	...	—	—	3.22*	1.17*	0.30*	3.26*	14.76*	20.57*
Pakistan														
Exports	80.61*	62.98*	1.74*	4.30*	19.05*	...	18.46*	1.87*	—	—	46.40*	56.34*	29.50*	28.53*
Imports	36.28*	31.91*	52.86*	24.24*	4.17*	4.05*	0.46*	1.44*	—	—	22.67*	33.02*	21.31*	16.38*
Sri Lanka														
Exports	6.99*	0.45*	37.39*	29.30*	80.95*	100.00*	2.05*	7.66*	23.53*	30.36*	—	—	13.18*	9.06*
Imports	4.88*	4.28*	26.43*	10.10*	27.08*	90.54*	...	...	32.18*	33.33*	—	—	23.98*	24.09*
SAARC region														
Exports	8.71	4.11	2.91	2.06	29.17	18.14	34.57	32.11	6.30	3.93	7.09	3.81	4.50	2.98
Imports	3.68	4.28	1.04	0.48	26.67	7.44	43.07	23.90	2.32	1.61	6.48	6.50	2.46	1.79
Industrial countries														
Exports	36.04	65.82	57.59	59.28	70.83	18.14	54.26	65.31	36.41	58.58	39.57	63.54	50.24	59.80
Imports	48.10	44.82	48.50	60.83	65.56	26.06	45.52	50.39	50.13	58.26	45.35	43.28	48.52	57.56

Source: [12, various issues].

Notes: 1. \* represents the share of the country in its intra-regional exports/imports to the concerned members.

2. ... = Negligible.

Maldives which sent 18 per cent of its total exports in 1987 to Sri Lanka. (3) The region's trade has been directed more toward the industrial countries whose share in the region's exports and imports in 1987 stood at 59.8 and 57.6 per cent respectively. India and Pakistan are the major exporters within the region together contributing 73 per cent of the region's export trade. On the other hand, 65 per cent of region's imports have been absorbed by Sri Lanka, Nepal, and Bangladesh making them the region's major importers. The extremely low share for Maldives shows that it has still not entered into the intra-regional trade. (4) India's major importers are Nepal, Sri Lanka, and Bangladesh; Pakistan's are Bangladesh and Sri Lanka. The chief exporters to Bangladesh and Sri Lanka continue to be India and Pakistan; the chief exporter to Nepal is India.

The product structure of intra-regional trade by broad commodity groups is shown in Table IV. It reveals that the share of "food items" dominates this trade and is followed by "other manufactures," "agricultural raw materials," "machinery and equipment," and "chemical products." Around 70 per cent of intra-regional trade in 1985 was accounted for by the first three broad commodity groups; the situation remained more or less the same in 1980. But the composition of intra-regional product trade is not symmetrical. Bangladesh, Nepal, and Sri Lanka export relatively more "food items" and "agricultural raw materials" and import "chemicals," "machinery and equipment," and "other manufactures" commodities. The reverse is true for both India and Pakistan. Within the region, India's share in the export of "food items" is the highest followed by Nepal; India is also the highest in the export of "machinery and equipment" and "other manufactures" followed by Pakistan. Pakistan is the highest exporter of "agricultural raw materials" and "chemical products" followed by India. On the other hand, Pakistan dominates in the import of "food items" and "agricultural raw materials" and Bangladesh in "machinery and equipment."

The inescapable inferences which emerge from the above analysis are that (1) the region is on the path of industrialization as revealed by the increased share of the industrial sector and manufactured exports to GDP. India, Pakistan, and Sri Lanka are relatively more attuned to the process of development when measured in terms of the level and real growth in per capita and total GDP and the manufacturing sector; (2) despite the fact that all the countries are saddled with huge and growing current account deficits vis-à-vis the outside world, there exists enormous scope for mutual trade expansion in the region. This can be done by restructuring and redistributing the region's trade through intra-regional understanding and arrangements for action, internally as well as in relation to the outside world. Intra-regional trade is bound to increase considerably if (1) India and Pakistan (which have continuously maintained their high share in the intra-regional export trade and have had trade surplus within the region) undertake to accept additional responsibility by opening up their markets more liberally to the other members and grant full or partial non-reciprocity; and (2) Sri Lanka, Nepal, and Bangladesh (the major importers which have absorbed a major share of intra-regional imports and have faced continuous intra-regional trade deficits) are assured by the rest of the members, in particular the surplus ones, of fair access to their markets, keeping in view each country's level of development, export capabilities,

TABLE IV  
COMPOSITION OF INTRA-REGIONAL EXPORTS AND IMPORTS FOR SAARC MEMBER COUNTRIES BY COMMODITY CATEGORY  
AND THEIR SHARE IN REGIONAL EXPORTS AND IMPORTS BY COMMODITY CATEGORY, 1985

	(%)											
	Food Items (SITC 0+1+22+4)		Agricultural Raw Materials, etc. (SITC 2-22+ 67+68)		Fuels (SITC 3)		Chemical Products (SITC 5)		Machinery and Equipment (SITC 7)		Other Manufactures [SITC (6+8) - (67+68)]	
	Compo- sition	% Share in Intra- regional Trade	Compo- sition	% Share in Intra- regional Trade	Compo- sition	% Share in Intra- regional Trade	Compo- sition	% Share in Intra- regional Trade	Compo- sition	% Share in Intra- regional Trade	Compo- sition	% Share in Intra- regional Trade
<b>Bangladesh</b>												
Exports	31.09	11.99	38.35	21.42	0.00	0.00	1.29	1.26	0.41	0.26	28.85	11.64
Imports	9.56	8.04	24.65	29.08	4.35	12.17	12.31	26.53	27.35	45.12	21.70	21.30
<b>India</b>												
Exports	18.40	31.83	10.19	25.54	2.65	36.77	7.79	33.96	30.81	88.28	30.16	54.60
Imports	32.24	13.91	30.66	18.55	0.00	0.00	9.59	20.61	1.34	1.13	26.17	13.18
<b>Nepal</b>												
Exports	61.82	26.48	10.70	6.64	0.00	0.00	6.57	7.09	0.00	0.00	20.90	9.37
Imports	19.13	26.69	5.90	11.54	18.92	87.83	12.53	44.79	13.04	35.63	30.48	49.62
<b>Pakistan</b>												
Exports	14.85	13.72	27.41	36.67	2.89	21.47	24.48	57.02	7.39	11.31	22.97	22.21
Imports	53.24	26.70	42.03	29.57	0.00	0.00	0.99	1.28	1.12	1.11	2.62	1.57
<b>Sri Lanka</b>												
Exports	52.96	15.98	22.16	9.37	17.15	41.76	0.88	0.67	0.27	0.14	6.84	2.17
Imports	40.98	24.66	13.33	11.25	0.00	0.00	10.87	16.79	14.37	16.96	20.45	14.36
<b>Intra-region</b>												
1980												
Exports	23.62		17.59		17.31		4.51		15.58		21.39	
Imports	31.59		16.68		1.15		6.25		18.40		25.93	
1985												
Exports	26.52		18.31		3.30		10.52		16.01		25.34	
Imports	26.53		18.91		7.97		10.35		13.52		22.72	

Source: [22, various issues].



and mutuality of interests. In addition there is the need to (1) harmonize production and investment plans, particularly in the export sectors (taking into account of the actual and potential comparative advantages or disadvantages), (2) gradually reduce tariff and non-tariff barriers, (3) undertake bilateral/multilateral long-term commodity agreements between the deficit and surplus countries of the region and with the outside world, (4) pool financial resources for maintaining buffer stocks in the major commodities on a regional or subregional basis, (5) set up joint projects in the basic and heavy goods sectors at the regional level and the allocation of their production to different areas, and (6) carry out joint marketing policies coupled with payment arrangements. Development in these areas would go a long way toward diversifying the structure and pattern of trade within the region and with the rest of the world.

## II

In current literature, the degree of competitiveness and complementarity in the production and trade structures of member countries within a customs union (CU) has assumed a central place when judging whether the CU will be trade creating or not. Prior to Viner's study in 1950 [25], it was argued that a CU was more beneficial among complementary rather than competitive economies, where complementary referred to different patterns of production and competitiveness to a similar pattern of production [7]. Viner, however, contradicted this view and argued that a CU was more desirable, the less the degree of complementarity—or the greater the degree of rivalry—among the member countries [25]. Subsequent discussion, while pointing out the ambiguities in Viner's definition of complementarity and competitiveness, have concluded that there is not much contradiction between Viner and earlier economists if we redefine complementarity and competitiveness in terms of differences in comparative costs. Rival or competitive economies are those with similar cost ratios, and complementarity economies are those with dissimilar cost ratios between different pairs of products [15] [16]. It is apparent therefore that the wider the difference in cost ratios (high complementarities), the greater the prospects for trade expansion in a CU. In the remainder of this paper, we will use the following indices: "trade intensity," "complementarity," "country bias," and "revealed comparative advantage" to assess the degree of "existing" and "potential" complementarity in order to evaluate the prospects for trade expansion in general and to identify the products in the broad sectors where intra-regional trade could be expanded.

The trade-intensity index ( $I_{ij}$ ) measures the extent to which one country's share in another country's exports (imports) is larger or small in relation to the former country's share in world trade [6] [13] [26].

$$I_{ij} = \frac{X_{ij}}{X_i} \bigg/ \frac{M_j}{M_w - M_i},$$

where  $I_{ij}$  is the export-intensity index of country  $i$  with country  $j$ , and  $X_{ij}$ ,  $X_i$ ,  $M_j$ ,  $M_w$ ,  $M_i$  represent exports of country  $i$  to country  $j$ , total exports of country  $i$ , total imports of country  $j$ , total world imports, and imports of country  $i$  respectively.

TABLE  
INDICES OF EXPORT AND IMPORT TRADE

From \ To		Bangladesh		India		Maldives	
		Export	Import	Export	Import	Export	Import
Bangladesh	1975	—	—	2.1536	11.4932	...	...
	1985	—	—	3.1513	4.5519	2.6606	...
	1987	—	—	1.2014	5.1591	2.3930	...
India	1965	—	—	—	—	...	...
	1975	10.0986	1.9754	—	—	15.2666	...
	1985	4.2868	3,3469	—	—	2.5816	...
	1987	4.8379	1.2619	—	—	2.0577	...
Maldives	1975	...	...	...	13.1810	—	—
	1985	...	2.5490	...	0.9973	—	—
	1987	...	...	...	0.8026	—	—
Nepal	1965	...	—	58.0779	87.5137	...	...
	1975	...	...	91.3640	111.3870	...	...
	1985	...	34.1472	32.2001	57.1402	...	...
	1987	0.5353	24.3762	34.1276	42.5025	...	...
Pakistan	1965	—	—	3.3107	1.8607	...	...
	1975	16.0243	6.0147	1.9074	0.0173	44.3333	23.5000
	1985	17.6131	13.9286	1.4536	0.2677	2.9061	1.2789
	1987	19.3613	18.6419	0.6030	0.3834	1.8522	...
Sri Lanka	1965	—	—	1.3299	8.7625	...	...
	1975	1.9075	0.6601	0.0955	5.2746	83.8000	427.0454
	1985	8.5772	0.1977	0.5214	4.1515	109.2894	176.9303
	1987	4.9017	0.6601	0.7592	7.3899	119.0883	229.0887

Source: [12, various issues].

Note: ... = Negligible.

The value of more (or less) than unity of this index indicates that a country is exporting more (or less) to another country than might be expected from the country's share in world trade.

High values of this index during the period 1965–87 (Table V) reveal that the intensity of trade for the countries within the region is very high, except for India-Pakistan, Maldives-Bangladesh, Maldives-India, Maldives-Nepal, Nepal-Bangladesh, Nepal-Maldives, Sri Lanka-India, and Sri Lanka-Nepal in export trade and Bangladesh-Maldives, India-Maldives, Maldives-India, Maldives-Nepal, Nepal-Maldives, Nepal-Sri Lanka, Pakistan-India, and Sri Lanka-Bangladesh in import trade, where the values of the indices are less than unity. The magnitude of bilateral trade orientation is the highest between Maldives-Sri Lanka followed by India-Nepal, Bangladesh-Pakistan, and Pakistan-Sri Lanka. However, the degree of intensity between each of the country within the region has fallen between 1975 and 1985 largely due to the adoption of vigorous inward-looking policies by the members to spearhead the drive for rapid overall development.

The trade-intensity index has been decomposed into two indices, "complementarity" and "country bias," in order to assess the contribution of complementarity

## V

INTENSITIES: 1965, 1975, 1985, AND 1987

Nepal		Pakistan		Sri Lanka		SAARC Region	
Export	Import	Export	Import	Export	Import	Export	Import
...	...	...	12.4827	9.8064	6.2489	2.2464	11.0533
32.4626	...	13.3321	4.6291	0.2065	2.7177	5.5967	4.3539
23.3545	1.0347	10.8312	7.7129	1.5956	57.4600	3.5029	9.6297
83.2368	60.1347	1.5969	2.9631	8.0071	1.3426	5.3000	3.6245
103.3684	98.1956	...	2.7050	7.3102	...	7.0017	3.5600
53.7310	33.7176	0.4364	1.5167	3.2065	0.5606	3.3373	2.4911
39.7713	36.0221	0.3672	0.6520	7.8666	3.1315	4.6058	1.6487
...	...	21.5329	30.4076	399.9014	91.8842	32.7413	14.0753
...	...	...	2.7892	176.4409	114.7281	11.4155	10.7800
...	...	...	1.7950	208.0488	122.5529	13.8721	9.6098
—	—	...	...	...	...	39.2512	56.2249
—	—	27.0174	...	...	...	89.9502	77.1388
—	—	4.1841	0.2224	28.8901	...	23.1980	40.5703
—	—	2.5115	1.9464	28.2152	...	24.8601	29.5173
...	...	—	—	11.8202	2.4773	3.4881	1.9460
0.7196	29.6086	—	—	31.3270	35.7539	6.7896	4.3653
0.2317	4.4420	—	—	15.9250	7.4000	4.4335	1.4226
1.8904	2.6668	—	—	13.6402	9.2717	3.6520	2.5182
...	...	2.7893	9.6134	—	—	1.7065	8.8697
...	...	34.0317	32.0950	—	—	7.8404	10.1095
0.5028	31.4405	6.9278	12.1889	—	—	4.8119	5.3504
0.3617	29.9291	8.9852	12.1216	—	—	3.1117	10.1095

and other factors influencing the intensity of trade. Whereas the “complementarity index” measures the extent to which one country’s export pattern matches another country’s import pattern more closely than it matches that country’s import pattern for world imports, the “country bias” index measures the extent to which one country’s exports have more or less favorable access to another country’s market than might be expected from both country’s share in world trade [10] [11] [2]. The “complementarity” and “country bias” indices ( $C_{ij}$  and  $B_{ij}$ ) for country  $i$ ’s export to country  $j$  are

$$C_{ij} = \sum_k \left( \frac{X_i^k}{X_i} \cdot \frac{M_w - M_i}{M_w^k - M_i^k} \cdot \frac{M_j^k}{M_j} \right)$$

and

$$B_{ij} = X_{ij} \sum_k \frac{M_w^k - M_i^k}{X_i^k - M_j^k},$$

where  $X_i^k$ ,  $M_j^k$ , and  $M_w^k$  represent country  $i$ ’s export of commodity  $k$ , country  $j$ ’s imports of commodity  $k$ , and world imports of commodity  $k$  respectively, and the

meaning of other variables are the same as defined in the trade-intensity index. Similar indices can be defined for country  $i$ 's imports from country  $j$ .

The values of the complementarity index (obtained by disaggregating six major commodity groups, viz. food items, agricultural raw materials and mineral ores, fuels, chemical products, machinery and equipment, and "other manufactures" goods and thereafter summing) show that the level of complementarity in the bilateral trade structure of the member countries as well as within the region as a whole is not only low, as most of the values of the index are clustered around unity, but also has not risen substantially during the period 1965–85 (Table VI). In other words, the high intensity of trade between the member countries cannot be attributed to the level of complementarity in their trade structure. One of the plausible explanations for the low and nearly stable level of complementarity is the dramatic increase in trade barriers and protectionism by the members to intra-regional trade. For example, the average ad valorem tariff rate in 1983–84 was more than 71 per cent except for Sri Lanka where it was 41 per cent, and the average tariff-frequency ratio was more than 80 per cent in the countries of the region [9]. Hence, the cause of the very high intensity in the trade pattern between the member countries can be largely explained by "country bias" trading relationships as the values of this index are significantly high (although showing a declining trend when compared to 1965, except for India-Pakistan, Pakistan-Nepal, Sri Lanka-India, Sri Lanka-Nepal in export trade and vice versa in import trade). The magnitude of the "country bias" trading relationship is the highest in Indo-Nepal trade followed by Sri Lanka-Pakistan and Bangladesh-Pakistan in both export and import trade (Table VII). The extremely high country-bias trading relations might have resulted from, inter alia, geographical proximity, bilateral trade agreements, and the availability of market information. On the other hand, the low intensity of trade among some of the countries is clearly due to the low magnitude of the "country bias" index possibly resulting from continuous hostile political relations, several discriminatory trade practices against co-members and an "information" gap about trading and investment opportunities rather than the low level of complementarity.

### III

The revealed comparative advantage (RCA) index, which shows the comparative advantage in terms of the share of a particular industry in a country's total exports relative to the industry's share in total world exports [18] [4] [27], has been calculated in order to assess the dimension of comparative advantage among the commodity groups of member countries and to infer the degree of potential complementarity of the countries as well as the degree of potential complementarity of the countries in international trade. The revealed comparative advantage for exports (RCAX) and also for imports (RCAM) can be expressed as

$$RCAX = (X_i^k / X_i) / (X_w^k / X_w),$$

$$RCAM = (M_i^k / M_i) / (M_w^k / M_w),$$

TABLE VI  
COMPLEMENTARITY INDEX: 1965, 1975, AND 1985

From \ To	Bangladesh		India		Nepal		Pakistan		Sri Lanka		SAARC Region	
	Export	Import	Export	Import	Export	Import	Export	Import	Export	Import	Export	Import
Bangladesh	—	—	0.8241	1.2572	1.4712	1.3822	0.7971	1.1747	1.2160	1.6050	0.8580	1.2750
India	—	—	—	—	1.5187	0.9453	0.7974	0.7386	1.2533	1.0462	0.9472	0.8759
	..	..	—	—	0.9924	1.4784	0.6735	0.8555	0.6380	1.5209	0.6965	0.8364
	1.2558	0.8282	—	—	0.9191	0.8062	0.9716	0.9155	1.2828	0.9325	1.1038	0.9003
Nepal	—	—	1.0021	1.4420	—	—	0.9178	1.1234	1.5113	0.9371	0.9813	1.4704
	..	..	1.5516	1.2977	—	—	1.5928	1.5618	2.6279	0.8516	1.6768	1.3658
	1.3814	1.2713	0.8015	1.3854	—	—	1.0065	1.4404	1.4039	1.3255	0.9417	1.3964
Pakistan	—	—	0.7799	0.7427	1.1888	0.8663	—	—	0.7495	0.9271	0.7908	0.7921
	..	..	0.9263	1.2174	1.6057	1.4783	—	—	1.3492	1.4751	1.0042	1.2881
	1.2984	0.7984	0.9121	0.9730	1.4395	1.0078	—	—	1.7636	1.2663	0.9761	0.9904
Sri Lanka	—	—	1.0873	1.1759	0.9753	1.4325	0.9641	0.7112	—	—	1.0524	1.0516
	..	..	1.5946	0.9166	0.8774	1.1517	1.7012	0.7746	—	—	1.6748	0.8666
	1.2054	1.2165	0.9296	1.2675	1.3225	1.4056	1.2658	1.1942	—	—	1.0813	1.2455

Sources: [24, various issues] [22, various issues] [23, various issues].

Note: .. = Not available.

TABLE VII  
INDEX OF OVERALL COUNTRY BIAS: 1965, 1975, AND 1985

From \ To	Bangladesh		India		Nepal		Pakistan		Sri Lanka		SAARC Region	
	Export	Import	Export	Import	Export	Import	Export	Import	Export	Import	Export	Import
Bangladesh	—	—	3.8239	3.6207	22.0654	0.0000	16.7257	3.9407	0.1698	1.6933	6.5230	3.4148
India	—	—	—	—	54.8079	63.6144	2.0026	4.0118	6.3888	1.2833	5.5954	4.1380
1975	..	..	—	—	104.1600	66.4202	0.0000	3.1619	11.4580	0.0000	10.0527	4.2563
1985	3.4136	2.6652	—	—	48.4605	41.8229	0.4492	1.6567	2.4996	0.6012	3.0235	2.7670
Nepal	—	—	57.9561	60.6891	—	—	0.0000	0.0000	0.0000	0.0000	39.9992	38.2378
1975	..	..	58.8837	85.8342	—	—	17.0693	0.0000	0.0000	0.0000	16.7467	56.4788
1985	0.0000	23.2089	40.1748	41.2446	—	—	4.1571	0.1544	20.5785	0.0000	24.6246	29.0535
Pakistan	—	—	4.2450	2.5073	0.0000	0.0000	—	—	15.7708	2.6721	4.4108	2.4546
1975	..	..	2.0592	0.0142	0.4481	20.0288	—	—	23.2189	24.2383	6.7612	3.3889
1985	13.5652	17.4456	1.5938	0.2751	0.1609	4.4076	—	—	9.0185	5.8438	4.5421	1.4365
Sri Lanka	—	—	1.2231	7.4517	0.0000	0.0000	2.8932	13.5172	—	—	1.6215	8.4345
1975	..	..	0.0599	5.7545	0.0000	0.0000	20.0045	41.4343	—	—	4.6814	11.6657
1985	5.3427	0.1625	0.5609	3.2753	0.3802	22.3680	5.4731	10.2067	—	—	4.4501	4.2958

Sources: Same as for Table VI.

Note: .. = Not available.

where  $X_i^k$  is the export of the product  $k$  by country  $i$ ,  $X_i$  is total exports of country  $i$ ,  $X_w^k$  is the world exports of product  $k$ ,  $X_w$  is world exports,  $M_i^k$  is the import of product  $k$  by country  $i$ ,  $M_i$  is total imports of country  $i$ ,  $M_w^k$  is world imports of product  $k$ , and  $M_w$  is world total imports. A value greater (less) than unity for the RCAX and RCAM indicates a strong comparative advantage (disadvantage) for the economy in the export/import of a given commodity.

The calculated values of RCAX indices for the member countries for the years 1965, 1975, and 1985 show that the countries possess comparative advantage in "food items," "agricultural raw materials," and "other manufactures." The magnitude of comparative advantage in "food items" is the highest for Sri Lanka followed by Nepal and India; in "agricultural raw materials" it is highest for Pakistan followed by India and Sri Lanka; and in "other manufactures" it is highest for Bangladesh followed by Pakistan and India. However, all the countries have a strong comparative disadvantage in fuel, chemical products, and in machinery and equipment, but the magnitude of comparative disadvantage is the lowest for India, followed by Pakistan (Table VIII). This implies that member countries, in general, have a comparative advantage in labor-intensive rather than capital-intensive goods. The RCAX over the period 1965-85 shows that there has been an increase in comparative advantage in "food items," except for Sri Lanka and in "other manufactures" for all the countries except for Bangladesh. The RCAX has decreased in "agricultural raw materials" for Bangladesh, Nepal, and Sri Lanka. Similarly the degree of comparative disadvantage has decreased in "fuels" and in "machinery and equipment" for Bangladesh, India, and Sri Lanka, and in "chemicals" for India and Sri Lanka. The RCAM has recorded a decline in "food items" for Bangladesh, India, and Sri Lanka, and in "other manufactures" for Bangladesh and Sri Lanka. It registered an increase for all the countries in "agricultural raw materials," "fuels" (except for Nepal), and in "chemicals" (except for Sri Lanka).

The changing pattern in the RCAX and RCAM is mainly due to the extensive use of government interventionist policies such as export subsidies, currency devaluation, duty drawback, state trading monopolies, exchange restrictions, high tariffs, restrictive quota licensing, and deployment of indirect taxes on imports. These have been employed to reallocate resources in different sectors of the economy and enhance competitiveness at the international level in some industries. These policies are relatively more concentrated in the import-substituting sector than the export sector as the divergence of the RCAMs from unity is less than that of the RCAXs [27] in most of the cases. As a result member countries have resorted to import-substitution policies, for example, in light and other manufactures instead of importing from other relatively more developed members of the region as depicted by decreasing RCAM. Besides this, a significant increase in the RCAX and decrease in RCAM in "food items" for Bangladesh and India during this period indicates the adoption of deliberate policies aimed at achieving self-sufficiency in "consumable items." Thus one can conclude that the policies of import substitution in light and other manufactured goods and self-sufficiency in consumable items through direct government intervention are chiefly responsible for distorting the structure of relative cost and prices and for the misallocation of resources, creating a network of disincentives to efficient production and export

TABLE VIII  
REVEALED COMPARATIVE ADVANTAGE (RCA) INDICES: 1965, 1975, AND 1985

	Food Items		Agricultural Raw Materials, etc.		Fuels		Chemical Products		Machinery and Equipment		Other Manufactures		
	RCAX	RCAM	RCAX	RCAM	RCAX	RCAM	RCAX	RCAM	RCAX	RCAM	RCAX	RCAM	
Bangladesh	1975	0.5490	3.9858	1.8121	0.8448	0.0046	0.3893	0.0805	1.1514	0.0086	0.3487	3.9498	0.5159
	1985	1.7418	2.3576	0.0695	1.4107	0.1361	0.8866	0.0195	1.4928	0.0508	0.9702	3.3963	0.4571
India	1965	1.8489	1.2651	0.9261	1.1665	0.1248	0.5547	0.0020	1.2569	0.0537	1.5841	2.3743	0.2937
	1975	2.8707	2.2898	1.3994	1.1330	0.0459	1.3603	0.3827	0.2988	0.2612	0.6543	1.9008	0.3382
	1985	2.4639	0.8179	1.0569	1.6798	0.3229	1.4180	0.4569	1.8527	0.2003	1.1014	2.5272	0.3830
Nepal	1965	3.3763	1.2474	1.3403	0.5244	0.0021	0.9733	0.0631	0.7468	0.0012	0.2812	0.6553	2.6845
	1975	4.7285	1.1976	1.8784	0.2752	0.0092	0.5521	0.0158	1.5106	0.0089	0.5661	0.6094	2.4429
	1985	3.4101	1.3592	0.5665	0.9321	0.0000	0.6186	0.4461	1.7021	0.0000	1.0409	2.9398	1.0167
Pakistan	1965	0.5168	1.1590	2.7335	0.8735	0.0986	0.3656	0.1171	1.5059	0.0357	1.6388	1.8522	0.6966
	1975	1.8806	1.7573	1.4178	0.1608	0.0552	0.9056	0.1640	1.3200	0.0229	0.8361	3.0973	0.5301
	1985	1.6826	2.1251	1.8370	1.0589	0.0770	1.5058	0.4316	1.6893	0.0101	1.6494	3.0115	0.3246
Sri Lanka	1965	4.7272	2.3804	0.9740	0.3633	0.0000	0.8954	0.0477	1.6740	0.0008	0.5192	0.0257	1.1665
	1975	4.8524	3.8307	1.8268	0.2233	0.0025	0.8604	0.2690	1.3943	0.0093	0.3071	0.0991	0.5647
	1985	4.6107	1.9403	1.0433	0.5820	0.5862	1.1653	0.0997	1.1596	0.0187	1.0973	1.5505	0.7076

Sources: Same as for Table VI.



performance. This in turn has brought about the low level of actual complementarity and intra-regional trade.

The RCAX at three-digit SITC level for the major commodity groups in which the region's countries enjoy comparative advantages and disadvantages in the external markets have also been calculated in order to identify the products in which mutual expansion of trade could be expected with the help of trade liberalization on a "product by product" basis and through bilateral and multilateral negotiations. The major products in which bilateral/multilateral trade can be expanded on the basis of the RCAX are listed in Table IX. It is interesting to note here that large numbers of these commodities, e.g., tea and mate, jute, leather, woven textiles, fabrics, etc. from Bangladesh; tea and mate, spices, tobacco, iron-ore concentrates, iron-steel castings, cotton fabrics, textile articles, perfumery cosmetics, medicinal pharmaceutical products, steam boilers, textile leather machinery, electric distribution equipment, road motor vehicles, cycles, etc. from India; rice, jute, leather, floor covering, dyes n.e.s., tanning products from Nepal; rice, honey and sugar, spices, seeds, cotton, textile yarn, textile articles, fertilizer, textile leather machinery, pumps, etc. from Pakistan; fruits and nuts, tea and mate, natural rubber, vegetable fiber, natural abrasives, rubber articles, essential oil perfumes, etc. from Sri Lanka were exported outside the region in 1985, and the very same products were imported by deficit countries from outside the region during the same year largely because of high tariffs, non-tariff barriers, and other discriminatory practices adopted by member countries to each other's products [22, 1985 edition].

The major conclusion emerging from the foregoing analysis is that the fundamental cause for the existing low level of intra-regional trade is the presence of the low degree of complementarity in the production and trade structures of the countries of the region. This is largely the direct outcome of the imposition of trade and other barriers by the member countries on their intra-regional trade and the following of the import-substitution and self-sufficiency policies in light manufactured goods and consumable items in order to attain self-sustaining growth or self-support as soon as possible. This conclusion implies that the countries of the region can increase mutual trade substantially if they immediately make prodigious and outstanding efforts to (1) expand and explore potential complementarity through gradual market opening, (2) introduce a phased programme to reduce tariffs and non-tariff barriers on a "product by product" basis and to reduce "other interventionist" measures in the different sectors of their production structure, (3) conclude bilateral and multilateral long-term commodity agreements between the deficit and surplus countries within and outside the region, (4) set up "regional industries" involving two or more countries, (5) introduce government procurement preferences vis-à-vis the outside world (as has been done by ASEAN), and (6) establish regional trade information and promotion centers in order to identify the prospective buyers and their demands in relation to technical standards, quality, design, and payment arrangements. The countries of the region also need to harmonize their production, investment, and export plans at the regional level, keeping in view their actual and potential comparative advantages and disadvantages and the long-term economic interest of the less developed areas of the region.

TABLE  
IDENTIFICATION OF PRODUCTS FOR BILATERAL/

Commodity Groups	Bangladesh	India
Food items	Fish (fresh, chilled, frozen); Fish (salted, dried, smoked); Shellfish (fresh, simply preserved); Vegetables (fresh, simply preserved); Tea and mate	Shellfish (fresh, frozen); Rice; Fruits, nuts (fresh, dried); Coffee substitutes; Tea and mate; Feeding stuffs for animal; Spices; Tobacco manufactured
Agricultural raw materials, etc.	Jute	Silk; Cotton; Jute; Stone, sand and gravel; Other crude materials; Iron and steel casting
Other manufactures	Leather; Textile yarns; Textile articles; Other woven textile fabrics; Men's outer wear; Women's outer wear; Undergarments	Leather; Leather, etc. manufactured; Cotton fabrics woven; Other woven textile fabrics; Textile articles; Floor covering; Pearl, precious stone; Travel goods; Women's outer wear; Undergarments; Textile clothing; Developed cinema; Works of arts
Fuels	Petroleum products	Petroleum products
Chemical products	Alcohol and phenols; Other inorganic chemicals	Inorganic chemicals; Synthetic dye; Dyes n.e.s., tanning product; Essential oil perfumes; Perfumery cosmetics; Pesticides
Machinery and equipment	Engineering equipment; Other machinery for special industries; Metal working machine tools; Mechanical handling equipment; Nonelectrical machine parts; Ship and boats	Steam boilers and auxiliary plants; Internal compress piston engine; Agricultural machinery excluding tractors; Textile leather machinery; Printing book-binding machine; Food machinery; Other machinery for special industries; Metalworking machine tool; Metalworking n.e.s.; Pumps for liquids; Pumps n.e.s., centrifuge; Electrical distributing equipment; Electrical model X-ray household-type equipment; Electrical machinery; Road motor vehicles; Motor vehicles cycle, etc.; Tractor non-motor vehicles

Sources: [22, various issues] [23, various issues].

## IX

## MULTILATERAL TRADE LIBERALIZATION

Nepal	Pakistan	Sri Lanka
Live animals; Butter; Rice; Wheat; Vegetables simply preserved; Spices; Feeding stuffs for animal; Seeds for other fixed oil; Fixed vegetable oil	Fish (salted, dried, smoked); Shellfish (fresh, frozen); Rice; Vegetables (prepared, preserved); Honey and sugar; Spices	Fruits, nuts; Tea and mate; Spices; Fixed vegetable oil
Wood rough; Jute; Stone, sand and gravel; Crude animal materials; Crude vegetable materials	Silk; Cotton; Wool; Crude animal materials; Crude vegetable materials; Pig iron	Natural rubber; Fuel wood; Vegetable fiber; Natural abrasive; Other crude materials; Crude vegetable materials
Leather; Other woven textile fabrics; Floor covering; Special fabrics, textile products; Women's outer wear; Undergarments; Works of arts	Leather; Textile yarns; Cotton fabrics; Textile articles; Floor covering; Cutlery; Women's outer wear; Undergarments; Undergarments knitted; Textile clothing; Headgear non-textile; Medical instrument; Toys	Rubber articles; Textile articles; Pottery; Pearl, precious stone; Men's outer wear; Women's outer wear; Undergarments; Outer wear knitted; Undergarments knitted; Textile clothing access
—	Petroleum products	Petroleum products; Residual petroleum products
Dyes n.e.s., tanning product	Fertilizer	Alcohols and phenols; Essential oil perfumes; Miscellaneous chemical products
—	Rotating electric plant; Textile leather machinery; Food machinery; Other machinery for special industries; Heating, cooling equipment; Electric power machinery; Electric distribution equipment; Ship and boats	Metalworking machine tools; Pumps for liquids; Electric power machinery

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