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# Is South Asian Economic Cooperation Sustainable?

*Strategy for Meaningful Transition from SAPTA to SAFTA*

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## I. Introduction

Economic cooperation between South Asian countries has been consolidating rapidly over a period of time, and the region has entered into a new phase of cooperation following signing of the South Asian Free Trade Area (SAFTA) in January 2004. There has been scepticism about the sustainability of the regional caucus, citing the internal contradictions in the political sphere and also the poor economic performances of the regional partners. There is discussion in the literature that South-South regional trading arrangements (RTAs) have high degree of mortality rate as compared to North-North and North-South type of RTAs. If such an assertion is true, the reservations raised about the sustainability of SAFTA need to be examined.

It may be noted that intra-regional trade in South Asia is picking up substantially following implementation of the South Asian Preferential Trade Area (SAPTA) since 1995. Under the SAPTA process, the initial Rounds were, rather, more populist whereas credible initiatives were noticed in the latter Rounds of SAPTA. If the changing perception of the regional partners is an index of shifting economic and political climate in the region, further trade liberalisation under both SAPTA and SAFTA processes would result in further enhancement of welfare in the region. For achieving speedy progress in the region through regional initiatives, substantial benefits of the trade liberalisation under SAFTA should be realised in the early phases of liberalisation, and less important sectors may be back loaded in the process of further opening up of the region.

In this paper we are attempting to examine the structure of alternative strategies, which would bring substantial benefits to the region in the early Rounds of SAFTA negotiations. We have assumed that complete liberalisation of the goods sectors may be achieved in three Rounds of SAFTA Negotiations. We postulate that credible negotiation strategy based on liberalising the most important sectors first may yield better welfare effects to region than populist approach of choosing less important sectors first and keeping most important sectors for liberalisation at the end. The paper will also present the order of the sectors to be considered for trade negotiations in different Rounds of SAFTA negotiations to optimise welfare gains of the region using a CGE model.

It may be noted that India is the largest trading partner country in South Asia. Most of the countries in the region are slowly getting into the regional process and attempting to form close economic cooperation with number of RTAs/BTAs. India is also active in the regional process too. If SAFTA process does not pick up within the stipulated time frame, there are possibilities that regional countries may negotiate with extra-regional grouping for trade liberalisation. In the present study we are analysing the cost of not implementing SAFTA and India adhering to the regional process and having rapid trade liberalisation with extra-regional RTAs/BTAs.

Taking in to consideration the recent developments in the South Asian region, several issues may be raised in order to understand the future prospects of cooperation in the region. How credible is the SAFTA in enhancing global welfare? How intensely the engagement of regional member countries with extra-regional arrangement would affect the SAFTA process? What could be the possible impact on India if SAFTA is implemented after completion of her bilateral engagement with other regional arrangements? How the implementation of SAFTA would affect trade composition of the region? How other regional

members of South Asia are likely to be affected if implementation of SAFTA is delayed? How effect is the sequencing of sectoral liberalisation in achieving faster gains from the SAPTA process? An attempt has been made to examine some of these issues in the paper.

In order to examine the efficacy of various rounds of SAPTA, the study attempts to link the contents in the regional PTA with other trade related issues. This would, in fact, through light on the prospects of trade liberalisation in the region. The scheme of the paper is as follows. The intra-regional trade flow is discussed in Section II. An overview of the implications of SAPTA on regional economies is presented in Section III. A brief discussion on model of the study is presented in section IV. The empirical findings of the paper are analysed in Section V. The last Section concludes the paper.

## **II. Intra Regional Trade Cooperation in the Region**

Most South Asian countries resorted to comprehensive economic reforms during the 1990s. Besides, number of bilateral and regional agreements were signed and implemented on a priority basis. The switching of policy regime in these countries has significantly contributed to outward orientation of these economies as well as regions trade under the regional process.

The present level of intra-regional trade is low, but it increased significantly in the 1990s. Trade within the region increased at a faster rate as compared to that of the world. Further intra-regional imports have been growing more rapidly than exports. However, the growth of regional trade is accompanied by high degree of instability (RIS, 2002).

Intra-regional trade performance of individual countries indicates that both exports and imports grew significantly during the last decade. During the period 1990-2000, regional trade of most of South Asian countries have made four-fold increase. The results indicate that there was a down turn in the trade activities of the region in 1991 and 1999. Except for Maldives, other countries faced marginal set back either in their exports or imports or both during these years. However, in the latter half of the 1990s, regional trade has not only been increasing but also becoming highly volatile. The instability in regional trade has an adverse impact on the regional trade balance.

The region has witnessed perpetual intra-regional trade deficit during the period. The trade deficit of the region increased between four to ten times during the period 1990-2000.

During the last decade, India continued to have favourable trade balance with the region. Pakistan also enjoyed the similar status except for a few years in the late 1990s. On the other hand, Bangladesh, Maldives, Nepal and Sri Lanka have significant level of trade deficit with the region. The nature of trade deficit in these countries is quite different from each other. In case of Maldives and Nepal, trade deficit with the region increased by around ten times during 1990-2000, but their base-level trade deficit was very low. In 1994, the level of trade deficit of Bangladesh and Sri Lanka was almost similar. During the latter half of the 90s, Sri Lanka's trade balance continued to remain unfavourable, but showed a declining trend during 1996-99. In 2000, it again started rising but the magnitude of trade deficit was much lower than that of 1996 level.

On the other hand, the regional trade deficit of Bangladesh more than doubled during the same period. Exports from Bangladesh to the region constitutes about 2-3 per cent of its global exports, and the corresponding figure for imports is between 7 to 17 per cent in the 90s. The trade deficit of Bangladesh with the region constitutes between 10 to 33 per cent of its total trade deficit with the world. The bilateral trade performances of regional partners indicate that Bangladesh has bilateral trade imbalances with most of the regional partners during the last decade. In the mid-90s, Bangladesh had favourable trade with Nepal, but the trend is reversed in the latter years. As far as country's trade balance with Sri Lanka is concerned, it was either balanced or negative during the same period.

South Asia has become an important trade destination of India. Exports from the country to region constitutes between 3 to 6 per cent of its global exports, whereas import from the region is relatively lower than exports. India has maintained favourable balance of trade with the whole of South Asia. The level of positive trade balance is quite significant in case of Bangladesh and Sri Lanka; and moderate with Nepal and Maldives. However, India's bilateral trade balance remained adverse with Bhutan. Up to 1994, India had positive trade balance with Bhutan, but the trend reversed in the subsequent years due to significant rise in Bhutanese exports to India. The trade surplus with Bangladesh is however subject to fluctuations and that with Nepal increased by four times between 1995 and 1996, largely due to its trade and transit treaty with India. In

the subsequent years, the magnitude of trade imbalances with India started receding.

Pakistan exported 3 to 5 per cent of its total exports to the South Asia and imported between 2 to 4 per cent of the total imports from the region in the last decade. The most important export destinations of Pakistan in the South Asian region are Bangladesh, Sri Lanka and India. These three countries absorb more than 95 per cent of country's exports to the region. India's share in the total imports of Pakistan from the region reached 72.4 per cent in 1996, and started declining to touch the rock bottom of 42.8 per cent in 2000. The declining share of Pakistan's imports from India has resulted in surge in Sri Lanka's exports to Pakistan in a significant manner. Pakistan continued to maintain favourable trade with the region, except for that in 1996-99. In 2000, country's adverse trade balance with the region increased to more than 7 per cent of its total trade deficit with the world.

Sri Lanka has been depending on the South Asian region more on imports than exports. The regional exports of Sri Lanka are about 2 to 4 per cent of its total exports. Though Sri Lanka's import from the region is very high as compared to other non-LDCs of the region, country's dependence on the region has been gradually declining in recent years. Sri Lanka's largest trading partner is India in the region, and other important partners are Maldives, Pakistan, Bangladesh and Nepal. The magnitude of country's trade deficit with the region is much larger than that with global trade in the 1990s. With the reduction of imports from the region, the trade imbalances with the region have declined



significantly. The bilateral trade balance of the country remains favourable with Maldives and Bangladesh; and continues to be adverse with other South Asian countries in the region.

The economy of Maldives is highly dependent on regional trade. Its exports depend on the region to the extent of 13 to 25 per cent of its global exports whereas dependence for imports varies between 10 to 21 per cent in the 90s. The trade imbalance of the country is almost proportionate to its regional trade.

The most important trading partner of Maldives is Sri Lanka, and the trade deficit with the country is increasing alarmingly in recent years. With high dependence on India for its domestic import requirements, trade deficit with India, is high in the late 1990s. Maldives' trade with Pakistan shows no significant improvements in the 1990s.

Nepal's dependence on South Asia has increased substantially following the Indo-Nepal Trade and Transit Treaty in 1996. The share of Nepal's regional exports to total export increased from 9.3 per cent in 1995 to 36.5 per cent in 1998. Similarly the share of imports from the region jumped up from 17.5 per cent in 1995 to 33.1 per cent in 2000. India is the largest regional trading partner of Nepal, and other important trade partners are Bangladesh and Sri Lanka. The surge of economic ties with the region has widened its trade imbalances with the region. It has large adverse trade balance with India. With Bangladesh and Sri Lanka, the nature of trade balance varies from one year to another.

Trade Imbalance between India and some of the regional trade partners has been one of the most contentious issues in the regional process. It may be noted that India's export and import baskets are highly diversified as compared to smaller partners of the region. Moreover, India's scale of production is high, partly due to its vast domestic market and partially to meet export requirements at the global level. Therefore, production and export bases of India, which are larger than other regional trade partners, are effectively used by the regional countries to overcome their short term problems concerning production inadequacies in their respective domestic economies. During a completely free trade regime, the production deficient countries are likely to face chronically trade imbalances. Attempts should be made to augment exports to trade-surplus country to reverse the trend of the trade balance. The trade surplus countries should also devise some suitable mechanism to compensate the trade deficit countries and to support them in augmenting their export capabilities.

### **III. Impact of SAPTA on Regional Economies**

In the first three Rounds of SAPTA, 5500 products were liberalised and LDCs of the region are given more concessions than the non-LDCs. India has offered maximum number of 2927 products in the first three Rounds of SAPTA. The coverage and depth of tariff cuts vary across countries in the region. The regional process is likely to be strengthened with the implementation of SAPTA IV and SAFTA.

The volume of India's import trade under SAPTA I was very low, but it increased sharply in the subsequent two Rounds. In case of small countries,

India's volume of imports under SAPTA was much higher than other non-concessional trade, which are falling outside the purview of SAPTA. Though India's preferential imports under SAPTA are rising very fast, the share of such imports in total imports of the region is declining steadily. This shows growth of India's normal imports with the regional partners. This may be partly due to bilateral Free Trade Agreements with some regional economies. The implementation of bilateral FTA has led to surge of bilateral investment activities in the region. This may be a reason for augmented trade activities of India with regional partners outside the SAPTA process.

India's preferential import basket under SAPTA is quite diversified. Some of the important import segments are vegetable products, chemical and textiles. It has been importing significant volume of other products such as prepared foodstuffs, plastic products, base metals and mechanical appliances from regional countries. Sizeable amount of such imports fall under the broad categories of primary and resource based agro-manufactured products. Other important imports of India are low (textile and footwear products) and medium technology products.

India's export to the region is also very significant but a very small proportion of preferential exports fall under the SAPTA as compared to total exports to the region. Tariff preferences granted by regional partners to India in the Third Round is much lower than the earlier two Rounds. India's exports mostly comprise of processed food, chemical, textiles and base metals. Other important product categories for exports are vegetable products, minerals and

vehicles. A large proportion of India's exports under SAPTA is in the category of primary, resource based agro-manufactures, medium technology manufactures and high technology manufactures (other than electronic and electrical products).

The region has substantial potentials for trade and investment. A study (Mohanty, 2003) rejects the hypothesis that South Asian countries competes among themselves to export similar kind of products to the world market and therefore, the level of regional trade is very low. The study found that there is significant level of trade potential in the region to promote intra-regional trade. Complete harnessing of export potential of some important sectors may significantly improve the prospects of intra-regional trade. It is estimated that the trade potential of the region is more than six times than the present level of intra-regional trade. A freer economic environment under SAFTA may support in harnessing the trade potential of the region.

#### **IV. Model**

For the present analysis, we have used a multi-regional and multi-sectoral computable general equilibrium model. The model has 14 broad sectors covering most of the economic activities of the global economy. Taking into consideration the analytical requirement, the global economy is broadly grouped into 15 countries/regions including an sector representing the rest of the world. The database of the model is primarily drawn from the GTAP database, Beta version 6. The additional data requirement is supplemented by data from other sources such as Direction Trade Statistics, World Development Indicator, PCTAS; etc. The aggregated regions of the model are given below:

SI No	Sector	SI No	Sector
1	China	9	ASEAN
2	Korea	10	ANDEAN
3	Singapore	11	MECOSUR
4	Thailand	12	SACU
5	Bangladesh	13	NAFTA
6	India	14	EEA
7	Sri Lanka	15	ROW
8	Other SA		

The primary objective of the study is to examine the implication of the FTA process on the regional economies of South Asia. The regional economies are also strongly into regional and bilateral processes with other regions/countries of the world. The study is also looking into these aspects. We have observed that the recent GTAP database has covered three out of seven countries of the region and other countries are bundled into another category of 'other South Asian' countries. In the region, India has a significant role as the largest economy in the region and strong economic linkages with the regional economies. India's economic performance during the last one decade has been highly commendable as discussed earlier. In this background, India's economic policies towards regionalism have significant implication for the region. It may be noted that, India is actively into the regional process in recent years including the SAARC process. The regional political atmosphere is consistently improving during the last few years. The region is, in fact, at a crossroad. It is difficult to anticipate whether India's trade liberalisation will pick up with the SAFTA process or with other regions. For this reason, we have taken certain RTAs/countries with whom India has agreed to have some form of economic arrangement in the recent years.

South Asian region is a heterogeneous region where structural characteristics of the regional economies differ significantly among them. In the external sector, the basket of exportable products differs significantly from one country to another. Taking into account the exports<sup>1</sup> of each regional country at 6-digit HS and concord them with GTAP sectors, we have identified the GTAP sectors, which are critical for the region in 2002. Based on the trade flows in 2002, 14 sectors are formed for the present study. While the agricultural sector is represented by three sectors, the services sector is characterized by three sectors in the model. The manufacturing sector is broadly covered through eight sectors. The mining sector is taken as a part of the manufacturing sector.

The aggregated sectors of the present model are as follows:

Sl. No	Sector	Sl. No	Sector
1	Vegetable & Fruits	8	Metals
2	Other Crops	9	Motor & Transport
3	Animal Products	10	Machinery
4	Mining	11	Other Manufactures
5	Prepared Food	12	Energy Services
6	Textiles & Apparel	13	Financial Services
7	Petroleum & Chemicals	14	Other Services

It may be noted that most of the important sectors are modelled separately for analyzing policy simulations.

The theoretical assumptions of the model are similar to that of standard, multi-regional CGE model. The underlying equation system of the model includes two different sets of equations. One part covers the accounting relationships,

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<sup>1</sup> PCTAS, UNCTAD, database provides bilateral trade flow for number of countries. We have used PTAS, 2004 for examining trade flow data for the regional economies. For some economies, such information are not provided by the database. For those economies we have generated bilateral trade data by taking information from around 150 countries, which are reported by PCTAS, 2004.

which ensure that receipts and expenditures of every agent in our model economy are balanced. The other part of the equation system consists of behavioral equations, which is based on microeconomic theory. These equations, in fact, specify the behavior of optimizing agents in the economy, such as demand functions.

There are three principal factors of production in the model, namely, unskilled labor, skilled labor and capital. These factors are not aggregated in the model. It is assumed that perfect competition is prevailing in most the regions. The market structure is generic in the sense that same type of market structure prevails in all the 14 countries/region.

Consumers and producers are assumed to use a two-stage procedure to allocate expenditure across differentiated products. In the first stage, expenditure is allocated across goods irrespective of country of origin or producing firm (see Table 1). At this stage, the utility function is taken to be Cobb-Douglas and the production function requires intermediate inputs in fixed proportion. In the second stage, expenditure on monopolistically competitive goods is allocated across the competing varieties. However, in case of perfectly competitive goods, where individual firm supply is indeterminate, expenditure on each good is allocated over the industry as a whole. The aggregation function in the second stage is a Constant Elasticity of Substitution (CES) function.

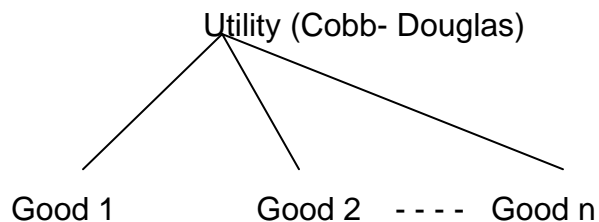
The production function is separated into three stages. In the first stage, intermediate input and primary composite of capital and aggregate of skilled and

unskilled labor are used in fixed proportion to output<sup>2</sup> (see Table 2). In the second stage, capital and aggregate of skilled and unskilled labor are combined through a CES function to form the primary composite. In the third stage, skilled and unskilled labors are combined through a CES function to form the aggregate of skilled and unskilled labors. In the monopolistically competitive sectors, additional fixed inputs of capital and labor are required. It is assumed that fixed capital and fixed labor are used in the same proportion as variable capital and variable labor so that production functions are homothetic. Details about the production function used in the model are discussed in Chart 2 Presented below:

## CHART 1: CONSUMER BEHAVIOUR

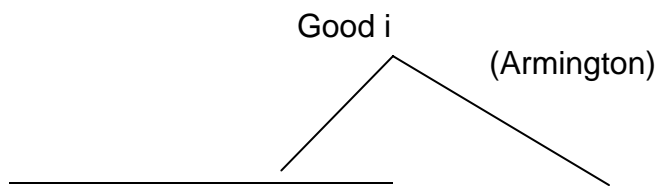
(Utility Maximiser)

### Stage 1



### Stage 2

#### Case A: Market Structure Perfect Competition



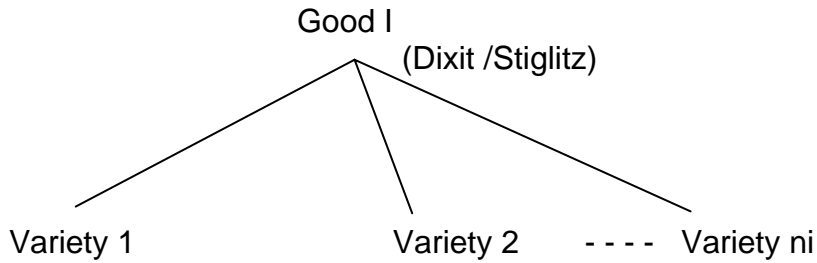
<sup>2</sup> Intermediate inputs include both domestic and imported varieties.



Imported good

Domestic Good

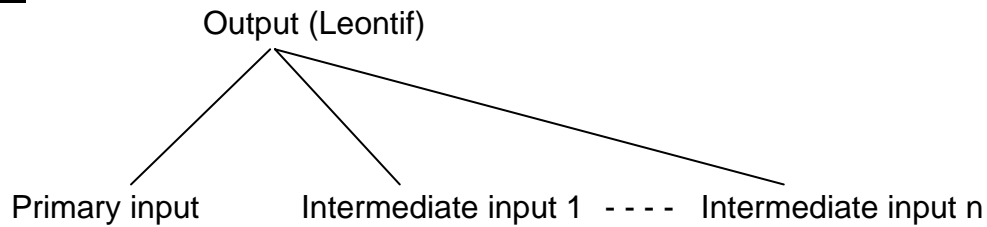
Case B: Market Structure: Monopolistic Competition



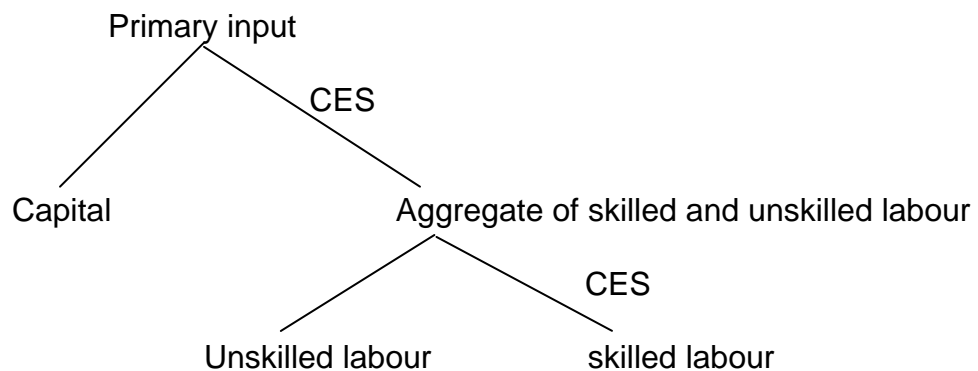
**CHART 2: PRODUCER BEHAVIOR**

(Cost Minimizer)

Stage 1



Stage 2: Primary Input



Stage 3: Intermediate Input

Same as in consumer stage 2

Total supply of factors of production (namely unskilled labour, skilled labour and capital) is assumed to remain fixed in the economy since the focus is on the inter-sectoral allocation of resource. The unskilled labour is assumed to be perfectly mobile across sectors within each country. Returns to unskilled labor are determined to equate factor demand to an exogenous supply of the same which is assumed to remain fixed. In the base run, the similar equilibrating mechanism is assumed to hold for the other two factors of production, namely skilled labor and capital.

World market determines equilibrium prices such that all markets clear. Total demand for each firm or sector's product must equal to total supply of that product.

The policy inputs in our model are basically the import and export tariff equivalents of trade barriers that are currently applied to the bilateral trade of the countries/region in the model.

The revenues or rents from import and export tariff equivalents are assumed to be redistributed to consumers in the tariff-levying country and are spent like any other income.

The model is implemented and solved using GEMPACK.

## **V. Empirical Results**

The implications of SAFTA on the regional economies of South Asian economies has been examined with the assertion that the region has substantial trade potential which is not yet untapped effectively. We have assumed that

perfect completion is uniformly prevailing in all the three sectors. The paper has focused that the South Asian region is strongly into the regional process. Taking into account the political environment in the region, two options are left for the regional partners if they continue to be in the regional process. The first option is that liberalisation under the SAFTA process should be given utmost importance and credibility needs to be maintained in liberalising the most important sectors at the early stages of liberalisation. Alternatively regional countries may chose alternative regional arrangements for bilateral trade liberalisation and follow the regional approach.

In the present study three scenarios are drawn to analyse the possible course of economic cooperation between regional partners. In Scenario I, we have assumed a situation like free trade area where complete trade liberalisation is envisaged covering both tariff and non-tariff barriers. In Scenario II, the South Asian countries have chose alternative regional approach and have chosen to terminate the SAFTA process. For modelling this scenario, we have taken some regional initiatives that India has taken up recently with number other regional groupings outside South Asia.

In Scenario III, we have assumed that India has implemented FTAs with different RTAs, outside the South Asian region, at the first instance and then has pursued SAFTA to meet the regional commitment. In these three different scenarios, we are trying to examine the manner in which regional countries can benefit from regional economic liberalisation and assess the relevance of SAFTA for the South Asian region.

## Regional Welfare Gains

In compatible general equilibrium analysis, the main issue centres around the welfare gains for the region and the world as a whole. The welfare gains as a result of economic liberalisation may be due to various policy initiatives. It is a composite macro indicator reflecting combined effects of several macro-variables. The trade liberalisation policies affect reallocation of productive factors across sector owing to surge in demand of tradable sectors within the region. In the process, allocative efficiency of the existing factor endowments alters and so also their relative real prices. Even, such changes are also seen in different production sectors. The surge of exports as a result of regional trade liberalisation, may generate additional pressure on certain tradable sectors and there are possibilities of reduction of demand for some non-tradable sectors in each economy because of economic policy changes at the regional level. The implications of such restructuring are transmitted in the calculation of welfare gains. The trade liberalisation is ultimately reflected in expansion of trade within the region. Because of various factors production condition in each country undergo a significant change. Such structural changes may have its impact on the competitiveness of each country's exports.

Table 1: Table 1: Welfare Effect of SAFTA on Regional Partners

(Million US\$)

	Scenario I	Scenario II	Scenario III
China	-10.53	262.42	250.51
Korea	-12.26	213.68	202.17
Singapore	-14.90	264.41	252.04
Thailand	-8.00	109.41	102.36
Bangladesh	8.34	-2.99	10.92
India	344.64	2749.67	3045.04

Sri Lanka	51.47	26.71	51.37
Other SA	31.43	-49.54	16.93
ASEAN	-12.50	539.73	528.57
ANDEAN	1.12	151.75	152.95
MECOSUR	-5.82	152.13	146.68
SACU	-0.63	337.08	337.12
NAFTA	-19.94	-323.74	-334.4
EEA	-38.15	-486.24	-515.46
ROW	-92.39	-698.7	-776.37

Note: Scenario I: SAFTA, Scenario II: Regional Process without SAFTA and Scenario III: Simultaneously pursuing all regional initiatives including SAFTA

The welfare implications of SAFTA on regional countries and other regions including rest of world are presented in Table 1. The results indicate that SAFTA is likely to enhance welfare gains of each member countries in the region and also the overall welfare position of South Asian region. It is important to note that SAFTA is not only enhancing welfare gains of the South Asian region but also the world economy as a whole. Under scenario-I where SAFTA is implemented, the size of welfare gains term would be more than US\$ 436 million per annum. In terms of absolute gains from trade liberalisation, India is likely to gain more followed by Sri Lanka and Bangladesh. Despite the fact that some of the extra-regional groups are likely to be adversely affected, the magnitude of absolute gains for the global economy as a whole would be positive.

If SAFTA does not take off, and India continues with its liberalisation commitments with extra-regional RTAs/BTAs, the implications can be seen in Scenario-II. The results show that India is likely to benefit substantially in the second as compared to the first one. In the process Sri Lanka is likely to benefit from the alternative liberalisation process. However Bangladesh and rest of South Asia are not likely to gain from the alternative trade liberalisation approach

of India. Along with India other regional groupings/bilateral arrangements are likely to gain.

In scenario-III, India's likely gains from the regional approach are likely to increase further comparing to scenario-II. Simultaneous trade liberalisation under SAFTA and India's trade liberalisation with other RTAs/BTAs may reduce the magnitude of gains for some of the South Asian Countries as compared to scenario-III. In the same manner, simultaneous trade liberalisation may not benefit extra-regional grouping. This provides a lead that early and credible liberalisation may give an advantage to those who come early in the regional process. If SAFTA is implemented fast and in a more effective manner, the regional member countries are likely to gain.

#### *Effects of Liberalisation on prices of factors of production*

In this model, we have taken two factors of production, namely, labour and capital. Labour is further subdivided into skilled and unskilled labour to suit the specific requirements of the region. The overall effects of free trade area on different types of factors of production have been favourable in the sense that their real prices have gone up with economic liberalisation.

Table 2: Change in Market Prices of Factor Endowments

(in %)

pm	BGD	IND	LKA	XSA
<b>Scenario I</b>				
Land	-0.82	0.75	0.44	-0.84
UnSkLab	0.18	0.42	0.95	-0.08
SkLab	0.17	0.41	0.92	-0.03
Capital	0.11	0.42	0.97	-0.09
NatlRes	-0.75	0.57	2.54	-0.33
<b>Scenario II</b>				
Land	-0.10	-1.08	-0.39	-0.77

UnSkLab	-0.03	0.27	0.44	-0.28
SkLab	-0.03	0.49	0.48	-0.26
Capital	-0.04	0.26	0.42	-0.31
NatlRes	-0.14	-3.63	1.09	-0.56
<b>Scenario III</b>				
Land	-0.93	-0.48	0.36	-1.56
UnSkLab	0.15	0.64	0.92	-0.35
SkLab	0.14	0.85	0.90	-0.29
Capital	0.07	0.62	0.94	-0.39
NatlRes	-0.89	-3.17	2.44	-0.88

Note: Scenario I: SAFTA, Scenario II: Regional Process without SAFTA and Scenario III: Simultaneously pursuing all regional initiatives including SAFTA

The effects of regional liberalisation on real wage rates of unskilled labour are presented in Table 2. Under the scenario of free trade area (Scenario I), the real wage rate has gone up in number of South Asian countries. The impact on the real wage rate of unskilled labour is likely to decline if SAFTA process does not take off and India chooses to go with the liberalisation process with other extra-regional partners. In the third scenario, where simultaneous liberalisation is likely to take place, there is likely to have optimism in terms of increase in the wage rate of unskilled labour, but it would be much lower than the Scenario I.

The situation in case of skilled labour is different from unskilled ones. In Scenario I, the wages of skilled labourers are likely to rise in most of the countries in South Asia following implementation of SAFTA. Under scenario II, surge in wage rates for unskilled labour is likely to persist in India and Sri Lanka, whereas it is likely to decline in Bangladesh and other countries in South Asia. In the third scenario, the up trend in real wage is like to happen in most of the SAARC countries, but the magnitude of hike in wage rate is likely to decline in scenario-III as compared to scenario-I.

Trade liberalisation in the SAARC region may improve real rate of return of investment in the region. In Scenario I, all the countries in the region are likely to witness surge in the efficiency of investment. The level of increase in the rate of return of investment may vary from one country to the other. For example in SAARC countries, most of the countries benefit from the liberalisation but the impact will be felt more strongly in Sri Lanka and India. Countries like Bangladesh witness net increase in the real rate of return of investment but the net increase will be very low. Sizable number of countries in South Asia may witness positive but decline in rate of return on investment in the second scenario as compared to Scenario I (i.e. India and Sri Lanka). While countries like Bangladesh is likely to face decline in the real interest rate. In Scenario III, the rate of return of investment in number of South Asian countries is likely to increase as compared to Scenario II (i.e., India and Sri Lanka). In scenario-III, most of the South Asian countries are likely to gain in terms of increase in the real interest rate following trade liberalisation under SAFTA and extra-regional liberalisation.

### *Effects on Exports*

The results of export performances of the South Asian region indicate that the trade sector performance is like to improve if SAFTA is implemented much faster than others. Trade liberalisation under the SAFTA will be a positive sum game where all the regional partners are likely to improve their regional exports without facing any adverse effect on their exports. The results of different scenarios are presented in Table 3.



Table 3: Change in Regional Exports by Region

(in %)

	Scenario I	Scenario II	Scenario III
China	-0.01	0.20	0.19
Korea	-0.02	0.27	0.26
Singapore	-0.02	0.44	0.42
Thailand	-0.01	0.33	0.31
Bangladesh	3.18	-0.05	3.13
India	0.86	9.50	10.21
Sri Lanka	0.87	0.56	0.80
Other SA	1.07	-0.44	0.64
ASEAN	-0.01	0.36	0.35
ANDEAN	0.00	0.29	0.28
MECOSUR	-0.01	0.21	0.20
SACU	0.00	0.85	0.84
NAFTA	-0.01	-0.03	-0.04
EEA	-0.01	-0.03	-0.04
ROW	-0.01	-0.06	-0.07

Note: Scenario I: SAFTA, Scenario II: Regional Process without SAFTA and Scenario III: Simultaneously pursuing all regional initiatives including SAFTA

The results show that SAFTA process offers a distinct advantage to member countries in terms of improving export performance of individual countries. In Scenario I, some countries in South Asia like Bangladesh, are likely to register significant increase in their export performance following implementation of SAFTA. However SAFTA is likely to have very little advantage to India and Sri Lanka in improving their exports performances. Trade liberalisation under scenario II may have significant advantage for India. India's exports may increase by 9.5 percent per annum following implementation of trade liberalisation with the extra regional groupings. Under overarching trade liberalisation in scenario III, participating countries/regions will have positive impact on their trade performance. But gains for the individual South Asian

countries will be more in scenario I than in scenario III. The advantage in terms of augmenting exports in specific sectors is presented in Table 4.

Table 4: Change in Regional Export by Sector

(in %)

	Scenario I				Scenario II				Scenario III			
	BGD	IND	LKA	XSA	BGD	IND	LKA	XSA	BGD	IND	LKA	XSA
Veg & Fruits	3.50	5.11	7.76	-0.51	-0.24	4.18	2.25	-5.36	3.27	7.32	7.44	-4.78
Oth Crops	39.22	2.27	2.01	1.45	-2.56	14.82	1.76	1.15	36.87	16.04	1.95	2.64
Animal Prd	2.45	1.51	0.52	0.68	-3.34	3.99	0.74	0.92	-0.94	5.57	0.51	1.57
Mining	13.05	4.24	7.28	1.42	-3.64	19.39	4.41	0.14	9.43	22.69	6.25	1.57
Prep. Food	1.14	4.35	5.39	-0.17	-0.32	16.81	1.20	-12.78	0.84	20.53	4.94	-12.76
Textiles & App.	2.80	-0.42	-0.37	1.56	0.10	8.65	-0.68	1.12	2.90	8.36	-0.29	2.65
POL & Chemical	4.32	2.21	6.20	1.28	-0.62	19.14	4.35	-7.26	3.71	21.20	5.51	-5.94
Metals	14.89	1.69	70.22	1.12	-2.09	15.27	48.67	-15.54	12.83	16.69	56.41	-14.34
Transport	3.22	15.14	6.90	0.58	-1.08	16.49	1.63	0.94	2.40	29.95	6.85	1.73
Machinery	4.73	2.10	2.73	0.86	0.03	15.76	2.66	0.86	4.77	17.67	2.91	1.71
Other Mnuf	1.97	-1.15	0.24	0.76	0.16	6.01	1.47	1.13	2.14	4.88	0.29	1.87
Energy Services	0.57	-1.73	-2.89	1.30	0.28	2.54	-0.85	0.86	0.85	1.02	-2.71	2.14
Finan. Services	-0.19	-1.17	-2.37	0.22	0.08	-0.64	-1.11	0.80	-0.11	-1.67	-2.27	1.01
Other Services	0.06	-0.93	-1.90	0.27	0.11	0.20	-0.73	0.71	0.17	-0.61	-1.78	0.97

Note: Scenario I: SAFTA, Scenario II: Regional Process without SAFTA and Scenario III: Simultaneously pursuing all regional initiatives including SAFTA

The sectoral results indicate that early implementation of SAFTA may have most enduring effect on the regional economies than slowing down the process. It is shown in Table 4 that exports are likely to increase in sizable number of sectors in scenario I. Exports of Bangladesh are likely to increase in most of the broad trade sectors. Bangladesh may have surge in exports in sectors like crops including cereals, minerals, petroleum and chemicals, metal products and machinery. India is like to its export performance in sectors like fruits and vegetables, mining, prepared food, and motor and transport items. Sri Lanka is likely to likely to compete strongly in number of products, where India has an edge over other South Asian partners. Scenario II indicates that India is likely to improve its export performances in several sectors if it liberalises well

with other extra-regional partners in a reciprocal basis. But such trade liberalisation initiatives may adversely affect the export prospects of number of South Asian countries. In scenario III, India is likely to have an upper hand in improving its export performance in number of sectors. However South Asian countries may be affected adversely if SAFTA process is delayed and other regional groupings take advantage of the liberalisation process in South Asia.

## **VI. Conclusion**

During the last two decades, SAARC has emerged as a strong regional trading bloc in Asia despite of having sharp political differences between number of regional partners. Slowly regional countries have realised that steady progress in the economic cooperation between them can bring enduring solution to their political differences. There is steady progress in this direction, and member countries are committed to have strong economic ties between them.

So far the SAPTA process has concluded four Rounds successfully and the last round is to be implemented very soon. In the earlier Rounds of SAPTA, the extent of liberalisation was very slow, but the depth of trade liberalisation picked up in the subsequent Rounds. Various studies indicate that the region has large trade potential, and speedy trade liberalisation can harness potentials.

The present study base on CGE model has reaffirmed the validity of such findings. The results show that fast implementation of SAFTA would be the best policy alternative for South Asian countries to improve their economic performances. The process of liberalisation under SAFTA should be credible and the agreement should be implemented within the stipulated time frame.

## References

- Asher, Mukul (2002), "India, China and the ASEAN: The Economic Enigma", Opinion Interview Report in *Business Line*, Singapore.
- Balasa, Bela (1967), 'Trade Creation and Trade Diversion in the European Common Market', *Economic Journal*, No 77, pp 1-17.
- Bandara, J.S. and Wusheng Yu (2003), 'How Desirable is the South Asian Free Trade Area? A Quantitative Economic Assessment', Blackwell Publishing Co., Oxford.
- Bhagwati, J. (1993), *India in a Transition-Freeing the Economy*, Clarendon Press, Oxford.
- Bhattacharya, S.K. (2001), "Regional Trading Arrangements among SAARC Countries and India's Imports", *South Asia Economic Journal*, Vol.2(2), pp.281-312.
- Bhuyan, A.R. (1996), "Regional Cooperation in South Asia: Outlook and Prospects under SAPTA", *South Asian Survey*, Vol.3(1 & 2), pp.197-217.
- De Melo, Jaime, arvind Panagariya and Dani Rodrik (1993), *The New regionalism: A Country Perspective*, Washington, DC, World bank.
- DeRosa, D. A., and K. Govindan, (1996), 'Agriculture, Trade and Regionalism in South asia', *Journal od asian Economics*, Vol 7(2), pp.293-316.
- Finger, J.M. and M.E. Kreinin (1979), "A Measure of 'Export Similarity' and its Possible Uses", *Economic Journal*, Vol.89, December, pp.905-912.
- Frenkel, J.A. with E. Stein and S.J. Wei (1997), *Regional Trade Blocs in the World Economic System*, Institute for International Economics, Washington DC.
- Frenkel, J.A. and S.J Wei (1997), 'The New Regionalism and Asia: Impat and Options', in A Panagariya and M. G. Quibria and N. Rao (eds.), *The Global Trading System and Developing Asia*, Hong Kong, Oxford University press.
- Jayasuriya, S and Dushni Weerakoon, (2002), "Foreign Direct Investment and Economic Integration in the SAARC Region", in T.N. Srinivasan, (ed.), *Trade Finance and Investment in South Asia*, Social Science Press, New Delhi.
- Jayaraman, T.K. (19978), *Economic Cooperation in Indian Sub-continent –A Customs union Approach*, New Delhi, Orient Longman.
- Kelegama, Saman (1998), 'Indo-Sri Lanka Economic Relationship: Trends and Outlook', in LP Associates (ed.): *Sri Lanka 50 years: In Commemoration of the 50th Anniversary of Independence of Sri Lanka*.

- Kemal, A.R. et al.(2002), "A Plan to Strengthen Regional Trade Cooperation in South Asia", in T.N. Srinivasan, (ed.), *Trade Finance and Investment in South Asia*, Social Science Press, New Delhi.
- Khan, S.M. (1999), "South Asian Association for Regional Cooperation', *Journal of Asian Economics*, Vol. 10(3), pp.489-95.
- Kumar, Nagesh (2002a), Towards An Asian Economic Community: Vision of Close Economic Cooperation in Asia, *Discussion Paper No. 32*, Research and Information System for the Non-Aligned and Other Developing Countries, New Delhi.
- Kumar, Nagesh and Saikat Sinha Roy (2003), Complementarities and Potentials of Intra-regional Transfers of Investments, Technology and Skills in Asia, International Conference on 'Building an Asian Economic Community' organised by RIS, India, MIER, Malaysia, CSIS, Indonesia, SPF, Japan, 10-11 March, New Delhi.
- Kumar, Nagesh, et al (1993), Indo-Sri Lanka Economic Cooperation, An Operational Programme, WIDER, Helisinki, Finland.
- Lal, Sanjaya (2001), Indicators of the Relative Importance of IPRs in Developing Countries, UNCTAD/ICTSD Capacity Building Project on *Intellectual Property Rights and Sustainable Development*, November, UNCTAD/ICTSD
- Lanteigne, Marc (2003), An assessment of Formal and Non-formal Arrangements for East Asian Engagement: Canada and India, Paper resented in the Seminar on 'India-Canada Dialogue on East Asia and Regional Cooperation, on February 14-15, Organised by Centre for Policy Research and Asia-Pacific Foundation of Canada, New Delhi.
- Mehta, Rajesh and S.K. Bhattacharya (2000), "The South Asian Preferential Trading Arrangement- Impact on Intra-regional Trade", *Asia Pacific Journal of Economics and Business*, June, Vol.4(1), pp.92-111.
- Mohanty S.K. (2003), Regional Trade liberalisation under SAPTA and India's Trade Linkages with South Asia: An Empirical Assessment, Paper presented in 'the Expert Group Meeting on Regional Trading Agreements in Asia and Pacific' for the UNESCAP, 30-31 January 2003, Bangkok.
- Mohanty, S.K. (2002), Possibility of Close Economic cooperation between India and Singapore, Study for the Ministry of Commerce, Government of India, New Delhi.
- Mohanty, S.K., Sanjib Pohit and Saikat Sinha Roy (2005), Implications of Economic Cooperation among JACIK Countries A CGE Modelling Approach, in Nagesh Kumar (ed.) in *Asian Economic Community*, Published by Research and Information System for Developing Countries (RIS), New Delhi and IESAS, Singapore.
- Mukherjee, I.N. (2002), Towards a Free Trade Area in South Asia: Charting a Feasible Course for Trade Liberalisation with reference to India's Role, October.

- Nair, K R G (2003), India and Regional Economic Groupings in Asia, Paper resented in the Seminar on 'India-Canada Dialogue on East Asia and Regional Cooperation, on February 14-15, Organised by Centre for Policy Research and Asia-Pacific Foundation of Canada, New Delhi.
- Pagato, N., et al. (1997), South Asia's Integration into the World Economy, World Bank, Washington D.C.
- Rahman, M.K., A.R. Bhuyan and S. Reza (19981), 'The Trade Effects of a South Asian Customs Union: An Exploratory Study', The Pakistan Development Review, Vol XX(1), pp61-80.
- RIS (2002), South Asia Development and Cooperation Report 2001/02, Research and Information System for the Non-Aligned and Other Developing Countries, New Delhi.
- Ruggie, John Gerard (1992), Mulilateralism: The Anatomy of an Institution", International organization, Vol. 46 (3), Summer, pp-561-98.
- Srinivasan, T.N. (1994), Regional Trading Arrangements and Beyond Exploring Some Options for South Asia: Theory, Empirics and Policy, Report No.IDP-142, July, World Bank, Washington D.C.
- Srinivasan, T.N. (2002) (ed.), Trade Finance and Investment in South Asia, Social Science Press, New Delhi.
- Srinivasan, T.N. and C. Canonero (1993), Preferential Trading Arrangement: Estimating the Effects on South Asian Countries, *World Bank Report*, South Asia Region, World Bank, Washington D.C., September.
- Viner, Jacob (1950), The Customs Union Issue, New York, Carnegie Endowment for International Peace.
- Wadhva, C.D. (1996), "Assessing SAARC Preferential Trading Arrangements (SAPTA)", *South Asian Survey*, Vol.3(1-2), pp.173-195.