Chapter 3

Assessing Gains from SAFTA

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3.1 Introduction

In recent years, there has been increased interest in regional economic integration in South Asia. The stalemate in multilateral trade talks, leading to the much prolonged Doha Round of negotiations of the World Trade Organization (WTO), has certainly contributed to intensifying efforts in regional trading arrangements with the trends likely to continue. One of the first few major regional integration initiatives in South Asia was launched in 1995 when the South Asian Association for Regional Cooperation (SAARC) Preferential Trading Arrangement (SAPTA) was signed. It took more than 10 years for SAARC member countries to establish a South Asian Free Trade Area (SAFTA), the full implementation of which will result in the abolition of customs duties on trade goods within South Asia by 2016. The transition towards deeper regional integration schemes has taken place in parallel to the establishment of unilateral trade liberalisation programmes in individual South Asian countries. Nevertheless, SAFTA is being implemented with the aim of boosting intra-regional trade in South Asia.

There are strong arguments for regional economic integration in South Asia, as it is believed to generate significant intra-regional trade and welfare gains for the countries involved. The SAFTA mechanism is expected to provide member countries with improved market access in the region, helping boost their exports and thereby augmenting the significance of intra-regional trade and the associated investment flows. SAFTA is likely to generate immediate trading opportunities triggered by tariff differentials between individual members' most favoured nation (MFN) vis-à-vis regional tariff regimes, giving rise to so-called static gains. The dynamic gains could be even greater for members owing to the possible expansion in scale of operation through access to large regional markets, further buoyed by increased investment and more efficient allocation of regional resources.

However, critics point out a number of factors which could undermine the potential benefits of SAFTA. Complementarities in the region are considered to be limited given that members specialise in similar export and trading activities. Therefore, the prospect of the expansion of intra-regional trade is argued to be not very substantial. This concern is further backed up by the fact that all South Asian countries rely heavily on the Western markets, which are the principal determinants of demand for exports from the region. It is also feared that SAFTA may lead to substantial trade diversion for some countries, as the regionalism will discriminate against the most efficient suppliers from the rest of the world. Finally, there is the general concern about the regional schemes being stumbling blocks to multilateral trade liberalisation and expansion, which is considered to be best possible option for promoting trade-led growth and development.

Notwithstanding the aforementioned arguments, there is, however, an overall favourable view of promoting intra-regional trade. Many observers are of the view that, even in the absence of any policy-induced mechanism, trade flows can be expanded within South Asia. It is argued that the current low level of intra-regional trade is due to excessive trading costs resulting from non-streamlined administrative procedures, weak infrastructural facilities, and corrupt and inefficient practices in dealing with traded goods crossing borders within the region. In this context, the barriers related to cross-border trading have, of late, become subject matters of discussions both at bilateral and regional forums in South Asia. There is some suggestion that the trade and welfare gains from reduced costs of trading in the region could be substantial.

Against the above backdrop, this chapter aims to shed some light on the implications of SAFTA for South Asian countries by first reviewing the findings from the related existing studies and then undertaking some simulation exercises to gain further insights. The chapter is organised as follows: Section 3.2 provides an overview of the evolution of the pattern of intra-regional trade in South Asia; Section 3.3 gives a brief review of the findings from studies on the potential implications of SAFTA; Section 3.4 makes use of a global general equilibrium model to simulate the welfare impact of regional integration considering reduced trading costs within the region; and finally Section 3.5 makes some concluding remarks.

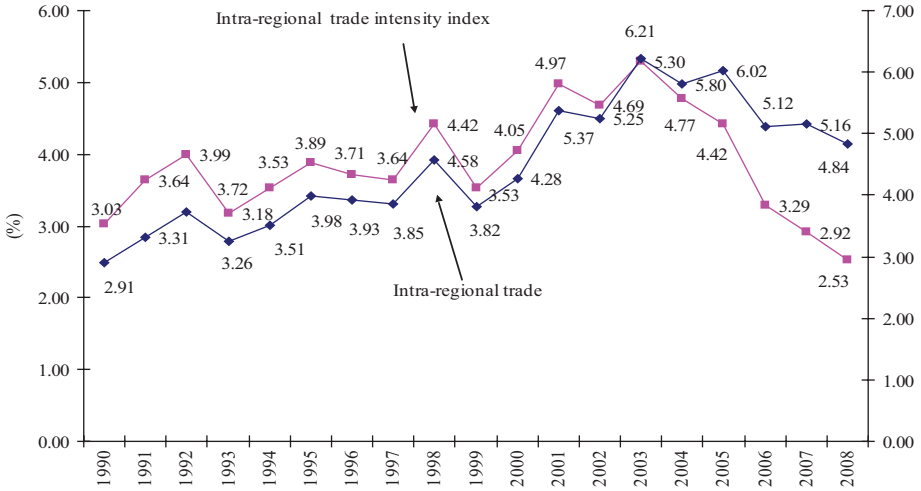
3.2 The pattern of South Asian intra-regional trade

The significance of intra-regional trade among the South Asian countries is low (Figure 3.1). Throughout the 1990s the share was less than 4 per cent of the region's global trade. There were some encouraging trends in the 2000s, with the proportion of intra-regional trade rising to more than 6 per cent of the region's global trade in 2003. More recently, however, the share has hovered around 5 per cent. The intra-regional trade intensity index, defined as the ratio of the intra-regional trade share to the region's share in the world's total trade, has also followed a similar pattern showing that South Asia's trade with the rest of the world has expanded faster than its intra-regional trade. Compared with other regional arrangements such as NAFTA, ASEAN and the EU, intra-regional trade in South Asia remains very low (Figure 3.2).

The country-wise shares in regional imports and exports are presented in Figure 3.3. Bangladesh has the largest share in intra-SAARC import, 26 per cent, while its share in the intra-SAARC export is only 3 per cent. India, although accounting for only a 15 per cent share in intra-SAARC import, had a 65 per cent share in total intra-SAARC exports.

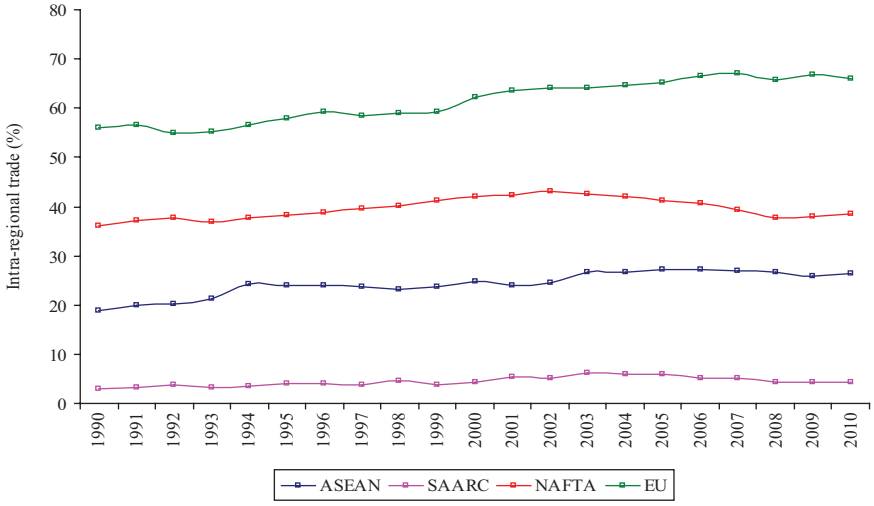
Except Nepal and Bhutan, all other South Asian countries have their major export destinations outside South Asia. Intra-regional export constitutes only about 5 per cent of total exports from Bangladesh. The corresponding figure for India is 6 per cent. Since, India is the major export destination for Nepal and Bhutan, Bhutan's exports to India comprise close to 100 per cent of its total exports and for Nepal the corresponding figure is more than 70 per cent. Trade between individual South Asian countries varies widely. Bangladesh trades very little with Bhutan, Nepal and Sri Lanka. India is the dominant

Figure 3.1 Intra-regional trade in SAARC



Source: De and Raihan (2011)

Figure 3.2 Intra-regional trade: SAARC vis-à-vis other regions

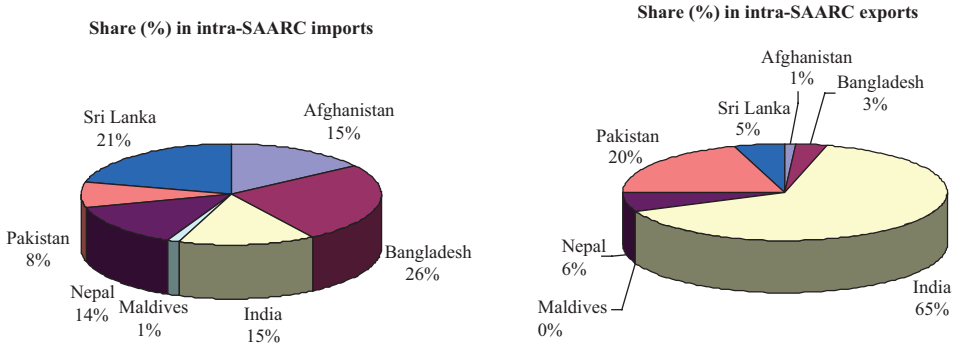


Note: Calculated based on Director of Trade Statistics Online Database, IMF
Source: De and Raihan (2011)

import source for Bhutan and Nepal, and India is also one of the major import sources for Bangladesh. However, this trade with India is largely one-sided, as the volumes of imports from India to Bangladesh and Nepal are disproportionately large.

High tariff rates among the South Asian countries have long been pointed to as one of the major reasons behind the low intra-regional trade. South Asia, as a region, has higher average tariff rates than in any other region in the world. It can thus be argued that a reduction in the tariff barriers among the South Asian countries is

Figure 3.3 Country-wise share (%) in intra-SAARC imports and exports



Source: Direction of Trade Statistics (DOTS)

likely to have important implications in terms of improved market access of these countries to their neighbouring countries. Non-tariff barriers, weak trade facilitation infrastructure and cumbersome procedures, particularly for trade through land ports, are also regarded as important constraints to regional trade.

One important aspect of South Asian intra-regional trade is the presence of informal border trade, which has always been thought to be very high. There have been some studies on informal border trade among South Asian countries and it is pointed out that informal and illegal trade between India and Bangladesh, India and Nepal, India and Sri Lanka, and India and Pakistan could be a significant proportion of trade (Pohit and Taneja 2003; Taneja et al. 2004; Das and Pohit 2006; World Bank 2006).

3.3 Potential implications of SAFTA: Review of qualitative and quantitative studies

SAFTA has been able to generate significant interest among the policy-makers, business community and researchers in South Asia. There are debates on whether South Asian countries stand to gain or lose from SAFTA. The findings of a number of qualitative and quantitative studies in this regard have been inconclusive, which has intensified this debate. The results of these studies have, however, been influenced by differences in the methodologies used.

3.3.1 Review of the qualitative assessments of the welfare effects of SAFTA

In trade theory, welfare effects of any regional trade agreement (RTA) are analysed using two concepts: trade creation and trade diversion. The overall welfare effects of economic integration are ambiguous and require case-by-case assessment. The reason is that integration is both a policy of protection and a move towards free trade. The effect of the trade liberalisation element is called *trade creation* and the effect of the protectionist element of integration is called *trade diversion*. The RTA's overall

effect on welfare for a member country is determined by comparing these two effects. If trade creation dominates, the formation of an RTA will enhance welfare. On the contrary, if the effect of trade diversion is greater than the effect of trade creation, the RTA will lead to a welfare loss for the country under consideration.[1]

The fundamental arguments for regionalism rest on the evidence which suggests that RTAs are predominantly trade-creating (Rodríguez-Delgado 2007). Krugman (1991) argued that most RTAs are likely to entail relatively low welfare losses resulting from trade diversion, since the countries involved are often geographical neighbours and hence already engage in a sizeable amount of trade. It is also argued that through RTAs countries can 'lock in' reform, which is often politically not feasible under multilateralism. Whalley (1996), for example, asserted that a desire for increased credibility of domestic reforms was a central preoccupation behind the Mexican negotiating position on NAFTA. In addition, failure or stalemate of the multilateral trade talks means trade liberalisation can take place only through RTAs. It is highlighted that countries can build on the progress of regionalism and can ultimately move toward a freer trade regime on the whole.

There are, however, some critical arguments against RTAs. Regional trading blocs are often thought to undermine the spirit of multilateralism. Given the rise of mega-trading blocs, it is feared that the world might be divided into a few protectionist blocs, and they might accept RTAs to oppose further multilateral liberalisation. It is in this sense that RTAs might work as an obstacle rather than a foundation for multilateralism. Also, the 'spaghetti bowl' effect can emerge because of the many complicated overlapping RTA negotiations.[2] RTAs also discriminate against the non-member countries, and even the poorest countries (such as the least developed ones) could seriously be discriminated against by RTAs in developed and developing countries. It has been demonstrated that the North American Free Trade Agreement has generated adverse welfare consequences for least developed countries such as Bangladesh (Razzaque 2005). Furthermore, RTAs distort resource allocation, favouring regional producers to the potential detriment of local consumers (Rodriguez-Delgado 2007). Research on RTAs has highlighted the global consequences of multiple and overlapping RTAs in terms of the transaction costs they impose (Feridhanusetyawan 2005). It is further put forward that resources in trade ministries are limited. Therefore, too much involvement in RTA negotiations may distract attention from multilateral liberalisation.

There are concerns that through RTA (reducing tariffs for the member countries) the prices of goods imported from the member countries in the domestic market may not fall, as the member countries may see the home country's market as a 'captive market' for their exporters. For example, it is often alleged by the critics of SAFTA that, through this regional trading arrangement, Indian exporters may find a 'captive market' for their exporters in Bangladesh (World Bank 2006). As a result, even when an importing country, e.g. Bangladesh, reduces the tariffs for Indian products, the prices of those products may not fall by the full extent of regional tariff cuts, as the Indian exporters can benefit from increased margins keeping prices up to the level at which the products from the rest of the world are sold in the domestic market.

Baysan et al. (2006) argued that the economic case for SAFTA was relatively weak. The authors pointed out three important features of the South Asian economies that might make an internal free trade agreement (FTA) *economically* unattractive. First, these economies are relatively small in relation to the global economy, in terms of both GDP and trade flows. Although, in terms of population, the size of the region is substantial (20 per cent), current per-capita incomes are so low that the economic size of the region remains small: less than 5 per cent of the global economy in terms of GDP, and if India is taken out of the picture this proportion drops to 0.4 per cent. Bayson et al. (2006) further argued that the probability that the most efficient suppliers of the member countries were within the region was slim. Therefore, the probability that the FTA is likely to be largely trade diverting is quite high. The second reason relates to the relatively high levels of protection among the SAARC economies. If the country participating in a regional arrangement were itself open, it would not suffer from trade diversion even if it were small. It is, however, evident that the level of protection within the SAARC region remains high in all countries. According to Bayson et al. (2006), the third and final reason that the economic case is weak for SAFTA concerns the political economy of the selection of excluded sectors and rules of origin (RoO). When countries are allowed to choose sectors that can be excluded from tariff preferences in an FTA, domestic lobbies make sure that the sectors in which they may not be able to withstand competition from the union partner are the ones that get excluded. In addition, the RoO can also be subject to abuse by the bureaucrats administering them. In cases where imports from the partner may be threatening an inefficient domestic competitor, bureaucratic discretion may be employed to block entry of the imports.

In contrast to the arguments put forward by Bayson et al. (2006), policy-makers and many business people in South Asia, and especially in Bangladesh, are rather optimistic about SAFTA. They see SAFTA as having significant potential to expand trade among the member countries. It is also hoped that the member countries will be able to gain significantly by having greater market access in other South Asian countries, and especially in India. Those who argue for SAFTA consider that, despite the little trade volume through formal channels, substantial trade is already taking place in South Asia via informal mechanisms. Taking into account informal trade, the 'real' intra-regional trade could be anywhere between 8 and 10 per cent. Although studies have shown that there are limited complementarities in the SAARC region, it is argued that this was also the case in ASEAN during the mid-1970s, and that dormant complementarities in the region could be invigorated by intra-regional investment and foreign direct investment (FDI).[3] They also argue the cost of not co-operating is quite high (CUTS 2012; RIS 2004, 1999; GEP 1998). The debate is, therefore, far from being settled. Notwithstanding, there is a general perception that regional co-operation in South Asia should not be viewed only from the trade perspective, and that there are many gains from regionalism in other areas.

3.3.2 Review of quantitative studies on the welfare effects of SAFTA

Empirical studies on the quantitative assessments on SAFTA (and on SAPTA as well) differ significantly in terms of the methodologies employed and results obtained. In

broad terms, three types of techniques have been employed to examine the potential implications of SAPTA/SAFTA. These are (i) econometric estimations techniques utilising the so-called 'gravity models'; (ii) partial equilibrium models to understand the effects of the removal of tariffs from intra-regional trade flows; and (iii) computable general equilibrium models to understand the effects of tariff reductions and resulting changes in resource allocation patterns across different sectors.

The gravity models aim, with a set of explanatory variables, to predict bilateral trade flows.[4] These models, for the analysis of any RTA, have been used widely to predict the impact of the agreements on the bilateral trade flows (among many others, Srinivasan and Canonero 1995; Sengupta and Banik 1997; Hassan 2001; Coulibaly 2004; Hirantha 2004; Tumbarello 2006; Rahman 2003; Rahman et al. 2006; Rodriguez-Delgado 2007). The findings of these studies have been mixed. For example, studies by Srinivasan and Canonero (1995), and Sengupta and Banik (1997) predicted that the impact of a South Asian FTA on trade flows would be small for India but much larger for the smaller countries. Sengupta and Banik (1997) predicted a 30 per cent increase in the official intra-SAARC trade and as much as 60 per cent if illegal trade became a part of official trade. Coulibaly (2004) found net export creation, and Tumbarello (2006) and Hirantha (2004) found net trade creation from SAPTA. On the other hand, Hassan (2001) found a net trade diversion effect from SAPTA, while Rahman (2003) found the dummy variable for South Asia to be insignificant, indicating that regional integration is unlikely to generate significant trade expansion.

Rahman et al. (2006) used an augmented gravity model to identify trade creation and trade diversion effects originating from SAPTA. It was found that there was significant intra-bloc export creation in SAPTA; however, at the same time there was evidence of net export diversion. It also appeared that Bangladesh, India and Pakistan were expected to gain from joining the RTA, while Nepal, Maldives and Sri Lanka were negatively affected.

Rodríguez-Delgado (2007) evaluated the SAFTA within the global structure of overlapping regional trade agreements using a modified gravity equation. It examined the effects of the Trade Liberalization Programme (TLP) which started in 2006. The study predicted that SAFTA would have a minor effect on regional trade flows. The gravity model simulation suggested that SAFTA TLP would influence regional trade flows mainly by increasing exports from India and imports from Bangladesh and Nepal. It should, however, be pointed out that studies based on gravity models to estimate welfare gains are methodologically flawed. While the estimated gravity equations are for bilateral trade (and not welfare), the concepts of 'trade creation' and 'trade diversion' directly relate to welfare consequences. Being partial equilibrium analysis in nature, they also fail to take into consideration inter-sectoral and inter-regional linkage effects. Therefore, gravity models are not suitable tools for assessing welfare effects.

The major partial equilibrium studies on RTAs in South Asia are by Govindan (1994), DeRosa and Govindan (1995), Pursell (2004), World Bank (2006) and Raihan (2011). The advantage of these models is that they are generally based on disaggregated data, and are also flexible enough to facilitate sector-specific assessments. However, the

major problem is overlooking the general-equilibrium effects arising from the inter-sectoral interactions within the economy.

A partial equilibrium study, by Govindan (1994), showing the effect of preferential liberalisation within the region on intra-regional trade in food concluded that preferential liberalisation would generate welfare gains through increased trade. The analysis by DeRosa and Govindan (1995), however, showed that the welfare gains were much higher when the member countries also applied unilateral liberalisation on a non-discriminatory basis. In another partial equilibrium analysis on the cement industry, Pursell (2004), demonstrated substantial gains of preferential liberalisation between India and Bangladesh.

With a view to exploring the potentials of India–Bangladesh bilateral FTA, World Bank (2006) provided a comparative assessment between Bangladesh and India with respect to a few selected sectors. The partial equilibrium simulation results indicated that in the cases of these sectors (cement, light bulbs and sugar) the likely effects of an FTA between Bangladesh and India would lead to an expansion of the latter's exports, without any similar export effects from Bangladesh to India. This was mainly because the Indian export prices for these products were substantially lower than the ex-factory before-tax prices of the same or similar products in Bangladesh. The simulations for ready-made garments (RMG) predicted increased Bangladeshi exports to India, but also increased (RMG) exports from India to Bangladesh. The study found that an FTA would bring large welfare gain for consumers in Bangladesh provided there was adequate expansion of infrastructure and administrative capacity at customs borders. The study, however, cautioned that the benefits of such an FTA could be wiped out if it had the effect of keeping out cheaper third-country imports, e.g. from East Asia, and that such trade diversion costs could be huge. The study suggested that the only way to minimise the trade diversion costs would be through further unilateral liberalisation.

Raihan (2011) applied the popular and widely utilised World Integrated Trade Solution (WITS) partial equilibrium model to explore the trade effects of SAFTA on the member countries. Under a full implementation of SAFTA, the findings suggested some of the South Asian countries would be able to increase their exports within the region quite substantially. India turned out to be the largest gainer, securing an expansion of its exports by about US$1 billion. For Pakistan, Bangladesh and Nepal the rises in exports were found to be US$169 million, US$122 million and US$90 million, respectively. Sri Lanka's exports to the region would also rise, but because of the India–Sri Lanka bilateral FTA, additional effects to the Indian market were likely to be small. The study also showed that, except for Maldives and Sri Lanka, in all other countries the rise in their exports to India would constitute a major share of the rise in their total exports to the region. Raihan (2011), however, showed that much of the potential of the rise in exports among the South Asian countries would be restricted by the presence of a stringent sensitive list under SAFTA.

The studies based on computable general equilibrium (CGE) models predict the effects of the trading arrangement on all variables including production, consumption and trade flows, in all sectors of the economy, as well as on welfare. The studies that

apply the CGE model to SAFTA analysis are by Pigato et al. (1997), Bandara and Yu (2003) and Raihan and Razzaque (2007). Although the three studies used the Global Trade Analysis Project (GTAP) (Hertel 1997) database and the relevant model, their results differ, partly as a result of the evolution of the GTAP data itself.

Pigato et al. (1997) found that, while SAFTA would produce benefits for member nations, unilateral trade liberalisation would yield larger gains. Bandara and Yu (2003) found that, in terms of real income, SAFTA would lead to gains for India and Sri Lanka, while Bangladesh stood to lose. The authors also endorsed the view that South Asian countries would gain much more from multilateral liberalisation than from SAFTA.

Raihan and Razzaque (2007), while using the GTAP model to explain the welfare effects of SAFTA, unlike previous studies, also decomposed the welfare effects of SAFTA (as obtained from simulation results) into trade creation and trade diversion effects for individual South Asian countries.[5] The estimates showed Bangladesh would incur a net welfare loss, despite recording a positive trade creation effect. The trade diversion effects (resulting from the replacement of competitive import supplies from the rest of the world with relatively inefficient regional sources) outweighed the positive gains, resulting in overall adverse consequences. All other South Asian countries were, however, found to gain from SAFTA, with India registering the maximum gains.

3.4 The welfare impact of SAFTA considering improved trade facilitation measures in South Asia

It appears from the above that CGE studies on SAFTA predict welfare losses for certain countries which would be primarily driven by large trade diversion effects. Costs of trading across borders in South Asia are known to be very high, as a result of which the issue of trade facilitation is considered with special importance among the concerned stakeholders.[6] As import duties are gradually falling in most product categories, the scope for gain through tariff reductions is becoming increasingly limited. This, however, also helps minimise the scope of trade diversions. Furthermore, there can be significant additional gains to be secured through reduction in transaction costs and improved trade facilitation measures. Most observers seem to agree that improved infrastructure and connectivity, coupled with streamlined and stronger institutions yielding less administrative tangles and corrupt practices, would allow South Asia to gain and share benefits from SAFTA arrangements. Among others, De and Raihan (2011) conclude that there is strong evidence that improving the efficiency of customs and administrative procedures and the simplification of trade-related documentation could facilitate intra-regional trade.

Despite the improvements, trade facilitation indicators in South Asia remain substantially weaker than those achieved in other regions of the world. According to the World Bank's Logistics Performance Index (LPI), South Asia is just ahead of Sub-Saharan Africa and well behind all other regions (Table 3.1).

According to the Doing Business surveys of the World Bank there has been substantial progress in streamlining trading procedures in some South Asian countries over the last few years. However, the progress has not been equally spread

Table 3.1 Logistic performance index 2010: South Asia vs. other regions

International LPI rank	Region	LPI	Customs	Infrastructure	International shipments	Logistics competence	Tracking and tracing	Timeliness
1	Europe and Central Asia	2.74	2.35	2.41	2.92	2.60	2.75	3.33
2	Latin America and Caribbean	2.74	2.38	2.46	2.70	2.62	2.84	3.41
3	East Asia and Pacific	2.73	2.41	2.46	2.79	2.58	2.74	3.33
4	Middle East and North Africa	2.60	2.33	2.36	2.65	2.53	2.46	3.22
5	South Asia	2.49	2.22	2.13	2.61	2.33	2.53	3.04
6	Sub-Saharan Africa	2.42	2.18	2.05	2.51	2.28	2.49	2.94

Source: LPI 2010, World Bank

across the region. Bangladesh and India experienced the most marked reductions in import documentation, the number of documents required for imports, and the time required to process imports, from arrival at the port to their final destination. Bangladesh and India also achieved smaller but still significant improvements in export trade facilitation. Trade costs in both countries fell for both exports and imports although the cost reductions were much larger for imports. However, Nepal showed very little change in its trade facilitation parameters although there appeared to be some increase in the documentation required for exports.

Despite the improvement, trade facilitation parameters in Bangladesh remain poorer than for India (Table 3.2). According to the LPI 2010, Bangladesh was behind India but ahead of other South Asian countries. Nepal's performance was the worst. However, according to the Enabling Trade Index 2010 of the World Economic Forum, Bangladesh and Nepal were the worst-performing countries in South Asia (Table 3.3).

As part of this chapter, some global general equilibrium model simulations are undertaken to explore the effects of SAFTA under the assumptions that members employ improved trade facilitation measures.[7] The latest version of the GTAP database covers 57 commodities, 129 regions/countries and five factors of production based on which the simulations keep the same commodity classification, shown in Table 3.4. However, in order to deal with computational challenges, the 129 regions have been aggregated into 9, as shown in Table 3.5.

One scenario is considered for the experiment: a full FTA in goods among the South Asian countries plus a reduction in trade costs for intra-SAARC goods trade by 25 per cent.[8] The welfare effects are reported in Table 3.6. Since the shock in the GTAP model has two sub-components the welfare effects are also decomposed for these two sub-components. The welfare effects arising from 'tariff cuts only' due to SAFTA are consistent with the results of the earlier empirical studies (e.g. Raihan and Razzaque 2007). The negative welfare consequences for Bangladesh are because of a bigger trade diversion effect. All other South Asian countries, however, experience welfare improvements resulting from SAFTA tariff cuts alone. The biggest gains turn out to be for India, followed by Pakistan. From the simulated improved trade facilitation measures, gains arise for every country. The favourable impact of trade facilitation is so strong that, when considering aggregate gains, Bangladesh shows much improved and positive welfare gains. India is likely to capture the maximum gains from improved trade facilitation measures in South Asia. Nevertheless, all other countries also have sizeable gains. As a proportion of total gains, those from trade facilitation stand out as the biggest for Bangladesh (about 110 per cent). The comparable figures for other countries range between about 65 per cent and 80 per cent.

Table 3.7 presents percentage changes in exports and imports (bilateral and total) for different countries under SAFTA with improved trade facilitation, with all individual countries experiencing a rise in total exports. Given the very small base, the percentage rise in total exports turns out to be the highest for Nepal. It is interesting to find that Bangladesh posts a robust growth of 15 per cent. Given its quite significant base, the expansion is likely to be quite sizeable. Decomposition of the results seems to suggest this performance is mainly driven by increased exports to the rest of the world, unlike

Table 3.2 Logistics Performance Index 2010: South Asian countries

International LPI rank	Country	Overall LPI	Customs	Infrastructure	International shipments	Logistics competence	Tracking and tracing	Timeliness
47	India	3.12	2.7	2.91	3.13	3.16	3.14	3.61
79	Bangladesh	2.74	2.33	2.49	2.99	2.44	2.64	3.46
110	Pakistan	2.53	2.05	2.08	2.91	2.28	2.64	3.08
137	Sri Lanka	2.29	1.96	1.88	2.48	2.09	2.23	2.98
143	Afghanistan	2.24	2.22	1.87	2.24	2.09	2.37	2.61
147	Nepal	2.2	2.07	1.8	2.21	2.07	2.26	2.74

Note: Ranking is among 155 countries
Source: LPI 2010, World Bank

Table 3.3 The enabling trade index 2010

Overall index ranking	Countries	Overall index score	Sub-indices							
			Market access		Border administration		Transport and communication infrastructure		Business environment	
			Rank	Score	Rank	Score	Rank	Score	Rank	Score
84	India	3.81	115	3.42	68	3.98	81	3.34	58	4.48
99	Sri Lanka	3.59	107	3.68	79	3.71	86	3.27	100	3.68
112	Pakistan	3.39	120	3.24	73	3.85	92	3.14	117	3.31
113	Bangladesh	3.38	52	4.37	100	3.21	117	2.53	114	3.41
118	Nepal	3.27	49	4.42	118	2.71	107	2.76	121	3.19

Note: Ranking is among 125 countries
Source: World Economic Forum

Table 3.4 GTAP commodity classification in the present study

No.	Sector name	No.	Sector name
1	Paddy rice	30	Wood products
2	Wheat	31	Paper products, publishing
3	Cereal grains n.e.c.	32	Petroleum, coal products
4	Vegetables, fruit, nuts	33	Chemical, rubber, plastic prods
5	Oil seeds	34	Mineral products n.e.c.
6	Sugar cane, sugar beet	35	Ferrous metals
7	Plant-based fibres	36	Metals n.e.c.
8	Crops n.e.c.	37	Metal products
9	Cattle, sheep, goats, horses	38	Motor vehicles and parts
10	Animal products n.e.c.	39	Transport equipment n.e.c.
11	Raw milk	40	Electronic equipment
12	Wool, silk-worm cocoons	41	Machinery and equipment n.e.c.
13	Forestry	42	Manufactures n.e.c.
14	Fishing	43	Electricity
15	Coal	44	Gas manufacture, distribution
16	Oil	45	Water
17	Gas	46	Construction
18	Minerals n.e.c.	47	Trade
19	Meat: cattle, sheep, goats, horse	48	Transport n.e.c.
20	Meat products n.e.c.	49	Sea transport
21	Vegetable oils and fats	50	Air transport
22	Dairy products	51	Communication
23	Processed rice	52	Financial services n.e.c.
24	Sugar	53	Insurance
25	Food products n.e.c.	54	Business services n.e.c.
26	Beverages and tobacco products	55	Recreation and other services
27	Textiles	56	Public admin/defence/health/education
28	Wearing apparel	57	Dwellings
29	Leather products		

Note: n.e.c. – not elsewhere classified
Source: GTAP Database Version 8

Table 3.5 GTAP region aggregation in the present study

Aggregated regions	Comprising regions
Bangladesh	Bangladesh
India	India
Nepal	Nepal
Pakistan	Pakistan
Sri Lanka	Sri Lanka
Rest of South Asia	Comprising Afghanistan, Bhutan and Maldives
USA	USA
EU25	European Union
ROW	Rest of the world

Source: GTAP Database Version 8

Table 3.6 Welfare effects from tariff cuts and improved trade facilitation measures in SAFTA (US$ million based on 2007 prices)

Countries	Tariff–cuts only	Trade facilitation	Aggregate gains	Gains from trade facilitation as % of overall gains
Bangladesh	–136.21	1567.74	1431.50	109.52
India	1,642.52	4120.01	5761.94	71.50
Nepal	463.02	1306.02	1769.04	73.83
Pakistan	1,026.66	1860.74	2887.41	64.44
Sri Lanka	35.41	2125.01	2160.42	98.36
Rest of South Asia	277.59	1047.18	1324.75	79.05

Source: GTAP simulation result

other South Asian countries. The reason for this might be that cheaper sourcing of raw materials from regional partners provides a competitiveness boost for Bangladesh's exports, particularly textile and clothing items that have a strong market presence in Europe and North America. Among others, Pakistan also registers a robust export growth rate of about 11 per cent.

3.5 Conclusion

This chapter has reviewed the implications of SAFTA for individual South Asian countries against the backdrop of the arguments both for and against regional trading arrangements. Previous studies confirm that the gains to members from preferential trading mechanisms are ambiguous and so is the distribution of gains among the partners within the regional formation. While the methodologies employed in assessing the implications can contribute to differing results, in the context of South Asia one could think of major issues *a priori* to anticipate the adverse consequences of regional integration. When members discriminate against supplies from the rest of the world by providing tariff preferences to their regional counterparts, adverse welfare consequences can arise due to trade diversion effects. This is more likely to occur if members have relatively MFN tariffs. Simulations undertaken using a popular global general equilibrium model show that while all other members in South Asia gain from SAFTA, only Bangladesh is likely to embrace overall adverse welfare implications. These results would indicate that proportionately more imports of Bangladesh would be replaced by regional sources, which is also evident in the increase in regional imports into Bangladesh under SAFTA.

While RTAs may have other dynamic gains, one serious constraint to intra-regional trade flows is the very weak trade facilitation infrastructure and measures. There have been studies that have demonstrated that South Asian countries are more protectionist when it comes to trading with neighbours. Inefficient and lengthy customs and border procedures, poor infrastructural facilities, and weak and cumbersome land port management have all affected across-the-border trading activities.

Table 3.7 Percentage changes in exports and imports under SAFTA and increased trade facilitation

To/From	Bangladesh	India	Nepal	Pakistan	Sri Lanka	Rest of South Asia	Total exports (to SAFTA plus rest of the world)
Bangladesh		390.01	892.86	193.37	188.14	476.32	15.06
India	270.90		192.71	262.63	94.05	209.09	4.22
Nepal	425.00	479.11		126.09	100.00	-50.00	136.44
Pakistan	400.27	1105.79	175.00		127.79	107.11	10.76
Sri Lanka	314.29	190.83	154.55	135.07		730.80	1.35
Rest of South Asia	52.60	299.45	75.00	208.51	85.86	250.00	36.42
Total imports	16.14	3.49	111.88	10.17	10.39	36.23	

Source: GTAP simulation results

Notwithstanding the significance of the trade diversion prospects at least for one country (Bangladesh), an issue of interest is to know about the potential benefits of improved trade facilitation measures in South Asia. This chapter has contributed to this discussion by undertaking some simulation exercises allowing for reduced costs in regional trade. The results are staggering in suggesting that the gains from trade facilitation in South Asia are much higher than the gains from mere tariff cuts from promoting intra-regional trade in goods. Therefore, in order to make SAFTA effective, trade liberalisation may be considered as a necessary condition, but not a sufficient one. Therefore, utmost policy priority should be given to develop trade infrastructure facilities and improve trade facilitation measures.

The review undertaken as part of this chapter and the simulation results provided offer quite an important message: as it stands the SAFTA liberalisation will benefit most South Asian countries. But trade-in-goods alone never constitutes a regional integration scheme and, in the spirit of regional co-operation, when trade facilitation is promoted gains for all countries are maximised.

Notes

1 Note that if member countries are the low-cost producers of the traded good, there will be no trade diversion effect and integration will unambiguously increase welfare.
2 See Bhagawati and Panagariya (1996).
3 Intra-regional trade in ASEAN was close to 6 per cent in the mid-1970s, but now has increased to around 23 per cent. ASEAN, too, was characterised by limited complementarities at the beginning but the situation changed with preferential trading, FDI and intra-regional investment (SACEPS 2002).
4 Typically, the exercise involves estimating a bilateral trade flow equation with bilateral trade (imports, exports or total trade at the aggregate or sector level) as the dependent variable and country characteristics, such as the GDP, population, land area, distance, the commonality of language or cultural ties, and the existence of preferential trade arrangements, as independent variables. Once estimated, the equation can then be used to predict the impact of a union between country pairs that did not have such a union during the sample period.
5 It should, however, be noted that the original GTAP framework does not provide any estimates of trade creation and trade diversion aspects of the total welfare effects. In order to estimate these two effects the authors made some adjustments in the GTAP model. The GTAP model provides a net welfare estimate of the SAFTA simulation that is a sum of the trade creation and trade diversion effects. With a view to isolating the trade creation effect from the total welfare effect, a separate simulation was run where necessary adjustments in the GTAP closure were made so that the imports from all other countries in the world to all the South Asian countries were held fixed. The welfare effects from this scenario only consisted of the trade creation effects for individual South Asian countries. This trade creation effect was then deducted from the total welfare effect in the original simulation to get the estimate of the trade diversion effect.
6 Limão and Venables (2001) found a link between the quality of infrastructure and transport costs – and thus concluded that infrastructure investments are important for export-led economic growth. However, Subramanian and Arnold (2001) argued that differences in logistics performance are driven only in part by the poor quality of physical infrastructure services such as road, rail, waterways, port services, and interfaces. The inadequacies often are caused by (non-tariff) policy and institutional constraints – such as procedural red tape, inadequate enforcement of contracts, poor definition and enforcement of rules of engagement, asymmetry in standards, delays in customs, delays at ports and border crossings, corruption and highly restrictive protocols on movement of cargo.
7 The detailed discussions on the GTAP model and database can be found in Hertel (1997). The information on the latest database and modification is available on the GTAP website: www.gtap.agecon.purdue.edu/databases/v8/. Some empirical applications similar to what are being done here

can be found in Razzaque et al. (2008). Version 8 of the GTAP database (which has 2007 as the base year) has been utilised to run the simulations here. Compared with previous versions, among others, GTAP 8 has added Nepal as an individual and separate country for the first time to capture its country-specific effects.

8 In the GTAP framework, such reduction in trade cost is introduced by shocking on the transaction cost of the bilateral trade. In this regard, the variable 'ams' – import-augmenting 'technical change' in the Armington nest, which can be used to lower the effective price of imported products, is shocked.

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